Interacting with Objects

Language, materiality, and social activity

Edited by
Maurice Nevile, Pentti Haddington,
Trine Heinemann and Mirka Rauniomaa

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INTRODUCTION

On the interactional ecology of objects

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The empirical studies of this book examine how objects feature in the moment-to-moment conduct of social interaction and activity. The studies draw on naturally occurring data, video recordings of people interacting with one another as they engage with objects for a wide range of purposes, across many real-life settings, situations and occasions. Here in this introductory chapter we define 'object', and highlight how objects in the social world have been investigated across scholarly fields. We outline the dominant methodological and analytic influences for this collection, ethnomethodology (EM) and conversation analysis (CA), and emphasise the significance of embodiment and materiality. We describe the broad arrangement of the chapters around two overarching themes, 'Objects as situated *resources*' and 'Objects as practical *accomplishments*'. Lastly, looking across the chapters we identify a number of possible alternative points of convergence which emerge when objects in and for social interaction are themselves treated as the principal focus of analysis.

Overview

One way or another, objects feature in most moments and aspects of ordinary social life, and are an integral part of human interaction and of activity between humans and their environment.[1] We experience, use, produce and shape objects all the time, at home, at work, at schools and at leisure, in numerous ways for different kinds of actions and tasks. Consequently, a prevalent view across a range of disciplines is that objects should be examined and understood not simply through description of their physical features and functions, or through analysis of their symbolic significance, but as people employ them in particular socio-cultural

1. We thank Johannes Wagner for early discussions which informed some ideas and wordings for this chapter, Lorenza Mondada for advice on one significant matter, and two reviewers for guiding some later refinements.

contexts. Even in an increasingly digitised world, we need objects, physical things, to conduct and accomplish ordinary practical and social activities: we depend on objects to act in the world, either as individuals or as social members. For example, in the home and for leisure, objects might serve practical activities like cooking and cleaning, or enable shared experiences such as dining and listening to music. For work, objects allow us to undertake productive tasks and fulfil goals, with desired efficiency and effect, and often in collaboration with others. In education, objects support instruction and learning, development and cooperation. Objects also feature as we participate in the wider community as competent citizens. For example, a simple train trip can entail many object-related challenges, involving tickets, credit cards, technologies (vending machines, validation systems), maps, platforms, and trains themselves on a network of rail tracks, as tools within a system for affording mobility for populations.

This book collects empirical studies that focus specifically on how objects feature in the moment-to-moment conduct of social interaction and activity. The studies draw on naturally occurring data, video recordings of people interacting with one another as they engage with objects for a wide range of purposes, across many real-life settings, situations and occasions. The chapters cover a range of very different kinds of object, including items of everyday life (e.g. vacuum cleaner, audio system, camera), technical and specialist equipment (e.g. for medicine, cooking, service and hospitality), materials and outcomes of creating and constructing (e.g. for art, craft, building), written documents, retail and commercial products, as well as furniture and other structures in the surrounding scene, the human body itself and its specific properties, and even metaphorical objects which are understood and oriented to although they are not actually materially present.

The chapters explore generally how objects are constitutive of and constituted through interactions. That is, they show how people interact with objects, and use objects to interact with others (*objects as situated resources)*, or how people shape, design and orient to objects as emerging in and through social interaction (*objects as practical accomplishments)*. The book brings together scholars with research experience in a wide range of fields, including anthropology, creative arts and crafts, design, education, gesture studies, linguistics, medicine and care, technology, transport, social psychology, and sociology. Through their detailed analyses of video-recorded data, the studies examine objects alongside talk, gesture and embodiment, and material and spatial circumstances, and so enable systematic accounts of objects as they figure in and for social action in real time. As we detail below, the dominant analytic influences are ethnomethodology (EM) and conversation analysis (CA) which allow for rigorous investigation of social interaction and activity as conducted and understood by the participants themselves, *in situ*, there and then.

The contributors to this book appreciate that there is a need to understand better and more precisely how objects feature for building meaningful and successful social interaction. Chapters focus on objects in their own terms as significant and consequential for the nature of social encounters and for how those encounters progress. The book therefore develops an emerging emphasis in research on social interaction where language and embodied conduct are analysed relative to their material environments (for recent collections see e.g. Haddington, Keisanen, & Nevile, 2012; Haddington, Mondada, & Nevile, 2013b; McIlvenny, Broth, & Haddington, 2009; Mondada & Schmitt, 2010; Sidnell & Stivers, 2005; Streeck, Goodwin, & LeBaron, 2011). In this chapter we introduce the value of examining objects in this way, and indicate how a rich understanding of objects can emerge through the empirical chapters. We position the book first briefly relative to interest in objects across some different scholarly traditions, in general, and then, after a short overview of key developments in ethnomethodology and conversation analysis, relative to interests of research on language and social interaction, in particular.

Objects in the social world

By 'objects' we mean generally those elements of the physical world that we can experience sensorially, i.e. that we typically see, hear and touch. For example, we can handle and manipulate objects; move, arrange or place them; create, assemble or transform them; dismantle or destroy them; represent, recall or imagine them; and so on. As objects are located in space, we can orient and move our bodies according to their presence (e.g. around and over them), we can point to objects, and we can also refer to and talk about objects, identifying and making them relevant, recognisable and intelligible, perhaps from the surrounding environment or drawing on shared understanding and experience. Objects are familiar to us all, we know and categorise them generally in a range of ways. Objects can be tools, devices, technologies, appliances, equipment, instruments, goods, products, vehicles, furniture, toys, clothing, materials, jewellery, food, containers, utensils, weapons, decorations, gifts, and so on. Objects can be understood and treated variously as rare or common, natural or manufactured, as familiar or unfamiliar, as precious or disposable, as simple or complex, as private or public, as relatively permanent or as disposable, as beautiful or ugly, as useful or useless, as accessible or inaccessible. The human body itself can also be understood or treated as an object. It is a physical entity that can be positioned relative to others or in surrounding space, and employed wholly or partially, for instance, to direct, protect or obstruct, or to be scrutinised (C. Goodwin, 2007; Heath, 1986; Koschmann, LeBaron, Goodwin,

Zemel, & Dunnington, 2007; Nishizaka, 2007), or it can be damaged and be subsequently mended or augmented (Egbert & Deppermann, 2012).

Objects are of course an interest, or even the principal focus, of many scholarly disciplines and fields of practice, which can study the nature and characteristics of objects, and more relevantly the significance of objects in society and for social life, perhaps in particular situations and settings, or periods of time. For example, for archaeology, anthropology, and history, objects can provide evidence for and support theories of socio-cultural and economic practices, beliefs, significant changes and events occurring over time, and the constitution, communication and organisation of populations (e.g. Appadurai, 1986; Hodder, 1991; D. Miller, 1987; P. Miller, 2013; Schiffer & Miller, 1999). In more sociological strands of research, there is likewise an interest in objects' role for forming and indicating social affiliations and statuses, for example through ownership, use, circulation or disposal, or otherwise for the conduct of institutions and organisations (e.g. Bourdieu, 1979; Douglas & Isherwood, 1996; Gregson & Crewe, 2003; Lunt & Livingstone, 1992; and see Engeström & Blackler, 2005).

There is also a large and growing interest among scholars from a range of backgrounds in objects and material culture, considering the meaning of objects for individuals and the impact of objects for the mind, as well as the role of objects for engaging in contemporary social life (e.g. Attfield, 2000; Dant, 1999, 2005; Leonardi, Nardi, & Kallinikos, 2012; Malafouris & Renfrew, 2010; Turkle, 2007). Research in psychology and education has concerned, for example, objects' significance for how individuals perceive and experience the nature of the physical world, and their own place within it, or for how objects support thinking, learning, and collaboration (e.g. Cobb, 2002; Csikszentmihalyi & Rochberg-Halton, 1981; Gibson, 1977, 1979; Hutchins, 1995a, 1995b; Schliemann, 2002; Stafford, 2009). In design and innovation, objects may be the outcome of processes of creative thinking, cooperation, negotiation, and making, or might themselves be an integral part of facilitating and accomplishing such processes (e.g. Busch, 2005; Costall & Dreier, 2006; Hallam & Ingold, 2007; Levi-Strauss, 1962; Norman, 1988; Parsons, 2009; Verbeek, 2006). Within creative arts and crafts, objects may be understood and valued for their possible aesthetic or functional qualities, exhibited technical skill, for their expression, representation, and interpretation of ideas and emotions, or for responses and for the experiences they can engender (e.g. Keller & Dixon Keller, 1996; Sennett, 2008). Furthermore, in studies dealing with science and technology, objects can be seen as social actors, as entities that can be active within and influence larger social networks or systems of meaning and practice (e.g. Latour, 1987, 2005; Suchman, Trigg, & Blomberg, 2002).

Objects have also received attention in philosophy and related disciplines, where the nature and characteristics of objects figure in reflections on, for example, experience, existence, materiality, reality, signification, representation, perception, mind, cognition, consciousness, and kinds of entities (e.g. Koslicki, 2008; Laycock, 2006; Merricks, 2001; K. Miller, 2008; Quine, 1960; Thomasson, 2007; Velmans, 2009; Wetzel, 2009). In studies of language, objects occur in discussions of referential descriptions in logic, typically drawing on writing or isolated and constructed examples (e.g. Frege, 1893/1952; Halliday, 1985; Kaplan, 1989). However, it has also been noted that in processes of activity and interaction, participants create and negotiate a variety of reference forms in the moment to establish shared understanding of what is happening and what to do next (Hanks, 1990).

Generally then, in the social sciences and humanities, approaches to objects across disciplines have involved theorising or documenting the materiality and practices of object use and consumption (e.g. objects as commodities). Or, they provide abstract or large-scale accounts and notions of socio-cultural changes and trends in people's experiences of objects, perhaps of the past or emerging in the present and for the future, including the role, influence and impact of objects for individuals or groups (e.g. objects as devices or tools). They might be concerned with wider issues of people's relations and attitudes to objects, the meaning and significance of objects, the symbolic or other value of objects (e.g. aesthetics of objects), or can seek to develop typologies of the ways objects appear and figure in human experience. Such research draws on various forms of data and a range of analytic methods, including surveys or interviews, recollections or reflections, ethnographic observations, document analyses, statistical analyses, or experiments.

Our interest and approach in this collection is therefore quite different. Studies here explore how objects reveal something of how participants, in situ and in the moment, act socially and meaningfully, to construct and interpret both their practical activities and also objects themselves. Through talk and interaction, objects can, for example, be noticed, appreciated, assessed, imagined, created and made sense of, or can be given and received, shared or distributed, shown and demonstrated, described and explained, or disputed. In work and institutional settings, objects can also serve as tools and technologies of various kinds as participants collaborate to organise and perform tasks. Indeed, just what counts as an 'object', and is treated as an object, is something that participants determine together as they interact with one another.

Researching social interaction: Ethnomethodology and conversation analysis

The studies in this book are informed by the analytic thinking and methodological principles of ethnomethodology and conversation analysis. In this section, we briefly outline the background and development of these approaches, connecting to the specific theme of the book, objects in social interaction. First, we discuss early developments in social sciences that led researchers to understand the importance of studying the order of everyday social interaction, and to recognise the central role that conversation has in creating and maintaining that order. We then move on to show how these developments have prompted researchers of social interaction to explore and better understand the role of embodiment, materialilty, and multimodality.

Observable conduct and displayed understandings

The studies of this collection show that objects have certain social potential, in interaction, which is worth examining systematically: objects have properties which are qualitatively different but importantly connect to language and bodily conduct (e.g. gaze, gesture, posture). The studies explore such differences and connections by focusing on how participants use, create, and understand objects, their features and possible materiality. An object can be drawn on to build action and understanding, or to accomplish a joint understanding of exactly what the object is and how it is relevant and significant for the participants engaged in joint activities. We see how objects are employed, oriented to, shaped, created or manipulated across a range of interactional contexts and languages. In this, the studies here share their inspiration with one or more of three historically and theoretically linked approaches to social interaction: Erving Goffman's thinking on 'interaction order' (e.g. Goffman, 1963, 1971), Harold Garfinkel's ethnomethodology (e.g. 1967 [1984], 2002; and see Francis & Hester, 2004; Heritage, 1984) and conversation analysis (e.g. ten Have, 2007; Pomerantz & Fehr, 1997; Schegloff, 2007; Sidnell, 2011; Sidnell & Stivers, 2013). Goffman can be credited with promoting the idea that social order is enacted and established in the face-to-face domain of everyday life, and so that this is a worthy and viable domain to study sense-making practices and social organisation without making or relying on guesses or claims about the content of the individual's mind, or intentions. Garfinkel's contemporary ethnomethodology similarly proposed that everyday interaction constituted a legitimate domain of (sociological) study, but with the focus being on members' common-sense knowledge and methods, i.e. how participants in interaction make

sense of and create order in their everyday lives. The thinking of both Goffman and Garfinkel were major influences on conversation analysis, which developed in the late 1960s. The birth of conversation analysis is associated with the work and thinking of Harvey Sacks (Sacks, 1992), who had worked with both Goffman and Garfinkel. Sacks and his collaborators, Gail Jefferson and Emanuel Schegloff, although obviously inspired by both Goffman and Garfinkel, were ultimately interested in revealing the 'machinery' of interaction (Sacks, 1992, vol. 2, p. 169), i.e. the structure and organisation of naturally occurring interaction, and how interaction contributes to the construction of social order.

The analytic focus of ethnomethodological conversation analysis (EMCA) is therefore on social action, the observable verbal and embodied conduct and understanding of social participants, in physical contexts. EMCA investigates and describes social action from an emic (Pike, 1967) perspective, which means that analysis is driven by demonstrable evidence of the participants' own view – their creation, treatment and understanding – of the events and actions as they occur. Furthermore, EMCA considers social action in terms of emergence and sequentiality, i.e. how social actions are locally situated and produced. In this sense, any action can be seen to be shaped or projected by events or actions that preceded it, while simultaneously shaping, projecting, and making relevant what may follow. Through an emic approach and attention to sequentiality, EMCA offers an analytic viewpoint to social action that is based on an "architecture of intersubjectivity" (Heritage, 1984, p. 254; Schegloff, 1992): participants display their understanding of a prior action in the next action, thus offering a "proof procedure" (Sacks, Schegloff, & Jefferson, 1974, p. 728) for the analysis. In other words, analyses rely on how the participants themselves, through their moment-to-moment verbal and embodied conduct, display to one another their understanding of what they are doing, and of what is going on. Any verbal utterance or embodied conduct, or a combination of these, may be understood in different ways, depending on how it is formatted and designed (i.e. its constituent parts, and their arrangement) and when – in what sequential context – it is produced (see Schegloff, 2007, p. 2; Schegloff & Sacks, 1973). In short, EMCA focuses on how participants understand each contribution to interaction *as it is produced in situ*. So a fundamental guiding question for analysts and participants alike is '*why that now?*' (Schegloff & Sacks, 1973).

To summarise, ethnomethodological conversation analysis provides insights and tools for a qualitative, deductive and empirical analysis of interaction – and so can examine the way objects feature in and for interaction. Methodologically, the studies here are distinguished by their emphasis on video recordings made in/of real-life, naturally occurring situations (for broad discussions of issues and methods, see e.g. Haddington et al., 2013b; Heath, Hindmarsh, & Luff, 2010;

Knoblauch, 2012). In addition to video recordings, analyses are supported with detailed transcriptions (written and other forms of representation) that include not only *what* people say and do but also *how* and *when* they do so, including details of 'troubles', such as mistakes, hitches, hesitations, absences, and overlaps (moments of simultaneous talk by different participants), and their related 'repairs' (see Schegloff, 1979). Such rigorous and precise analytic attention is important because EMCA research has shown that these kinds of details can be consequential for participants' conduct in social interaction – we know that participants themselves attend to them.

Embodiment and materiality: Resources for interaction

In this book, the interest in objects in particular arises from a now rapidly growing recognition of the significance and value of embodiment and materiality as features of naturally occurring social interaction, and/or of actions and practices of particular settings and situations (for an overview see Haddington, Mondada, & Nevile, 2013a, pp. 12–16). Indeed, Nevile (2013b, in prep.) suggests there has been an 'embodied turn' in the direction and development of EMCA research (and see Nevile, 2014), part of a wider 'corporeal turn' across the humanities and social sciences (Sheets-Johnstone, 2009; Tambornino, 2002). Conversation analysis especially, as a discipline, has sometimes been associated with the analysis of talk only, and so the interest in other resources employed by participants, such as embodied conduct or multimodality, is noted as evidence of "an increasing awareness of the relevance of the full array of visible and audible resources to social interaction" (Deppermann, 2013b, p. 2; and see earlier Sidnell & Stivers, 2005). Early EMCA literature did to some extent focus primarily on language practices, and it seems that this focus was a result of the just-emerging status of video recording technology at the time, rather than a pre-determined methodological decision to prioritise language. That early work did not refrain from *recognising* the relevance of the material surround for the analysis (see C. Goodwin, 1981; Sacks & Schegloff, 2002). Goffman's (1963) notion of 'focused encounters', for instance, was largely defined through co-presence, which in fact seems to exclude interactions only conducted through language, such as telephone conversations (C. Goodwin, 1981). Additionally, Pomerantz's (1984) work on preference organisation in assessment pairs readily recognised that visible and even tacit access to the same environment was relevant for how assessments were formatted. Other specifically non-verbal features of social action, for example gaze, were also investigated in related work at least as early as the 1960s and 1970s (e.g. Argyle & Cook, 1976; Kendon, 1967; see detailed discussion in Leeds-Hurwitz, 1987).

In the late 1970s, Charles and Marjorie Goodwin, working exclusively with video recordings, began their highly influential work attesting the various semiotic resources that participants employ in ordinary social interaction (C. Goodwin, 1979, 1981; Goodwin & Goodwin, 1986), and later also in institutional and work settings, which are often rich in technologies (C. Goodwin, 1994, 1995, 1996; M. H. Goodwin, 1995; Goodwin & Goodwin, 1996, 1997). Other key influences included studies of doctor-patient interaction (Heath, 1986; Psathas, 1990), and Schegloff's (1998) analyses of a postural positioning he termed 'body torque'. Apart from numerous individual papers and chapters over the past 15 years or so, growing interest in embodiment and materiality is evident also within book-length studies of single settings or kinds of interaction (e.g. Filipi, 2009; Heath, 2013; Heath & Luff, 2000; Nevile, 2004a; Rendle-Short, 2006), and in recent collections of interaction studies, either with a general scope (Deppermann, 2013a; Stivers & Sidnell, 2005; Streeck et al., 2011), or for a more specific setting or focus, e.g. on space and place (Hausendorf, Mondada, & Schmitt, 2012; McIlvenny et al., 2009), cars (Haddington et al., 2012), mobility (Haddington et al., 2013b), or multiactivity (Haddington, Keisanen, Mondada, & Nevile, 2014). Interests and analyses are also often informed by insights from gesture research (e.g. Kendon, 1990, 2004; Streeck, 2009, 2013), and converge with some of the assumptions of the pioneers in gesture studies, who argued that gesture and talk are not separate 'modules' for communication but originate from the very same linguistic, cognitive and social mechanisms (McNeill, 1981).

The present collection, then, can be seen as a natural continuation of interest in human social action as an amalgam of talk, bodily conduct and other forms of material and spatial involvement. Studies that are informed by Garfinkel's and Goffman's work, and rely on ethnomethodology and conversation analysis, have developed an understanding of the multimodality of social action in various everyday and work-life contexts. They have shown that it is necessary to consider the broader physical context in order to investigate how participants engage in and make sense of their everyday lives. This collection centres precisely on how people interact with objects, use objects to interact with others, or shape, design and orient to objects in and through social interaction. In the following section we reflect on relevant previous and more recent ethnomethodological and conversation-analytic research that has contributed to the understanding of how objects and materiality feature in social interaction.

Early contributions to the study of materiality and social interaction

Within the recognition for empirical research of the role of embodied and material aspects of interaction, objects' particular significance has begun to be recognised, but less often have interaction studies treated objects as their specific focus. As early examples, Lynch, Livingston, & Garfinkel (1983) and Lynch (1985) analysed the arrangement of objects as a resource for organising and conducting laboratory work (cf. Garfinkel, Lynch, & Livingston, 1981), while others examined the role of objects in the activities of particular groups and professional communities, especially for seeing and demonstrating to accomplish collaboration or joint understanding (C. Goodwin, 1994, 1995; Goodwin & Goodwin, 1997; Ochs, Gonzales, & Jacoby, 1996; Psathas, 1992; Streeck, 1996). Notable also were Suchman's (1987; and see 2007) landmark research on individuals' situated use of technology, and Psathas' (1979; 1986; 1991) concern for maps and direction-giving in interaction. C. Goodwin (1984, also 1981) considered objects within ordinary conversations, for example how the casual telling of a story during a meal between family and friends involves precise coordination of talk with handling and distributing food-related objects.

Following this earlier research, studies have begun to reveal how objects, as an important part of people's ordinary lives, can be tied to and constituent of the situated, embodied, material and spatial circumstances of social interaction, either in everyday domestic situations or in institutional and work settings. There is an emerging sense of how participants use or recruit objects, orient or refer to objects, create, manipulate and make sense of objects, and so on:

- *to support thinking, perception and learning, to facilitate views and interpretations of the world* (e.g. C. Goodwin, 1994; Heath, 2006; Hindmarsh & Heath, 2000; Kääntä & Piirainen-Marsh, 2013; Koschmann, Dunnington, & Kim, 2012; Macbeth, 1994; Nishizaka, 2006, 2011);
- *to build collaborative action and understanding, or demonstrate and claim knowledge* (e.g. Brassac, Fixmer, Mondada, & Vinck, 2008; Fasulo & Monzoni, 2009; Ford, 1999; C. Goodwin, 2003; Laurier & Brown, 2011; Mondada, 2007, 2012c; Nevile, 2004b, 2009, 2013a);
- *to affect orientation or change within the surrounding environment* (e.g. Arnold, 2012; C. Goodwin, 2000; Koschmann, LeBaron, Goodwin, & Feltovich, 2006; Laurier & Brown, 2008; Mondada, 2012a);
- *to initiate and organise events and courses of action* (e.g. Donovan, Heinemann, Matthews, & Buur, 2011; Haddington & Rauniomaa, 2011; Heath, 2013; Heath & Luff, 2013; Keisanen & Rauniomaa, 2012; Kidwell & Zimmerman, 2007; Mondada, 2012b; Svinhufvud & Vehviläinen, 2013; Wootton, 1994);

- *to monitor changing circumstances and attend to the progress of activities* (e.g. Broth, 2008, 2009; Heath & Hindmarsh, 2000; Heath & Luff, 2000; Koschmann et al., 2006; Nevile, 2004a);
- *to realise or facilitate particular forms of participation and involvement* (e.g. Evaldsson, 2004; Glenn & LeBaron, 2011; Goodwin & Goodwin, 2012; Landgrebe & Heinemann, in press; Luff & Heath, 2002; Nevile & Haddington, 2010; Noy, 2012; Rae, 2001);
- *to create and represent, for processes of design and innovation* (e.g. Alby & Zucchermaglio, 2007; Nielsen, 2012; Heinemann, Mitchell, & Buur, 2009; Luck, 2010; Murphy, 2012; Phillabaum, 2005);
- *to be mobile and experience mobile views of the world* (e.g. Haddington et al., 2012; Haddington et al., 2013b; Nevile, 2004a);
  and
- *to experience, attend to and act upon the human body* (e.g. Hindmarsh et al., 2011; Koschmann et al., 2007; Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Mondada, 2003; Nishizaka, 2007).

Importantly however, most of this research has considered objects as just one among many resources or aspects for interaction, and only rarely are objects themselves, and their specific features and contributions, the primary focus (some exceptions are Brassac et al., 2008; Eriksson, 2009; C. Goodwin, 2010; Heath & Hindmarsh, 2000; Heinemann et al., 2009; Hindmarsh & Heath, 2003; Koschmann et al., 2012; Nishizaka, 2006; Pitsch, 2012; Streeck, 1996; Zinken & Ogiermann, 2013).

Contributions of this book: A focus on objects

Building on this emerging sense of the significance of objects in and for social interaction, the chapters in this book all take their point of departure in one or more objects, to demonstrate how these objects manifest as participants' *resources* situated within and for actions and activities, or are themselves *accomplished* through and by participants' practical actions and activities. The chapters cover very different objects, such as paper, technologies, art, edibles, materials and utensils, the human body, and even immaterial and abstract objects. We see the different ways in which objects are experienced, created or made sense of, for instance through manipulating, pointing, seeing, hearing, and referencing. Lastly, the chapters show objects in interaction across a range of contexts, for example at the doctor's office or in the surgical theatre, at an exhibition, in the workplace or home, in education and training, in the car, and at the pub. Common to all the chapters

is that it is the objects themselves, and their specific contribution to interaction, that are the primary foci of analysis.

The book presents 15 empirical chapters, which are arranged broadly around two overarching themes: (A) Objects as situated *resources;* and (B) Objects as practical *accomplishments*. The chapters in Part A are organised under the sections 'Organising and sequencing' and 'Participating and involving'. These chapters focus on how, by handling, indexing or orienting to physically available objects, participants can manage interactional demands and relevancies, such as shifts in activity, sequence organisation, turn-taking, and the nature and form of participation. For example, these chapters highlight how objects' availability, and the access to and control of objects, can influence the ability to participate, or how participants negotiate and coordinate their use of or orientation to objects. The chapters in Part B are organised under the sections 'Shaping and creating' and 'Experiencing and identifying'. These chapters focus on how objects are formed, constituted and potentially altered through interaction, as participants forge representations, interpretations and abstractions of objects as identifiably this or that. For example, these chapters particularly highlight how participants handle and shape objects to create shared realisations of what objects are, or can or should be, and so how they might be perceived, understood, and treated.

Beyond this main distinction, looking across all the chapters we can identify a number of possible alternative points of convergence, when objects in and for social interaction are themselves treated as the principal focus of analysis:

Objects for instructing: Objects are created, manipulated, shaped and interpreted within and for instructional activities. For example: how does the articulation of instructions from a professional chef relate to the eventual transformation of edible ingredients into a dish during a cooking class (Mondada)?; how do dance teachers manipulate immaterial objects into being to accomplish the pedagogical task of conveying dance formations to a class of students (Keevallik)?; how does an interview form contribute to discussions about subordinates' performance and future development at the workplace (Mikkola & Lehtinen)?; how is a feature of the body recognised and acted upon for surgery (Koschmann & Zemel)?

Objects for knowing: Objects are oriented to, labelled, described and handled to manifest knowing and knowledge. For example: how is practised and technical expert knowledge, relative to novice trainees, realised in situ in diagnostic and corrective abilities, for instance for the human body (Koschmann & Zemel) or craft materials (Ekström & Lindwall)?; how does conversation featured around personal pictures allow an aphasic man greater opportunities for participation (Aaltonen, Arminen, & Raudaskoski)?; how does the distributed knowledge of a plumber working in

the field come into play for handling and manipulating blueprints and sketches at a plumbing meeting (Sakai, Korenaga, Mizukawa, & Igarashi)?

Objects for order: Objects are used to manage interactional order and organisation. For example: how does an interview form allow for negotiating activity shifts in performance appraisal interviews (Mikkola & Lehtinen)?; what role does the possession of arbitrary objects such as Styrofoam forms and pieces of wood play for the organisation of turn-taking in design workshops (Day & Wagner)?; how do a doctor's shift of attention from patient to desk-top computer, or a driver's turning on the car radio, or a bartender's logging of a customer's order into the sales till, influence the overall sequence organisation of an activity (Beck Nielsen; Rauniomaa & Heinemann; Richardson & Stokoe)?

Objects for time and occasion: Objects become salient and significant at and for particular moments and occasions within temporally emerging courses of activity, and to project new activity. For example: how do participants in a university advice meeting refer to objects over time to re-occasion their mention at subsequent points (Hazel)?; how do designers and product stakeholders coordinate and time their talk about an object to effect its exchange between parties, such that reaching for an object may be understood as a claim to talk (Day & Wagner)?

Objects as meaningful: Objects are employed as meaningful (semiotic) resources, to augment communication, and to afford participation and action. For example: how can a digital camera serve as a resource for a man with aphasia, allowing him to participate in interaction and initiate actions (Aaltonen, Arminen & Raudaskoski)?; how do participants draw on material objects such as documents and table-top surfaces to create leitmotifs to serve as referential resources for subsequent talk (Hazel)?; how do the material properties of artworks allow both seeing and blind people to appreciate their aesthetics (Kreplak & Mondémé)?

Objects as relevant: Objects are made relevant through participants' pointing, referencing, naming and touching. For example: how, and where, do bartenders in a pub recruit and index objects such as the sales till and tables (Richardson & Stokoe)?; which items on a supermarket shelf do shoppers orient to, and in what ways (De Stefani)?; how do objects such as post-it notes, press-releases and other journalistic documents become resources for designing and understanding action, either as incidental or essential objects (Weilenmann & Lymer)?

Objects as invoked: Objects are invoked within practices, procedures and entitlements of collaborative work and action. For example: how is the coordination of disparate work in a plumbing company accomplished and made accountable

through sketches and blueprints that can be talked about and altered (Sakai, Korenaga, Mizukawa & Igarashi)?; how are different aspects of journalistic work accomplished through pointing, moving, visibly looking at and showing paper documents (Weilenmann & Lymer)?; what effects does physical access have on participants' roles and responsibilities at the doctor's office, where the patient can maybe view the computer screen but cannot operate the keyboard (Beck Nielsen)?; how is an immaterial object realised and understood, to offer demonstration and guidance to others (Keevallik)?

Objects as constituted: Objects, their features and affordances, are oriented to and locally constituted for the purposes at hand. For example: how is the aesthetic experience of art constituted for blind people in a museum (Kreplak & Mondémé)?; how does an object's potential for producing sound affect the overall organisation of interaction (Rauniomaa & Heinemann)?; how do students in craft education detect mistakes in their felt-making, crocheting and machine knitting, through their inspection and manipulation of materials (Ekström & Lindwall)?; how is the irreversibility of ingredients' transformation recognised and acted upon by novices in a cooking class (Mondada)?

Objects as negotiated: An object's significance and value for action is negotiated in and through interaction. For example: how is a clinical diagnosis accomplished or discovered, through participants' sense-making procedures and informed by the object under scrutiny (Koschmann & Zemel)?; how do shoppers in a supermarket negotiate whether or not an object on a shelf is purchasable (De Stefani)?

The chapters in this book advance knowledge specifically of the role and significance of objects in and for social interaction. They explore and clarify the many ways in which participants use objects in interaction, what kinds of roles and functions objects have in interaction, how the participants negotiate access to objects and how this influences participation and serves to organise interaction, and how objects may be constituted through interaction and through participants' joint sense-making practices, such as naming, referencing, shaping or manipulating. In sum, the studies in this book show *how* objects play an important role in the moment as we interact with one another in our everyday lives.

Conclusion: The interactional ecology of objects

In our own previous studies we have noticed the paramount relevance of objects for human action and sense making, across many settings, including aged care, airplane cockpits, cars and driving, design and innovation, education, and gambling. Overall, we note that researchers examining the various details of naturally occurring social interaction have increasingly been interested in issues of embodiment and materiality, but while objects often appear in data and analyses they are typically included as just one among many aspects of interaction, and so themselves are rarely the research focus. This book collects studies that examine specifically and in detail how objects actually feature, moment-to-moment, in and for people's participation and experiences in interaction in real-life situations and settings of social life. The collection can therefore provide first steps towards a stronger and more coherent appreciation of objects and social interaction. The book might then also inform the appreciation of the sociality of/with objects/things (cf. Dant, 2005; Knorr Cetina, 1997; Latour, 1996) by working towards a coherent understanding of objects within ordinary and authentic social activities. After Gibson's (1979) 'ecological approach to visual perception', Hindmarsh and Heath's (2003) 'local ecology of objects', and other interest in forms of ecology in social interaction (e.g. C. Goodwin, 2000; Streeck et al., 2011; Haddington et al., 2013a), we can describe our interest as the *interactional ecology of objects:* objects feature dynamically in richly organised relationships with aspects of talk, embodied conduct, and features of the surrounding environment. As resources, objects are situated within and contribute *to* developing processes and trajectories of social interaction. As practical accomplishments, objects emerge and are established, perceived and understood, *from* processes and trajectories of social interaction. We hope the book is timely, and that its analyses and findings will interest and impact a wide variety of fields of research and practice. Objects, in all their forms and uses, are an integral but common and often unremarkable part of our everyday lives, and we experience them everywhere. Across a diverse range of settings, the studies of this book explore in detail just how we do so.

References

Alby, F. & Zucchermaglio, C. (2007). Embodiment at the interface: Materialization practices in web design. *Research on Language and Social Interaction*, 40(2–3), 255–277. DOI: 10.1080/08351810701354714

Appadurai, A. (Ed.). (1986). *The social life of things: Commodities in cultural perspective*. New York: Cambridge University Press.

Argyle, M., & Cook, M. (1976). *Gaze and mutual gaze*. Cambridge: Cambridge University Press.

Arnold, L. (2012). Dialogic embodied action: using gesture to organize sequence and participation in instructional interaction. *Research on Language and Social Interaction*, 45(3), 269–296. DOI: 10.1080/08351813.2012.699256

Attfield, J. (2000). *Wild things: The material culture of everyday life*. Oxford: Berg.

Bourdieu, P. (1979). *Distinction: A social critique of the judgment of taste*. London: Routledge.

Brassac, Ch., Fixmer, P., Mondada, L., & Vinck, D. (2008). Interweaving objects, gestures, and talk in context. *Mind, Culture and Activity*, 15(2), 208–233. DOI: 10.1080/10749030802186686

Broth, M. (2008). The studio interaction as a contextual resource for TV-production. *Journal of Pragmatics*, 40(5), 904–926. DOI: 10.1016/j.pragma.2007.10.010

Broth, M. (2009). Seeing through screens, hearing through speakers: Managing distant studio space in television control room interaction. *Journal of Pragmatics*, 41, 1998–2016. DOI: 10.1016/j.pragma.2008.09.023

Busch, A. (2005). *The uncommon life of common objects: Essays on design and the everyday*. New York: Metropolis Books.

Cobb, P. (2002). Reasoning with tools and inscriptions. *The Journal of the Learning Sciences*, 11, 187–215. DOI: 10.1080/10508406.2002.9672137

Costall, A., & Dreier O. (Eds.). (2006). *Doing things with things: The design and use of everyday objects*. Aldershot: Ashgate.

Csikszentmihalyi, M., & Rochberg-Halton, E. (1981). *The meaning of things: Domestic symbols and the self*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9781139167611

Dant, T. (1999). *Material culture in the social world: Values, activities, lifestyles*. Buckingham: Open University Press.

Dant, T. (2005). *Materiality and society*. Berkshire: Open University Press.

Deppermann, A. (Ed.). (2013a). *Conversation analytic studies of multimodal interaction*. Special issue for *Journal of Pragmatics*, 46(1), 1–172.

Deppermann, A. (2013b). Multimodal interaction from a conversation analytic perspective. *Journal of Pragmatics*, 46(1), 1–7. DOI: 10.1016/j.pragma.2012.11.014

Donovan, J., Heinemann, T., Matthews, B., & Buur, J. (2011). Getting the point: The role of gesture in managing intersubjectivity in a design activity. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 25, 221–235. DOI: 10.1017/S0890060411000059

Douglas, M., & Isherwood, B. (1996). *The world of goods: Towards an anthropology of consumption*, 2nd edition. London: Routledge.

Egbert, M., & Deppermann, A. (Eds.). (2012). *Hearing aids communication: Integrating social interaction, audiology and user centered design to improve hearing technology use*. Mannheim: Verlag für Gesprächforschung.

Engeström, Y., & Blackler, F. (2005). On the life of the object. *Organization*, 12, 307–330. DOI: 10.1177/1350508405051268

Eriksson, M. (2009). Referring as interaction: On the interplay between linguistic and bodily practices. *Journal of Pragmatics*, 41, 240–262. DOI: 10.1016/j.pragma.2008.10.011

Evaldsson, A.-C. (2004). Shifting moral stances: Morality and gender in same-sex and cross-sex game interaction. *Research on Language and Social Interaction*, 37(3), 331–363. DOI: 10.1207/s15327973rlsi3703_3

Fasulo, A., & Monzoni, C. (2009). Assessing mutable objects: A multimodal analysis. *Research on Language and Social Interaction*, 42(4), 362–376. DOI: 10.1080/08351810903296481

Filipi, A. (2009). *Toddler and parent interaction: The organisation of gaze, pointing and vocalisation*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.192

Ford, C. E. (1999). Collaborative construction of task activity: Coordinating multiple resources in a high school physics lab. *Research on Language and Social Interaction*, 32(4), 369–408. DOI: 10.1207/S15327973rls3204_3

Francis, D., & Hester, S. (2004). *An invitation to ethnomethodology: Language, society and interaction*. London: Sage.

Frege, G. (1893/1952). On sense and reference. In P. Geach, & M. Black (Eds.), *Translations from the philosophical writings of Gottlob Frege*. Oxford: Blackwell.

Garfinkel, H. ([1967] 1984). *Studies in ethnomethodology*. Cambridge: Polity Press.

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkheim's aphorism*. Edited by A. W. Rawls. Lanham, MD: Rowman and Littlefield.

Garfinkel, H., Lynch, M., & Livingston, E. (1981). The work of a discovering science construed with materials from the optically discovered pulsar. *Philosophy of the Social Sciences*, 11(2), 131–158.

Gibson, J. J. (1977). The theory of affordances. In R. Shaw, & J. Bransford (Eds.), *Perceiving, acting, and knowing: Toward an ecological psychology* (pp. 67–82). Hillsdale, NJ: Lawrence Erlbaum.

Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston: Houghton Mifflin.

Glenn, P., & LeBaron, C. (2011). Epistemic authority in employment interviews: Glancing, pointing, touching. *Discourse & Communication*, 5, 3–22. DOI: 10.1177/1750481310390161

Goffman, E. (1963). *Behavior in public places: Notes on the social organization of gatherings*. New York: Free Press.

Goffman, E. (1971). *Relations in public: Microstudies of the public order*. New Brunswick, NJ: Transaction Publishers.

Goodwin, C. (1979). The interactive construction of a sentence in natural conversation. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 143–186). New York: Irvington.

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.

Goodwin, C. (1984). Notes on story structure and the organization of participation. In J. M. Atkinson, & J. Heritage, J. (Eds.), *Structures of social action* (pp. 225–246). Cambridge: Cambridge University Press.

Goodwin, C. (1994). Professional vision. *American Anthropologist*, 96, 606–633. DOI: 10.1525/aa.1994.96.3.02a00100

Goodwin, C. (1995). Seeing in depth. *Social Studies of Science*, 25, 237–274. DOI: 10.1177/030631295025002002

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32, 1489–522. DOI: 10.1016/S0378-2166(99)00096-X

Goodwin, C. (2003). The body in action. In J. Coupland, & R. Gwyn (Eds.), *Discourse, the body and identity* (pp. 19–42). New York: Palgrave/Macmillan.

Goodwin, C. (2007). Environmentally coupled gestures. In S. Duncan, J. Cassell, & E. Levy (Eds.), *Gesture and the dynamic dimensions of language* (pp. 195–212). Amsterdam/Philadelphia: John Benjamins.

Goodwin, C. (2010). Things and their embodied environments. In L. Malafouris, & C. Renfrew (Eds.), *The cognitive life of things: Recasting the boundaries of the mind*. (pp. 103–120). Cambridge: McDonald Institute Monographs.

Goodwin, C., & Goodwin, M. H. (1986). Gesture and coparticipation in the activity of searching for a word. *Semiotica*, 62(1/2), 51–75. DOI: 10.1515/semi.1986.62.1-2.29

Goodwin, C., & Goodwin, M. H. (1996). Seeing as a situated activity: Formulating planes. In Y. Engeström, & D. Middleton (Eds.), *Cognition and communication at work* (pp. 61–95). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9781139174077.004

Goodwin, C., & Goodwin, M. H. (1997). Contested vision: The discursive constitution of Rodney King. In B. Gunnarsson, P. Linell, & B. Nordberg (Eds.), *The construction of professional discourse* (pp. 292–316). New York: Longman.

Goodwin, M. H. (1995). Assembling a response: Setting and collaboratively constructed work talk. In P. ten Have, & G. Psathas (Eds.), *Situated order: Studies in the social organization of talk and embodied activities* (pp. 173–186). Washington DC: International Institute for Ethnomethodology and Conversation Analysis, and University Press of America.

Goodwin, M. H., & Goodwin, C. (2012). Car talk: Integrating texts, bodies, and changing landscapes. *Semiotica*, 191, 257–286.

Gregson, N., & Crewe, L. (2003). *Second-hand cultures*. New York, NY: Berg. DOI: 10.2752/9781847888853

Haddington, P., & Rauniomaa, M. (2011). Technologies, multitasking and driving: Attending to and preparing for a mobile phone conversation in the car. *Human Communication Research*. 37(2), 223–254. DOI: 10.1111/j.1468-2958.2010.01400.x

Haddington, P., Keisanen, T., Mondada, L., & Nevile, M. (Eds.). (2014). *Multiactivity in social interaction*: *Beyond multitasking*. Amsterdam/Philadelphia: John Benjamins.

Haddington, P., Keisanen, T., & Nevile, M. (Eds.). (2012). *Meaning in motion: Interaction in cars*. Special Issue for *Semiotica*, 191(1/4).

Haddington, P., Mondada, L., & Nevile, M. (2013a). Being mobile: Interaction on the move. In P. Haddington, L. Mondada, & M. Nevile (Eds.), *Interaction and mobility: Language and the body in motion* (pp. 3–61). Berlin and New York: De Gruyter. DOI: 10.1515/9783110291278

Haddington, P., Mondada, L., & Nevile, M. (Eds.). (2013b). *Interaction and mobility: Language and the body in motion*. Berlin and New York: De Gruyter. DOI: 10.1515/9783110291278

Hallam, E., & Ingold, T. (Eds.). (2007). *Creativity and cultural improvisation*. Oxford: Berg.

Halliday, M. A. K. (1985). *Introduction to Functional Grammar*. London: Edward Arnold.

Hanks, W. F. (1990). *Referential practice: Language and lived space among the Maya*. Chicago: The University of Chicago Press.

Hausendorf, H., Mondada, L., & Schmitt, R. (Eds.). (2012). *Raum als interaktive Ressource*. [Space as an interactional resource] Tübingen: Forschungen des Instituts für Deutsche Sprache.

ten Have, P. (2007). *Doing conversation analysis: A practical guide*. (2nd edition.) London: Sage.

Heath, C. (1986). *Body movement and speech in medical interaction*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628221

Heath, C. (2006). Body work: The collaborative production of the clinical object. In J. Heritage, & D. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 185–213). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511607172.009

Heath, C. (2013). *The dynamics of auction: Social interaction and the sale of fine art and antiques*. Cambridge: Cambridge University Press.

Heath, C., & Hindmarsh, J. (2000). Configuring action in objects: From mutual space to media space. *Mind, Culture, and Activity*, 7(1&2), 81–104.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research*. London: Sage.

Heath, C., & Luff, P. (2000). *Technology in action*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511489839

Heath, C. & Luff, P. (2013). Embodied action and organisational interaction: Establishing contract on the strike of a hammer. *Journal of Pragmatics*, 46(1), 24–38. DOI: 10.1016/j.pragma.2012.01.002

Heinemann, T., Mitchell, R., & Buur, J. (2009). Co-constructing meaning with materials in innovation workshops. In B. Darras, & S. Belkhamsa (Eds.), *Objets et Communication* [Objects and Communication], MEI 30–31 (pp. 289–304). Paris: Aujourd'hui.

Heritage, J. (1984). *Garfinkel and ethnomethodology*. Cambridge: Polity Press.

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29(5), 523–562. DOI: 10.1177/089124100129023990

Hindmarsh, J., & Heath, C. (2003). Transcending the object in embodied interaction. In J. Coupland, & R. Gwyn (Eds.) *Discourse, the body, and identity* (pp. 43–69). Basingstoke: Palgrave Macmillan.

Hindmarsh, J., Reynolds, P., & Dunne, S. (2011). Exhibiting understanding: The body in apprenticeship. *Journal of Pragmatics*, 43, 489–503. DOI: 10.1016/j.pragma.2009.09.008

Hodder, I. (Ed.). (1991). *The meanings of things: Material culture and symbolic expression*. London: Routledge.

Hutchins, E. (1995a). *Cognition in the wild*. Cambridge, MA: MIT Press.

Hutchins, E. (1995b). How a cockpit remembers its speeds. *Cognitive Science*, 19, 265–288. DOI: 10.1207/s15516709cog1903_1

Kaplan, D. (1989). Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals. In J. Almog, J. Perry, & H. Wettstein (Eds.), *Themes from Kaplan* (pp. 481–563). Oxford: Oxford University Press.

Keisanen, T., & Rauniomaa, M. (2012). The organization of participation and contingency in prebeginnings of request sequences. *Research on Language and Social Interaction*, 45(4), 323–351. DOI: 10.1080/08351813.2012.724985

Keller, C. M., & Dixon Keller, J. (1996). *Cognition and tool use: The blacksmith at work*. Cambridge: Cambridge University Press.

Kendon, A. (1967). Some functions of gaze direction in social interaction. *Acta Psychologica*, 26, 22–63. DOI: 10.1016/0001-6918(67)90005-4

Kendon, A. (1990). *Conducting interaction: Patterns of behavior in focused encounters*. Cambridge: Cambridge University Press.

Kendon, A. (2004). *Gesture: Visible action as utterance*. Cambridge: Cambridge University Press.

Kidwell, M., & Zimmerman, D. H. (2007). Joint attention as action. *Journal of Pragmatics*, 39(3), 592–611. DOI: 10.1016/j.pragma.2006.07.012

Knoblauch, H. (Ed.). (2012). Video-analysis and videography: Methodology and methods. Special issue for *Qualitative Research*, 12(3).

Knorr Cetina, K. (1997). Sociality of objects. *Theory, Culture & Society*, 14(4), 1–30. DOI: 10.1177/026327697014004001

Koschmann, T., Dunnington, G., & Kim, M. (2012). Team cognition and the accountabilities of the tool pass. In E. Salas, S. Fiore, & M. Letsky (Eds.), *Theories of team cognition: Cross-disciplinary perspectives* (pp. 405–420). New York: Routledge.

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2006). The mystery of the missing referent: Objects, procedures, and the problem of the instruction follower. In S. Greenberg, & G. Mark (Eds.), *Conference on Computer Supported Cooperative Work* (pp. 373–382). New York: ACM.

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43, 521–541. DOI: 10.1016/j.pragma.2009.09.009

Koschmann, T., LeBaron, C., Goodwin, C., Zemel, A., & Dunnington, G. (2007). Formulating the triangle of doom. *Gesture*, 7(1), 97–118. DOI: 10.1075/gest.7.1.06kos

Koslicki, K. (2008). *The structure of objects*. Oxford, New York: Oxford University Press. DOI: 10.1093/acprof:oso/9780199539895.001.0001

Kääntä, L., & Piirainen-Marsh, A. (2013). Manual guiding in peer group interaction: A resource for organizing a practical classroom task. *Research on Language and Social Interaction* 46(4), 322–343. DOI: 10.1080/08351813.2013.839094

Landgrebe, J., & Heinemann, T. (in press). Mapping the epistemic landscape in innovation workshops. *Pragmatics & Society*.

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge MA: Harvard University Press.

Latour, B. (1996). On interobjectivity. *Mind, Culture, and Activity*, 3(4), 228–245.

Latour, B. (2005). *Reassembling the social: An introduction to Actor–network theory*. Oxford and New York: Oxford University Press.

Laurier, E., & Brown, B. (2008). Rotating maps and readers: Praxiological aspects of alignment and orientation. *Transactions of the Institute of British Geographers*, 33, 201–221. DOI: 10.1111/j.1475-5661.2008.00300.x

Laurier, E., & Brown, B. (2011). The reservations of the editor: The routine work of showing and knowing the film in the edit suite. *Journal of Social Semiotics*, 21(2), 239–257. DOI: 10.1080/10350330.2011.548646

Laycock, H. (2006a). *Words without objects*. Oxford: Oxford University Press. DOI: 10.1093/0199281718.001.0001

Leeds-Hurwitz, W. (1987). The social history of *The Natural History of an Interview*: A multidisciplinary investigation of social communication. *Research on Language and Social Interaction*, 20(1–4), 1–51. DOI: 10.1080/08351818709389274

Leonardi, P., Nardi, B. A., & Kallinikos, J. (Eds.). (2012). *Materiality and organizing: Social interaction in a technological world*. Oxford: Oxford University Press. DOI: 10.1093/acprof:oso/9780199664054.001.0001

Levi-Strauss, C. (1962). *The savage mind*. Chicago, IL: University of Chicago Press. [Translated from Lévi-Strauss, C. (1962). La Pensée sauvage. PLON: Paris].

Luck, R. (2010). Using objects to coordinate design activity in interaction. *Construction Management and Economics*, 28, 641–655. DOI: 10.1080/01446193.2010.489924

Luff, P., & Heath, C. (2002). Broadcast talk: Initiating calls through a computer-mediated technology. *Research on Language and Social Interaction*. 35(3), 337–366. DOI: 10.1207/S15327973RLSI3503_4

Lunt, P., & Livingstone, S. (1992). *Mass consumption and personal identity*. Oxford: Oxford University Press.

Lynch, M. (1985). *Art and artifact in laboratory science: A study of shop work and shop talk*. London: Routledge & Kegan Paul.

Lynch, M., Livingston, E., & Garfinkel, H. (1983/1990). Temporal order in laboratory work. In J. Coulter (Ed.), *Ethnomethodological sociology* (pp. 416–449). Brookfield, Vermont: Edward Elgar.

Macbeth, D. (1994). Classroom encounters with the unspeakable: "Do you see, Danelle?". *Discourse Processes*, 17, 311–335. DOI: 10.1080/01638539409544871

Malafouris, L., & Renfrew, C. (Eds.). (2010). *The cognitive life of things: Recasting the boundaries of the mind*. Cambridge: McDonald Institute Monographs.

McIlvenny, P., Broth, M., & Haddington, P. (Eds.). (2009). *Communicating place, space and mobility*. Special Issue for *Journal of Pragmatics*, 41(10).

McNeill, D. (1981). Action, thought, and language. *Cognition*, 10, 201–208. DOI: 10.1016/0010-0277(81)90047-0

Merricks, T. (2001). *Objects and persons*. Oxford: Clarendon Press. DOI: 10.1093/0199245363.001.0001

Miller, D. (1987). *Material culture and mass consumption*. Oxford: Blackwell.

Miller, K. (2008). Thing and object. *Acta Analytica*, 23(1), 69–89. DOI: 10.1007/s12136008-0021-5

Miller, P. (Ed.). (2013). *Cultural histories of the material world*. Ann Arbor, MI: University of Michigan Press.

Mondada, L. (2003). Working with video: How surgeons produce video records of their tasks. *Visual Studies*, 18, 58–73. DOI: 10.1080/1472586032000100083

Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. *Discourse Studies*, 9(2), 194–225. DOI: 10.1177/1461445607075346

Mondada, L. (2012a). Garden lessons: Embodied action and joint attention in extended sequences. In H. Nasu, & F.C. Waksler (Eds.), *Interaction and everyday life: Phenomenological and ethnomethodological essays in Honor of George Psathas*. Lanham, MD: Lexington Books.

Mondada, L. (2012b). Talking and driving: Multiactivity in the car. *Semiotica*, 191(1/4), 223–256.

Mondada, L. (2012c). Video analysis and the temporality of inscriptions within social interaction: The case of architects at work. *Qualitative Research*, 12, 304–333. DOI: 10.1177/1468794112438149

Mondada, L., & Schmitt, R. (Eds.). (2010). *Situationseröffnungen: Zur multimodalen Herstellung fokussierter Interaktion*. [Situation openings: On the multimodal accomplishment of focused interaction] Studien zur Deutschen Sprache. Forschungen des Instituts für Deutsche Sprache. Tübingen: Narr.

Murphy, K.M. (2012). Transmodality and temporality in design interactions. *Journal of Pragmatics*, 44, 1966–1981. DOI: 10.1016/j.pragma.2012.08.013

Nielsen, M.F. (2012). Using artifacts in brainstorming sessions to secure participation and decouple sequentiality. *Discourse Studies*, 14(1), 64–86.

Nevile, M. (2004a). *Beyond the black box: Talk-in-interaction in the airline cockpit*. Aldershot: Ashgate.

Nevile, M. (2004b). Integrity in the airline cockpit: Embodying claims about progress for the conduct of an approach briefing. *Research on Language and Social Interaction*, 37(4), 447–480. DOI: 10.1207/s15327973rlsi3704_3

Nevile, M. (2009). "You are well clear of friendlies": Diagnostic error and cooperative work in an Iraq War friendly fire incident. *Computer Supported Cooperative Work*, 18, 147–173. DOI: 10.1007/s10606-008-9089-0

Nevile, M. (2013a). Collaboration in crisis: Pursuing perception through multiple descriptions (how friendly vehicles became damn rocket launchers). In A. De Rycker and Z. Mohd Don (Eds.), *Discourse and crisis: Critical perspectives* (pp. 159–183). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/dapsac.52.05nev

Nevile, M. (2013b). From body to objects: First steps in tracking an embodied turn in research on language and social interaction. Public lectures at The University of Southern Denmark, Kolding, and The University of Iceland, Reykjavík (both October).

Nevile, M. (2014). A complete chronological bibliography of the journal *Research on Language and Social Interaction*, 1987–2013. Available at https://southerndenmark.academia.edu/MauriceNevile

Nevile, M. (in preparation). The embodied turn in research on language and social interaction: A review of studies in *ROLSI*, 1987–2013. Paper for submission to the journal *Research on Language and Social Interaction*.

Nevile, M., & Haddington, P. (2010). *In-car distractions and their impact on driving activities*. Canberra: Department of Infrastructure and Transport. RSGR 2010-001.

Nishizaka, A. (2006). What to learn: The embodied structure of the environment. *Research on Language and Social Interaction,* 39(2), 119–154. DOI: 10.1207/s15327973rlsi3902_1

Nishizaka, A. (2007). Hand touching hand: Referential practice at a Japanese midwife house. *Human Studies*, 30(3), 199–217. DOI: 10.1007/s10746-007-9059-4

Nishizaka, A. (2011). The embodied organization of a real-time fetus: The visible and the invisible in prenatal ultrasound examinations. *Social Studies of Science*, 41(3), 309–336. DOI: 10.1177/0306312710386842

Noy, C. (2012). Inhabiting the family-car: Children-passengers and parents-drivers on the school run. *Semiotica*, 191, 309–333.

Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.

Ochs, E., Gonzales, P., & Jacoby, S. (1996). "When I come down I'm in the domain state": Grammar and graphic representation in the interpretative activity of physicists. In E. Ochs, E. A. Schegloff, & S. Thompson (Eds.), *Interaction and grammar* (pp. 328–369). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511620874.007

Parsons, T. (2009). *Thinking objects: Contemporary approaches to product design*. Lausanne: Ava Publishing.

Phillabaum, S. (2005). Calibrating photographic vision through multiple semiotic resources. *Semiotica*, 156(1/4), 147–175.

Pike, K. L. (1967). *Language in relation to a unified theory of structure of human behavior* (2nd edition). The Hague: Mouton.

Pitsch, K. (2012). Exponat – Alltagsgegenstand – Turngerät. Zur interaktiven Konstitution von Objekten in einer Museumsausstellung. [Exhibition object – Everyday object – Turn-taking device. On the interactional constitution of objects in a museum exhibition] In H. Hausendorf, L. Mondada & R. Schmitt (Eds.), *Raum als interaktive Ressource*. [Space as an interactional resource]. (pp. 233–273) Tübingen: Forschungen des Instituts für Deutsche Sprache.

Pomerantz, A. (1984). Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 57–101). Cambridge: Cambridge University Press.

Pomerantz, A., & Fehr, B. J. (1997). Conversation Analysis: An approach to the study of social action as sense making practices. In T. A. van Dijk (Ed.), *Discourse studies: A multidisciplinary introduction* (pp. 64–91). London: Sage.

Psathas, G. (1979). Organizational features of direction maps. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 203–226). New York: Irvington.

Psathas, G. (1986). Some sequential structures in direction-giving. *Human Studies*, 9(2–3), 231–246. DOI: 10.1007/BF00148129

Psathas, G. (1990). The organization of talk, gaze, and activity in a medical interview. In G. Psathas (Ed.), *Interaction competence* (pp. 205–230). Washington DC: University Press of America.

Psathas, G. (1991). The structure of direction-giving in interaction. In D. Boden, & D. H. Zimmerman (Eds.), *Talk and social structures: Studies in ethnomethodology and conversation analysis* (pp. 195–216). Cambridge: Polity Press.

Psathas, G. (1992). The study of extended sequences: The case of the garden lesson. In G. Watson, & R. M. Seiler (Eds.), *Text in context: Contributions to ethnomethodology* (pp. 99–122). Newbury Park: Sage.

Quine, W. V. O. (1960). *Word and object*. Cambridge, MA: MIT Press.

Rae, J. (2001). Organizing participation in interaction: Doing participation framework. *Research on Language and Social Interaction*, 34(2), 253–278. DOI: 10.1207/S15327973RLSI34-2_4

Rendle-Short, J. (2006). *The academic presentation: Situated talk in action*. Aldershot: Ashgate.

Sacks, H. (1992). *Lectures on conversation [1964–1972]*. Cambridge: Blackwell Publishers.

Sacks, H., & Schegloff, E. A. (2002). Home position. *Gesture*, 2(2), 133–146. DOI: 10.1075/gest.2.2.02sac

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50(4), 696–735. DOI: 10.2307/412243

Schegloff, E. A. (1979). The relevance of repair for syntax-for-conversation. In T. Givón (Ed.), *Syntax and semantics 12: Discourse and syntax* (pp. 261–288). New York: Academic Press.

Schegloff, E. A. (1992). Repair after next turn: The last structurally provided defense of intersubjectivity in conversation. *American Journal of Sociology*, 97(5), 1295–1345. DOI: 10.1086/229903

Schegloff, E. A. (1998). Body torque. *Social Research*, 65(3), 535–596.

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, 7(4), 289–327.

Schiffer, M. B. & Miller, A. R. (1999). *The material life of human beings: Artifacts, behavior, and communication*. New York: Routledge.

Schliemann, A. D. (2002). Representational tools and mathematical understanding. *The Journal of the Learning Sciences*, 11, 301–317. DOI: 10.1080/10508406.2002.9672141

Sennett, R. (2008). *The craftsman*. New Haven and London: Yale University Press.

Sheets-Johnstone, M. (2009). *The corporeal turn: An interdisciplinary reader*. Exeter: Imprint Academic.

Sidnell, J. (2011). *Conversation analysis. An introduction*. Chichester: Wiley-Blackwell.

Sidnell, J. & Stivers, T. (Eds.). (2005). *Multimodal interaction*. Special Issue of *Semiotica*, 156.

Sidnell, J., & Stivers, T. (Eds.). (2013). *The handbook of conversation analysis*. Chichester: Wiley-Blackwell.

Stafford, B. M. (2009). *Echo objects: The cognitive work of images*. Chicago & London: The University of Chicago Press.

Streeck, J. (1996). How to do things with things. *Human Studies*, 19, 365–384. DOI: 10.1007/BF00188849

Streeck, J. (2009). *Gesturecraft: The manu-facture of meaning*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/gs.2

Streeck, J. (2013). Interaction and the living body. *Journal of Pragmatics*, 46(1), 69–90. DOI: 10.1016/j.pragma.2012.10.010

Streeck, J., Goodwin, C., & LeBaron, C. (Eds.). (2011). *Embodied interaction: Language and body in the material world*. Cambridge: Cambridge University Press.

Suchman, L. A. (1987). *Plans and situated actions: The problem of human-machine communication*. Cambridge: Cambridge University Press.

Suchman, L. A. (2007). *Human-machine reconfigurations: Plans and situated actions* (2nd edition). Cambridge: Cambridge University Press.

Suchman, L., Trigg, R. & Blomberg, J. (2002). Working artefacts: Ethnomethods of the prototype. *British Journal of Sociology*, 53(2), 163–179. DOI: 10.1080/00071310220133287

Svinhufvud, K., & Vehviläinen, S. (2013). Papers, documents, and the opening of an academic supervision encounter. *Text & Talk*, 33(1), 139–166.

Tambornino, J. (2002). *The corporeal turn: Passion, necessity, politics*. Maryland, Oxford: Rowan and Littlefield.

Thomasson, A. L. (2007). *Ordinary objects*. Oxford: Oxford University Press. DOI: 10.1093/acprof:oso/9780195319910.001.0001

Turkle, S. (Ed.). (2007). *Evocative objects: Things we think with*. Cambridge, MA: MIT Press.

Verbeek, P-P. (2006). *What things do: Philosophical reflections on technology, agency, and design*. University Park: Pennsylvania State University Press.

Velmans, M. (2009). *Understanding consciousness*. 2nd edition. Sussex: Routledge.

Wetzel, L. (2009). *Types and tokens: On abstract objects*. Cambridge, MA: MIT Press. DOI: 10.7551/mitpress/9780262013017.001.0001

Wootton, A. J. (1994). Object transfer, intersubjectivity and third position repair: Early developmental observations of one child. *Journal of Child Language*, 21(3), 543–564. DOI: 10.1017/S0305000900009454

Zinken, J. & Ogiermann, E. (2013). Responsibility and action: Invariants and diversity in requests for objects in British English and Polish interaction. *Research on Language and Social Interaction*, 46(3), 256–276. DOI: 10.1080/08351813.2013.810409

PART A

Objects as situated resources

Organising and sequencing

The order of ordering

Objects, requests and embodied conduct in a public bar

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This chapter examines how, in video-recorded public house service encounters between customers and bartenders, different objects emerge and are constituted as essential resources in accomplishing the service encounter at the bar. The objects of interest are the cash till and the tables in the bar, as well as the bar environment itself. Using ethnomethodology and conversation analysis, we show how the bartenders and customers recruit and index these objects at particular junctions in the ordering sequence, and how they work collaboratively with spoken talk to progress the activity of ordering. This chapter aims to expand thinking on how embodied conduct may be analysed in conjunction with talk, and highlights the integral nature of objects to the progression of social life.

Introduction

In this chapter, we examine how, in video-recorded public house service encounters between customers and bartenders, different objects emerge and are constituted as essential resources in accomplishing the ordering of drinks and food at the bar. The objects of interest are the cash till and the tables in the bar, as well as the bar environment itself. We show how the bartenders and customers recruit and index these objects at particular junctions in the ordering sequence, and how objects work collaboratively with talk to progress the activity of ordering. We unpack a series of activities in which, first, bartenders interact with the till to progress customers' orders for drinks and food, by selecting buttons on the till screen satisfying the till's programming and registering items. Second, we show how customers orient to the bar's 'semiotic field'; that is, its layout and the arrangement of its tables, in response to bartenders' questions about their table number.

Customers are able to identify their chosen location in the bar by providing a number for the table, by referencing its location or through embodied gesture. We also consider the parties' differential access to, and knowledge of, these objects: only the bartender has access to the till; the parties display unevenly distributed knowledge of tables and table numbers. The bartender has access to the visual prompts from the till and expert knowledge of its programmed requirements. The customers have the knowledge of their table location, but not always the expert knowledge of its specific number. Overall, the chapter displays how customers and bartenders make relevant aspects of the bar's 'semiotic field' and its objects in aggregate, during the initial stages of the ordering process. By examining the mobilisation of two key objects in this sequence, the till and the tables, the organisation and order of ordering is revealed.

Objects and the organisation of service encounters

The study of embodied conduct and its centrality to the organisation of action has a well-established history and trajectory in the analysis of interaction, within the study of human sociality in its multimodal forms. In contrast to psychological studies of 'body language' (e.g. Greenlees, Bradley, Holder, & Thelwell, 2005), and counter to notions that interaction analysis examines 'just talk' (e.g. Frosh, 1999), the study of embodied conduct, including gaze and gesture, has begun to show "unprecedented richness of details of the precise timing of tacit activities in coordinated work" (Deppermann, 2013, p. 1).

Within this literature, however, less attention has been paid to the way people mobilise *objects* as resources in and for interaction. As Goodwin (2013, p. 8) writes, "actions are constructed by assembling diverse materials, including language structure, prosody, and visible embodied displays". Within this broader array of such materials and "semiotically charged objects" (Goodwin, 2013, p. 8), a small number of researchers has examined the ways in which people mobilise objects to organise everyday life, across domestic, workplace and public settings. From the relevance of tools on board an ocean-going ship to the organisation of daily life on board – such as the maps which provide representations of the external environment (Goodwin, 1995) – to use by pilots of aeroplane instruments, reference manuals and computer programmes to calculate landing speeds (Hutchins, 1995; see also Nevile, 2004), interaction analysts have established the relevance of a "full array of visible and audible resources" in "spatial environments populated with material objects" for our understanding of social interaction, including rethinking some basic notions about social life (Deppermann, 2013, p. 4).

In this chapter, we investigate the activities in a different sort of environment: the public bar, where customers buy drinks and food across a bar, from a bartender. There is a multitude of objects in the bar space, including the bar itself with beer taps and a till. The bar counter constructs a barrier between bartender and customer, but is also a site for the activity of ordering (Brown, 2004). Beyond the bar itself, is a larger space with numerous tables where customers can sit to eat and drink. A key activity at the bar is the 'service encounter' between customer and bartender, which involves both their spoken interaction and mobilisation of objects that figure in that interaction. The service encounter comprises a series of *requests* that run in both directions between customer and bartender. While the customer requests drinks and food from the bartender, the bartender, as we will see, requests information about the customer's table number. What we will show is how two types of object, the till and tables, are integral to the accomplishment of both of these activities.

While requests, as "basic and ubiquitous" (Curl & Drew, 2008, p. 130) human activities, have been studied in some detail by conversation analysts, only a small number of studies has focused on their design and organisation in service encounters (e.g. Merritt, 1976), including examining the preference for progressivity of an encounter (e.g. Kuroshima, 2010) and what happens when requests are not granted (e.g. Vinkhuyzen & Szymanski, 2005; see also Raevaara, 2011). Objects can be recruited into service encounters at every phase, from specifying and recording the detail of orders to using calculators and computers to total prices and complete financial transactions. For example, in Moore, Whalen and Gathman's (2010) study of a reprographics business, they examined customer–client interaction, focusing on the way the staff deployed a standardised form to ensure that the correct information about a customer's order was captured.

A handful of other studies is particularly relevant to the current chapter's focus on service encounters and the objects that progress them. For example, Lee (2009) examined the way call-takers in airline sales encounters oriented to their computer as an object displaying permitted flight options. When a customer's request could not be granted but an alternative flight was available, the call-taker formulated this information and relayed it to the customer through a series of questions. Similarly, Whalen and Vinkhuyzen (2000) examined telephone calls, but to a customer support centre, rather than in a direct sales environment. They investigated the way call-takers use the computer and its software to help callers diagnose computer problems. One aspect of the interaction involved the call-taker making requests for information from the callers, including the serial number of their machine and other reference information. This information then allowed a 'job ticket' to be created and the issue with the equipment to be explored. Such requests and

their completion, and the call-taker's interaction with their workplace objects, were essential ingredients in the accomplishment of the service encounters (see also Whalen, 1995).

As discussed at the start of this chapter, the centrality of mutually-informing resources, such as gaze direction, body orientation and involvement with objects, demonstrates the importance of analysing such resources in addition to the spoken talk that comprises a social encounter. Focusing on sales encounters, Llewellyn and Burrow (2008) investigated *Big Issue* sales transactions on the street, observing how sellers and customers use the landscape, verbal conduct, gaze direction and involvement with objects like shopping bags and purses, to initiate or, very often, *avoid* such encounters. Prior to any spoken talk, customers' involvement, or lack of it, with objects in a store has also been shown by Clark and Pinch (2010) to indicate availability to enter into a sales encounter on the shop floor. Others have investigated how parties make projected activities observable through the indexing of, movement with or use of objects. For example, butchers may wipe their hands on their apron to display that they are ready to serve the next customer (e.g. Dausendschön-Gay & Krafft, 2009). Alternatively, objects can be used to mark the completion of actions. For example, in Brown's (2004) studies of a Swedish market stall and a tourist information centre, objects symbolised the closing of an encounter once a request had been made and a service provided: in the market stall customers left with their goods in a bag; in the tourist information centre they left with a document.

In the current chapter, the setting under investigation involves some similar activities, objects and gestures, which work together in a situated, material environment. For example, the bar has a computerised till; the bartender inputs information, and the till processes that information. When customers order drinks and food, the bartender formulates the order 'for the till', by entering the items on the screen. This process then records the items as sold for stock purposes and totals the price, which is subsequently formulated by the bartender. Food orders, once completed, are sent electronically to the kitchen staff for preparation. To complete food orders, however, the bartender must enter a table number into the till, and to do this, must request this information from customers. As we will see, customers sometimes know their table number. However, when they do not, they use the resources available in the bar's environment, as well as their bodies, to locate their table and formulate it for the bartender. The analysis we present contributes not only to the general, on-going trajectory of "multimodal CA" (Deppermann, 2013), but to one specific focus of this book, on objects as resources *in and for* interaction.

The data and analytic approach

200 service encounters from a public house, or bar, in England were video-recorded. The bar was located in a town centre and had a wide customer demographic. It served alcohol, hot drinks and food, opening at 11 a.m. and closing at 12 p.m. The bar served mainly food in the day and alcohol in the evening. The data were collected during the lunchtime service period between 12 p.m. and 2 p.m. To capture the customer–bartender service encounter, a video camera was positioned behind the bar. All participants consented to be recorded. Posters were placed on bar entrances, announcing that recording was taking place and therefore employing an 'opt-out' method. The data were anonymised according to standard ethics guidelines. The data were transcribed using Jefferson's (2004) system for conversation analysis. The analytic approach is ethnomethodological and conversation analytic, paying attention to the sequential organisation of the interactions which constitute and make visible the order of the bar. We examined how particular objects contributed to the development of courses of action, as well as the way those objects afforded or constrained those actions.

Analysis

The analysis is organised into three inter-related sections, each illustrating how objects are fundamental to accomplishing the ordering sequence. The first section examines the role of the cash till and the bartender's orientation to it, as a customer's order is initiated. The second and third sections describe how participants select tables, as particular objects in the surrounding space, to accomplish a particular interactional goal within the ordering sequence, and thus constitute the tables as aggregate components of social action.

The cash till as a mobilised object

As an electronic device, the till registers and calculates the payment totals of items ordered, relaying the ordered food items to the kitchen staff. It also holds money. The "contextual configuration" (Goodwin, 2000) of the environment is organised such that the customer is located on one side of the bar counter, with the till positioned on the bar counter facing the bartender on the other side. The till's programming records the order which ensures that, like other paper and electronic forms, certain information is collected and so constrains the content of each order. The first substantive interaction the bartender has with the till is as they 'log in'.

Each member of the bar staff team has a key fob; by placing this key fob against the till they gain access to various menus. This allows transactions to be recorded as completed by a specific bartender. When a customer requests a drink, the various expandable options can be accessed by touching square buttons on the till's screen until the requested item is located and logged. When a customer requests food, the expandable menu button displays a screen of table numbers, temporarily halting the progressivity of the interaction (Stivers & Robinson, 2006). While this may be an integral part of the activity for the bartender, it is invisible to the customer; something which manifests itself in particular interactional features, as we will see later in the chapter. The bartender must input a table number before locating and registering the items requested. Unlike paper forms, which may be produced at a counter and visible to both parties (see Moore et al., 2010), the till screen is visible only to the bartender. Figure 1 displays the sequence of actions the bartender must perform prior to registering items ordered.



Figure 1. Table number entry

When a food order is initiated by the customer, the bartender must select the 'food' button at the top left of the till screen. This then expands in to a list of eight further options. To access the food-ordering screen, the bottom right button of these eight options is selected. This then expands to a screen of all the possible table numbers from which the bartender must select to progress the activity of ordering. These activities occur every time a food order is initiated.

In the public house that provided the setting for data collection, customers order food in one of two ways: they either browse the menu and *then* order food and/or drinks at the bar *prior* to locating a table, or go directly to a table prior to interacting with the bar staff. On each table, or in the vicinity of each table, there is a menu. Customers select items, take note of their table number (demonstrable by them producing the information when it is requested) and approach the bar to order. When selected as the next customer, they order and pay in one transaction. The customers then return to their specified table and, when ready, waiters bring food items to the correct table. This is the 'script' for this bar; it is interactionally instantiated and maintained (see Edwards, 1994).

Our analysis of the till, as a mobilised object in and for interaction, is divided into two sub-sections which show how the till and its programming, and the spatial arrangement of the bartender and customer, work to produce the service encounter. In each section, we focus on different ways that the cash till 'prompts' the bartender to formulate a request for information about customers' table numbers, temporarily halting the progressivity of the ordering sequence.

'What table are you on?'

Excerpt 1 gives us our first example of the interaction between customer and bartender, and bartender and till. We focus on the way table number requests are organised relevant to the till and formulated by the bartender as an 'insert sequence' (Schegloff, 2007) within an overall food order sequence. The embodied actions shown in video stills occur at the position indicated by a broken line (- - - -).

Excerpt 1 (Richardson LG-27N-C64)

```
01 BAR:     Any one waitin'.
02 CUS:     Yeah can I order some food please,
03 BAR:     Yeah it's about a twen'y minute wait
04          dar[lin'.=is that all]=
05 CUS:        [Yeah that's fine ]=
06 BAR:     =[right yeah.]
07 CUS:     =[   yeah.   ]
            ((B logs on to till))
```



08 BAR: *What table are you [on.]*

09 CUS: *[Uh] table thirteen.*

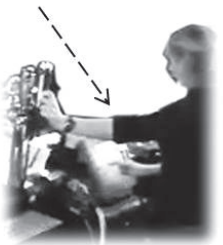
((B selects food button))



10 BAR: *Thirteen.*

11 CUS: *Yeah.*

((B selects table number))



12 BAR: (3.9)

13 BAR: *'kay what would you like darl[in'.]*

14 CUS: *[Um] can I have*

15 *chicken bacon and barbeque melt baguette pleas:e.*

As was typical across the data, an order for food is initiated (lines 01–07) but, before it is progressed (lines 14–15), an object-rich sequence about table numbers is inserted and itself completed (lines 08–12). Let us unpack this basic organisation. At line 01, the bartender invites a next customer to place their order. As we will see across the data, bartenders have different ways of initiating a next customer-bartender interaction; such turns let potential customers know that a new order sequence can be initiated. Here, the bartender asks a question, *Any one waitin*', to allow customers to self-select. In this pair of turns, both parties establish their availability to enter into a service encounter. In Excerpt 1, once the customer has self-selected himself as next customer with a pre-request (line 02), the bartender confirms that the customer can order food but that there will be a twenty-minute delay. The projection of the bartender's account is understood

by the customer who confirms in overlap *Yeah that's fine* (line 05), and again at lines 06–07. So far, then, it is established that the customer will be placing a food order, and has accepted the condition of a twenty-minute wait.

At line 07, then, the bartender logs into the till to begin to turn the customer's verbal request for food into an order on, and for, the till. The table number request, *What table are you on*, comes at line 08, immediately after the bartender has logged into the till, and prior to the till requesting this information. The bartender therefore progresses to a next action in the food ordering process by issuing the request in this sequential position, displaying knowledge of the till's programming and what information will be required to progress the order.

The bartender's formulation of the 'table number' request presupposes that the customer has already selected a table. A fitted response could, however, be a number or a gesture towards the table, perhaps accompanied by the words 'that one'. In Excerpt 1, the customer supplies a number (line 09). However, note that the customer prefaces his response with *Uh*, suggesting that the request was not entirely expectable at this position in the interaction (Heritage, 1998). On receipt of the table number, the bartender then taps the food button; the till displays an array of table numbers on the screen. At line 10, the bartender checks with the customer to confirm the number; the customer confirms at line 11. The bartender is then ready at this point to enter the table number and does so in overlap with the customer's confirmation at line 11. Once completed, ordering resumes (lines 13–15).

Excerpt 2 provides a second example of the way the bartender mobilises the till as part of a customer's request for food.

Excerpt 2 (Richardson LG-27N-C67)

```
01 BAR:     Yes please.
02 CUS:     Can I order some food.
03 BAR:     Course y'can (.) there's a twenty minute wait
04          s'that okay.
            ((B logs into till))
05 CUS:     Yeah tha's fi[ne. ]
06 BAR:                  [↑Yep] table number ple:ase.
                         ((B selects food button))
07 CUS:     Uh eleven.
08 BAR:     Eleven.
                   (0.4)
          ((B selects table number))
09 BAR:     And what can I get for ya.
```

The same basic activities are underway in Excerpt 2: a next customer is selected (this time the bartender selects the customer directly); the customer issues a pre-request for food (line 02); the bartender gives a go-ahead with an account (lines 03–04); the bartender accepts the condition of the order (line 05); a sequence about the customer's table number is initiated and completed (lines 04–08) before ordering resumes (line 09). Again, the till is mobilised by the bartender logging in; this time, and in contrast to Excerpt 1, prior to the customer's acceptance of the twenty-minute wait.

At line 06, the bartender formulates a different version of the request seen in Excerpt 1 (*What table are you on?*), this time asking specifically for a table number using the noun phrase *table number please*. Like the question in Excerpt 1, the bartender's question here presupposes that the customer has already selected a table but, unlike in Excerpt 1, also knows the number. A fitted response, this time, is a number, which the customer supplies. Again, like in Excerpt 1, the customer's response is prefaced with *Uh*, demonstrating it is somewhat inapposite; yet the information is provided, displaying that the customer knew it. The customer's *uh* also reveals an asymmetry of knowledge between the bartender and the customer; the bartender can see that a till number is required and at this point in the sequence; the customer knows a table number is required but perhaps not why and where it becomes relevant.

In Excerpt 3, the bartender cannot access the till because another bartender is already using it.

Excerpt 3 (Richardson LG-12D-C55)

01 CU1: *Have you ordered food.*



02 CU2: ↑*Yep.*

03 CU1: *Okay.*

04 (1.0)



05 CU1: *Can I have thē: ranchers burger,*
06 BAR: *Yep.*
07 CU1: *An:d* (0.7) *uh apple and mango jay two oh.*
08 BAR: *Do you want a glass an' ice,*
09 CU1: *Yes please.*
10 (21.5)
11 CU1: *Would I be able t' 'ave a tap water as well please.*
12 BAR: *Yeah.*
13 CU1: *Thank you.*



14 (15.1)
((B logs in, enters drinks, selects food button))
15 BAR: *What ta:ble number were you on?*
16 CU1: *Thirty five?*
17 BAR: *'Kay.*
18 (4.4) ((B enters table number))
19 BAR: *Do you want ice in your tap water as well,*

A first noticeable thing about Excerpt 3 is that items of food appear earlier in the sequence, before any requests for table numbers are issued. The bartender cannot access the till at the point which the customer is placing her order. The first video still image in Excerpt 3 shows there are three customers around the till at line 01. The till can handle several transactions at one time, afforded by the logging in function for individual bartenders. CU2 states she has ordered food when asked at line 01, but, in fact, her transaction is not complete. As CU1 begins to place her order, CU2's bartender returns with her drink (line 05). This restricts the bartender's access to the till. Although the items have been ordered and the sequence has been closed at line 13 by the customer, the bartender has not made a request for the table number. When the till becomes available for use, after the bartender has prepared the drink, he registers the drink and, while still on the drink selection screen, he asks *What table were you on?* (line 15). Note that the bartender's request, while again presupposing that the customer has already selected a table number, is, this time, delivered in the *past* tense; it is a question that, as we have seen in Excerpts 1 and 2, is routinely located before the customer formulates their food order. He then presses the food button and brings up the table number screen. Although the customer has already requested the food order, the bartender cannot process it without requesting the table number. The bartender could have asked the customer for her table number prior to accessing the till; however, the way this interaction unfolds shows that it is the till that occasions the placement of this table number request, not the 'script' of the bartender.

This section has shown how the cash till is mobilised in food ordering sequences and how it is relevant to the sequential unfolding and organisation of such activities. The bartenders' requests to customers are built grammatically to presuppose that the customer has already identified a table (and, sometimes, a table number) and will be able to identify it when asked. The preface *uh* prior to the customers' providing their table number suggests that the question is somewhat inapposite, but customers nevertheless formulate an answer to the question. This is relevant to the asymmetry of knowledge between bartenders and customers: the bartender has access to the visual prompts from the till and expert knowledge of its programmed requirements (see Drew, 1997). So bartenders are aware that, and when, table numbers are relevant but, as we saw in Excerpt 3, it is the till that occasions the table number request. The next section shows how the format of table number requests may be designed to allow for the contingency that customers do not know their table number.

'Do you know your table number?'

Sometimes, in contrast to asking questions that presuppose customers already know which table they will eat at, bartenders ask a pre-question –a question formatted as a yes/no interrogative (YNI): '*Do you know your table number?*'. The grammatical design of the YNI (see Raymond, 2003) allows for customers to *not know* their table number; to not have selected a table or to have selected one but not noted its number. The action carried in the YNI request, however, prefers a 'yes' response, in that a 'yes' will progress the activity underway, while a 'no' will (temporarily) suspend it.

Excerpt 4 begins with the customer initiating an order for food.

Excerpt 4 (Richardson LG-12D-C50)

```
01 CUS:     Order some food pl'se.

02 BAR:     D'you know your table number.

03 CUS:     Yeah twen'y two:.

04              (4.0)
                ----
            ((B logs in, selects food, enters table number))

05 BAR:     Yep.

06 CUS:     Can I 'ave uh ranchers burger ple:ase.
```

At line 01, the customer makes a pre-request to order food. This occasions the bartender to issue a table number request (line 02). As noted earlier, while the grammatical design of the question allows for the customer to not have noted her table number, a 'yes' will align with the action projected. The customer treats the question as non-problematic; responding to its grammatical form (*yeah*, line 03) and aligning with its action-orientation (*twen'y two*). The bartender is then in a position to progress the food order as the positioning of the table number request means the information can be entered into the till with no delay. Once the table number information is input to the till, the bartender resumes the ordering process (line 05). In contrast to earlier excerpts, in which the bartender logs in, selects 'food' from the menu concurrently with the talk, in Excerpt 4 the bartender does not initiate these activities until line 04. By logging in, selecting food and entering the till number in this sequential position, a four-second gap is created (line 04) before spoken interaction continues.

Excerpt 5 shows some trouble in the interaction due to the sequential positioning of the request for the required table number.

Excerpt 5 (Richardson LG-27N-C58)

```
01 CUS:    Chicken and stuffing and a (bowl of)(   )
02 BAR:    Yeah um do you know your table number.
           ((B logs into till))
03 CUS:    Eh.
04 BAR:    Do you know your table number.
05 CUS:    Yeah twenty five.
06               (5.4)
           ((B selects food, enters table number))
07 BAR:    An': do you want that on white or brown bread.
08 CUS:    White.
```

In response to the customer's request, the bartender starts to confirm that this request can be granted with his *Yeah* at line 02. But note that, within the same turn, he launches the expected request for a table number. The *um* at the start of this request projects this shift to a second action, as the bartender must, in this sequential slot, ask the customer for a table number. This shift from the action of ordering food to a request for the customer's table number occasions an "open class repair initiator" (Drew, 1997) from the customer (*Eh*, line 03). A repair of this kind shows the customer has had some general trouble with the prior turn. Like the customer's *uh*-prefaced responses to requests for table numbers in the previous section, it also marks out such a request as somehow inapposite. So the parties are on different sequential tracks: the customer is probably unaware of the bartender's project when requesting a table number. At line 04, the bartender repeats his original question in its entirety, which is then responded to both with a grammatical "type-conforming" *yeah* (Raymond, 2003), as well aligning with its action-orientation by supplying the table number. The food order is then resumed (line 07). Here, then, the table request has produced some turbulence in the ordering sequence.

Excerpt 6 shows what happens interactionally when the customer cannot provide a table number.

Excerpt 6 (Richardson LG-27N-C40)

```
01 BAR:    You all right there.=
02 CUS:    =Hot chocolate please.
```

03 BAR: Hot chocolate.
04 CUS: *Uh order some chips as well please.*
((B logs into till, selects food button))
05 BAR: *Ye:ah d'you know what table number.*
06 CUS: *Uh hasn't got a table number it's the (sofas)*
07 *in the middle,*



08 BAR: *Ah right okay.*
09 (2.5)
((B selects table number))
10 BAR: *Just some chips yeah.*

At lines 01–03, the customer latches his drinks request onto the bartender's summons, which the bartender then confirms with a 'repeat receipt' (see Puchta, Potter, & Wolff, 2004; Stokoe & Edwards, 2008). At the point where a food item is requested (line 04), the bartender logs into the till, selects 'food' on the till recruiting the object to the interaction. Again, the request is an interrogative, the grammatical design of which prefers a 'yes' plus an alignment with the action (Raymond, 2003). However the customer does not comply with the grammatical constraints of the YNI; instead of saying 'no', he supplies an account for why he cannot provide the bartender with a number: *hasn't got a table number* (line 06). The customer goes on to describe his location in conjunction with a pointing gesture at the end of line 06, *it's the (sofas).* In saying this and being able to locate the table in the environment, it is evident that the customer has selected a table but there was no number on it. The *uh* which prefaces his account orients to the dispreferred non-conforming nature of his response. The bartender has attempted to obtain his table number but has discovered it is impossible for him to find: the fault lies with the bar and not the customer. The customer's gesture to formulate the table's location, in tandem with his description (*it's the (sofas) in the middle,* lines 06–07), provides the bartender with enough information to invoke his professional knowledge of the bar's 'semiotic field' and identify the correct table number.

In this section, we have seen that the YNI, 'do you know your table number?' is, in most cases, responded to with a type-conforming 'yes' plus the table number. While the question is designed for the contingency of not having obtained the table number it still prefers a 'yes'. This excerpt has illustrated how a gesture to a table in the environment can inform the bartender and ensure the location is collaboratively achieved. The second section of analysis focuses on a table request which is *designed* to produce such embodied response to the question.

'Where in the whereabouts': Embodied responses mobilising the environment

In the previous sections, we have seen that table number requests have been issued with the noun phrase 'table number' or at least the referent 'table' in the request. The till, as a key object in the interaction, prompts the bartender for a table number; the bartender formulates one request (asking the customer for the table number) to fulfil another (the table number request made by the till). In this section, we examine a different method for requesting such information and the role of different objects in the completion of the action. Rather than ask for a number, the bartender asks the customer 'whereabouts' they are sitting, which generally prefers, and receives, a description of location. What is interesting is that these verbal descriptions are indexical and accompanied by a gesture towards a table and embodied formulation of its spatial location. The gestures and verbal descriptions must then be converted by the bartender into 'table number' for the till, such that the food order can be progressed.

Excerpt 7 is a first example of an embodied response.

Excerpt 7 (Richardson LG-1A-C3)

```
01 BAR:     >Y' right.<
02 CUS:     >Y' right.< Can I have a chicken
03          and stuffin' sandwich on white bread please.
04 BAR:     Ye:s.
                  ((B logs into till))
05 CUS:     And uh:=
                  ((B selects food button))
06 BAR:     =Whereabouts are you sitting.
```



07 CUS: *Uh just there ( )*
08 BAR: *>Jus' there yeah.<*
09 CUS: *Yeah.*
((B selects table number))
10 CUS: *An' uh: can I have a Carlsberg please.*

Like the examples we saw earlier, the basic sequence of ordering remains the same: a next customer is selected (lines 01–02); an order is initiated (lines 02–03) and progressed (line 10), but only after the customer's table number is established (lines 06–09).

Excerpt 7 provides further evidence that the customer and the bartender are in different epistemic positions with regards to the relevance and placement of table number information in the overall ordering sequence. At line 05, the customer begins to expand on his food order (*And uh*:). However, the bartender interrupts, taking 'directorship' of the ordering process (Lee, 2009, 2011) by inserting the request for table number information. The bartender's question, *Whereabouts are you sitting*, differs in grammatical form from the yes/no interrogative seen earlier ('Do you know your table number'), and requires different information than the form of wh-question seen in the first analytic section ('What table are you on'). It *does* presuppose that the customer knows where he is sitting, in the same way that earlier questions presupposed customers knew their table numbers. But the information requested is different: a fitted response is a formulation of a location. The question asks 'whereabouts' rather than 'where', making a more general response relevant, in contrast to a specific table or its number. At line 07, the customer provides such a response, by gesturing towards the location of his table, at the same time formulating in words the location indicated by his pointing gesture (*uh, just there*). That talk and gesture work in tandem here is evidenced by the customer's use of the indexical *there*, which is given its meaning via the pointing gesture which locates which 'there' is being referred to (see also Rauniomaa & Keisanen, 2012). The bartender follows the direction of the customer's gesture to establish

mutual gaze at the table being formulated. The inclusion of *just* in the customer's answer here works to make the indexical reference more precise, whereas in the next excerpt the same type of sequence is illustrated yet the syntactical position of the *just* in combination with the pointing gesture has a different function.

Excerpt 8 (Richardson LG-22N-C1)

```
01 BAR:    Hi ya how can I he[lp.]
02 CUS:                      [Hi ] can I have um (1.0) a
03         chicken tikka masala and uh pint of Fosters please.=
            ((B logs into till, selects food))
04 BAR:    =Course you can.=Have you got a rough idea of
05         whereabouts you'll be sitting?
06 CUS:    Um, I'll just sit down here somewhere.
```




```
07                  (3.0)
             ((B selects table, enters food items))
08 BAR:    Chicken tikka masala and a pint of-is that with rice
09         or chips:?
```

The bartender designs his question about the customer's likely 'whereabouts' in a more expanded way: *have you got a rough idea of whereabouts you'll be sitting?* (lines 04–05). If 'whereabouts' provides for a more general response than just 'where', or a request for a number, then the even more mitigated request for 'a rough idea' provides for an even less specific formulation of location. Note also that the bartender's question does not presuppose the customer knows his 'whereabouts', as it begins, like questions in the second section of analysis, with *have you got*, providing for the customer to give 'no' as a response. The customer's response is ambiguous with regards to whether he *already* had a 'rough idea' of his table, or whether he is selecting his table as he formulates his turn: *Um, I'll just sit down*

here somewhere (line 06). Similarly to previous excerpts, however, his turn starts with *um*, marking the bartender's question as inapposite. The word *just* in combination with *down here somewhere* is designed reciprocally to provide a 'rough idea' about his table. It differs from the *just* seen in Excerpt 7 in that here it does not work to specify, which would be *I'll sit just there* but to provide this 'rough idea'. Finally, as we can see from the still image, the customer uses a pointing gesture to locate the table, which the bartender follows to establish shared gaze at the key object: a table. By establishing mutual gaze, the customer knows the correct table has been identified and the bartender uses his professional knowledge to convert the customer's answer into a response the till will accept, evidenced by the entering of the number into the till and the progression of the order. Like Excerpt 7, the bartender does not formulate verbally the table number for the customer to know, but, during the gap at line 07, selects from the array of number the screen is showing. Therefore, the till is the intended final recipient for the table number information, and, again, we can see how the customer and the bartender are in different epistemic positions with regards to the way table numbers are relevant to *the till's* role in progressing food orders.

The 'whereabouts' way of requesting the table number works as efficiently as asking the customer what table they are on. It was noticeable that this design was used regularly when there were fewer other customers in the bar; presumably larger numbers would obscure the potential for a shared view of the bar and block pointing gestures. In the next excerpt, although the bartender uses the same request formulation for the table number, the customer orients to the question being a request for a table number.

Excerpt 9 (Richardson LG-5A-C7)

01 BAR: *You 'right there.*

02 CUS: *Uh* (1.1) *two* ( ) *burger but one without the barbeque dip.*

((B logs into till))

03 BAR: *Okay whereabouts are you sitting.*



04 (1.6)

((C turns his head))

05 CUS: *Here to the right (there it is.)*



06 BAR: *Okay.*

07 CUS: *There's no, there's no number on the [table.]*

((B selects food))

08 BAR: *[Nah (t]h's).*

09 BAR: *Most without a number to be honest with you.=*

((B selects table number))

The bartender accompanies his question, *whereabouts are you sitting*, with a pointing gesture (line 03). More specifically, he raises his right hand and performs a circling motion throughout his uttering the word. The customer subsequently formulates where his table is in the bar environment, by moving into the environment and pointing at the table (line 05). The images show the bartender leaning his body to the right in order to follow the customer's gesture so they can collaboratively identify which table the customer is sat at. The bartender receipts this information at line 06 (*Okay*) and, like in previous excerpts, he does not formulate verbally the number but presumably has identified the number being referred to by the customer. The customer expands his response, providing an account for why he has not supplied a table number: *There's no, there's no number on the table* (line 07). The customer orients here to the bar's 'script', that numbers are relevant to the ordering process. What he may not know is that it is the *till* that requires a number, and not the bartender per se. The bartender responds to the customer's account for not giving a number with his own account: *Most without a number to be honest with you.* (line 09).

While the till requires that bartenders enter table number information, for each order and each customer, bartenders must formulate a request. There is no 'script' for doing so; while bartenders have been trained to use the electronic till they have not been trained to ask such questions. So, there are options for designing such requests in different, and particular, ways (see Stokoe, 2013). In each example shown in this section, the customers' referential actions and gestures are recipient designed for the bartender (see Hindmarsh & Heath, 2000). By doing things such as moving into the environment (Excerpt 9), and securing mutual gaze

to an object in that environment, the participants show how their bodily conduct along with the verbal description work to locate key object referents for the main activities underway. Like Rauniomaa and Keisanen (2012, p. 829), we also show, therefore, that "making a request and responding to one are complex multimodal actions where embodiment plays a central role".

Tables and tills

In the final section, we examine some instances in which customers provide their location within the environment *prior* to the bartender requesting it. They reference their table by providing the number which they have actively sought from within the environment to supply to the bartender. In contrast to previous examples, then, in which the bartender took 'directorship' (Lee, 2009) of the table number request sequence; in the examples that follow this directorship is temporarily reversed. Nevertheless, the bartender mobilises the till and its programming to reinstate similar inserted sequences within the overall food ordering activity.

Excerpt 10 (Richardson LG-12D-C15)

```
01 BAR:     Yes [pl'se.]
02 CUS:         [Hello.]
03              (0.6)
04 CUS:     Uh table thir:ty five.
05 BAR:     Yeah.
06 CUS:     Can I possibly have a great big gourmet burger and a
           ((B logs onto till))       ((B selects food))
07          °pint of tap water.°
08 BAR:     Yep.
09 CUS:     °Thanks.°
            ((B circles finger over table numbers))
10 BAR:     Thirty five did you [say. ]
11 CUS:                         [Yeah.]
12                  (1.8)
            ((B selects table number))
13 BAR:     Do you want ice in the tap wa:ter.
```

The bartender's turn at line 01, *Yes pl'se*, invites the customer to place an order. This is treated by the customer as a greeting, who replies *Hello* (line 02); this was relatively uncommon across the corpus. But our main interest is in what happens at line 04, in which, rather than initiate the food order sequence, the customer provides a table number in that slot. By stating the table number the customer

accomplishes several things. First, it constitutes a 'pre' to ordering food. Second, the customer displays knowledge of the way food ordering happens in this bar and that a table number is integral to such an activity. That is, the customer has established that this is not, say, waitress-service at the table. The bartender confirms receipt of this information (line 05) and logs into the till. The customer then places the order, which the bartender then confirms at line 08. The customer then moves to close this sequence, with *thanks* (line 09). However, the bartender is prompted by the till's screen of table numbers, for him to supply the information. So, even though the customer has already supplied the table number, and the bartender has responded to the customer, the bartender nevertheless *re-invokes* a table number sequence (line 10), in the slot where such a request would usually be positioned. It is somewhat accountable, however, and the bartender asks the customer *thirty five did you say*, acknowledging that the customer has already provided this information.

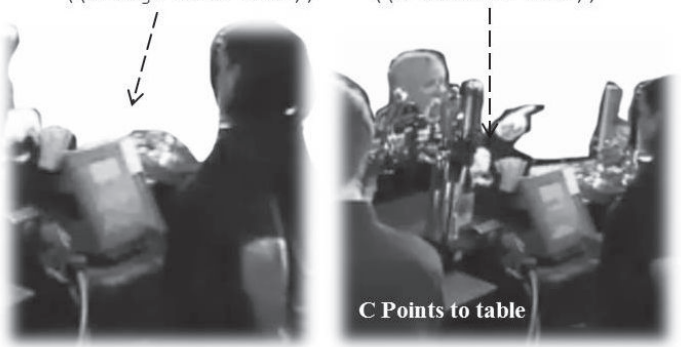
What is of interest in this excerpt is that the interaction unfolds with the same sequential properties as those excerpts in which customers *do not* pre-empt the request. The bartenders taps on the till screen always follow the same routine activity and this excerpt shows the talk following a similar routine pattern. In Excerpt 11, the customer provides the information about her order and her table whilst the bartender co-ordinates her action with the till to produce an efficient transaction.

Excerpt 11 (Richardson LG-27N-C59)

01 BAR: *Yes ple(h)ase.*

02 CUS: *Can I order some food [please] to table si[:x].*

((B logs into till)) ((B selects food))



03 BAR: *[↑Yeah] [ta]ble six.*

04 CUS: *Can I have a bowl of soup,*

The customer is selected as the next customer by the bartender; the customer issues a pre-order and provides her table number within the same turn (line 02). The bartender coordinates her interaction with the till with information provided in the customer's turn. As the customer announces food will be ordered, the bartender logs into the till, then selects the food button when the table number is provided and subsequently enters the number. The inclusion of the information in the customer's first turn allows for a truncated version of the spoken element of this sequence, without the insert expansion sequences that are occasioned by the till. However, the interaction the bartender has with the till remains the same. The sequence still operates with the bartender logging into the till, selecting the food button and subsequently entering the table number.

Concluding remarks

Although the ecology of action is becoming a key topic in various disciplines, studies that explicitly take artefacts and gestures into account – both theoretically and empirically – as they are actually mobilised by participants in interaction have remained under developed (Brassac, Fixmer, Mondada, & Vinck, 2008, p. 1).

In our chapter, we have examined the way two types of object, a cash till and tables, figure in the organisation of public bar service encounters, and, more specifically, in the progress of orders for food. Like Suchman (1987), our focus is not on the way objects determine action but are mobilised as resources in and for action. In the setting we studied, having a 'table number' was central to bartenders' ability to complete customers' food order requests. However, because customers rarely supplied a table number when initiating food orders, bartenders had to formulate requests for this information. This meant that ordering sequences were temporarily halted while table numbers were established. Integral to the completion of table number request sequences were the till itself, as well as the tables and their location in the bar's 'semiotic field', each to be formulated, interacted with, and gestured toward alongside questions and descriptions.

As Goodwin (2013, p. 21) argues, to build action, "participants must know in detail what each other is doing, the kinds of knowledge each can accountably be expected to possess". We highlighted various aspects of the activity of food ordering that displayed each party's stance towards the other's state of knowledge with regards to the unfolding activity. For example, by ordering at the bar, customers displayed implicit knowledge that they were not in a restaurant where, say, they are shown to tables by wait-staff who take orders at those tables. Bartenders' questions presupposed that customers had identified a table where they would eat. Similarly,

customers showed that they knew to identify a table by providing information about it when asked by bartenders.

The detail of ordering sequences also revealed some asymmetry of knowledge between bartender and customer. For example, while it was clear that customers knew, in the main, that they must select a table to eat at, they did not know where in the ordering sequence such information might become relevant. We noted the *uh*'s which prefaced their answers, which marked the somewhat inappositeness of a question about table numbers which were often temporarily halted the progress of their order. We also noted that bartenders, unlike customers, had visual and physical access to the till and its screen. Bartenders' requests for table numbers were, therefore, a standard item in the ordering process from their point of view, but something that was somewhat unexpected, at the moment of interactional relevance, for customers. The centrality of the till was further underscored in cases where the bartender could not access the till or where customers supplied table numbers without being prompted to do so. Finally, we showed that bartenders were able to convert customers' gestures towards tables, on tables without table numbers or in cases where customers did not know the number, into table numbers for the till. The fact that they did not formulate verbally the table number for the customer further marks these interesting asymmetries of practical knowledge about the bar and its ordering organisation.

Overall, we have shown that the interactions at the bar counter, ostensibly between customer and bartender, is more than dyadic (cf. Deppermann, 2013). The bartender interacts with the cash till and the customer. Meanwhile, the customer interacts with the bartender, but, indirectly, and via the bartender, answers questions that the till initiates (see Scott & Purves, 1996). Both parties interact with the bar's 'semiotic field' and its components; in this case, tables, table numbers and their location in space. This chapter has aimed to expand thinking on how embodied conduct within the environment may be analysed in conjunction with talk, and the integral nature of objects to the progression of social life.

References

Brassac, C., Fixmer, P., Mondada, L., & Vinck, D. (2008). Interweaving objects, gestures, and talk in context. *Mind, Culture and Activity*, 15(2), 208–233. DOI: 10.1080/10749030802186686

Brown, B. (2004). The order of service: The practical management of customer interaction. *Sociological Research Online*, 9(4). Retrieved from http://www.socresonline.org.uk/9/4/brown.html DOI: 10.5153/sro.973

Clark, C., & Pinch, T. (2010). Some major organisational consequences of some 'minor', organised conduct: Evidence from a video analysis of pre verbal service encounters in a showroom retail store. In N. Llewellyn, & J. Hindmarsh (Eds.), *Organisation, interaction and practice* (pp. 140–171). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511676512.008

Curl, T. S., & Drew, P. (2008). Contingency and action: A comparison of two forms of requesting. *Research on Language and Social Interaction*, 41(2), 129–153. DOI: 10.1080/08351810802028613

Dausendschön-Gay, U., & Krafft, U. (2009). Preparing next actions in routine activities. *Discourse Processes*, 46(2), 247–268. DOI: 10.1080/01638530902728900

Deppermann, A. (2013). Multimodal interaction from a conversation analytic perspective. *Journal of Pragmatics*, 46(1), 1–7. DOI: 10.1016/j.pragma.2012.11.014

Drew, P. (1997). Open class repair initiators in response to sequential sources of troubles in conversation. *Journal of Pragmatics*, 28(1), 69–101. DOI: 10.1016/S0378-2166(97)89759-7

Edwards, D. (1994). Script formulations: A study of event descriptions in conversation. *Journal of Language and Social Psychology*, 13(3), 211–247. DOI: 10.1177/0261927X94133001

Frosh, S. (1999). What is outside discourse? *Psychoanalytic Studies*, 1(4), 381–390.

Goodwin, C. (1995). Seeing in depth. *Social Studies of Science*, 25(2), 237–274. DOI: 10.1177/030631295025002002

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32(10), 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X

Goodwin, C. (2013). The co-operative, transformative organization of human action and knowledge. *Journal of Pragmatics*, 46(1), 8–23. DOI: 10.1016/j.pragma.2012.09.003

Greenlees, I., Bradley, A., Holder, T., & Thelwell, R. (2005). The impact of opponents' nonverbal behaviour on the first impressions and outcome expectations of table-tennis players. *Psychology of Sport and Exercise*, 6(1), 103–115. DOI: 10.1016/j.psychsport.2003.10.002

Heritage, J. (1998). *Oh*-prefaced responses to inquiry. *Language in Society*, 27(3), 291–334. DOI: 10.1017/S0047404500019990

Hindmarsh, J., & Heath, C. (2000). Embodied reference: A study of deixis in workplace interaction. *Journal of Pragmatics*, 32(12), 1855–1878. DOI: 10.1016/S0378-2166(99)00122-8

Hutchins, E. (1995). How a cockpit remembers its speeds. *Cognitive Science*, 19(3), 265–288. DOI: 10.1207/s15516709cog1903_1

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Kuroshima, S. (2010). Another look at the service encounter: Progressivity, intersubjectivity, and trust in a Japanese sushi restaurant. *Journal of Pragmatics*, 42(3), 856–869. DOI: 10.1016/j.pragma.2009.08.009

Lee, S.-H. (2009). Extended requesting: Interaction and collaboration in the production and specification of requests. *Journal of Pragmatics*, 41(6), 1248–1271. DOI: 10.1016/j.pragma.2008.09.013

Lee, S.-H. (2011). Managing nongranting of customers' requests in commercial service encounters. *Research on Language and Social Interaction*, 44(2), 109–134. DOI: 10.1080/08351813.2011.567091

Llewellyn, N., & Burrow, R. (2008). Streetwise sales and the social order of city streets. *The British Journal of Sociology*, 59(3), 561–583. DOI: 10.1111/j.1468-4446.2008.00208.x

Merritt, M. (1976). On questions following questions in service encounters. *Language in Society*, 5(3), 315–357. DOI: 10.1017/S0047404500007168

Moore, R., Whalen, J., & Gathman, E. C. H. (2010). The work of the work order: Document practice in face-to-face service encounters. In N. Llewellyn, & J. Hindmarsh (Eds.), *Organisation, interaction and practice: Studies in ethnomethodology and conversation analysis* (pp. 49–73). Cambridge: Cambridge University Press.

Nevile, M. (2004). *Beyond the black box: Talk-in-interaction in the airline cockpit*. Aldershot: Ashgate.

Puchta, C., Potter, J., & Wolff, F. (2004). Repeat receipts: A device for generating visible data in market research focus groups. *Qualitative Research*, 4(3), 285–309. DOI: 10.1177/1468794104047231

Raevaara, L. (2011). Accounts at convenience stores: Doing dispreference and small talk. *Journal of Pragmatics*, 43(2), 556–571. DOI: 10.1016/j.pragma.2010.01.020

Rauniomaa, M., & Keisanen, T. (2012). Two multimodal formats for responding to requests. *Journal of Pragmatics*, 44(6–7), 829–842. DOI: 10.1016/j.pragma.2012.03.003

Raymond, G. (2003). Grammar and social organization. Yes/no interrogatives and the structure of responding. *American Sociological Review*, 68(6), 939–967. DOI: 10.2307/1519752

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Scott, D., & Purves, I. N. (1996). Triadic relationship between doctor, computer and patient. *Interacting with Computers*, 8(4), 347–363. DOI: 10.1016/S0953-5438(97)83778-2

Stivers, T., & Robinson, J. D. (2006). A preference for progressivity in interaction. *Language in Society*, 35(3), 367–392. DOI: 10.1017/S0047404506060179

Stokoe, E. (2013). The (in)authenticity of simulated talk: Comparing role-played and actual conversation and the implications for communication training. *Research on Language and Social Interaction*, 46(2), 1–21. DOI: 10.1080/08351813.2013.780341

Stokoe, E., & Edwards, D. (2008). "Did you have permission to smash your neighbour's door?": Silly questions and their answers in police-suspect interrogations. *Discourse Studies*, 10(1), 89–111. DOI: 10.1177/1461445607085592

Suchman, L. (1987). *Plans and situated actions: The problem of human–machine communication*. Cambridge: Cambridge University Press.

Vinkhuyzen, E., & Szymanski, M. H. (2005). "Would you like to do it yourself?": Service requests and their non-granting responses. In K. Richards, & P. Seedhouse (Eds.), *Applying conversation analysis* (pp. 91–106). Basingstoke: Palgrave Macmillan.

Whalen, J. (1995). A technology of order production: Computer-aided dispatch in public safety communications. In P. ten Have, & G. Psathas (Eds.), *Situated order: Studies in the social organisation of talk and embodied activities* (pp. 187–230). Washington: University Press of America.

Whalen, J., & Vinkhuyzen, E. (2000). Expert systems in (inter)action: Diagnosing document machine problems over the telephone. In P. Luff, J. Hindmarsh, & C. Heath (Eds.), *Workplace studies: Recovering work practice and informing systems design* (pp. 92–140). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628122.006

Initiating activity shifts through use of appraisal forms as material objects during performance appraisal interviews

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This study shows how participants of performance appraisal interviews use appraisal forms as material objects in initiations of activity shifts. Participants negotiate their willingness to proceed from one interview item to another by gazing at, pointing toward and manipulating the forms. This study contributes to earlier studies of written documents as material objects in interaction, by showing, firstly, how written documents can be used in a step-by-step embodied negotiation; secondly, how orientation to material objects makes it possible for participants to conduct two activities at the same time; and thirdly, how the document's role as the agenda of an encounter is consequential for the activity. The data of this study consist of six video-recorded appraisal interviews from a Finnish public organisation.

Introduction[1]

Participants of many institutional face-to-face encounters have sheets or piles of papers in front of them, such as agendas, forms, files, plans or memos. Besides having a textual content, these documents also have a material form. They are visible, tangible and movable. They can thus be gazed at, pointed at, handled and manipulated in various ways. For the participants, these become material objects. The textual content is often important for the business-at-hand; an interview, for example, usually follows the items in an interview form in an orderly way (cf. Houtkoop-Steenstra, 2000). However, the material nature of a document is also a resource that can be exploited for various interactional purposes.

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In this study we focus on one setting, the performance appraisal interview, in which a written document, namely an appraisal form, features prominently (cf. Asmuss, 2008; Clifton, 2012). We aim to shed light on how appraisal forms are used interactionally as material objects during these interviews. In particular, we concentrate on initiations of activity shifts. Thus, we will analyse how participants display their orientation to the appraisal form as a material object as they negotiate the possibility to begin to either go through the appraisal form or proceed from one item to another. We argue that the appraisal form is used in systematic ways in such encounters.

In the following, we will firstly review earlier studies of written documents being used as material objects in interaction. Secondly, we will review studies of activity shifts. Finally, we will outline our contribution vis-á-vis these studies.

Written documents as material objects in institutional encounters

A sizable number of studies address written documents as texts in interaction (for a review, see Komter, 2006). However, fewer studies have investigated how written documents are used as material objects. In many of these studies written documents are analysed as one aspect in a wide array of different artefacts and spatial arrangements that are oriented to in interaction. A number of issues have, however, started to emerge. In the following, we will review the findings of these studies from three perspectives: participation, epistemics and sequential order.

Firstly, earlier studies show that orientation to written documents as material objects has to do with securing *participation* in the task at hand. Gaze and gestures directed at the document are used to direct the participants' attention to the document and thus make it a focus of joint attention. For example, the facilitator of a brainstorming session gazes toward and points at a coloured card on a whiteboard to show that the content of the card in question should be the focus of attention (Nielsen, 2012). Similarly, in doing homework together with a child, a parent uses a gesture directed at a specific place on a workbook page to secure the attention of the child (Goodwin, 2007), and in academic supervision, the supervisor and supervisee work towards achieving a joint orientation towards the student's text at the beginning of the encounter (Svinhufvud & Vehviläinen, 2013). Even though, in all of these cases, the task at hand has to do with the content of the document, i.e. the text written on the coloured card, in the workbook or in the student's manuscript, the materiality of the document is important in the creation of what Goodwin (2007, p. 56) calls an "embodied participation framework". The participants display their collaboration in the task through joint attention to the document, i.e. their "co-operative stance" (Goodwin, 2007, p. 62).

In some settings, however, only one of the participants has access to the documents at hand. In such cases joint attention cannot be reached. This is true, for example, in medical consultations in which the doctor has access to a patient's files (Heath, 1986; Ruusuvuori, 2000, 2001). In these cases the doctor's orientation to the documents can disturb the flow of the interaction. There are perturbations and pauses in the patient's talk while the doctor is engaged with the documents. The patient seems to conclude that the doctor's attention is divided. Ruusuvuori (2001), however, makes an interesting observation by noting that the patient's talk is more fluent when the posture of the doctor is toward the patient and not toward the document. Thus, even slight changes in the embodied participation framework have an effect on how the activity proceeds (see also Beck Nielsen, this volume).

Secondly, earlier studies show that written documents are used to display *epistemic* states. Documents, of course, contain some kind of information. What is important for us in this study, however, is that states of knowledge with regard to information in the document can be displayed through gazing at and gesturing towards the document. This is done, for example, by an interviewer in a job interview with regard to applicant files (Glenn & LeBaron, 2011). The interviewer can display both the interactional relevance of the information in the files and the nature of his or her state of knowledge, i.e. whether he or she is reading the information from the files at the moment or just referring to knowledge already acquired earlier. Also, there are different gestures with which the interviewer can either point to a specific part of the files or the files as a whole (see also Mondada, 2012, p. 314). These different orientations are consequential for the interaction: the interviewer makes the interviewee accountable for different interpretations of the information in his or her file. Moreover, as Mondada (2012) shows, the document can also symbolise the epistemic authority of its author. Thus, through pointing at the document, the speaker can show that he or she attributes his or her view to the author of the document.

Written documents can also point to the future, which is true, for example, with architectural drawings (Mondada, 2012; see also Sakai, Korenaga, Mizukawa, & Igarashi, this volume). Documents of this type make it possible to manifest a future state of events and create knowledge with the help of the document as a material object. Mondada (2012, p. 325) shows how a solution to an architectural problem can be "prefigured" through a metaphorical gesture even though it is not clearly formulated in the talk. Thus, it is as if the speaker manipulates the document, (re)formulating its meaning in an embodied way.

Thirdly, *timing* and *sequential order* are important issues with regard to the use of written documents as material objects. For example, orientation to material objects often takes place in between or at the beginning of turn constructional units (Mortensen & Lundsgaard, 2011). Gestures such as pointing at the document

are used to project actions in which the content of the document is referred to (Glenn & LeBaron, 2011; Nielsen, 2012). Also, in the case of doctors' engagement with medical records, it seems to be less disturbing to the patients if this happens at the end of turn constructional units (Ruusuvuori, 2001).

Timing and order are also important in settings in which the activity requires both talking and writing or drawing by the same person. Moreover, writing or drawing specifically entails engagement with the document as a material object. In these cases writing or drawing are precisely synchronised with talk (Nevile, 2004; Mondada, 2012). Nevile's (2004) study of approach briefing by pilots is a case in point. He analyses a case in which the first officer reaches for the pad containing the details of the approach briefing, writes something on it, and returns it to its home position. Nevile shows how the first officer suspends his talk in order to precisely synchronise it with his handling of the pad. Through the synchronisation he displays and embodies the orderliness of his activities to the captain in a setting where strict order is crucial for the normal, successful accomplishment of the tasks at hand. Thus, talk and object-related action are not only simply produced in an orderly way; orderliness is produced through the synchronisation of the different activities.

All the issues reviewed above, participation, epistemics and sequential order, can also be seen in studies where written documents are used as material objects in activity shifts and closings (Deppermann, Schmitt, & Mondada, 2010; Mondada, 2006; Svennevig, 2012). In the following section we will review the earlier literature on activity shifts and look at orientation to written documents as material objects in that context.

Toward a multimodal activity shift

An activity shift is simply a shift from one activity to another.[2] Such a shift includes closing an ongoing activity or topic and starting a new one. According to Sacks (1992, p. 566) topics do not usually have clear boundaries as the shift proceeds stepwise. Thus, a clear topic or activity shift that includes a closing and a beginning must be accomplished by the participants.

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2. We have decided to use the concept 'activity shift' instead of 'topic shift' because the former concept covers the idea of transition where there are different layers of multimodal features involved and not solely speech. The concept 'activity transition' has before been used in multimodal analyses for example by Robinson and Stivers (2001) and Deppermann, Schmitt, and Mondada (2010). In our data of performance appraisal interviews the activity shift is separated in two parts, which are the initiation and the implementation of the activity shift.

Activity or topic shifts and closings have mostly been analysed from the perspective of talk. Words like 'well', 'ok' or 'so' pronounced with downward intonation have been shown to act as pre-closings and indicate topic termination (Beach, 1995; Schegloff & Sacks, 1973). Also, particular conversational actions such as expressing assessments or summaries, holding over prior activities or projecting future activities have been identified as closing indicative (Button, 1991; Schegloff, 2007). In interviews, high-grade assessments by the interviewer, such as 'brilliant' or 'excellent' can indicate a transition to the next question (Antaki, Houtkoop-Steenstra, & Rapley, 2000). Holt (2010) has suggested that shared laughter can also project the termination of a particular topic.

Recently several conversation analytic scholars have started to study activity shifts as multimodal sequences and have begun to take into account different modalities of action, including artefacts. For example, cups and glasses can be used as resources in closing a lunch break in a café (Laurier, 2008). Also, as Robinson and Stivers (2001) show, physicians in doctor-patient consultations begin to show their orientation towards the examination phase by freeing their hands of pens and other artefacts.

As already mentioned, several studies have been made to show that written documents are used as material objects in activity shifts, both in the closing and opening phase of the shift. In Mondada's study (2006) the written document is used to close an activity. She shows how moving a written plan from the middle of the table in a meeting of architects is a crucial part of the closing. As for the opening phase of the shift, Svennevig (2012), in his study of topic introductions, refers to the role of the written agenda as a multimodal resource in activity shifts in meetings. He shows that in addition to referring to the items of the agenda in their talk, chairpersons gaze towards the document and use gestures, such as lifting the document, when introducing new items. In their study of the transition from work to non-scheduled break-like activity and back to work, Deppermann, Schmitt, and Mondada (2010) show how holding a folder can be used as a resource in projecting a return to work.

The use of written documents in activity shifts is related to the issues mentioned in the previous section: participation, epistemics, and order. It is clear that activity shifts have to do with the orderliness of encounters. In particular, order is produced in accomplishing the agenda of meetings (Deppermann, Schmitt, & Mondada, 2010; Svennevig, 2012) with the help of written documents as material objects. Also, activity shifts usually also mean shifts in the participation framework, and the document may be important in this respect. In particular, the concept "double orientation" coined by Deppermann, Schmitt and Mondada (2010, p. 1710) is important. One of the participants gestures that it is time to return to work by holding the folder while the participants are still involved in

break activities such as drinking water. Thus, the written document can act as a vehicle in a step-wise change in the participation framework. As for epistemics, Svennevig's (2012, p. 56) observation is that items in the agenda have a "known-in-advance" status. Thus, when the chairperson gazes at or lifts the document in an activity shift sequence, the participants know what he or she is referring to.

In the present study we wish to extend the previous work by investigating the role of the appraisal form as a material object in activity shifts in performance appraisal interviews. In these sequences, the form is repeatedly used as a tool: the activity shift is projected e.g. through gazing, touching and grasping the document and lifting it from the table. All these cues orient to the appraisal form as a material object. At the same time, however, they project the activity of reading the text.

Our study contributes to earlier studies on activity shifts and the use of written documents as material objects in several ways. Firstly, we will extend the idea of the accomplished character of activity shifts by showing how activity shifts are initiated through a negotiation between the participants and how the negotiation is realised with the help of material objects. Secondly, drawing on the concept of "double orientation" (Deppermann, Schmitt, & Mondada, 2010, p. 1710), we will show how orientation to the document as a material object makes it possible for the participants of a performance appraisal interview to do two things simultaneously: they can finish their conversation on the previous topic and initiate the activity shift. The double orientation is made possible by the embodied nature of the initiation. Thus, we will show that orientation to material objects is not only synchronised with talk, since objects in some ways provide an opportunity for action that is partly independent of talk. Thirdly, we will argue that the written document's role in setting the agenda of the interview and its known-in-advance status are consequential in initiating the activity shifts.

Data and method

The data for the study come from a Finnish public organisation, i.e. 'the Church organisation' that is going through a process of strategic development. The data consist of six performance appraisal interviews that were video-recorded during 2010. There are two superiors and six subordinates involved. We found 40 activity shift sequences in which the participants begin to discuss an item in the appraisal form.

The appraisal form consists of four so-called strategic alignments, such as 'Reaching and acting', and a section called 'Open discussion'. In the latter section both participants could take up the topics that they wanted to discuss. The subordinate's task was to complete the appraisal form in advance so that the superior could

become acquainted with the subordinates' answers before the appraisal interview. The participants went through the form in an orderly manner during the encounter. During the process, the subordinate was required to comment on the things that he or she had written on each section of the form. Every item was closed by agreeing on what would be written down as a conclusion of the previous discussion.

The setting was rather similar in all of the interviews. The superior and the subordinate sat on chairs around a table or on a chair and a sofa. The participants had visible access to each other and to the written appraisal forms. The documents were placed either on the table in front of the superior and the subordinate or they held them on their laps. The encounters were video-recorded with one camera, which was located to the side of the participants.

For the purpose of our research, the activity shift sequence can be separated into two parts. The first part we call the initiation of the activity shift. There the participants multimodally negotiate the possibility to close the present activity and move on to the next section in the appraisal form. This is the part of the sequence that we are especially interested in. In the second part, the implementation, the shift to the next activity concretely takes place as the superior announces the next item.

The multiple means of the initiation

As one studies the initiations of activity shifts, one can easily find verbal resources – word choices, closing-implicative expressions and prosody – that are used to indicate the shift to another activity. However, the resources of speech are just one level of multimodal cues among others: e.g. gestures, postures and embodiment. Concerning the performance appraisal interview data, the prominent role of the written appraisal form is the central feature. In various ways, the participants use this document as a material object, in order to negotiate when the next activity should take place. In the present section, we list these different embodied resources of activity shifts and introduce some of them with the help of stills. In the following section we will then move to a detailed analysis of how these resources are used to accomplish an activity shift.

Figure 1 visualises the most commonly activated document-related resource in the activity shifts: the gaze directed toward the appraisal form. Figure 1 represents a typical setting before the implementation of the activity shift: both the superior and the subordinate are silently gazing towards the written documents. By glancing down at the documents on their laps the participants are able to display their willingness to turn to the next item on the appraisal form. In a similar way, Svennevig (2012, p. 57, 61) has noted in his data of workplace meetings that the chairperson tends to look at the written agenda before introducing a new topic.

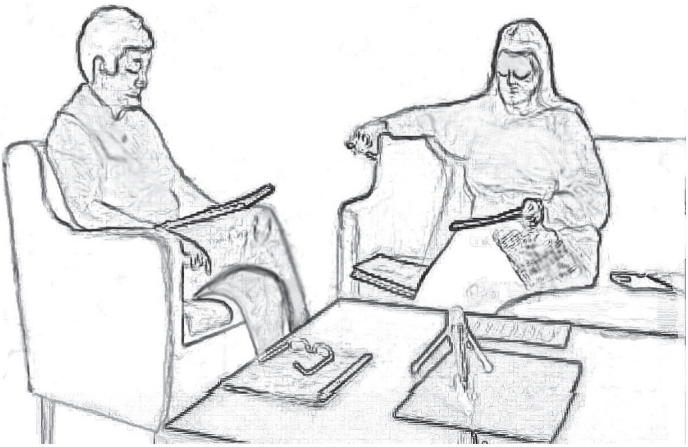


Figure 1. Gazing toward the document

Another discreet way of taking up the possibility of an activity shift is to handle the written text. In our data, we found many examples of documents being manipulated in order to signal activity shifts. The means used were touching, grabbing, raising, opening and folding, moving the document on the table, turning the page, riffling through the pile of papers and tapping the table with the pile. Furthermore, a written document already held in the hands can be made relevant by gently fluttering it. In Figures 2 and 3 we will show two different ways of manipulating the document in initiations of activity shifts.

In Figure 2, the superior on the right has grabbed the document during the subordinate's turn and lifted it between the participants. As the document is placed at the line of sight of the opposing party, the cue is hard to pass unnoticed. By keeping the document steadily in an upright position, as shown in Figure 2, the superior can indicate that the discussion related to the written document is expected to be the next action.

In Figure 3, one of the participants is turning the page of the appraisal form and setting the topmost page of the pile on the table. This action clearly has two implications. On the one hand, it can be seen as closing-implicative: the ongoing topic is concretely moved out of sight when the topmost page is relocated so that it is no longer in the focus of attention (see Mondada, 2006 for a similar kind of finding). On the other hand, the following page in the pile represents a new activity.



Figure 2. The document lifted in an upright position

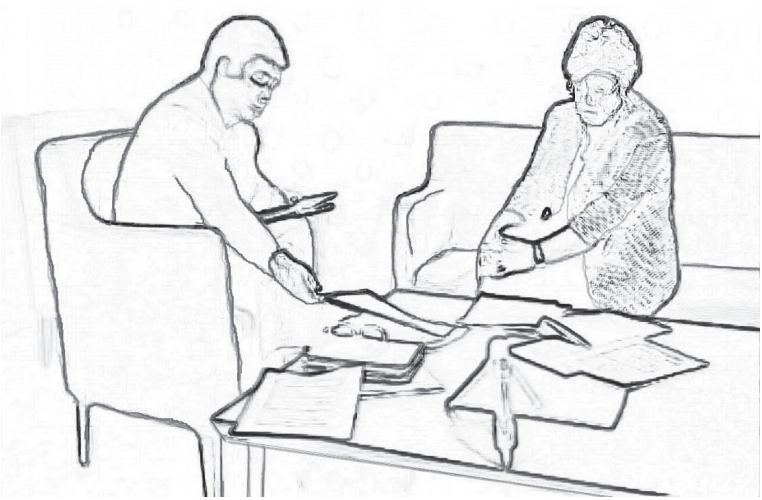


Figure 3. Setting a page on the table

Another important group of multimodal means in the initiations are cues that indirectly show orientation to the written text. These cues project reading or handling the text without manipulating the document itself. In Figure 4, the superior puts on his reading glasses while the subordinate is talking. He has also lifted the document from the table and holds it with his left hand. It is obvious that he wears the glasses in order to read the appraisal form because he promptly takes them off when he no longer shows orientation to the document. Accordingly, putting on the glasses during the co-participant's turn the superior can delicately display a willingness to change the topic. Similar kinds of means include certain changes in posture, such as leaning to the table before grasping the appraisal form or lifting a pen from the table in order to write on the document. In one instance the superior moves the calendar from the top of the appraisal form to be able to handle the document. Before this the participants have been noting a date for the next meeting in their calendars.



Figure 4. Putting on reading glasses

The appraisal form in multimodal negotiation

In the previous section we listed the different embodied resources used by participants to achieve an activity shift during performance appraisal interviews. There, the embodied means were addressed separately, without placing them in the context of actual interaction. In this section, we present a detailed analysis on how the superior and the subordinate multimodally negotiate the possibility to move to the next section in the appraisal form. Thus, we will demonstrate how initiating an activity shift is a joint accomplishment of both participants and how the written appraisal form, i.e. the material object, is used to achieve this purpose. A series of stills are used to illustrate the main actions of the sequences.

We will analyse two excerpts that represent the common and prominent multimodal features of the data. However, the excerpts used do have some significant differences. Excerpt 1 demonstrates a situation where the multimodal negotiation promptly leads to an activity shift, whereas Excerpt 2 is more complicated. Additionally, Excerpt 1 focuses mostly on gaze direction as an embodied cue. Excerpt 2 includes different ways of manipulating the appraisal form. In Excerpt 1, the person initiating the negotiation concerning the activity shift is the subordinate. In the Excerpt 2, this person is the superior. Hence, with these two excerpts we aim to demonstrate different features of multimodal negotiation with the help of a material object. In the transcripts we follow the conventions based on Jefferson's (2004) work. The non-verbal actions of the participants have been marked below the lines of talk. The arrow symbol (→) is used to indicate gaze direction. The timing of the pictures in the figures (A, B, C etc.) has been marked in the transcript.

Excerpt 1 designates the significance of gaze direction in initiating a new activity. Gaze is a prominent cue in our data, as there seems to be a strong tendency for both participants to be looking at the appraisal form before the implementation of a new activity. As Goodwin (1981, p. 30) puts it, gaze is an important social act. It constitutes a display of hearership or addressing the utterance to someone. On the other hand, gaze can indicate withdrawal from the interaction and orientation to somewhere else, as will be seen in Excerpt 1. The different phases of activity shift are illustrated in Figure 5.

Before the beginning of Excerpt 1, the female superior (on the left) and the female subordinate have been discussing how the subordinate could evaluate her own performance at work. The subordinate has first offered her understanding concerning the matter, namely that the regular feedback from her subordinates informs her how she has succeeded. The superior has accepted the idea and the subordinate has begun to write this down on the appraisal form on her lap. Excerpt 1 begins when the subordinate is orientating to the writing task and

glances down at the document. Her co-participant, however, continues the discussion at hand and starts to develop her opinion from line 01 onwards. Concurrently she adopts a middle-distance gaze (cf. Goodwin, 1981). The situation described here is illustrated in Figure 5, Picture A.

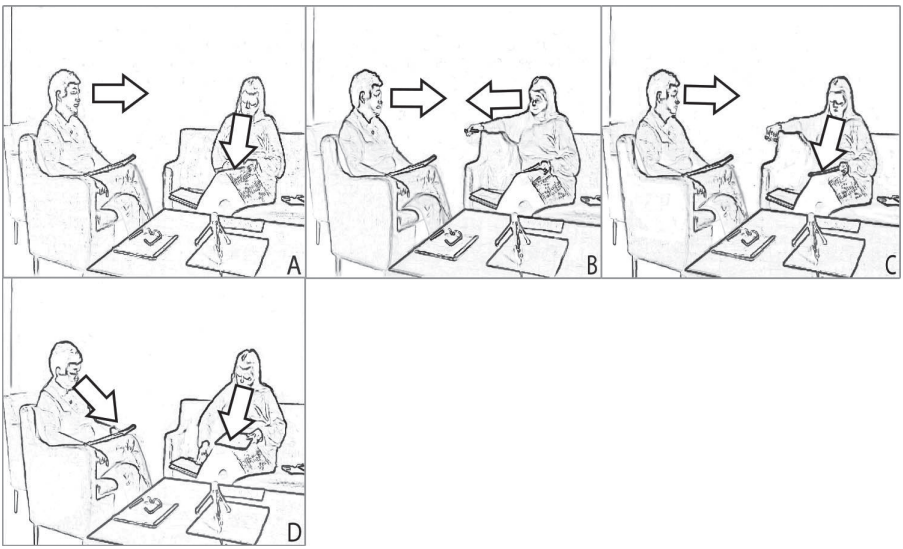


Figure 5. Gaze toward the document as a resource in multimodal negotiation

Excerpt 1

```
01 SUP:     et esimerkiks jos ajatellaan seuraavaa työvuotta? (pic. A)
            so if we think about the next working year for example?
            SUB writes
            SUB→doc
            SUP→middle-distance

02          (2.2)

03          siis ihan kalenterivuotta.
            I mean the calendar year.
            SUB writes

04          (0.8)

05          ni meillä on:
            so we shall have:
               SUB quits writing, lifts pen from the paper
                        SUB→SUP

06          (.) ens syksyyn                                    mennessä (pic. B)
            (.) by next fall
            SUB moves hand with the pen on the back rest of the sofa
                  SUP → SUB

07          niinku (0.4) jotakin (.)ihan konkreettista     (pic. C)
            kinda like (0.4) something (.) quite concrete
                                                  SUB→doc
```

```
08          >mitä ne< seurakuntalaiset haluais.
            >what the< parishioners would like to have.
                  SUB          nods

09          (1.8)

10 SUP:     minkälaista ne haluis °olla mukana°.
            what they would like to °be a part of°.

11          (0.6)

12 SUB:     °mm-m°.
            SUB nods

13          (1.6)  (0.8)  (3.0)
                  SUP→doc

14 SUB:     mm.
            SUB lifts her hand in order to turn the page (pic. D)
            SUB starts nodding

15          (0.8)

16 SUP:     hyvä.     sitte kolmas          kohta
            good. then the third section
            SUB        nods
                              SUB grasps the doc

17          eli kolmas strateginen           tavote.
            that is the third strategic alignment
              SUB moves the topmost page aside

18          (0.6)

19          edistämme yhteiskuntaa uudistavaa elämäntapaa. hh
```

The superior first frames her stance by bringing up the time period that the participants should take into account in appraising the work of the subordinate: *et esimerkiks jos ajatellaan seuraavaa työvuotta* 'so if we think about the next working year for example'. Then the superior continues by stating her actual argument from line 05 onwards: *ni meillä on: (.) ens syksyyn mennessä niinku (0.4) jotakin (.) ihan konkreettista >mitä ne< seurakuntalaiset haluais* 'so we shall have: (.) by next fall kinda like (0.4) something (.) quite concrete >what the< parishioners would like to have'. In this sentence, she thus hints that the subordinate should first consider the opinion of the parishioners.

A striking feature in this excerpt is that when the superior is just about to reach the central point of her argument at line 05, the subordinate visibly stops the writing task: she lifts the pen from the paper and leans on the back rest of the sofa while still holding the pen in her hand. Additionally, she turns her gaze to the superior and the participants achieve a mutual gaze at line 06 (Figure 5, Picture B). As the superior continues to explain her vision, it soon becomes apparent that the subordinate is neither intending to write her suggestion down nor participating in the conversation. Instead, the subordinate briefly directs her glance back to the written document on her lap (line 07, Figure 5, Picture C). By turning her gaze to

the appraisal form in the middle of the conversation, the subordinate can initiate embodied negotiation concerning the next activity.

As soon as the subordinate has begun to glance down at the appraisal form, she begins to nod. According to Goodwin (1981, p. 89, 106), as gaze is withdrawn, the recipient may establish hearership by performing other talk-relevant actions. It seems, indeed, that the subordinate does not completely withdraw from the interaction, but she is now doing two things at once. By nodding and later producing a vocal display of hearership (lines 12 and 14), she is able to show some acknowledgement of what is being said. At the same time, however, she implicitly refuses to write down the superior's words and chooses the written document as her new subject of attention.

After a rather long pause at line 09, the superior reformulates the sentence 'what the parishioners would like to have' turning it to 'what they would like to be a part of'. Simultaneously, she still gazes at the subordinate. As the superior has waited silently for a couple of seconds without a new response from the co-participant, she finally turns her glance to the appraisal form as well (line 13). We conceive that she thus quits the ongoing topic from her side. A joint orientation to the written document has now been achieved and an activity shift is about to happen (Figure 5, Picture D).

As Excerpt 1 demonstrates, the activity shift to the next section in the appraisal form is the result of a joint accomplishment of the participants that required negotiation. The negotiation proceeds moment by moment, leaning on the previous actions. Both participants have the possibility to either help the progress of the activity shift or disregard the co-participant's multimodal cues. In Excerpt 1, the joint orientation is achieved shortly after the subordinate's withdrawal. This is because the superior lets the present topic go and visibly redirects her attention.

Furthermore, Excerpt 1 indicates that the subordinate, and not solely the superior, can initiate the negotiation concerning the shift to the next alignment in the document. Still, it seems that only the superior has the right to finally implement the shift in our data. In Excerpt 1, the subordinate does not even turn the page of the appraisal form before the superior has concretely started to name the next strategic alignment they are supposed to discuss. At line 14, the subordinate lifts her hand in order to grasp the page, but retracts until the superior implements the shift by saying *hyvä. sitte kolmas kohta* 'Good. Then the third section'. After this, the superior reads the name of the topic, 'Promoting a lifestyle that renews society', from the document.

Gaze is a prominent means used for the activity shift, as we have seen in Excerpt 1. However, there are still multiple other resources that can be exploited in the negotiation concerning the activity shift. These means are addressed in Excerpt 2. This excerpt illustrates a more complicated sequence, in which the

negotiation concerning the activity shift is delayed as participants seem to have different orientations concerning the next activity: the superior shows an orientation to the activity transition, while the subordinate continues the topic at hand.

This excerpt has been separated into two parts. The first part (Excerpt 2A) deals with the initiation of the activity shift by the superior, while the second part (Excerpt 2B) reveals that the activity shift is only achieved after multimodal negotiation. The context of the discussion deals with planning practices in the organisation. In the beginning of the excerpt, the male superior (on the right) has just informed the female subordinate that the organisation will adopt new conventions for planning. According to the superior this means that people would not work separately, but should 'combine their strengths' instead. The steps of this activity shift are shown in Figure 6.

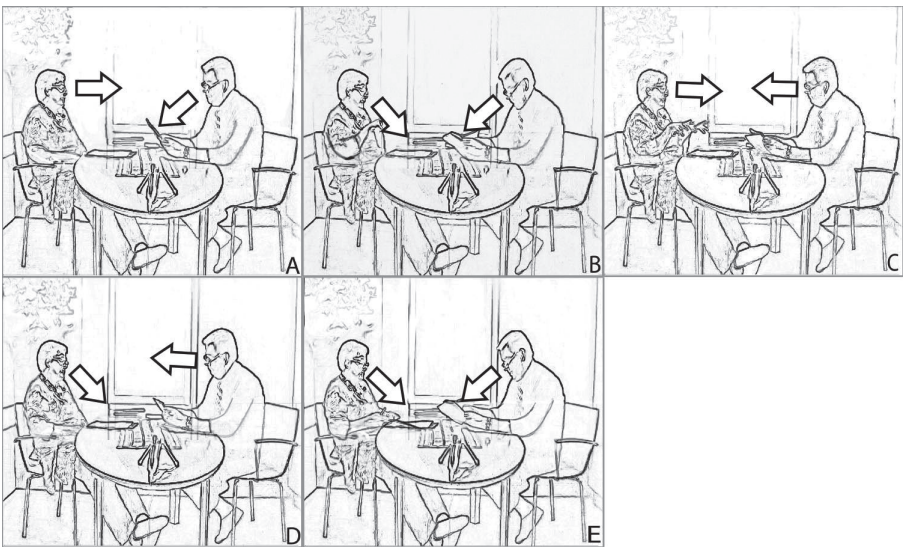


Figure 6. Negotiation with the help of multiple resources

Excerpt 2A

```
1 SUP:    et tavallaan niinkun yhdistettäis voimia sen
          that we would kinda like combine our strenghts as we
          SUP→SUB
          SUB→SUP

2         ideoinnissa et mitä tämmöset[ fakt]at
          generate ideas of what these kinds of facts

3 SUB:                                  [mm.  ]

4 SUP:    niinkun merkitsee meijän toiminnalle. [eikä] niin
          like mean for our activities. and not so

5 SUB:                                          [mm. ]
```

```
06 SUP:     et sitä tehtäis kymmenessä seura[kunn]assa
            that they would be carried out in ten parishes
                        SUP knocks the table on the tempo of the speech

07 SUB:                                      [mm. ]

08 SUP:     .hhh [ ja ] sitte vielä muissa
            .hhh and even in other
                   SUP lays hands on the sides of the doc

09 SUB:          [mm. ]

10 SUP:     yksiköissä erikseen.
            units separately.
                       SUP grasps the doc

11          (0.6)

12 SUP:     hyötysuhde ois niinku paljo parempi et tehtäis semmosta    (pic. A)
            the benefits would be much greater if we did this kind of
                       SUP       lifts     the          doc
                                             SUP     →     doc

13          yhteistä pohjatyötä si:,
            groundwork together in:,
                     SUB→doc
```

When Excerpt 2 starts, the participants are orienting to each other through gaze, but from line 08 onward the superior begins to show orientation to the written appraisal form. He does this mainly by using the document itself as a tool. The negotiation of the activity shift is initiated as the superior lays his hands on the sides of the document (line 08), then grasps the document (line 10), lifts it up to the subordinate's line of sight and finally turns his gaze to the appraisal form (line 12). Figure 6, Picture A illustrates the moment when the document is lifted between the participants. In addition to these non-verbal cues, the superior expresses a verbal assessment (lines 12–13): *hyötysuhde ois niinku paljo parempi et tehtäis semmosta yhteistä pohjatyötä* 'the benefits would be much greater if we did this kind of ground-work together'. As Schegloff (2007, p. 186) suggests, assessments can be connected to topic closing.

This chain of different multimodal activities shows how the possibility to turn to the next item on the appraisal form is gradually taken up by the superior (see also Laurier, 2008, p. 177 concerning step-by-step multimodal negotiation in a café). In our data, it is particularly the superiors who make use of handling the document in initiations of activity shifts. In a similar way, Heath (1986, p. 131) has pointed out in his data that a doctor may hand over a written prescription to a patient in order to achieve an activity shift, namely, conclude a medical visit.

With the first part of Excerpt 2, we wanted to demonstrate that handling a document while talking is a discreet way to bring up a new activity and suggest a shift in a stepwise manner. We will now take a look at the latter part of the excerpt (Excerpt 2B). There it will become evident that the subordinate is not yet ready to change the topic.

Excerpt 2B

```
13          yhteistä pohjatyö[tä si:,
            groundwork together in:,
                     SUB→doc

14 SUB:                      [joo, ja mä
                             yeah. and I

15          us[kon ]                  niinku                    että, et-
            believe that, tha-
            SUB lifts right hand with the pen in pointing position

16 SUP:       [.nff]

17 SUB:     se kum me käydään sitä yhdessä lapsityönohjaajien
            as we go through these things with the directors of child services

18          kanssa niin (.) se just tarkottaa sitä että,
            so (.) it means exactly that,

19          (0.6)

20          et- se mitä me
            tha- when we are
            SUB lifts left hand next to right hand

21          pureskellaan     tiettyjä juttuja niin se (pic. B)
            chewing on certain things then
            SUB rolls hands around
                               SUP opens the doc

22          heidän kauttaan  niinku                      leviää (.) (pic. C)
            these people like communicate the ideas (.)
            SUP opens the doc     SUB opens fingers  from fist
              SUP → SUB           SUB        →        SUP


23          nii[hin s]eurakuntiin missä he työskentelee et jos siel
            to the parishes that they work in so if there happens to

24 SUP:        [mm.  ]

25 SUB:     on s: sen tyyppistä väestöö ja muuta
            be tha: that kind of population in a parish and so on
                   SUB rolls right  hand  around

26          niin, .hhh
            then, .hhh
                  SUB opens fingers from fist
                SUB→doc

27          °se menis             eteenpäin sielä°. (pic. D)
            °it would spread out there°.
                SUB lays hands on her lap

28          (1.4)
            SUP→doc
            SUB lifts hands from her lap

29 SUP:     mt okei.             = mennäänkö neloseen. = (pic. E)
            mt okay. = shall we move to number four. =
                SUB grabs the doc
                               SUP opens the doc

30 SUB:     [=mennään.]
             =yes.
```

```
31 SUP:     [=tavotamm]e ja vaikutamme. hhh
             =reaching and acting. hhh

32          (0.8)

33 SUB:     mt

34          (1.2)

35 SUB:     joo. (.) mä oon tähän laittanut ihan sen…
            yeah. I wrote here just this way that…
```

As the superior turns his gaze to the appraisal form during his assessment at line 12, the subordinate at first seems willing to co-operate: she soon directs her glance to the written document as well. However, she then begins a new turn related to the topic at hand. In this turn, the subordinate indicates that she has a slightly different opinion concerning the planning practices in the organisation. She implies that in her department the directors of child services, her own subordinates, already have functioning planning practices. Adding a new point to the conversation, the subordinate then suspends the activity shift and prevents the superior from taking the turn.

When the subordinate starts speaking, she simultaneously begins to use numerous indexical gestures contributing to the verbal message: she lifts her pen in a pointing position (line 15), rolls her hands around (line 21) and unclenches her fist (line 22) as she demonstrates how the issues at hand would spread in the parishes. This kind of gestural activity can be an attempt to encourage the superior to realign his gaze (see Heath, 1986, pp. 154–155, concerning the patient's actions during the doctor's engagement with medical records).

Excerpt 2B elucidates that the non-verbal cues performed with the help of the material object can grow stronger during the negotiation: while the subordinate speaks and gesticulates, the superior does not, at first, place himself in the role of the recipient of the speech. Instead, he visibly directs his attention elsewhere. He glances down at the appraisal form and even opens it at lines 21–22 (Figure 6, Picture B). At this point there seems to be an apparent disagreement concerning the next activity. The superior's withdrawal can be regarded as an attempt to nonverbally heckle the co-participant's speech and control the course of the topics (see Ruusuvuori, 2000, p. 268 concerning a similar kind of usage of medical records by doctors in doctor-patient interaction). Soon the superior, nevertheless, returns his gaze to the subordinate and the participants achieve a mutual gaze at line 22 (Figure 6, Picture C). Furthermore, at line 24, the superior produces a response particle.

Though the superior now seems to be listening to the subordinate he still holds the appraisal form in his hands in an upright position. This way the superior may indicate double-orientation (cf. Deppermann, Schmitt, & Mondada, 2010):

he listens to the subordinate but continues to make the activity shift relevant with the help of the material object. This twofold orientation might relate to Schegloff's (1998) idea of "body torque". When the appraisal form is lifted up from the table – its home position – it signals a material commitment to the activity shift. By holding the written document in his hands, the superior could also implicate that a long turn by the co-participant is not expected.

At line 25, the subordinate is finally ready for the activity shift. She makes this visible to the superior by turning her gaze to the appraisal form. Almost simultaneously she gives up the gestures and lays her hands on her lap, lowers her voice and then stops talking. This new position is illustrated in Figure 6, Picture D. As the subordinate has finished her turn and is now gazing at the document, the superior takes the turn and implements the activity shift by asking *okei. mennäänkö neloseen.* 'Okay. Shall we move to number four' (Figure 6, Picture E). Beach (1995, pp. 272–273) points out that the word 'Okay' often works as a juncture, marking movement from one phase of an encounter to another. Here the word, accordingly, marks the transition from the present topic to the discussion related to the fourth section of the appraisal form. Remarkably, as the participants have already multimodally negotiated the placement of the activity shift, the superior does not even wait for the subordinate's verbal answer. Instead, he reads the name of the next strategic alignment 'Reaching and acting' immediately after his question, as if the selection of the question format would have been just a formality. The activity shift is finally successfully completed when the subordinate begins to comment on what she has written on that section of the appraisal form.

Conclusions

In this study, we have analysed the role of an appraisal form as a material object in the initiations of activity shifts. We contend that before the verbal implementation of an activity shift, the participants have accomplished a negotiated agreement that they are ready for the activity shift. Although there are some verbal resources that are used in this initiation, it is mainly performed through embodied means. Importantly, most of these means display an orientation to the appraisal form as a material object: the participants, for example, touch, lift, open, move and gaze at the document. They can also show an orientation to reading the document or writing on it, e.g. by putting on reading glasses or lifting their pen.

In particular, we want to stress the negotiated character of the initiation of the activity shift. The negotiation commences when one of the participants begins to show an orientation to the appraisal form, in one way or another. The

co-participant can then collaborate with or disregard these multimodal cues. If the cues are disregarded, the first participant can either strengthen or lessen his/her orientation to the document. Thus, joint attention toward the document is achieved step-by-step.

Embodied cues are practical for the participants, since they make it possible for them to have a double orientation (cf. Deppermann, Schmitt, & Mondada, 2010). That is, they can simultaneously close the present activity and initiate the next. As for talk, the turn-taking system for conversation works toward minimising simultaneousness (Sacks, Schegloff, & Jefferson, 1974). When, however, actions are performed using a material object as a resource, simultaneousness is not a problem. In the case at hand, we can even state that there are two interactional sequences at the same time, a verbal one and an embodied one. That is, both the participants' verbal conversation about the previous topic and the embodied initiation of the activity shift has a sequential structure. Thus, a participant may need to produce a response to both the verbal turn and the embodied cue, and these responses are, at least partly, independent of each other.

It is also noteworthy that while the verbal implementation of the activity shift is always performed by the superior, its multimodal initiation can be launched by either party. Thus, it seems that actions that are performed through an orientation to material objects are not as strictly tied to institutional roles as verbal actions. This might be connected to the discreet nature of such actions. Since they are performed simultaneously with verbal actions, and since they do not require verbal responses, the performer of the action can be seen as less accountable for the action. In other words, the embodied action has a weaker conditional relevance than the verbal action. That is, instead of the fairly normative projection that a verbal action usually has in interaction, it can be said that the embodied action merely occasions the next action.

The role of the document as the agenda of the interview seems to be relevant vis-á-vis the actions analysed in this article. The agenda provides the participants with knowledge concerning the order of the items to be discussed. This known-in-advance status of the items (cf. Svennevig, 2012) can be used as a resource by the participants. Thus, the question of *what* will happen next is decided in advance; it is only the question of *when* that needs to be addressed in a situated way. For this purpose, embodied means are sufficient, particularly when displaying orientation to the document as a material object.

In a more general sense, the document as an agenda can be related to other kinds of plans, procedures and protocols that have been addressed in earlier studies (e.g. Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Lynch, 2002; Nielsen, Nielsen, Gravengaard, & Due, 2012; Suchman, 2007). As Suchman (2007) argues, although plans project the way actions are going to be realised, they cannot

determine action. In other words, realisation is always situated. In our case, the agenda is, in part, locally realised through orienting to the document that includes the plan for the agenda.

References

Antaki, C., Houtkoop-Steenstra, H., & Rapley, M. (2000). "Brilliant. Next question…": High-grade assessment sequences in the completion of interactional units. *Research on Language and Social Interaction*, 33(3), 235–262. DOI: 10.1207/S15327973RLSI3303_1

Asmuss, B. (2008). Performance appraisal interviews: Preference organization in assessment sequences. *Journal of Business Communication*, 45(4), 408–429. DOI: 10.1177/0021943608319382

Beach, W. A. (1995). Preserving and constraining options: "Okays" and 'official' priorities in medical interviews. In G. H. Morris, & R. J. Chenail (Eds.), *The talk of the clinic: Explorations in the analysis of medical and therapeutic discourse* (pp. 259–289). New Jersey: Lawrence Erlbaum.

Button, G. (1991). Conversation-in-a-series. In D. Boden, & D. H. Zimmerman (Eds.), *Talk and social structure: Studies in ethnomethodology and conversation analysis* (pp. 251–277). Cambridge: Polity Press.

Clifton, J. (2012). Conversation analysis in dialogue with stocks of interactional knowledge: Facework and appraisal interviews. *Journal of Business Communication*, 49(4), 283–311. DOI: 10.1177/0021943612436974

Deppermann, A., Schmitt, R., & Mondada, L. (2010). Agenda and emergence: Contingent and planned activities in a meeting. *Journal of Pragmatics*, 42(6), 1700–1718. DOI: 10.1016/j.pragma.2009.10.006

Glenn, P., & LeBaron, C. (2011). Epistemic authority in employment interviews: Glancing, pointing, touching. *Discourse & Communication*, 5(1), 3–22. DOI: 10.1177/1750481310390161

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.

Goodwin, C. (2007). Participation, stance and affect in the organization of activities. *Discourse & Society*, 18(1), 53–73. DOI: 10.1177/0957926507069457

Heath, C. (1986). *Body movement and speech in medical interaction*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628221

Holt, E. (2010). The last laugh: Shared laughter and topic termination. *Journal of Pragmatics*, 42(6), 1513–1525. DOI: 10.1016/j.pragma.2010.01.011

Houtkoop-Steenstra, H. (2000). *Interaction and the standardized survey interview: The living questionnaire*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511489457

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Komter, M. (2006). Introduction. *Research on Language and Social Interaction*, 39(3), 195–200. DOI: 10.1207/s15327973rlsi3903_1

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43(2), 521–541. DOI: 10.1016/j.pragma.2009.09.009

Laurier, E. (2008). Drinking up endings: Conversational resources of the café. *Language & Communication*, 28(2), 165–181. DOI: 10.1016/j.langcom.2008.01.011

Lynch, M. (2002). Protocols, practices, and the reproduction of technique in molecular biology. *British Journal of Sociology*, 53(2), 203–220. DOI: 10.1080/00071310220133304

Mondada, L. (2006). Participants' online analysis and multimodal practices: Projecting the end of the turn and the closing of the sequence. *Discourse Studies*, 8(1), 117–129. DOI: 10.1177/1461445606059561

Mondada, L. (2012). Video analysis and the temporality of inscriptions within social interaction: The case of architects at work. *Qualitative Research*, 12(3), 304–333. DOI: 10.1177/1468794112438149

Mortensen, K., & Lundsgaard, C. (2011). Preliminary notes on 'grooming the object': The example of an architectural presentation. In J. Buur (Ed.), *Participatory Innovation Conference, 13th–15th January, Sønderborg, Denmark* (pp. 91–96).

Nevile, M. (2004). Integrity in the airline cockpit: Embodying claims about progress for the conduct of an approach briefing. *Research on Language and Social Interaction*, 37(4), 447–480. DOI: 10.1207/s15327973rlsi3704_3

Nielsen, M. F. (2012). Using artifacts in brainstorming sessions to secure participation and decouple sequentiality. *Discourse Studies*, 14(1), 87–109. DOI: 10.1177/1461445611427211

Nielsen, M. F., Nielsen, S. B., Gravengaard, G., & Due, B. (2012). Interactional functions of invoking procedure in institutional settings. *Journal of Pragmatics*, 44(11), 1457–1473. DOI: 10.1016/j.pragma.2012.06.007

Robinson, J., & Stivers, T. (2001). Achieving activity transitions in primary-care encounters: From history taking to physical examination. *Human Communication Research*, 27(2), 253–298.

Ruusuvuori, J. (2000). *Control in medical consultation: Practices of giving and receiving the reason for the visit in primary health care*. Tampere: Acta Electronica Universitatis Tamperensis 16.

Ruusuvuori, J. (2001). Looking means listening: Coordinating displays of engagement in doctor–patient interaction. *Social Science & Medicine*, 52(7), 1093–1108. DOI: 10.1016/S0277-9536(00)00227-6

Sacks, H. (1992). *Lectures on conversation*. Volume I. Edited by G. Jefferson. Oxford: Blackwell.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50(4), 696–735. DOI: 10.2307/412243

Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, 8(4), 289–327. DOI: 10.1515/semi.1973.8.4.289

Schegloff, E. A. (1998). Body torque. *Social Research*, 65(3), 535–596.

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Suchman, L. (2007). *Human-machine reconfigurations: Plans and situated actions*. Cambridge: Cambridge University Press.

Svennevig, J. (2012). The agenda as resource for topic introduction in workplace meetings. *Discourse Studies*, 14(1), 53–66. DOI: 10.1177/1461445611427204

Svinhufvud, K., & Vehviläinen, S. (2013). Papers, documents, and the opening of an academic supervision encounter. *Text & Talk*, 33(1), 139–166.

"I'll just see what you had before"

Making computer use relevant while patients present their problems

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This chapter focuses on how doctors, during consultations, use computers as objects that serve diagnostic purposes. Specifically, the chapter investigates instances when doctors shift their attention towards their computers while patients present their problems. Such shifts momentarily change the focus of the doctor-patient interaction from patient-centred, in which patients typically describe their problems and/or answer questions from their own perspective, to computer-centred, where doctors seek answers about patients' histories and general conditions as available in the digital records. I call this activity 'history-taking side sequences' because participants treat them as relevant departures from on-going interactional trajectories, which make a range of options such as diagnoses and informed decisions possible. The study sheds light on how computer use has become an integral part of face-to-face doctor-patient communication. More specifically, the study also shows that integrating the computer into the consultation requires doctors' active efforts, both verbal and embodied, to indicate that the computer is a relevant object and its use is important for the medical business at hand.

Introduction[1]

Doctors employ a range of objects that serve as instruments in their daily work, for instance stethoscopes, blood pressure monitors, thermometers and otoscopes. In general practice, no other object is used as frequently and in such variable ways as the computer. Computers are used during many of the distinct 'phases' that characterise the organisation of general practice consultations (see below). The

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computer has become an indispensable help in parallel with the transformation of medical records from paper documents to digital units, because it provides doctors immediate access to an enormous amount of information (e.g. Als, 1997; Frankel et al., 2005; Nordman, Verhaak, van Beljouw, & van Dulmen, 2010; Pearce, Dwan, Arnold, Phillips, & Trumble, 2009; Rhoades, McFarland, Holmes Finch, & Johnson, 2001; Rhodes, Langdon, Rowley, Wright, & Small, 2006; Rhodes et al., 2008). Almost all doctors turn to their computers during and between consultations, and very often they do this during such activities as openings, history-taking and treatment recommendations.

In public debate, doctors' computer use during consultations is often assessed negatively. For instance, in a letter to *The New York Times* (September 8, 2011) a hospital doctor complains:

> In the old days, when a patient arrived in my office, I laid the paper chart on the desk between us. I looked directly at the patient. As we spoke, I would briefly drop my eyes to jot a note on the page, and then look right up to continue our conversation. My gaze and my body language remained oriented toward the patient nearly all the time. In the current computerized medical world this is impossible. I have to be tuned toward the computer screen to check labs, review X-rays, read prior notes, document the patient's current concerns.

Such experiences and perceptions are not yet completely matched with a thorough and detailed understanding of how doctors do actually use their computers during consultations, nor how such use affects the nature of their interactions with patients. Nevertheless, conversation analysis has proven a fruitful approach to try to fulfil that goal.

Previous in-depth conversation analytic research has investigated doctors' computer use in two contexts: during openings of consultations and while doctors type prescriptions (i.e. as part of the treatment recommendation phase, cf. Byrne & Long, 1976). Regarding the first context, a series of studies has shown that doctors initially signal their readiness to hear patients' problem presentations by turning their gaze from the desk-top screen towards the patients, and that patients await such shifts during consultation openings (Heath, Hindmarsh, & Luff, 2010; Robinson, 1998, 2006a). Regarding the second context, another series of studies has shown that patients' talk and doctors' computer typing are remarkably closely coordinated during the prescription phase of medical consultations – to the extent that patients await doctors' keystrokes before speaking (Greatbatch, 2006; Greatbatch, Luff, Heath, & Campion, 1993; Greatbatch, Heath, Campion, & Luff, 1995; Greatbatch, Heath, Luff, & Campion, 1995). These very specific studies reveal the ways in which computer use has become constitutive of certain central activities during medical consultations, resulting in new ways for doctors

and patients to interact, where their talk and embodied activities are found to be closely coordinated with the tasks, which doctors conduct on their computers (cf. Robinson, 2006b; Robinson & Stivers, 2001). Even more broadly, but specifically in terms of the notion of 'objects', these studies support a general understanding of the interactional dynamics of situated objects use:

> The meaning of an object is […] established through human interaction primarily in situations in which the object is used and conversely the meaning of interaction can be mediated and/or structured by artifacts. (Riggins, 1990, p. 343)

The present chapter continues this effort by suggesting that computer use may form part of a bridge, a transition, between the problem presentation activity and the history-taking activity during general practice consultations. Furthermore, the study shows that computer use is indeed highly constitutive of, in particular, a certain type of history-taking variant, namely the *history-taking side sequence*, which I introduce in the following.

Computer use during history-taking side sequences

Medical consultations are organised in six relatively distinct phases: *I Opening; II Presenting complaint; III Examination; IV Diagnosis; V Treatment; VI Closing* (Byrne & Long, 1976; ten Have, 1989; Heritage & Maynard, 2006; Robinson, 2003). The second phase is characteristically "the only phase in which patients are licensed to present their problems in their own ways and according to their own agendas" (Robinson & Heritage, 2005, p. 481). The third phase is where doctors may examine patients' symptoms. It is characterised as a "pivotal part of the consultation", which "follows the interview of the patient and discussion concerning the signs and symptoms of the illness, and foreshadows the diagnosis or professional assessment" (Heath, 2006, p. 185).

As it appears from this brief overview, history-taking is generally not considered among the distinct phases of medical consultations. This is probably because it may be analytically difficult to define the distributional placement of the activity. Byrne and Long (1976) noted this difficulty already in their classic study. They observed that doctors and patients may spend a long time discussing unclear problem presentations, and also that examinations may be purely verbal; both conditions may, thus, result in history-taking activities during phases II) and III). Yet, in spite of this distributional variation, history-taking represents an important aspect of many consultations because it may provide the doctor in-depth understanding of the patient's general condition. Furthermore, recent research informs us that the activity is locatable:

> [w]hen viewed within the context of the medical consultation as a whole, the medical history is more than a simple chain of questions and answers; it represents a recognizable activity within the overall set of activities that comprises the consultation as a whole. (Boyd & Heritage, 2006, p. 152)

The 'recognisable activity' consists of participants' jointly attuned behaviour, oriented towards an in-depth understanding of the patient's background and general condition. Many of its features have been examined in conversation analytic studies (cf. Boyd & Heritage, 2006; Frankel, 1995; ten Have, 1991; Robinson, 2003; Stivers & Heritage, 2001). However, all these studies focus exclusively on the strictly verbal formats that history-taking activities may assume, that is the ways in which doctors interview patients in order to achieve thorough background information. This focus neglects that doctors also obtain background information by consulting the electronic medical records. In this chapter, the moment where doctors focus their visible attention on the computer screen is called *computer-centred* behaviour. Computer-centredness does not exclude talk with the patients. Doctors often communicate with patients while they look at the computer screen. However, the talk typically evolves around information that is found in the records: doctors may read the information aloud or may ask patients questions about its specifics. Computer-centredness is contrasted with *patient-centred* behaviour where doctors face the patients and have them describe their conditions in their own words and/or answer questions based upon their own experiences. The present study concentrates on how computer-centred history-taking is made possible interactionally, and how it is carried out.

The baseline of the chapter is a number of observations. Firstly, doctors recurrently orient towards their computers while patients present their problems. Secondly, this orientation often coincides with a shift from talk about the patient's acute problem (i.e. the patient's problem presentation) to talk about the patient's medical history and more general circumstances (i.e. history-taking). Thirdly, the computer may play an important constitutive role in the latter type of communication in that the content in the records may observably guide the participants' talk and doctors' questions in particular. The remainder of the chapter will explore these observations in detail. I will show that the participants treat computer use at this particular moment relevant to the tasks at hand. In other words, I show how doctors elevate the computer from a more-or-less general object into an object that is essential for their medical business. An important feature of such computer use is that participants treat it as a momentary departure from the otherwise patient-centred participation format, which pervasively characterises the problem presentation phase. In spite of this, it is treated as a relevant departure, as a precondition to talk about and inspect the patients' problems and symptoms in informed ways.

Therefore, to support the analysis, I borrow the term *side sequence*, which refers to brief and relevant departures from a given conversational topic/activity (Jefferson, 1972), and call the phenomenon under investigation *computer-oriented history-taking side sequences*.

Data and initial classifications

Video-recordings of 52 general practice consultations at a larger health centre (a total of approx. 11 hours) have been used for the study. Four different doctors participated (two male; two female). Each patient was filmed only once. I conducted all the recordings in 2009–2010. I was located in the waiting room where I informed patients about the project and asked them for permission to video-record the visits (approx. 60% declined). When patients accepted the request, I would turn on the video recorder in the doctor's office. After the consultations I addressed the patients again and gave them the opportunity to have the recording deleted; all recorded patients declined this offer. I then asked them to sign a consent form. The patients were handed a signed document in which they were guaranteed anonymity and the opportunity to have the recordings and transcriptions deleted at any time if they should wish.

The corpus exhibits six different uses of computers during consultations. Their differences and frequencies are:

a. To gather information from the records during patients' problem presentations (20/52 = 38%)
b. To fill in prescriptions/referrals (18/52 = 34%)
c. To provide patients with test results (7/52 = 13%)
d. To help patients find relevant, additional information on the internet (6/52 = 11%)
e. To add information to the records (4/52 = 8%)
f. To make a new appointment (3/52 = 6%)

To some extent it is possible to connect different types of uses with the different phases. For instance, doctors frequently use their computers to write prescriptions or referrals, and this use coincides with doctors' treatment recommendations (i.e. phase V), although the act of issuing and handing over a prescription may transgress phases V Treatment and VI Closing (cf. Beck Nielsen, 2012). This chapter concentrates on use a), 'To gather information from the records during patients' problem presentations'. This is selected as the focus not only because it appears to be the most frequent type of use, but also because it has the potential to illuminate

how object use may be constitutive of interactional activities that, similar to the movement from treatment recommendations to closure, transgress overall phases and accomplish progression over the course of consultations (related to the findings represented for example in Modaff, 2003; Robinson & Stivers, 2001).

There are, of course, significant differences between the ways in which doctors use computers to fill in prescriptions/referrals, on the one hand, and to gather information from the records, on the other. Obviously, they 'write' prescriptions and 'read' information in the medical records. But the differences may also be more complex. For instance, how do they carry out reading the records? Do they merely glance at the records, or do they show the patients that they devote their entire attention to them? As Hindmarsh and Heath (2000) note on general object use in workplace settings:

> Within particular sequential positions (and in the light of the demands of the initiation), certain bodily movements and gestures may reveal that they are reading, inspecting, or merely glancing at an object. In turn, this can inform the other of whether they are appropriately attending to the object given the activity and the workplace demands at hand. Thus, the way in which someone looks can be used as a resource to determine how they are attending to an object or treating a scene.
> (Hindmarsh & Heath, 2000, p. 541)

In the transcripts that follow, I have abbreviated doctors with 'DOC' and patients with 'PAT'. The transcripts are accompanied with illustrative still shots, represented as numbered figures.

Computer use and activity-progression

The first excerpt illustrates the transition from a consultation opening to a computer-centred history-taking side sequence over a very short timespan. The patient quickly makes it clear that she visits the doctor with a request to receive a referral to a physiotherapist. In Denmark, everybody is entitled to seek a physiotherapist without having consulted a doctor first. If, however, a doctor refers a person to a physiotherapist, it is considerably less costly to receive the treatment. It is quite common for patients to commence a consultation with an overt request, and this doctor reacts in the typical manner: she postpones her stance towards the request (see Beck Nielsen, 2011). The postponement is accomplished by commencing an enquiry regarding the patient's history and general wellbeing in conjunction with an inspection of the patient's medical record.

As the excerpt opens, the patient is sitting down, waiting for the doctor to enter the office. The doctor walks across the room, greets the patient, shakes her hand, and takes a seat in her desk chair:

Excerpt 1 (Beck Nielsen corpus; 4: 1.37)

```
01 DOC:    *hej
            hi
   DOC     *reaches out her hand to PAT
02 PAT     *hej
            hi
   DOC     *shake hands
   PAT     *shake hands
03 DOC:    hva ka jeg hjælpe med?
           how may I help you?
04 PAT:    *<jamen de:t sådn set> fordi* jeg gerne vil have
           <well it's basically> because I would like to be
   DOC     *adjusts chair, sits down---*
05         en #henvisning til en ↑fysioterapeut fordi jeg har
           referred to a ↑physiotherapist cause I've gotten
              #Fig.1
06         fået hold i nakken.
           a stiff neck.
07 DOC: →  ↑okay: *(.) er [det #noget du plejer at
           ↑okay:  (.)is   this something you commonly
   DOC            *torques body towards computer, gazes at screen
                          #Fig.2
08 PAT:                   [så::
                           so::
09 DOC: →  [*excellere i?
             suffer from?
   DOC      *reaches for computer mouse
10 PAT:    [((forstår.))
            ((unintel.))
11 PAT:    ø::: *hm næ det syns jeg faktisk d- øh jeg kan godt
           e:::rhm no actually I don't think- erh occasionally
   DOC          *closes the appointment window on the computer,
                 opens a new window showing the patient's record

12         få en nerve i klemme en gang imellem °men det
           I'll squeeze a nerve °but it'll
13         *plejer sådan set at gå væk.°
           usually pass.°
   DOC     *gazes back at patient
```



Figure 1

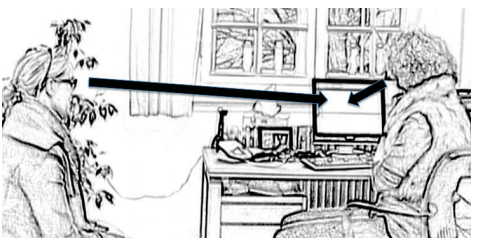


Figure 2

Excerpt 1 shows just how quickly phases and activities may pass. For instance, verbally phase I Opening is completed within the first two lines. The doctor then "offers to serve" in line 03 (cf. Robinson, 2001), which prompts the patient's problem presentation in lines 04–06, and phase II is treated as complete for now. Its completion will be the focus of attention here.

In American English 'okay' has been noted for its pivotal use; during medical encounters, as well as other settings, it is found to be a resource for organising activities (Beach, 1995). This Danish doctor uses 'okay' in a similar fashion here. While she utters the word, she torques her body (Schegloff, 1998; see Figure 2). Immediately after, and from the same bodily position, she asks the patient if a stiff neck is something she commonly suffers from. By asking her this question, the doctor avoids answering 'yes' or 'no', that is, she avoids assuming a stance towards the request. As mentioned, it is common for doctors to postpone stances towards patients' initial requests (cf. Beck Nielsen, 2011). This doctor postpones her stance by initiating a history-taking query instead, which commences with a question that explicitly orients towards this patient's potential history of having a stiff neck. It is followed by a series of similar questions (not shown in the transcript). Thus, the doctor successfully accomplishes transition from *phase II Presenting the problem* to the activity of history-taking, and her turn towards the computer plays an important part in this transition.

The doctor's body torque towards the computer (line 07) is conducted immediately before she produces her initial history-taking question (lines 07–09). Such coincidence is, in fact, found frequently in the corpus, which exhibits several related cases where doctors orient towards their computers during patients' problem presentations, while they commence queries with initial questions such as "and there hasn't been anything like this previously?"; "how about your blood percentage, when did we measure that?"; "and for how long have you attended the physiotherapist?". These questions all anticipate and, thus, initiate the history-taking activity. Furthermore, they all convey what the doctors are looking for in the medical records; thereby, they all treat the computer as relevantly part of the medical business to which the parties are attending at the moment. The same may be said of Excerpt 1. The doctor does not overtly explain to the patient what she is about to read on the computer, let alone explain that she is about to attend the computer. But the movement's coincidence with the transition towards the history-taking activity makes it potentially possible for the patient to infer that when the doctor wants to know about the patient's past experiences, the doctor most likely seeks similar answers in the digital medical record. In the next example we see an instance where this potential is explicitly unfolded.

Excerpt 1 illustrates that orienting towards the computer while patients present their problems coincides with a transition into the history-taking activity. In the next two sections I discuss how the doctor-patient interaction thereby changes from a patient-centred to a more computer-centred orientation.

From patient- to computer-centredness

The next excerpt shows an opening of a consultation where the doctor more explicitly makes his subsequent computer use accountable. During this exchange, the doctor uses his computer twice. The analysis will mostly focus upon the second use, which shows the commencement of a history-taking side sequence, but the first use is also depicted in the transcript and briefly commented upon for the sake of comparison.

The patient visits the doctor because of a recurrent rash on his back. The excerpt begins when the doctor is facing his computer. He explains to the patient that he is deleting his appointment from the clinic's common calendar, so that the other doctors are aware that this patient is being treated and to keep them from calling upon him in the waiting room:

Excerpt 2 (Beck Nielsen corpus; 21: 0.05)

```
01 DOC:   jeg streger dig lige her (.6) på skemaet så de ikk-
          I'll just delete you from this (.6) chart so that they
          won't
02        (.) #andre også står og (.) og råber efter dig.
          (.) others won't also (.) call out for you.
              #Fig.3
03   →    *°ye::°s
          °ye::°p
   DOC    *turns to face patient
04   →    *(.)
   DOC    *gazes at patient; moves his wheeled desk-chair away
          from the computer
05   →    *hvad #siger du?
          what do you say?
   DOC    *places hands in lap
                #Fig.4
05 PAT:   øhm jeg- jeg har tidligere været nede hos ((navn
          erhm I- I've previously visited ((name
06        på anden læge i praksissen)) °med noget øhm aXXX°=
          of other doctor in same practice)) °with some aXXX°=
07 DOC:   med noget?
          with some?
08 PAT:   akne [jeg får (.) piller for det.
          acne  I receive (.) pills for it.
09 DOC:        [ja.
          yes.
10 DOC:   ja.
          yes.
11        (.)
12 PAT:   ø:hm og de sidste hjalp mig også men da jeg så holdt
          e:rhm and the last ones also helped me a lot but when
          I stopped
13        op med pillerne så fik jeg det igen=>og nu er det
          taking the pills it came back=>and now it
14        blevet helt vildt slemt igen
          has become insane bad again.
15 DOC:   okay (.) ja.
          okay (.) yes.
16 PAT:   ø::hm og det er sådan noget (.3) virkelig
          e::rhm and it's this sort of (.3) really
17        betændt noget.
          infectious thing.
```

```
18 DOC: → ok*ay.
          okay._
   DOC       *moves left hand towards the desk
19         → *#(.)
   DOC     *places his hand on the desk;
           maintains gaze with PAT
            #Fig.5
20 PAT: → mən  *ø:h[m
           but e:rhm
   DOC           *turns chair to face computer screen
21 DOC: →           [jeg *se- jeg ↑ser- lige se hvad du
                     I'll see- I'll see- just ↑see
   DOC                    *picks up computer mouse
22         hvad #du fik før.
           what you got before.
                #Fig.6
```



Figure 3



Figure 4



Figure 5



Figure 6

Excerpt 2 nicely illustrates embodied differences between patient-centredness versus computer-centredness, and the way these differences are also constituted in the participants' talk. During the transcript's first two lines the doctor is placed firmly in front of the computer (see Figure 3 above). But the doctor treats the computer use, and his position in front of the machine, at odds with the activity that is to follow, namely the patient's problem presentation, in two ways. Firstly, he is careful to make his computer use accountable to the patient, that is, to explain the patient what he is using the computer for (lines 01–02). Secondly, he makes sure to distance himself from the computer as he prompts the patient to present his problem: simultaneous with the production of the extended 'yes', which projects activity transition, and the following brief silence, the doctor moves his wheeled desk chair to face the patient at a distance from the computer. Thus, as he utters his

opening question (line 05; see Figure 4), he displays patient-centredness, verbally as well as with embodied means. But, as we shall see, he changes his position back shortly afterwards when he uses his computer for the second time in the excerpt.

Similarly to Excerpt 1, this doctor turns towards his computer at a moment when the nature – but not all the possible details – of the patient's complaint has been made clear. Upon uttering 'okay' (line 18) he places his hand on the desk (line 19; Figure 5). Notice how the patient appears to have more to add to his problem presentation. In line 20 he commences a turn-at-talk that is 'but'-prefaced, which ties it to his assessment in line 17. The doctor, however, verbally interrupts the patient in line 21 with an account of his on-going move towards the computer, which at this point reaches the level where the doctor turns his chair, full body and gaze away from the patient. The account makes it understandable that the doctor is about to devote his attention to the computer. The doctor emphasises that he 'just' wants to see which kind of medication the patient has taken before. This 'just' hints that the doctor will be available to hear the rest of the patient's narrative thereafter; that is, it makes it understandable to the patient that what the doctor is about to engage in, is a side sequence. Furthermore, the account provides a hint that his business at the computer is relevant for the understanding and treatment of the patient's symptoms – he needs the background information, which the medical record provides, before the talk should proceed. Thus, the computer is conveyed as an object to which it is relevant, if not necessary, to devote his momentary attention.

In the next section we shall see when the doctor returns to hear the rest of the patient's narrative, and how the history-taking side sequence activity that unfolds in-between to a large extent centres around the digital record as visible to the doctor, and partially also to the patient, on the computer screen.

Computer-centredness during history-taking side sequences

This section deals with the issue of how computer-centredness is pervasive during history-taking side sequences. In research, the doctor's computer is sometimes spoken of as an "indispensable third party" (Chan, Stevenson, & McGlade, 2008); as a "magic box", which can be used to accomplish almost any number of interactional tasks (Als, 1997); or doctor-patient-interaction is occasionally characterised as "triadic" in essence, because the computer may form the third, equally important element (Pearce et al., 2009).

The use of rhetoric, which juxtaposes human participants and the objects that they employ (i.e. the computer), runs the risk of, for instance, overstating technological agency (cf. Suchman, 2007). That aside, as demonstrated so clearly in previous conversation analytic studies of the act of issuing prescriptions, computer

use may be most constitutive of an on-going interactional organisation (e.g. Greatbatch, 2006). The same may indeed be said of computer use during history-taking side sequences. Excerpt 2 exemplified how a doctor orients towards distancing himself from the computer as a prerogative to hear the patient's problem presentation. But similarly to Excerpt 1, the doctor in Excerpt 2 turns towards the computer simultaneously with a transition towards a history-taking side sequence. The next excerpt illustrates how this activity is carried out, instead of how it is initiated (in the previous two excerpts). It picks up where the previous stopped, which means that the doctor is still facing his computer:

Excerpt 3 (Beck Nielsen corpus; 21: 0.35)

```
23          (1.8)
24 DOC:     du har fået noget tetracyklin=
            you've been given some tetracycline=
25 PAT:     =ja.
            =yes.
26          (.4)
27 DOC:     og så har du fået noget skinoren også.
            and then you've been given some skinoren as well.
28          (.3)
29 PAT:     ja.
            yes.
30          (.)
31 PAT:     og så har jeg *fået det der #erythromycin.
            and then I've also been given that erythromycin there.
   PAT                   *points at the computer screen--------
                                  #Fig.7
32          (.3)           og  bas*irol.
            (.3)           and basirol.
   PAT      --lowers pointing hand*
34 DOC:     erythromycin #og basirol også. ye:s.=
            erythromycin and basirol also. ye:s.=
                         #Fig.8
35 PAT:→    *=øhm*
             =erhm.
   DOC      *pushes his wheeled desk chair backwards away from the
            computer, but maintains gaze on the screen
   PAT      *removes supporting hand from chin; moves back from
            the desk to sit more upright
36 DOC:→    og  [tetracyklin dem  *stoppede du #med her i foråret.
            and  tetracycline you stopped taking those this spring.
   DOC                           *points at computer screen
                                          #Fig.9
37 PAT:→         [xxx
                  xxx
38 PAT:→    ja.
            yes.
39 DOC:→    og *så *blussede det op *#igen?
            and then it started flushing again?
   DOC         *lowers his pointing hand
   DOC             *turns and gazes at PAT
   DOC                              *touches own face illustratively
                                     #Fig.10
40 PAT:     ja.
            yes.
41          (.)
42 DOC:     [okay.
             okay.
```

43 PAT: [>og så har det så blevet< (.3) tiltagende værre=altså
>and then it has become< (.3) increasingly worse=you know
44 i starten var det ikke sådan (.9) der stod det bare på et
in the beginning it wasn't like (.9) it was just at a
45 niveau hvor jeg tænkte det er fint nok,
level were I thought it's all right,
46 DO: mm.
mm.
47 PAT: men nu: (...)
but no:w (...)



Figure 7



Figure 8



Figure 9



Figure 10

In Excerpt 2, the patient explained that he has previously been medicated against acne, and that his condition has worsened now because he has stopped the treatment. He did, however, not specify the particular drugs, including the latest one. In Excerpt 3 above, the doctor consults the digital records for specifications and their history. He reads the information aloud (lines 24 and 27), and the patient responds with confirmations (lines 25 and 29). The parties attempt to reach an exhaustive overview of the types of pills that the patient has been treated with. Furthermore, the doctor seeks to shed light on the latest drug and its possible connection to the patient's current condition. The computer plays an important role in the activity that takes place here, and its use leads to markedly different participant placements and foci of attention than in the prior excerpt, where we witnessed the doctor's effort to display patient-centredness during the patient's problem presentation.

It is worth noting that the list of medication types is conveyed as the 'product of a reading' (cf. Drew, 2006) rather than, say, of the doctor's enquiry or the patient's unsolicited remembrance. The doctor 'does reading aloud' by reporting to the patient the information in the record as assertions. The patient 'does reading aloud' by inserting the deictic marker *det der* 'that there' as he completes the list with two additional types of pills; furthermore, the patient points towards the computer screen in conjunction with the deictic marker, even though the doctor has his back towards the patient, making it impossible to see the gesture (see Figure 7 above). The doctor and the patient, thus, engage in an interaction with one another, whilst sustaining their attention and visible focus upon the computer screen. They continue to do so for some time, also after they both adjust their bodily positions a few seconds later. The patient appears to follow the doctor's lead, and the doctor continues his computer-centred conduct, among other aspects by sustaining his visual attention on the screen.

Upon a confirmative repetition of the patient's supplement (line 34), and in conjunction with the patient's silence filling 'erhm' (line 35), the doctor pushes his wheeled desk-chair backwards. Immediately after the doctor begins this movement, the patient lowers his hand, which supports his chin, and withdraws from the position of leaning over the desk. At this point it is opaque that the doctor will sustain his visual attention on the computer screen. Nevertheless, by moving from a position where he most clearly orients towards reading the digital record on the screen (i.e. leaning over the doctor's desk) to sit in a more 'neutral', upright position, the patient displays readiness to engage in a reframing of the situation (cf. Kendon, 1990, p. 115).

However, the doctor does not yet turn to face the patient. Instead he stops his wheeled desk chair at a distance from the computer and assumes a position, which disables him from, for instance, using the mouse, but which still enables him to read the digital record. He continues to look at the digital record from this position, that is he sustains his computer-centred embodied behaviour, but now in qualitatively different manner. It seems that the patient, through his withdrawal from the desk, prepares to reorient his visual attention to the doctor rather than to the computer screen. Nevertheless, the doctor's current position actually, to a higher degree, invites the patient to co-read. It provides the patient much better visual access to the computer screen. The patient is now accountable for paying attention to the medical record on the screen, which indeed he does throughout Excerpt 3 (as depicted in Figures 7–9). This encouragement is enhanced by the doctor's pointing gesture towards the screen as he asks the patient for confirmation that his latest medication concerned the drug tetracycline (line 36; see Figure 9) (on *pointable* objects, see Nevile, 2007). The patient confirms (line 38). The doctor

has, thereby, managed to unravel the so-far-missing information, and he has done it by having the patient co-read and confirm the information in the record.

Upon this completion, the doctor again turns his head to face the patient. The movement coincides with another confirmation-seeking assertion (line 39) that is tied to the previous one with the 'and'-conjunction, but which is now oriented towards the patient's own version (cf. line 13–14). The movement also coincides with the doctor's illustrative facial touch. These elements display to the patient that the computer-centred history-taking side sequence is possibly completed, and that the parties can return to the patient-centred orientation. Using the doctor's own words, he has accomplished to "just see what the patient had before" – his computer-centred business has been legitimate – and now he is ready to return to the patient's perspective as a goal-oriented way to treat this patient. In return, these elements prompt the patient to elaborate upon his problem presentation (lines 43–45 and following). Upon this elaboration the doctor conducts a physical examination; he then returns to a discussion about the patient's preferred type of medication, which again takes place while the parties attend to the computer screen, and which finally leads to a new prescription (not in transcript).

Excerpt 3 provides an illustration of the computer-centredness that characterises history-taking side sequences. It represents a recurrent phenomenon, namely that doctors commonly use their computers to find information in the digital records which supplements patients' problem presentations. As mentioned above, this use is found in 38% of the consultations in the corpus. I have shown that doctors engage in multiple ways of legitimating the attention they devote to the computer when they seek to find such information in the electronic records; it shows the patients that the computer is an essential object for the doctors when they seek to reach a diagnosis. Presumably, they have good reason to do so, since the business, which the participants accomplish during history-taking side sequences, is consequential: it makes a range of subsequent activities possible, for instance choosing among a wide list of different pill prescriptions.

Conclusion

The amount of research on doctor-patient interaction is massive, not least from a conversation analytic point of view. Perhaps the most significant discovery is that doctors and patients, through their verbal contributions, continuously sustain and/or negotiate the overall organisation of the consultation in terms of phases and activities. In other words, consultations are systematic, interactional accomplishments.

As much research has documented since the 1980s, body movements and other sorts of embodied resources form essential parts of these accomplishments (cf. Heath, 1986, 2006; Robinson, 1998; Robinson & Stivers, 2001). The same may be said of object use, for instance in relation to physical examinations. Nevertheless, the ways in which objects are used for clinical purposes, and the constitutive impact this use may have, have so far been less comprehensively investigated. The constitutive impact of doctors' computer use has previously been studied in relation to openings of consultations and the typing/issuing of prescriptions. In this chapter, I have sought to supplement these studies with a third type: the constitutive impact of doctors' orientations towards their computers while patients present their problems.

The corpus indicates that computer use during problem presentations is, in fact, the most frequent kind during consultations. The study focused upon one of its manifestations where doctors use the computer to gather information in the electronic records about patients' histories and general conditions. This activity requires that doctors shift their visible attention from the patient to the computer screen; doctors' conduct become computer-centred rather than patient-centred. The study revealed that doctors initiate such moves at moments when the nature of a patient's complaint has been made clear, but when all the possible details about the connection between the acute symptom and the patient's medical history are not yet clear. These details are looked for in the electronic record. Furthermore, the study reveals that doctors accompany the moves with accounts, more or less unfolded, about their forthcoming computer use. Doctors make it understandable that the computer use is at the same time momentary and relevant for diagnostic purposes. They treat this as a 'side sequence', which locally makes history-taking relevant. More globally, the side sequences make possible diagnoses and informed decisions. Finally, the study illuminates the radically different type of doctor-patient interaction, which takes place during history-taking side sequences. It is indeed computer-centred, as all parties, and doctors in particular, devote their visible attention towards the computer as object, and revolve their talk around its content: doctors read aloud information in the records and ask patients clarifying questions about their specifics, and so on. In sum, the kind of computer use, which I have described in the chapter, is a recurrent and important part of many consultations, and doctors systematically seek to convey that the use is a relevant part of the goal-oriented medical task.

To my mind, there is a double benefit of the study. Awareness of doctors' computer use may help achieve a better understanding about when the history-taking activity starts and stops, and how it is carried out and what it involves. Furthermore, awareness of exactly why doctors use their computers at that

particular moment, that use is only relatively brief, and that use does not necessarily exclude dialogue with the patient, may help demystify exaggerated notions about doctors' excessive computer use.

References

Als, A. B. (1997). The desk-top computer as a magic box: Patterns of behavior connected with the desk-top computer; GPs' and patients' perceptions. *Family Practice*, 14, 17–23. DOI: 10.1093/fampra/14.1.17

Beach, W. A. (1995). Preserving and constraining options: "Okays" and "official" priorities in medical interviews. In G. H. Morris, & R. J. Cheneil (Eds.), *The talk of the clinic: Explorations in the analysis of medical and therapeutic discourse* (pp. 259–289). Hillsdale, NJ: Lawrence Erlbaum.

Beck Nielsen, S. (2011). Keeping the gate ajar during openings of general practice consultations. *Communication & Medicine*, 8, 235–245.

Beck Nielsen, S. (2012). Patient initiated presentations of additional concerns. *Discourse Studies*, 14, 549–565. DOI: 10.1177/1461445612454081

Boyd, E. & Heritage, J. (2006). Taking the patient's medical history: Questioning during comprehensive history-taking. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 151–184). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511607172.008

Byrne, P. S. & Long, B. E. L. (1976). *Doctors talking to patients: A study of the verbal behaviours of doctors in the consultation*. London: HMSO.

Chan, W.-S., Stevenson, M., & McGlade, K. (2008). Do general practitioners change how they use the computer during consultations with a significant psychological component? *International Journal of Medical Informatics*, 77, 534–538. DOI: 10.1016/j.ijmedinf.2007.10.005

Drew, P. (2006). When documents 'speak': Documents, language and interaction. In P. Drew, G. Raymond, & D. Weinberg (Eds.), *Talk and interaction in social research methods* (pp. 63–80). London: Sage. DOI: 10.4135/9781849209991.n5

Frankel, R. M. (1995). Some answers about questions in clinical interviews. In G. H. Morris, & R. J. Cheneil (Eds.), *The talk of the clinic: Explorations in the analysis of medical and therapeutic discourse* (pp. 233–257). Hillsdale, NJ: Lawrence Erlbaum.

Frankel, R., Altschuler, A., Sheba, G., Kinsman, J., Jimison, H., Robertson, N. R., & Hsu, J. (2005). Effects of exam-room computing on clinician–patient communication: A longitudinal qualitative study. *Journal of General Internal Medicine*, 20, 677–682. DOI: 10.1111/j.1525-1497.2005.0163.x

Greatbatch, D. (2006). Prescriptions and prescribing: coordinating talk- and text-based activities. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 313–339). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511607172.013

Greatbatch, D., Luff, P., Heath, C., & Campion, P. (1993). Interpersonal communication and human-computer interaction: An examination of the use of computers in medical consultations. *Interacting with Computers*, 5, 193–216. DOI: 10.1016/0953-5438(93)90018-O

Greatbatch, D., Heath, C., Campion, P., & Luff, P. (1995). How do desk-top computers affect the doctor-patient interaction? *Family Practice*, 12, 32–36. DOI: 10.1093/fampra/12.1.32

Greatbatch, D., Heath, C., Luff, P., & Campion, P. (1995). Conversation analysis: Human-computer interaction and the general practice consultation. In A. Monk, & N. Gilbert (Eds.), *Perspectives on HCI: Diverse approaches* (pp. 199–222). New York: Academic Press.

ten Have, P. (1989). The consultation as a genre. In B. Torode (Eds.), *Text and talk as social practice* (pp. 115–135). Dordrecht/Providence, RI: Foris Publications.

ten Have, P. (1991). A reconsideration of the "asymmetry" of doctor-patient interaction. In D. Boden, & D. H. Zimmerman (Eds.), *Talk and social structure: Studies in ethnomethodology and conversation analysis* (pp. 138–163). Cambridge: Polity Press.

Heath, C. (1986). *Body movement and speech in medical interaction*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628221

Heath, C. (2006). Body work: The collaborative production of the clinical object. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 184–213). Cambridge: Cambridge University Press.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research: Analysing social interaction in everyday life*. London: Sage.

Heritage, J., & Maynard, D. W. (2006). *Communication in medical care: Interaction between primary care physicians and patients*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511607172

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29, 523–562. DOI: 10.1177/089124100129023990

Jefferson, G. (1972). Side sequences. In D. Sudnow (Ed.), *Studies in social interaction* (pp. 294–338). New York: Free Press.

Kendon, A. (1990). *Conducting interaction: Patterns of behavior in focused encounters*. Cambridge: Cambridge University Press.

Modaff, D. P. (2003). Body movement in the transition from opening to task in doctor-patient interviews. In P. Glenn, C. D. LeBaron, & J. Mandelbaum (Eds.), *Studies in language and social interaction: In honor of Robert Hopper* (pp. 411–422). Mahwah, NJ: Lawrence Erlbaum.

Nevile, M. (2007). Seeing the point: Attention and participation in the airline cockpit. In L. Mondada, & V. Markaki (Eds.), *Interacting bodies: Online proceedings of the 2nd international conference of the International Society for Gesture Studies*. Lyon: ENS LSH & ICAR Research Lab.

Noordman, J., Verhaak, P., van Beljouw, I., & van Dulmen, S. (2010). Consulting room computers and their effect on general practitioner-patient communication. *Family Practice*, 27, 644–651. DOI: 10.1093/fampra/cmq058

Pearce, C., Dwan, K., Arnold, M., Phillips, C., & Trumble, S. (2009). Doctor, patient and computer – A framework for the new consultation. *International Journal of Medical Informatics*, 78, 32–38. DOI: 10.1016/j.ijmedinf.2008.07.002

Rhoades, D. R., McFarland, K. F., Holmes Finch, W., & Johnson, A. O. (2001). Speaking and interruption during primary care office visits. *Family Medicine*, 33, 528–532.

Rhodes, P., Langdon, M., Rowley, E., Wright, J., & Small, N. (2006). What does the use of a computerized checklist mean for patient-centered care? The example of a routine diabetes review. *Qualitative Health Research*, 16, 353–376. DOI: 10.1177/1049732305282396

Rhodes, P., Small, N., Rowley, E., Langdon, M., Ariss, S., & Wright, J. (2008). Electronic medical records in diabetes consultations: Participants' gaze as an interactional resource. *Qualitative Health Research*, 18, 1247–1263. DOI: 10.1177/1049732308321743

Riggins, S. H. (1990). The power of things: The role of domestic objects in the presentation of self. In S. H. Riggins (Ed.), *Beyond Goffman: Studies on communication, institution, and social interaction* (pp. 341–367). Berlin: Mouton de Gruyter.

Robinson, J. D. (1998). Getting down to business: Talk, gaze and body orientation during openings of doctor-patient consultations. *Human Communication Research*, 25, 97–123. DOI: 10.1111/j.1468-2958.1998.tb00438.x

Robinson, J. D. (2001). Asymmetry in action: Sequential resources in the negotiation of a prescription request. *Text*, 21, 19–54.

Robinson, J. D. (2003). An interactional structure of medical activities during acute visits and its implications for patients' participation. *Health Communication*, 15, 27–59. DOI: 10.1207/S15327027HC1501_2

Robinson, J. D. (2006a). Soliciting patients' presenting concerns. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 22–47). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511607172.004

Robinson, J. D. (2006b). Nonverbal communication and physician-patient interaction: Review and new directions. In V. Manusov, & M. L. Patterson (Eds.), *The Sage handbook of nonverbal communication* (pp. 437–459). Thousand Oaks, CA: Sage. DOI: 10.4135/9781412976152.n23

Robinson, J. D., & Heritage, J. (2005). The structure of patients' presenting concerns: The completion relevance of current symptoms. *Social Science and Medicine*, 61, 481–493. DOI: 10.1016/j.socscimed.2004.12.004

Robinson, J. D., & Stivers, T. (2001). Achieving activity transitions in primary-care consultations: From history-taking to physical examination. *Human Communication Research*, 27, 253–298.

Schegloff, E. A. (1998). Body torque. *Social Research*, 65, 535–596.

Stivers, T., & Heritage, J. (2001). Breaking the sequential mold: Answering "more than the question" during comprehensive history-taking. *Text*, 21, 151–185.

Suchman, L. (2007). *Human-machine reconfigurations: Plans and situated actions*. New York: Cambridge University Press.

Participating and involving

Objects as tools for talk

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This chapter deals with the touching, grasping, moving and handling of relatively small physical objects within spates of talk-in-interaction. We are interested in the organisation of such actions and the distribution of the objects amongst interactants in their unfolding activities, specifically in relation to how interactants, analogously, organise and distribute their turns at talk. Unlike previous work, we attend less to objects as referred-to objects or as components of topic development. Instead, our focus is on objects as transactional in the ways in which they support fundamental infrastructure of interaction, namely that turns at talk and objects are taken or possessed in some sense and this is signalled and collaboratively organised by participants.

Introduction[1]

The work informing much of our understanding of sociality in interaction has its foundations in the analysis of turn-taking in talk as presented in Sacks, Schegloff, and Jefferson (1974). This work has entailed the careful delineation of the methods by which turns at talk are distributed within an interaction, the construction of turns of talk, and how they are sequentially organised, all the while making note that turns at talk are to be understood as social actions interactively managed by interlocutors. With the exception of work on embodied resources such as gaze (e.g. Goodwin, 1981; Psathas, 1990; Rossano, Brown, & Levinson, 2009) and gesture (e.g. Mondada, 2006, 2007; Olsher, 2004; Streeck & Hartge, 1992), the focus has been on the linguistic resources used to produce and coordinate turns at talk.

An interest in the role of the material environment on the unfolding and organisation of socially organised practice, including talk, has been pioneered in work by, for example Goodwin (1994, 2000, 2003), Heath and Hindmarsh (2000),

1. We would like to thank Jeanette Landgrebe for comments and discussions in the early phases of this project. We are grateful to two anonymous reviewers and the editors for substantial comments to earlier versions of this manuscript.

Hindmarsh and Heath (2000a, 2000b), Heath and Luff (2000), Hutchins (1995), Nevile (2004a, 2004b, 2009), Streeck (1996, 2009, 2011) and Suchman (1987). Generally speaking, this work has focused on how the material surroundings and objects therein are used to organise mutual attention, for example in deictic reference, and sense-making, for example as topics of talk, in sequentially unfolding practical action. An exception to these two foci is Mondada (2007) where pointing to materials in the surroundings was on occasion dealt with in terms of incipient speakership and to signal current turn completion. Pointing could thus be a member's method to display that current speaker is understood to be near completion and as a pre-beginning for self-selection of next speaker. Additionally, pointing gestures may be 'withdrawn' should speakership not be achievable.

This chapter follows in this development and deals with the touching, grasping, moving and handling of relatively small physical objects, namely Styrofoam forms and a small piece of wood. We are interested in the organisation of such actions and the distribution of the objects amongst interactants in their unfolding activities, specifically in relation to how interactants, analogously, organise and distribute their turns at talk. Unlike previous work and consistent with Mondada's (2007) work mentioned above, we attend less to objects as referred-to objects or as components of topic development. Instead, our focus is more on objects as transactional, in the ways in which they support fundamental infrastructure of interaction namely that turns at talk and objects are taken or possessed in some sense and this is signalled and collaboratively organised by participants. Whereas investigations of turn-taking, as a fundamental element of our sociality, have mostly been concerned with possessing and exchanging turns at talk, we here extend the notion to object possession and exchange, and attempt to unravel the co-occurrence of the two in our data.

We noticed, for example, that speakers touch or handle objects before or during transition in turns at talk. In this way, our observations are similar to Mondada's (2007) for pointing. Speakers may grasp an object, take a turn at talk, use the object in that turn's construction – for example as a topic of talk or in gesture – and release the object at the end of their turn at talk. When this happens we are able to track how objects, just as turns at talk, may be exchanged between interactants. Our focus will therefore be on turn transitions for talk and the handling and exchange of objects. Unlike turns at talk however, in exchanging objects we are dealing with the physical touching, grasping and manipulation of mutually available material objects which persist in the environment. Our ambition is to demonstrate some ways in which the exchange of turns at talk and object possession can be effected through the mutual elaboration of language and elements in the material environment.

That objects may change hands is significant. Possession of objects we see, just as turns at talk, as a fundamental element of our sociality. To track this, our focus will therefore be on transitions in turns at talk and the handling and exchange of objects. Our basic claim is that this is one way in which taking turns at talk and object possession can be bound to the material environment, and vice versa how the material environment can be involved in these aspects of our sociality.

In distinction to many of the studies mentioned above concerning objects, the elements of the material environment with which we are dealing are very tangible and manipulable, all the more so because of the particular activities in which they were casted. They are to serve as resources in industrial design activities either as iconic props or as something 'inscrutable'. We are dealing then with just a few artefacts from within an environment and, in contrast to say a switch in an airplane cockpit, with objects whose purpose and function are quite malleable by design. The activities and the objects being somewhat esoteric may suggest our findings will be less general. Nevertheless, we would argue for the value in such an exploratory investigation of the activities being "perspicuous" (Garfinkel, 2002) for precisely the ways objects figure within them. What may be lacking in generality of the settings is compensated by the salience of the issue of interest, i.e. objects.

Data

Our data are drawn from video material recorded at the SPIRE Centre for Participatory Innovation[2] and comprise industrial participatory design workshops and an analogous design education activity. These activities are generally set up so that designers, as well as other stakeholders, may explore possibilities for future products, services and experiences. For this paper we use transcribed data extracted from two settings. Setting 1 was a design activity extending over several hours in which a variety of stakeholders were to discuss new ways to control a backhoe digger. In Setting 2, groups of industrial design students were given obscure objects and asked to discuss, for about 15 minutes, what the objects might be. The data have been transcribed following the conventions in Jefferson (2004). Multimodal comments have been aligned by *, + and ^ in the transcription line and in the comment line.

2. The Sønderborg Participatory Innovation Research Centre at the University of Southern Denmark researches how to involve users in the development of new products. Amongst the employees are engineers, anthropologists, ethnomethodologists/conversation analysts, designers, marketing researchers, consultants and actors from a Forum Theatre Group.

Setting 1: The re-design of a backhoe loader

Two designers, JES (Jesper) and CAT (Catherine) (not in the picture), and three users, NIL (Nils), KRI (Kristian) and KNU (Knud), work together to modify a prototype for controlling the digging functions of a backhoe loader. Figure 1 below shows them in a makeshift cabin. Knud is in the cabin itself behind the driver's work area, while the three others are standing outside the cabin. The language of the workshop is Danish.



Figure 1. The Design Workshop

During the previous activities in the workshop, the participants have chosen several objects and established them as props (Landgrebe & Wagner, submitted) to represent parts of the driving controls of the backhoe. Participants use these objects to display visually for each other the placement and operation of the control system they are envisaging. Figure 1 shows Jesper keeping his hand on a blue cylindrically shaped Styrofoam object (BLUE) that has at this point in time come to represent a joystick. Knud is reaching for a taller cylindrically shaped object (RED), which represents another joystick. A third object used we will refer to is the cardboard slider (BOARD) which Knud is touching with his left hand.

Setting 2: The case of the massage stick

In Setting 2, a particular object, in this case a wooden massage stick, has been given to the students and they are to come up with a designation of what it might be. Typically this means identifying the object with a name, e.g. 'a massage stick', or a defining paraphrase, e.g. 'a stick used for massaging'. Reference to the object itself through gesture or pointing was used in lieu of such a symbolic representation. In Figure 2 are, from right to left, RIT (Rita), MET (Mette), GAB (Gabriel), and KAR (Karoline). The person in the back looking on was not part of the group conducting the activity. Mette is holding the stick with which the activity is concerned.



Figure 2. The massage stick

The two settings differ in certain respects: Setting 1 is a design workshop where an abundance of materials is available for the participants. They may grasp, manipulate, modify or abandon a collection of objects or a single object throughout their 'construction' of the backhoe controls. In Setting 2, there is one single object available and the activity is centred around talk about the object. Apart from the number of objects then, there are differences between the activities in the two settings (design activities vs. speculation about the object). All these differences have consequences for the ways in which objects are used and dealt with. In the remainder of the chapter, we will refer to these consequences in discussing the possession and exchange of material objects in relation to beginnings in turns at talk.

Analysis

Participation framework and communal objects

We begin with a general description of the two settings which delineates important aspects of their overall material ecology. In doing this, we hope to establish how the material environment, in terms of the objects under investigation and the bodies of interlocutors, makes available a particular physical underpinning for interaction which, in its turn, allows for particular forms of social action.

In both settings, participants are positioned surrounding a particular object or set of objects, such that not only can they see them, but also physically touch, grasp and move them. Because of this, physical orientation to an object which is co-attended to by participants enables it as a communal object, in the sense of being an actual or potential interactional resource for sense-making as well as enabling particular "participation frameworks" (Goodwin, 2000, p. 1492) through mutual bodily orientation. Additionally, for our objects, participants are physically able to touch and handle the objects singularly which may bring to bear not only availability of the objects, but also outright possession of them. As mentioned above, our objects persist in the environment and may change hands.

Goodwin has more generally called what we are referring to "contextual configurations", understood as a "locally relevant array of semiotic fields that participants demonstrably orient to" (Goodwin, 2000, p. 1490). By making note of the physical surround of the activities, we are thus portraying objects as potential resources for such semiotic fields. A key question for us in this regard is: given the objects' persistence in the environment and their manipulability, how do they become involved in sense-making when they are handled, specifically what can we say about them with regard to the exchange of turns at talk and object possession? In the following we will discuss instances in our data where communal objects are used as resources to foreshadow another speaker's bid for the next turn at talk and as items that can be exchanged in their own right.

The use of material objects to prepare a turn beginning

We noticed that participants often touch and take objects at the end of another participant's turn or in the turn transition space. In Excerpt 1, Knud, Kristian and Nils have been discussing Kristian's suggestion to make the joysticks for the backhoe digger removable so the driver can take them out of the cabin and stand beside the tractor while controlling the digging activity.

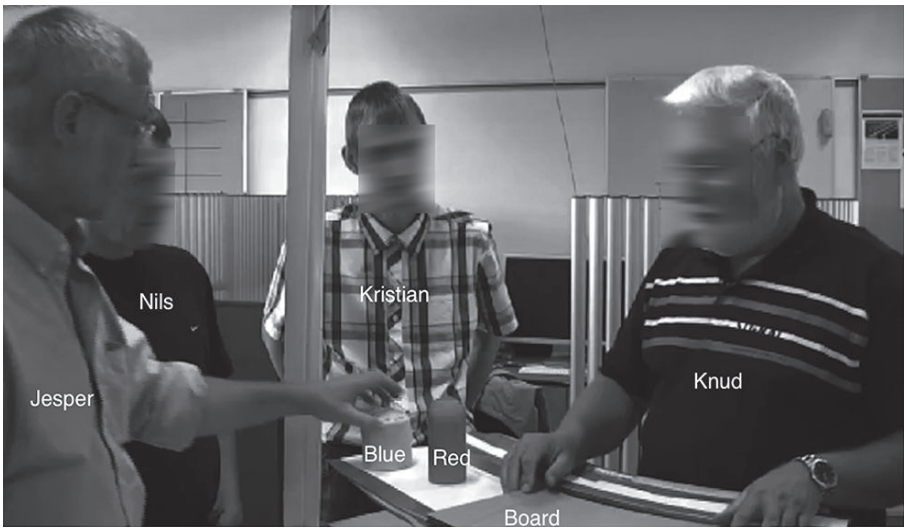


Figure 3. Excerpt 1, end of line 04, *sige* 'say'

Excerpt 1 (Influency 20, 7:30 into the tape)

```
01   KRI:  |·hja
           yes
           nods

02   NIL:  (den ska det).
           it should it
           That it should
     N&I   nod

03   KNU:  js *det=det=det=det==det tror han har ret +i.
           yes this=this=this=this this think he has right in
           I think he is right about this
     K&J   * K gazes at J, J gazes at K
     J                                              + lowers gaze &
                                                   lifts left hand

04   KNU:  >/f'di man ka sige</ ·hh
           because one can say
           coz you could say
     J       /___________________/ moves left hand twd BLUE
     K     lowers gaze, looks at J's hand and blue

05   KNU:  >@du (har ikke */nogen) relevan+te her/ °ting å sager såd'n°
             you have not     any   relevant here things and stuff such
           you don't have any relevant things here
      K    @ withdraws gaze, looks at his own hands
      J                   *touches BLUE, looks at KNU
      J                              + lifts BLUE towards himself
                          /_____ _____________/
      K                   / waves both hands sev.times

06   KNU:  du når *bare ikke ret meget andet +end at komme til at stå her.
           you achieve just not quite much else than to come to stand here
           you cannot achieve much more than standing here
      J            * puts BLUE on table in front of himself,
                     holds with l.hand
      K                                    + raises gaze, looks at JES
```

Kristian acknowledges in line 01 Knud's agreement to a previous utterance (not shown here), and both Nils and Kristian nod (line 02). With Knud's restated agreement (line 03, *det tror han har ret I*, 'I think he is right about this') produced with falling intonation, the turn approaches its ending and the topic seems to reach possible closing. Knud's formulation in line 03 is and might be heard as a sequence closing.

Until the end of line 03, Jesper and Knud have eye contact. At the very end of Knud's turn in line 03, i.e. in a position that Jefferson (1984a) refers to as "terminal onset", Jesper lowers his gaze and moves his hand to BLUE. Terminal onset is a position in which a next turn at talk can start early without being treated as an overlap. Terminal onset, however, can make it difficult for current speaker to keep his or her turn at talk.

Knud likewise lowers his gaze and monitors Jesper's hand, which is moving towards BLUE. Having his gaze fixed on Jesper's hand movement, Knud rushes into an account, which through the conjunction *fordi* 'because' is packaged as an extension of his previous turn at talk. Knud's action shares features with what Local and Walker (2004, p. 1399) have described as an abrupt-join:

> In doing an abrupt-join, speakers work to secure for themselves more talk beyond the transition relevance of possible TCU [turn constructional unit] completion, without having given prior indication that they were in the process of constructing a long multi-unit turn.

At the beginning of the account proper in line 05, Knud moves his gaze from Jesper's hand to his own hands. In overlap with Knud's emerging account, Jesper picks BLUE off the board and moves it to the table before him. After having done this, he rests his hand on top of BLUE (cf. Figures 1 and 8) until Knud changes the topic. Then he lets it go (not shown here).

We see in Excerpt 1 closely coordinated verbal and embodied activity in possible transition space between turns at talk. Jesper moves his hand towards BLUE just before Knud's turn comes to a possible point of completion. We argue that in this sequential environment, Knud's rush into formulating an account is occasioned by Jesper's movement towards BLUE. In other words, Jesper's activity, occurring at the end of a turn at talk, is treated by Knud as projecting upcoming talk. Knud's rushed start – before Jesper himself starts on a turn at talk – secures his right to speak. We note as well that simultaneously with Jesper lifting BLUE towards himself, Knud engages in rapid hand weaving indicating that Knud monitors Jesper's bodily activities after having started to talk.

Between Excerpts 1 and 2 nearly three minutes elapse. Following Excerpt 1, another topic is brought up by Knud, and Jesper puts BLUE back on the table (cf.

Excerpt 5, line 04). Two minutes later, as the topic is being closed, Jesper moves his hand again towards BLUE while Knud again rushes into a turn extension (not shown here). When Excerpt 2 starts, Jesper has picked up BLUE a second time and holds it at about chest level in his left hand, his right hand on the BOARD in front of Knud, who is looking at him as shown in Figure 4:

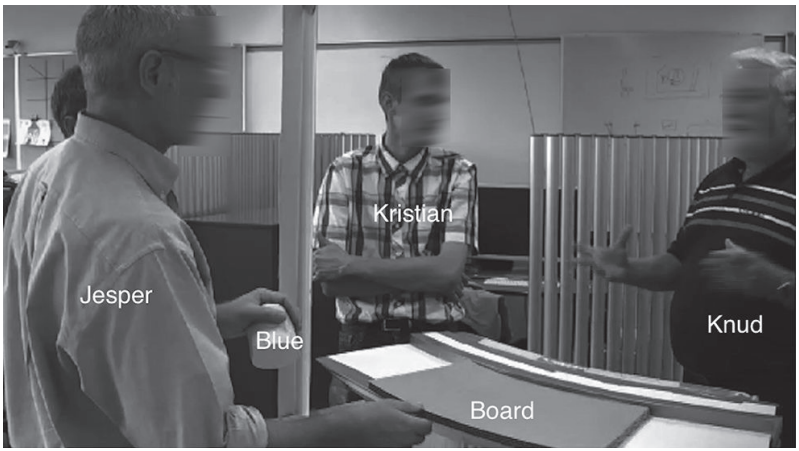


Figure 4. Excerpt 2, end of line 01, *eller* 'or'

Excerpt 2 (Influency 20, 10:15 into the tape)

```
01  KNU:   ·hh å så ha man ⌈så⌉ *et eller andet (0.3)
           and so has one then one or another
           and then one has something
    J      holds Blue in l.hand and has r. hand on BOARD

02  NIL:                    ⌊mmh⌋.

03  KNU:   *°eh-°- +.hh +kohornsagtige noget hvor du havde de he:r (.)
           cow horn kind something where you have these here
           like cow horns where you have those
    J      *nods once   + r. hand lets go of slider

04  KNU:   /°eh°/ /propor/tional*/funktioner på,/=
                 proportional functions on
           proportional functions added on
    J      /___/ moves r. hands to BLUE
    J            /____/ grips blue with r. hand
    J                          * releases l. hand
                                 /_____________/
    J                            raises BLUE with r. hand
```



Figure 5. Excerpt 2, line 05, *nu* 'now'

```
05  JES:   =hvis  det /nu va:r/
             if    it now was
    J                /_______/ raises BLUE higher

06          (0.7)  (0.2)
    J       /___/ shakes Blue three
    J             /__/ touches BLUE with both hands

07  KNU?:  /khm khm:/
    J      /________/ shakes BLUE twice

08  JES:   *var den her.
           was this one
    J      * releases r. hand, shakes BLUE twice with l. hand
```

In lines 01–04 in Excerpt 2, Knud's talk is again approaching a possible closing. In line 03, Jesper lets go of the cardboard slider with his right hand and keeps the hand in a semi-raised position. When the end of Knud's turn is imminent, Jesper shifts BLUE to his right hand and raises it high into the visual space of all participants (Figure 5). The moment Knud has finished, Jesper starts speaking. The first sound of his turn at talk in line 05 latches to the last element of Knud's talk.

The two excerpts that we have shown here have demonstrated two central features of the role of objects in the taking of turns at talk. Firstly, reaching for an object in a position where a projected ending in the turn at talk is approaching may be understood by the participants as pre-beginnings to talk and as claims for the floor. Secondly, material objects can sustain a claim for the turn over several turns at talk (Keisanen & Rauniomaa, 2012, p. 333).

Pre-beginnings are "elements which project the onset of talk, or the beginning of a (next) TCU or a turn, but are not yet proper recognizable beginnings" (Schegloff, 1996, p. 92). Earlier research has shown that pre-beginnings can be

accomplished by verbal cues (Schegloff, 1996) and embodied activities such as pointing (Mondada, 2007), audible in-breath (Mortensen, 2009), and the use of objects (Keisanen & Rauniomaa, 2012). Our data also show that the description of the basic practices of early starts in turn-taking (as described on the basis of audio recordings by Jefferson, 1984a, 1984b, 1986, and Schegloff, 1996) are validated by embodied data.

Material objects can proffer a claim for a turn over a period of time. As already mentioned, almost three minutes elapse between the extracts. Jesper had several contributions to a new topic that was developing after Excerpt 1. By again picking up BLUE in topic closing environment (not shown here), and pushing it into the joint visual space of the participants, he demonstrates that material objects come in handy to indicate a claim for a turn at talk over several possible points of transition. A material object is less bound to the interactional flow than a gesture or a verbal element. An object's materiality holds even if an attempt to take the next turn at talk has been abandoned for a while, what Keisanen and Rauniomaa (2012, p. 333) call "the sustained relevance of material objects". The object can easily be flashed or even be kept in plain view of the participants to indicate that the holder of the object maintains a claim for the next turn at talk, which he or she may begin at an appropriate moment.

In Excerpt 2, the object was put into play by Jesper from what we may call its 'neutral' position in the common space. In the following excerpt from the massage stick setting, an object is similarly in its neutral position and contact with it is made where turns at talk can be exchanged. A distinction we will elaborate on below is, however, in this setting there is only one object in play, the massage stick itself.

At the beginning of Excerpt 3, Gabriel has been speculating about the object while scrutinising it. In line 01, he deposits the stick on the table. Previous to Gabriel's extended turn at talk, Mette has also had an extended turn talking about the stick. If the participants decide to follow this 'right-to-left' pattern, Karoline would be the next speaker. Note that it is Karoline who overlaps Gabriel's line 02 with a receipt token.

Excerpt 3 (massage stick)

```
01  GAB:   an' I start to wonder (0.4) ⌈how⌉ that could xx *work
                                                          *puts stick
       G                                                  down on table

02  KAR:                               ⌊yeah⌋

03          (0.7)

03  GAB:   ⌈and⌉
```

```
04  KAR:  ⌊*and⌋
    K      *stretches out r. hand towards stick, stops movement half way
           and withdraws hand

05  KAR:  >/and another question/ *is<
    K      /_____________________/ leans back, lowers head, looks at stick
    K                              * moves r. hand and grabs stick

06  KAR:  /is this/ */u:::::::::h:::/ sawed off thing,
    K     /_____ _/ picks up stick with r. hand
    K               *gribs with left hand
    K                 /_____________/ releases r. hand lifts STICK up, turns
                    STICK twice in full display of the others, holds it

07  KAR:  or is it /connected/ to some other things
    K               /_________/ brings r. hand up touches stick shortly,
                     lowers r. hand,showing an extension of the stick

08  MET:  yes
```

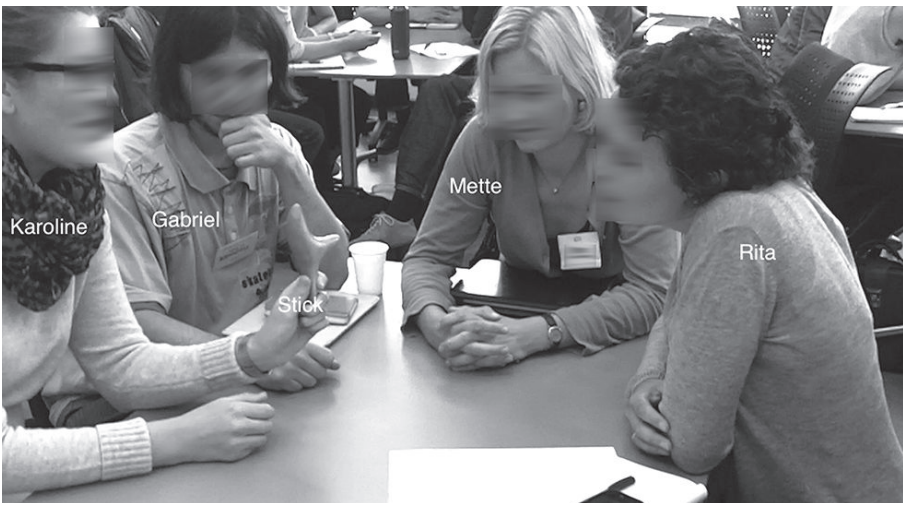


Figure 6. Excerpt 3, line 06, *sawed off*

At line 03 the object is free of anyone's hands during a 0.7-second pause. It is, as it were, up for grabs for the next speaker. When Karoline starts speaking in line 04, she is overlapped by Gabriel as she is moving her right hand toward the object. She stops the movement and brings her hand back to a resting position on the table at the end of the overlap. In line 05 she recycles the beginning of her turn at talk clear of the overlap, leans back and looks at the object. At the end of the first phrase *and another question is*, which relates to Gabriel's talk in line 01, she grabs the object and brings it up in the joint visual space of the participants and displays it. She then uses the object in the construction of her turn at talk. She formulates a question if there is some missing, sawed off, part of the stick, moving her finger along where the missing part would have been.

Karoline does not pursue her turn at talk until she is clear of the overlap. She does not go so far as Jesper in Excerpt 1, who grabbed the blue object and used it as a pre-beginning in an initially unsuccessful bid for the turn at talk. Karoline stops her movement towards the stick when her initial vocalisation is overlapped by Gabriel, and she does not reach for and take the stick until she is clear of the overlap and has produced a first portion of her turn at talk (line 05). So for Karoline, grabbing the stick and keeping it until she is able to take a full turn at talk does not seem to be an option as it was for Jesper, who kept the blue object and bid his time through several opportunities to take a turn at talk.

We may conclude from these excerpts that reaching for or possessing a communal object may work indexically as a pre-beginning, though not just for a turn at talk, but for some 'larger' project, for example a turn at talk involving a topic shift. That there is only one object in the massage stick setting, however, calls for a different set of relevancies with regards to possession of the object and effecting an exchange of turns at talk. In this setting, possession of the object was almost always co-terminus with extended turns at talk to the extent that one may, loosely, speak of a rule 'possess the stick to take a turn at talk'. The stick was a scarce resource and always in play. While in all excerpts thus far, possession of the object precedes developing an extended turn at talk, for Karoline the possession of the stick and getting an extended turn at talk seemingly must happen more or less simultaneously. And to accomplish this, Karoline vocalises as she reaches for the object. She uses then resources from two semiotic fields, the field of material objects and the field of vocal language. If one gains possession of an object, i.e. gets a turn with holding the object but not the turn at talk, as in Jesper's case, the object may signify a continual relevance of the pre-beginning for talk until a proper beginning of talk can ensue. If gaining possession of the object is potentially problematic, more work must be done. In our case here with Karoline, she must vocalise and restart her turn before gaining possession of the object and room for an extended turn at talk.

We have then a complex semiotic interplay between the material world, i.e. the objects and their economy demonstrated here by their number, and sociality, here the taking of turns at talk and the possessing and exchange of an object. In both cases getting hold of an object indicates possession of it, which in turn indicates a turn at talk by the possessor is underway or may be forthcoming. Additionally, in both our cases, when the turn at talk ensues, the object may be relevant both as a topic of talk and as an important semiotic resource for constructing the turn. The objects are, however, part of a local economy of objects. In a constrained 'object economy', e.g. there is one and only one object, then the turn at talk and possession of the object are co-terminus and this is marked semiotically in two semiotic fields: (1) a material field, i.e. having the object, and (2) vocal language. Jesper's possession of the object without speaking, in contrast, worked in one semiotic field alone, the object indicated the possibility of an ensuing turn at talk by him.

Competing for a turn at talk with objects

In Excerpt 3, we witnessed a form of competition for the one 'free' object. Here we look at how multiple objects are reached for, held and manipulated in the competition for a turn at talk by both current and incipient next speaker. In these cases, the object is not touched in pre-beginning positions of talk but simultaneously with the start of the turn at talk or slightly later. The sequential position of the move to the object is clearly different in these cases. We will discuss two instances in which participants interrupt a current speaker and while starting to speak, reach out for objects. In the first instance (Excerpt 4), the incoming speaker succeeds in taking the turn at talk; in Excerpt 5, the incoming speaker abandons his intrusion into the talking space of the other speaker.

Excerpt 4 (Influency 20, 8:11 into the tape)

```
01  KNU:   jeg tro på man skal *fri+gøre det fra /det her/
           I believe on one should release this from this one
           I believe one should release it from this one
    K                          * touches cardboard slider
    K                              + moves gaze to JES and NIL
    K                                        /_______/ picks up slider,
                                          holds it close to his chest

02  KNU:   °de:t det det har jeg° xx
           this this this have I
           this one I have

03  NIL:   ja

04         (0.4)
```



Figure 7. Excerpt 4, line 06 *system* 'system'

```
05  KNU:  hvad hvad *er det for ⌈et element⌉ ⌈der xx⌉
          what what  is it  for an element which xx
          what kind of element is it which xxx
             *turns gaze to workspace before him, shakes BOARD slightly

06  NIL:                          ⌊ehkchm *hm ⌋/⌊xx  ⌋ hele system/+et/=
                                  (clears throat)   | whole system=the
                                                      the whole system
    N                                          * pulls hand out of pockets
                                                 reaches for red & blue
    N                                                          + gribs
                                                            red and blue
                                                  /_____________________/
    K                                          lifts head high, gaze at JES

07  NIL   =/*ska du ha i/ /de to joystick det her./
          will you have in the two joysticks this one
          you will have in these two joysticks
          /___________/ /_____________________/
    N     lifts both objects, shakes them three times
    K       * gazes twd NIL

08        (.)
    N     shakes objects once

09  KNU:  °ja° .hh

10  KNU:  å s/å=så tror jeg /*nemlig a- e- /hvis man havde/
          and so  so think I really that  if one had
          and then I really think that if you had
    N       /_________________ lowers red and blue
                                          /_____________/
    N                                       puts them on table
    K                              * lowers slider
```

Excerpt 4 occurs about half a minute after Excerpt 1. Before its start, Knud has developed the idea to make the controls independent of the workspace in the cabin so that the digger can be operated from outside the cabin. In a variation of an earlier formulation, he airs in lines 01–02 again his idea to remove the controls from the cabin. He demonstrates this by lifting the BOARD from the work area and holding it close to his chest (Figure 7). He does not receive much uptake apart from Nils' minimal response in line 03, and after a gap, Knud starts speaking again. Well into his turn at talk, just after Knud has removed his gaze, Nils clears his throat, speaks, and at the same time reaches out for and grips the red and blue object. Knud raises his head very high so he seems to look under his glasses and looks first at Jesper, than at Nils. Nils's turn at talk is constructed in such a way that *hele systemet* 'the whole system' is topicalised as he reaches out for the objects. The rest of the turn at talk is produced while Nils lifts up the objects and rhythmically shakes them. In line 09, Knud minimally acknowledges Nils's intrusion, changes his gaze back to the workspace, lowers the BOARD and proceeds with his own topic. When Knud has regained the floor, Nils puts down the objects and slowly releases them before he withdraws his hands.

Before and during the micropause in line 08, Nils and Knud are facing each other, each of them holding a different object. They compete visibly for the turn: Nils shakes the joysticks several times while Knud holds the BOARD up before his chest. When Knud goes back to his argument in line 10, both lower their objects. But Knud keeps the BOARD in his hand while Nils slowly puts the joysticks back on the table and releases them. Here – as in many other instances in our data – leaving the floor is accompanied by object release.

In Excerpt 5 Nils does not wait for transition in the talk either but starts speaking in the middle of Knud's turn at talk. Knud removes RED from the workplace in line 01 and places it directly before Nils. In overlap with Knud's movement Nils pulls his hands out of his pockets and moves them towards RED (Figure 8) while starting to speak (line 02). Nils's action and talk are precision-timed with respect to the control of the object but not with respect to Knud's on-going talk. So when Knud proceeds with his turn at talk, raising his voice, Nils stops talking and moves his hand back.

Excerpt 5 (Influency 20, 7:39 into the tape)

```
01  KNU:  /det var oss:/ /det var oss som jeg siger så/
           it was as well  it   was well as I say so
           It was as I said
    K      /___________/ moves hand twds red object
                         /_____________________________/
    K                     moves red object from the board

02  KNU:  /hvis du *laver/ ·h⌈hh  ⌈MÅDEN å      BETJEn⌉e.
           if   you make             way=the to handle
           If you change the way of operating it
    K      /_____________/ puts red on table directly before N
    N               * takes hands out of pockets and moves them
                      towards RED

04  NIL:                            /⌊men ⌊men/ + xxx samme⌋
                                     but   but xxx same
    N                               /________/ withdraws hands before
                                                touching RED
    J                                        +  let go of BLUE

05          (0.4)

06  KNU:  hvis du laver den om der
           if   you make it PART there
           if you change it there
```

Excerpts 4 and 5 show an incoming speaker interrupting a current speaker. The interruption is in both instances launched verbally and by getting hold of an object. In Excerpt 4, both speakers have their individual objects, which they bring into the visual space of all participants. The competition is solved verbally by current speaker bracketing off the intrusion into his turn. In Excerpt 5, both speakers



Figure 8. Excerpt 5, line 04 *men men* 'but but'

compete for an object and the incoming speaker seems to take current speaker's relinquishing the object as a signal to start to talk. In the next section we will in detail investigate several speakers' competition for a single object.

Competing for an object with a turn at talk

At the beginning of Excerpt 6, which precedes Excerpt 3, Mette is giving an evaluation of the stick, which she is holding with both hands (see Figure 9). We will look at how the possession of an object can be in 'overlap' between two participants and the relation of this to exchange of a turn at talk. That possession of an object can be in overlap, in the sense of being physically touched by two participants simultaneously, suggests competition for the object. We maintain that just as turns at talk may be in overlap and competitive, so too may possession of an object. Below we look at an example of object possession overlap where taking a turn at talk is unproblematic. We explore the semiotic interplay of objects and vocal language at such junctures. We have noted above that once participants gain possession of an object and a turn at talk, the object may be a resource in the development of their talk. Although this use of objects is not a focus of our investigation, it is of some relevance in the exchange of turns at talk here and therefore attended to in limited fashion below.

In the massage stick setting, the stick is initially held by Mette at the beginning of our recording, and the following ensues.

Excerpt 6

```
01  MET:   it's very organic.
           MET holds stick, looks at it. Nods several time

02         (0.5)

03  GAB:   and yeah /when I- /
    G              /_________/ moves r hand forward

04  GAB:   /and when you- when you/ *touch it
    G      /_____________________/ moves hand slowly forward
    G                              * touches stick
```



Figure 9. Excerpt 6, line 04, *touch it*

```
05         (0.3)

06  GAB:   it feels /like e:h/ /(0.4)/
    G              /_________/ grips end of stick
    G                        /_____/ releases grip

07  GAB:   /it feels in your ha:nd/ *good.
    G      /_____________________/ opens hand wide
                                   * grips again

08  GAB:   so it ⌈looks⌉ /like its/ (0.3)
    G                  /_________/ releases grip and withdraws hand
                       from stick. Keeps open r. hand under the
                       stick which MET still holds

09  MET:          ⌊mm yeah⌋
    M             nods
    K             raises r. hand, fondles imaginary object
```



Figure 10. Excerpt 6, line 08, GAB keeps open right hand

```
10  GAB   [something] to be manipulated by ha:nd. *a human [ha:nd]
    M                                               * gives stick to G

11  KAR:  [* yea:h  ]
    K      * nods

12  MET:                                                [yes:] it's true
    M                                                   nods
```



Figure 11. Excerpt 6, beginning of line 12, *it's true*

```
13  KAR:   /yea:⌜h

14  GAB:       ⌊and it's /*really (.) nice touch.
    G      /_____________/ holds stick in r. hand
    M                      folds hands

15          (0.4)

16  GAB:   when you touch it it's: its so::ft
    G      turns object, looks at it, smiles
```

Mette finishes her turn at line 01. Following a 0.5-second pause, Gabriel begins a next turn at talk at line 03 while moving his right hand towards the stick, which remains in Mette's hands. His hand reaches the stick precisely at him uttering *touch it* (see Figure 9). In his turn at talk he introduces a new topic, speaking of the phenomenal experience of touching the stick. He also proffers, at lines 08–11, a possible function for the stick, something to be manipulated by the hand (line 10). In this way then, Gabriel is using the stick in the construction of a turn at talk. However, it is also the case that he touches the stick while Mette is actually holding it, and thereby has possession of it, i.e. it's her turn at holding the stick. Gabriel eventually removes his hand from the stick, but allows his hand to remain with palm open, just under it (see Figure 10). All the while, both of Mette's hands retain contact with the stick. Additionally, while producing his talk regarding the stick (lines 08 and 10), Gabriel receives alignment from Mette at line 09 and Karoline line 11. At line 10, following possible completion of Gabriel's turn at talk as indicated by syntactic completeness and falling intonation, Mette moves the stick over into Gabriel's hand. She offers an assessment of Gabriel's contribution, *yes it's true*, retracts and folds her hands together (see Figure 11). Gabriel continues with his previous talk on the physical properties of the stick.

We see Mette's continued possession of the object, despite the work done by Gabriel, as indicating her 'not being done yet.' When she finally transfers the object, she withdraws completely from the activity by folding her hands. To take the object back, she would need to unfold her hands again. There is a strong visual contrast of Gabriel having his open palm directly under the object held by Mette, ready to receive and to investigate it further, and Mette's iconic withdrawal by folding her hands. Gabriel's open palm allows receiving the object. Mette's folded hands do not.

Unlike in Excerpts 2–3, the object is not in a neutral position here, but in another participant's, Mette's, possession. Thus we can also note that, again unlike the previous excerpts, the speaker, Gabriel, is not in possession of the object while taking an extended turn at talk. What are we then to make of the previous observation from the massage stick setting that having an extended turn at talk was most often co-terminus with having possession of an object? We propose that the rule 'possess the stick when taking a turn at talk' is still in play and that here we witness a transitional space regarding, not talk per se, but object possession and the semiotic

field it inhabits. Just as vocal overlap where a current turn holder and a presumptive one are both active in the semiotic space of vocal language, so too here with an object possessor (Mette) and presumptive object possessor (Gabriel). Gabriel and Mette are not, however, physically struggling with each other over possession of the stick, which one might expect as the most straightforward way of resolving object possession overlap. Rather, from the perspective of object possession, we suggest they predominately use talk as an arbiter, i.e. talking about an object effects its exchange. Gabriel silently holding his hand under the stick at line 08 also supports the exchange of the stick which follows. We maintain that his doing so highlights, however, that the semiotic field of objects is in a transitional state. Ultimately, it is the semiotic field of language that arbitrates object possession.

Gabriel, at a relevant juncture after a pause (line 02), takes the turn at talk and following this, receives the stick from Mette, upon which time he launches a new turn. Gabriel's initial turn at talk is constructed topically in a particular way, however; he talks of the physical sensation of touching the stick as he touches it, and in this way seemingly legitimises his touching the stick not possessed by him. He receives alignment from the others, and Mette in an agreement at line 12, turns the stick over to him. We can say then that one way of gaining possession of an object is to touch it and talk about it, and once attained, one may possess it and talk even more about it. The breaking of the rule 'possess the object to take a turn at talk' is effected by talking about the object in such a way that touching it is warranted and, one may say, even projects eventual possession and a new or continuing turn at talk.

Conclusion

We began our analysis with the conjecture that the ecology of our two settings, in terms of bodily positions and the phenomenal availability of an object or set of objects, prefigured possible participation frameworks. In relation to turn-taking, this has been the case. Coherent with studies of multimodal resources such as gaze and gesture, we have shown that reaching for an object near the end of another speaker's on-going turn at talk may be understood by the participants as pre-beginnings to talk and as claims for the floor. Significant for objects, in comparison with other resources, is their materiality. Participating in the two settings meant touching, grasping, moving the objects at hand. This particular materiality of the objects also afforded their constant availability for such participatory work throughout the interactions, given their relation to the bodily positions of the participants. Unlike speech and gesture, objects can go 'offline' and yet easily remain in the phenomenal space to be brought forward into semiotic fields both as potential referents and

aids to speech and gesture. Other aspects of this materiality worth noting are the physical properties of the objects and how they were initially staged as relevant within the activities. As noted earlier, the objects were graspable and movable for the participants and were part of common activities for designers within a design workshop, or educational training therein. As such, the objects had easily recognisable affordances for participants as, in Setting 1 potential proxies for backhoe controls or, in Setting 2, objects whose primary function is to be discovered as an educational activity. Our focus, however, has not been on these uses of the objects per se, but rather in how the physical handling of them is involved in the sequential unfolding of the activities. It is instructive to consider whether one may speak of 'primary' and 'secondary' uses of the objects to capture this distinction. To this we would say it is best to keep the objects 'whole' as far as possible. They are, first of all, what they come to be, not only through conventional recognisability but also through their very physicality and handling by participants.

Another consequence of our objects' materiality is that they could be singularly held by participants which makes possession of the objects potentially relevant as a social fact to be dealt with. This is evidenced in Excerpt 3 and 6 from Setting 2 by the necessary coordination by participants between having the object in one's hands and taking a turn a talk. In this way, objects differ from resources such as gesture. Mondada (2007, p. 208) notes: "[w]hereas verbal and other acoustic resources are vulnerable to overlaps in these early starts, pointing gestures are not and can be produced simultaneously with the terminal segment of the ongoing turn." This is not the case for our objects as they can be 'overlapped' as demonstrated in Excerpt 6. Moreover, as evidenced in Excerpt 5, objects can be very useful in arbitration over a turn at talk in conjunction with verbal overlap.

Possession of an object was most relevant in Setting 2 as a consequence of the rather brute fact that there is only one object in play there. Thus we found that speaker change, in Excerpts 3 and 6 from Setting 2 also involved the exchange of the one and only object. This was not the case in any of the excerpts from Setting 1. That there is but one object in Setting 2, can also account for one further observation. The use of the object in the construction of a turn at talk by Gabriel in Excerpt 6 (lines 04–08) could also be seen and heard as a bid for the floor. Actions were not so configured in Setting 1. Use of the object in turns at talk was carried out after the speaker reasonably had already secured the floor. One may say that the economy of objects in Setting 2 vis-à-vis Setting 1 necessitated an expansion of the object's affordances.

The ready flexibility of objects as part of a material semiotic field is also noteworthy. The objects in both settings, when being held, touched or reached for, can be said to index having a turn at talk or a bid for the same. This holds regardless of however the object may be used in constructing a turn at talk where an object's

iconic potential was more at play. This is perhaps most clearly seen in Setting 2 where each speaking participant held the one object at some point during their talk.

Finally, we raise the inevitable question of what including objects into an analysis adds to our understanding of turn-taking. It is clear that objects are semiotically resourceful for claiming a turn at talk. Their semiotic malleability and phenomenal accessibility provide an undeniable richness to talk, which we are just beginning to understand. Here, we have mostly tried to test the waters for the resourcefulness of objects in the distribution of turns at talk and have found that for this important task, they are also quite useful.

References

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkheim's aphorism*. Lanham: Rowman and Littlefield.

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.

Goodwin, C. (1994). Professional vision. *American Anthropologist*, 96, 606–633. DOI: 10.1525/aa.1994.96.3.02a00100

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32, 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X

Goodwin, C. (2003). The body in action. In J. Coupland, & R. Gwyn (Eds.), *Discourse, the body and identity* (pp. 19–42). New York: Palgrave Macmillan.

Heath, C., & Hindmarsh, J. (2000). Configuring action in objects: From mutual space to media space. *Mind, Culture, and Activity*, 7, 81–104.

Heath, C., & Luff, P. (2000). *Technology in action*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511489839

Hindmarsh, J., & Heath, C. (2000a). Embodied reference: A study of deixis in workplace interaction. *Journal of Pragmatics*, 32, 1855–1878. DOI: 10.1016/S0378-2166(99)00122-8

Hindmarsh, J., & Heath, C. (2000b). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29, 523–562. DOI: 10.1177/089124100129023990

Hutchins, E. (1995). *Cognition in the wild*. Hillsdale, NJ: Erlbaum.

Jefferson, G. (1984a). Notes on some orderliness of overlap onset. In V. D'Urso, & P. Leonardi (Eds.), *Discourse analysis and natural rhetoric* (pp. 11–38). Padua, Italy: Cleup Editore.

Jefferson, G. (1984b). Notes on a systematic deployment of the acknowledgment tokens 'Yeah' and 'Mm hm'. *Papers in Linguistics*, 17(2), 197–216. DOI: 10.1080/08351818409389201

Jefferson, G. (1986). Notes on latency in overlap onset. *Human Studies*, 9, 153–183. DOI: 10.1007/BF00148125

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Keisanen, T., & Rauniomaa, M. (2012). The organization of participation and contingency in prebeginnings of request sequences. *Research on Language and Social Interaction*, 45, 323–351. DOI: 10.1080/08351813.2012.724985

Landgrebe, J., & Wagner, J. (submitted). Props in a planning and design activity.
Local, J., & Walker, G. (2004). Abrupt-joins as a resource for the production of multi-unit, multi-action turns. *Journal of Pragmatics*, 36, 1375–1403. DOI: 10.1016/j.pragma.2004.04.006
Mondada, L. (2006). Participants' online analysis and multi-modal practices: Projecting the end of the turn and the closing of the sequence. *Discourse Studies*, 8, 117–129. DOI: 10.1177/1461445606059561
Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. *Discourse Studies*, 9, 194–225. DOI: 10.1177/1461445607075346
Mortensen, K. (2009). Establishing recipiency in pre-beginning position in the second language classroom. *Discourse Processes*, 46, 491–515. DOI: 10.1080/01638530902959463
Nevile, M. (2004a). *Beyond the black box: Talk-in-interaction in the airline cockpit*. Aldershot: Ashgate.
Nevile, M. (2004b). Integrity in the airline cockpit: Embodying claims about progress for the conduct of an approach briefing. *Research on Language and Social Interaction*, 37, 447–480. DOI: 10.1207/s15327973rlsi3704_3
Nevile, M. (2009). "You are well clear of friendlies": Diagnostic error and cooperative work in an Iraq War friendly fire incident. *Computer Supported Cooperative Work*, 18, 147–173. DOI: 10.1007/s10606-008-9089-0
Olsher, D. (2004). Talk and gesture: The embodied completion of sequential actions in spoken interaction. In R. Gardner, & J. Wagner (Eds.), *Second language conversations* (pp. 221–245). London/New York: Continuum.
Psathas, G. (1990). The organization of talk, gaze and activity in a medical interview. In G. Psathas (Ed.), *Interaction competence* (pp. 205–30). Lanham, MD: University Press of America.
Rossano, F., Brown, P., & Levinson, S. (2009). Gaze, questioning and culture. In J. Sidnell (Ed.), *Conversation analysis: Comparative perspectives* (pp. 187–249). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511635670.008
Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50, 696–735. DOI: 10.2307/412243
Schegloff, E. A. (1996). Turn organization: One intersection of grammar and interaction. In E. Ochs, E. A. Schegloff, & S. Thompson (Eds.), *Interaction and grammar* (pp. 52–133). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511620874.002
Streeck, J. (1996). How to do things with things: Objets trouvés and symbolization. *Human Studies*, 19, 365–384. DOI: 10.1007/BF00188849
Streeck, J. (2009). *Gesturecraft: The manu-facture of meaning*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/gs.2
Streeck, J. (2011). The changing meaning of things: Found objects and inscriptions in social interaction. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world* (pp. 67–78). Cambridge: Cambridge University Press.
Streeck, J., & Hartge, U. (1992). Gestures at the transition place. In P. Auer, & A. di Luzio (Eds.), *The contextualization of language* (pp. 135–157). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.22.10str
Suchman, L. (1987). *Plans and situated actions: The problem of human-machine communication*. Cambridge: Cambridge University Press.

Photo sharing as a joint activity between an aphasic speaker and others

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This chapter concerns the usages of a digital camera and digital photographs as augmentative and alternative communication (AAC) methods in interaction between aphasic and non-challenged speakers. It focuses on the way in which a universal tool (the 'ubi-tech' method) can contribute to the fluency of spontaneous everyday interactions. The video-recorded conversation is analysed with conversation analytical methods. We highlight the way in which sharing photographs on the display of a digital camera affects the organisation of social activity through bringing in additional semiotic resources that empower the person with aphasia. The digital camera and photos also assist in manifesting the epistemic status of a knowing participant who otherwise tends to be limited by communicative constraints.

Introduction[1]

When a person has suffered communication losses such as those in severe aphasia, various compensatory communication strategies (such as drawing, gestures, writing, low-technology books, high-technology devices, etc.) are used to support the co-construction of messages with communication partners (Beukelman, Fager, Ball, & Dietz, 2007). These compensatory strategies allow people with aphasia to communicate more effectively than simply through talk, because people are naturally able to utilise multimodal communication resources (Goodwin, 1995, 2003). Functional and pragmatic communication skills are thus better preserved than individual linguistic aspects of language use following aphasia (McKelvey, Dietz, Hux, Weissling, & Beukelman, 2007). Conversational ability, which consists of more than the production and understanding of talk, includes the knowledge

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and use of the interactional conventions of a specific community, use of non- and paraverbal means (gaze, head nods, shakes and hand gestures), referral to the material objects and other people in the situation and so forth (Laakso, 1997, pp. 23–25). Participants orient to and use different kinds of communication resources, which can be called communicative affordances (Gibson, 1979; Hutchby, 2001). In this chapter we will show how digital photos and a digital camera, by which those photos are taken and stored, become objects that afford the social production of action and meaning-making when linguistic abilities are impaired.

The use of pictures or photographs to augment interaction and the rehabilitation of aphasic people is not new as such (Aaltonen & Raudaskoski, 2011; Wilkinson, Bloch, & Clarke, 2011), but the role of multimedia tools, such as digital cameras and multimedia phones, has not yet been thoroughly investigated (van de Sandt-Koenderman, 2004). We analyse the enhancement of communicative competence using a digital camera and photos it contains to ease the aphasic communication difficulties of one participant. Two episodes of an informal coffee-table conversation are analysed in detail, using conversation analytical (CA) methods. The study explores how an intrinsic relationship between a digital camera as a physical, movable object, and photos that can be looked at on its screen, augments communication. We focus on two conversational phenomena: repair and the sequential organisation of talk. We claim that the mobility and ubiquity of contemporary multimedia devices affords new kinds of interaction in which human agency and technical tools are smoothly integrated to support social action.

Special augmentative and alternative communication (AAC) devices have often remained underutilised in everyday life (Lasker, Garret, & Fox, 2007; Wilkinson et al., 2011). No systemic studies have been carried out on the use of multimedia technologies to augment communication among people with complex communication needs. Therefore, our interest is to explore whether the everyday communication of people with special communication needs could be augmented with mundane multimodal technologies such as digital cameras or smart phones. Everyday devices designed for all are not necessarily limited in usability and utilisability as are specifically designed high-tech AAC tools.

Earlier studies have demonstrated that people with diminished skill in producing verbal expressions tend to assume somewhat passive roles in interaction. They employ only a limited range of speech acts, restrict themselves to responses or repair initiations, and avoid topic initiations and completions of repairs (e.g. Johnson, Hough, King, Vos, & Jeffs, 2008; Wilkinson, 1995). Passive interactional roles tend to accumulate, resulting in limited participation in society. In our study, we show that a digital camera and digital photographs can function as a communicative ramp (Kagan, 1998, p. 817), enabling more democratic participation in conversation (Annable, Goggin, & Stienstra, 2007).

Multimodal conversation analysis, repairs and aphasia

Our analysis is based on multimodal conversation analysis (CA) (Goodwin, 2000; Mondada, 2008; Streeck, Goodwin, & LeBaron, 2011). CA initially concentrated on the analysis of talk (Heritage, 1984). The subsequent development of CA has led to a multimodal conversation analysis method that aims at providing a comprehensive view of the composition of social action, addressing both verbal and non-verbal aspects of activities and taking into account the technology and media included in the interaction (Arminen, 2005; Hutchby, 2001; Raudaskoski, 2009). Multimodal CA unites the analysis of visually observable actions with the study of spoken interaction to examine the mutually constitutive role of talk and action (Heath, Hindmarsh, & Luff, 2010). It investigates talk with the help of CA methods and inspects visually observable actions along with the stream of speech to disclose the sequential flow of activities as an organised whole.

Further, CA has also proven to be applicable to communication in which the linguistic abilities of participants, as in aphasia, are impaired (Bloch & Wilkinson, 2004; Goodwin, 2003; Wilkinson, 1995). CA allows the study of turn-taking, repair practices and the co-construction of the interaction between an aphasic speaker and the other interlocutors, supporting the view that, for example, in rehabilitation the improvement of communication is a joint activity rather than an individual achievement (Blackstone, Williams, & Wilkins, 2007; Higginbotham, Shane, Russell, & Caves, 2007; Laakso & Klippi, 1999; Milroy & Perkins, 1992). Interlocutors resolve together the problems created by aphasia (Aaltonen, 2010; Laakso, 1997; Oelschlaeger & Damico, 2000).

Repairs consist of an organised set of practices for dealing with problems in speaking, hearing and understanding talk in a conversation to resolve communicative problems and restore intersubjective understanding (Arminen, Auvinen, & Palukka, 2010; Drew, 1997; Jefferson, 1987; Schegloff, 1979). Since repair is a complex sequential activity requiring considerable communicative competence, participants with communicative and/or social constraints, children, second-language speakers and people with communicative challenges often tend to have a limited ability to repair practices (e.g. Kurhila, 2001; Laakso, 1997, 2003; Perkins, 2003). Language impairments are also directly consequential for repairs (Goodwin, 2003).

Repair is composed of the initiation, which marks a possible disjunction with the previous talk, and the production of a correction aiming at solving the problem. The trouble, which the repair addresses, is referred to as the trouble-source or repairable. The repair is organised along two basic dimensions. The first concerns who initiates the repair; the producer of the trouble-source with self-initiation or some recipient using other-initiation. The second dimension concerns the sequential location of repair initiation (Schegloff, Jefferson, & Sacks, 1977).

In aphasic conversation, a variety of trouble sources may impede the progression of conversation. Further, aphasic speakers tend to be more fluent in multimodal repair initiations, such as self-interruptions and gestures, than in the accomplishment of the correction (Perkins, 2003; Laakso, 1997, 2003). The repair initiation is not as tightly tied to lexico-verbal competence as the completion of the repair (Goodwin, 2003), which correlates to the overall communicative competence of the speaker. Repairs are also important as they not only manifest troubles but also constitute a framework for the collaborative constitution of meaning and action.

Data and methods

The data of the study consist of eighteen video-recorded meetings (30 hours in all) between three different people suffering from an aphasic syndrome, their relatives, speech and language therapists, and/or the researcher. The data were collected in cooperation with the Technology and Communication Centre (TCC) in one University Hospital in Finland. The TCC is a unit specialising in the rehabilitation of people with complex communication needs and, in particular, the search for appropriate augmentative and alternative communication (AAC) methods for each client. All the materials for this research were collected with the participants' informed consent and the appropriate permission from the ethical commission of the University Hospital.

We will analyse a discussion between Leo, a 65-year-old man with aphasia, his wife, Anna, and a guest, Tiina, who is one of the researchers. The setting is an informal follow-up appointment. Leo had a stroke eighteen months before coming to the TCC. Because of the stroke, he suffers from fluent aphasia: his speech is full of allegro speech, meaningless jargon. The words he produces may be dysformed or changed into other words, possibly from the same category, that is, *paraphasias*. Existing words may be paraphatic if used in the wrong syntagma (for example, *herkku* ('delicacy') instead of *serkku* ('cousin'), or they may be non-existent in the vocabulary of the speaker's native language (such as *kirvee* instead of *hirvee* ('horrible') (Laakso, 1997, p. 25). One of the symptoms characterising Leo's aphasia is *anomia*, difficulty in finding words (Laine & Martin, 2006). This means that he often has to interrupt his on-going speech and pause to search for words.

During the TCC visits, Leo has refused to use official AAC devices designed especially for people with speech and language impairments. In everyday life, he sometimes finds words by writing them down and articulating them out loud at the same time. He also has a booklet of written words, which has been composed

and personalised for his use in cooperation with himself, his family and a speech and language therapist.

The analysis of the video recordings combined the study of oral interaction and visually observable physical actions. The data were transcribed using conversation analytical conventions and methods. The interactions of the interlocutors were transcribed using simplified conversation analytical notation (for basic CA transcription, see Atkinson & Heritage, 1984, p. ix–xv). In the data extracts, the talk of each person is depicted in two lines. The first line is the original talk in Finnish, and the second is its translation into English (for translation, see Klippi, 1996; Laakso, 1997). Non-Finnish words or words hard to hear or understand for other reasons are transcribed by using an 'x' in parentheses; prosody (for example, capital letters when the speaker uses a loud voice), pauses and other non-verbal elements of the speech have been preserved. Idiomatically specific linguistic structures and aphasic problems are explained separately in the text. In addition, frame graphs are supplied with the text to assist the analysis of non-verbal actions, for instance embodied actions and gestures. The exact places of the frame graph figures are marked in the transcription as #fig. and are numbered and situated below the points with which they coincide.

Analysis and results

In the analysis we focus on the affordances of digital camera and digital photographs, and on how they in concert with other communicative resources help in managing the interaction and overcoming the challenges caused by aphasia. We examine the sharing the photographs as a joint activity, which is composed of the handling of a camera with stored pictures and an environmentally coupled discussion, which are sequentially organised to a unified activity (Goffman, 1981, p. 141). The handling of a digital camera and its stored photographs is intimately connected to the communication framing, structuring and sequencing. The physical and verbal actions of showing the photographs mutually form an organised whole so that giving and taking the camera both constitute the physical frame of showing photographs and direct and guide the related talk-in-interaction. Goffman (1981) suggested that joint projects, such as sharing photographs, in which parties work to get something jointly accomplished, are organised in a different way than conversations in which parties maintain a joint universe through talk. Drawing on the discussion of turn-taking by Sacks, Schegloff, and Jefferson (1974), we can complement Goffman's observation, and point out that joint projects are based on multiple resources, which affects their primal organisation.

As Sacks et al. (1974) show, turn-taking for conversations is an economy that allocates a resource, turns of talk, among participants. The turn-taking for conversation is an identifiable system that allocates and distributes the units of a valued resource, turns of talk, among parties. The turn-taking systems adapt to the properties of the sort of resources distributed (Sacks et al., 1974, pp. 696–701). Sacks et al. (1974) were restricted to explore a systematics for the organisation of a single resource, turns at talk in conversation. When participants in an encounter have multiple resources, they do not orient to speech exchange alone but also to the exchange of other resources in relation to the exchange of units of speech. Rauniomaa and Keisanen (2012) have established that under some circumstances other resources may replace turns of talk. They have shown that in everyday encounters the most basic favourable response to a request is its embodied fulfilment, for instance, handing the object requested. In a parallel way, photo showing is a joint activity that is based on allocation of two resources: turns of talk and photographs. The turn-taking in the showing of photographs, thus, is different from the organisation of conversation discussed by Sacks et al. (1974), as the allocation of resources concerns (minimally) two semiotic resources. In a joint activity based on multiple resources, the semiotic unit construction deviates from verbal turn construction (see Stivers & Sidnell, 2005); the allocation of verbal turns is related to allocation of other resources (here pictures); and the epistemics is altered as it concerns all the resources (including knowledge of what is in the pictures).

The departure from the turn-taking of conversation affects the power balance between the participants. The person with aphasia, whose participation in the economy of turn-taking in ordinary conversation is constrained, is empowered by the shift in the turn-taking mechanism in which semiotic resources include both speech and photos, as aphasia does not affect the exchange of semiotic resources other than talk. We propose that a photo showing is an identifiable activity with characterisable properties making it more benevolent to aphasics than non-augmented conversations (cf. Clarke & Wilkinson, 2008).

In the following data analysis we consider, for instance, the way the use of digital camera and photographs assists word searches and obviates protracted word-finding difficulties, and enhances repair management. In example one, Leo, Anna and Tiina are sitting beside a coffee table discussing what Leo and Anna have done since their last appointment five months earlier. Tiina remembered that Leo and Anna were waiting for a visit from a counselling student. The episode begins when Tiina asks about the student's visits and what they did together. Leo and the student had planned that she would counsel Leo to find what kind of activities he is still capable of despite his aphasia and the weakness of his right arm and leg. After Tiina's question Leo starts to search for something that turns out to be a digital camera. Bringing the camera up altered the contextual configuration (Goodwin,

2000) by a new semiotic field of the stored photos that allow Leo to have a new resource in answering Tiina's question and organising the subsequent interaction. The accomplishment of these activities is afforded by the technological features of the digital camera – such as its small size, integral display and memory, and ease of use interface.

The analysis of the episode starts at a point where Tiina asks what kinds of pictures Leo has taken. Leo initially tries to describe verbally the kinds of pictures he has taken, but following Leo's *paraphatic* utterance, his wife completes the turn, simultaneously turning her gaze towards Leo (line 05). The exchange makes it relevant for Leo to show his pictures. The subsequent interaction from line 08 on demonstrates the basic sequential organisation of photo showing between the participants mediated by the camera and its stored pictures.

Excerpt 1 Photo showing as a joint activity

TII = Tiina, the guest; LEO = Leo, the aphasic speaker; ANN = Anna, Leo's wife; #fig.nn indicates the place of a numbered figure (frame grab) in interaction.

```
01  TII:  Mit- mitäs sä oot sitt kuvaillu.
          Wha- what have you photographed then.
02        (0.8)
03  LEO:  Mää oon ottanu noita (no mut) ((yskähtää))
          I have taken those (uh well) ((cough))
          04          mitäs mun mielest lukee,
          what reads to my mind,
05  ANN:  Lintuja ja (.) ystäviä ja, ((katsoo puolisoaan))
          Birds and (.) friends and, ((looks at her husband))
06        (.)
07  TII:  Linnuthan on vaikeita kuvattavia.
          Birds y-know are difficult to take photos of.
08        (1.2)
          #fig.1
```



Figure 1. Leo looks at the screen and selects a picture (line 08)

```
09  LEO:  Tässäki  o  (0.2) Anna (0.2) tässä.
          Here too is (0.2) Anna (0.2) here.
                                #fig.2
```



Figure 2. Leo hands the camera to Tina and says 'here' (line 09)

```
10          (1.1)
11  LEO:    hh he
12  TII:    No: niin onki.
            So:  it  is.
                 #fig.3
```



Figure 3. Tina looks at the picture, making a verbal assessment (line 12)

```
13  LEO:    He he
14  TII:    Joo::,
            Ye::s,
15          (1.0)
16  LEO:    katostää    =mitäs tääl muita on,
            look at this=what else is here,
                        #fig.4
```



Figure 4. Leo takes the camera back (line 16)

After Leo's word search (line 03) and the *paraphatic* utterance 'what reads to my mind',[2] (line 04) Anna completes the turn by providing a candidate understanding of what Leo might have meant (line 05). Tiina's assessment 'birds y-know are difficult to take photos of' (line 07) maintains Leo's photographs as the topic. Further, the verbal description of the epistemic content owned by another makes it socially relevant for the owner to take a turn: here, for Leo to show his pictures (Pomerantz, 1980). Hence the place for showing the photographs has been intersubjectively co-constructed, and the photographer, Leo, starts during Tiina's turn to look at the screen, navigating and searching for a photograph to show (Figure 1, line 08).

Leo's act of navigating through the pictures manifests as a pause displaying a role of multiple semiotic resources for turn-taking (line 08). Searching the right picture is a part of the semiotic unit construction, in which the unit consists of the picture and environmentally coupled verbal expression. Participants' orientation to their joint activity is shown in that Leo is let to keep the turn while he was visibly and demonstrably doing something with the camera, i.e. preparing a semiotic unit. After the unit construction has progressed, Leo starts preparing to hand the camera to Tiina, saying 'here too is' (line 09). Through the copula and verb construction 'here too is', the aphasic speaker makes an incomplete ostensive reference to the topic, the subject of photography, which is literally in his hand. Pragmatically, the reference shifts the participation framework, inviting Tiina to prepare herself to look at the pictures. Although 'here too is' is grammatically incomplete, it is a recognisable, tentative description of the stored photograph, making it relevant to the recipient, and prepares her to receive the camera. While

2. 'Reads to my mind'; the speaker may have looked for the phrase 'comes to my mind'.

handing over the camera, Leo completes the utterance after a slight delay by providing the critical attribute, the name of the person in the picture. Simultaneously, Tiina shifts her orientation, putting her spoon down, and reorients to the camera offered to her. During the aphasic man's repetition 'here', the guest stretches out her arm and grasps the camera (Figure 2, line 09). The repetition 'here' is sequentially coordinated with the moment of handing over the camera, as the object momentarily shifts from one personal sphere to another, thereby sanctioning this shift as a minimal version of 'here you are'.[3]

In Excerpt 1, the photograph on the display of the camera as an assessable item is looked at and manipulated by all the participants (cf. Mondada, 2012, p. 330). After taking the camera and looking at the photograph, Tiina articulates her participation in the joint photograph-sharing activity by displaying her recognition of the person in a photograph (cf. Lindström & Mondada, 2012, p. 304). Tiina's display of recognition also confirms the primary epistemic authority of her host by being an overt agreement (line 12). Leo's brief laughter at line 13 seems to display acceptance of the guest's stance. Leo then initiates the closing of the sequence by stretching out his arm as a request to get the camera back, while the guest is still occupied with looking at the picture (Figure 4, line 16). In this way, the aphasic speaker manages the sequential coordination of showing the pictures, maintaining its rhythm through verbal items coordinated with embodied actions.

In this first example, giving and taking the camera affect turn-taking by both embodying and structuring the sequential organisation of showing and discussing the photographs as a joint activity (Goffman, 1981). The physical action frames the sequential coordination and turn allocation; accepting the camera also builds the sequential implication to take a turn in the on-going assessment of the photographs. Leo's use of his restricted verbal actions in unison with the affordances of the digital camera is critical for constituting a mutual understanding of the on-going action. The copula and verb construction 'here too is' enables the parties to reframe the participation framework and contextual configuration so that they become engaged in the social action of looking at photographs (cf. Goodwin, 2000). In this way, the linguistic, material and sequential structures figure together in the organisation of action (Arminen & Weilenmann, 2009; Goodwin, 2000, 2003). Through the unison of multiple semiotic structures, the linguistic restrictions of interaction are temporally evaded.

The photographs provide accessible evidence of the claims made, that is, who or what is in the picture, but they also provide a new arena for epistemic relations,

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3. Although in Finnish *tässä* ('here') and *ole hyvä* ('here you are') do not share the same root, as the two expressions do in English, they seem to have the same pragmatic function.

who knows and has access to see, who or what is in the picture. The reflexivity of the material evidence (Heritage, 1984, p. 110) at hand offers the parties a way to display their epistemic relationships: what the participants in the interaction can accountably know, how they know it, whether they have the right to describe it, and in what terms it is implicated in the organised practices of the interaction (Heritage & Raymond, 2005). For the aphasic speaker the photographs provide a material source enabling him to display his knowledge despite his limited lexico-verbal means. The epistemic domains are even more critical in our second example concerning the interpretation of a photographs being shown.

Our second example consists of an extended repair sequence including two repairables between the three parties concerning the interpretation of the picture being shown. In Excerpt 1, the focus was on the sequential organisation of social action accomplished by handling the camera. Now we will look more closely at how the pictures on the display enable the aphasic speaker to maintain his epistemic authority by allowing him to participate in the repair sequence. In Excerpt 2, Anna questions the visibility of the picture just as Leo hands the camera to Tiina (line 03). Leo initiates a repair in overlap with Anna's turn and is joined by Tiina. And finally, the repair is completed by the aphasic speaker, Leo (line 07), making Anna restate her view of the picture (line 12).

Excerpt 2 Extended repair sequence

LEO = Leo, the aphasic speaker; ANN = Anna, Leo's wife; TII = Tiina, the guest; #fig.n indicates the place of a numbered figure (frame grab) in interaction.

```
01          (1.5)
02  LEO:    Tässon yks,
            Here's one,
             #fig.5
```



Figure 5. Anna looks at the screen as Leo hands the camera to Tiina (line 02)

```
03 ANN:  Ei siin näy mitää[n    kuva[a.
         You can't see   a[ny pictu [re.
04 LEO:                  [Tä-      [eiku, (     )]
                         [Thi-     [no I mean,( )]
05 TII:                            [>Näkyyhän.   ]=
                              [>Yes you can.]=
06 TII:  =Siin on kuule taidekuva,      (.) aurinko laskee.
         =There's y'know an art picture,(.) the sun is going down.
07 LEO:  E:::e (.) [ei ku    ] kun  (.) kuu tulee.=
         No::: (.) [no I mean] when (.) the moon comes.=
                                                        #fig.6
08 TII:               [Vau     ]
                      [Wow     ]
```



Figure 6. Tiina hands the camera back to Leo (line 7)

```
09 TII:  =Vai o- [niin] vai onkse  kuu   yl[häällä.]
         =Or i-   [yes ] or is it the moon  u[p.     ]
10 LEO:           [(xx)]                    [ ( xx )] kuu.
                  [(xx)]                    [ ( xx )] the moon.
                                                        #fig.7
```



Figure 7. Leo shows the picture to Anna as he says 'the moon' (line 10)

```
11          (0.5)
12  ANN:    Mm (.) kuu nousee joo.
            Hm (.) the moon is rising yes.
13  LEO:    °Joo°
            °Yes°
14          (0.2)
15  TII:    ↑Noi on niit vaikeimpia kuvia ottaa.=
            ↑Those are the most difficult photos to take.=
16  LEO:    =Tosson  (0.3) Annan sh- shisko.
            =There is(0.3) Anna's sh- shister.
```

Again Leo initiates the sequence with an ostensive reference to the photograph and invites Tiina to look at the photograph by handing the camera over her (Figure 5, line 02). Anna, who was not the principal recipient addressed, but who had a brief visual access to the display while her husband was handling the device, makes a negative observation of the view on the screen of the camera (line 03). Anna's negative observation raises the question of whether there is really anything meaningful to see in the picture that is handed over Tiina. In the following, both Leo and Tiina respond to this 'questioned appropriateness' of the photo being shown. Leo immediately initiates a repair in overlap with his wife's turn with the canonical repair initiator *eiku* (translation 'no I mean' for *eiku* in repairs, see Haakana & Kurhila, 2009; Laakso & Tykkyläinen, 2009; Laakso & Sorjonen, 2010). Tiina's turn at line 05 ('yes you can') starts in overlap with Leo's repair initiation, and they both occur still in overlap with the last item of Anna's turn. Simultaneously Leo glances at his wife. In this way, the repair has shifted into a disagreement (Schegloff, 2007), though Leo initially did not disagree but repaired his wife displaying his supreme epistemic position as regards the content of the photo.[4]

When analysed, Anna's statement 'you can't see any picture' sounds like a spontaneous attempt to be accommodating to the guest, not like an apologetic turn on behalf of her husband. The way Tiina rapidly and jokingly proposes an alternative frame by calling the photograph an art picture (line 06), re-categorises the photograph as something that is worth seeing. Her post turn appreciative exclamation 'Wow' (line 08) indicates her appreciation of the picture. However, even before Tiina's exclamation, Leo has started to initiate a second repair, which he succeeds to complete in a second try with an almost grammatically appropriate utterance 'no I mean when the moon comes' (line 07). Also Tiina's understanding 'the sun is going down' has been made repairable. Subsequently, handing the camera back to Leo (Figure 6), Tiina acknowledges Leo's correction by rushing to formulate a follow-up question with a new candidate understanding (line 09). In his next turn at line 10, Leo confirms Tiina's new understanding by both repeating

4. The one who disagrees acknowledges the epistemic equality of the position disagreed with. A repair presupposes supremacy.

the word 'moon' and showing the picture to his wife Anna (Figure 7). Now also Anna joins in the shared interpretation of the moonlight (line 12). Thus, eventually both Anna and Tiina agree on Leo's conception of the picture, and the process of assessing and elaborating on the picture has granted Leo the epistemic authority on his photographs and photography (cf. Heritage & Raymond, 2005). Leo also produces a sequence-closing confirmation at line 13, sanctioning his authority (Schegloff, 2007). Tiina's post-sequence musing at line 15 publicly acknowledges the aphasic man's expertise and authority in the photography, and the social action is now ready to move on.

Although Leo took the photograph, his capacity to maintain epistemic authority is at risk because of his aphasia. As discussed, aphasic speakers tend to be constrained in the completion of repairs, but in the example above the aphasic speaker both initiates and completes the repair successfully. It seems that the use of the digital camera helps him to mobilise his knowledge in sequentially relevant ways despite his aphasia. The digital image provides visible semiotic support for the completion of the aphasic speaker's repair: *e::e (.) ei ku kun (.) kuu tulee* ('n::: (.) no but when (.) the moon comes'),[5] the meaning of which might be indecipherable without visual access to the picture. Here, the visual access to the object offers a critical semiotic resource that alleviates the enrichment of a poetic utterance, uttered with a number of restarts (*e::e ei ku kun kuu*), making it sound unintended, *paraphatic* and therefore indecipherable (Goodwin, 2003). The universal tool deployed as an augmentative device thus supports manifesting and maintaining the aphasic speaker's epistemic status as a competent and knowing participant in the conversation. In Goffman's (1981) terms, the aphasic speaker is both the author of the photographs and their animator while showing them, despite his restricted linguistic skills.[6]

In our data, as in episodes other than the two analysed above, the aphasic speaker introduced the topic, first by holding the camera in his hand and then by handing it to the guest while making an incomplete utterance 'Here is'. By doing so, the aphasic speaker also offered the turn to her. Further, the picture shown completes the aphasic speaker's turn, providing a mutually accessible referent and understandable content for 'what he is saying'. By taking the camera, the guest accepts the activity and participation framework of looking at photographs, implying her duty to participate in assessing them. The verbal assessments are

5. Here the English translation loses the everyday poetics of the utterance (Jefferson, 1996), but maintains almost literally the sense of the Finnish original. It does not seem possible to translate the double-coded meaning of both phonetics and semantics.

6. We thank Ray Wilkinson for this point.

sequentially tied to physical actions and semiotic resources afforded by the camera. Even though the person with aphasia does not always find the exact words, the photographs function as topical cues for the other participants.

Conclusion

The photo sharing transforms the organisation of social activity through bringing in additional objects that affect the sequential composition of interaction by diminishing the dependence of semiotic exchange on talk. The change from conversation to a joint activity empowers the person with aphasia as non-verbal resources allow more equal participation. The empowerment is based on the activation of communicative means of the aphasic speaker. The digital camera and the digital photographs support interactional competence; they do not assist the aphasic speaker to produce more grammatically appropriate utterances, but support communication by multimodal means, offering extra resources that enrich the communicative actions. People with aphasia communicate better than they talk, that is, their communicative competence is better than their linguistic abilities (Holland, 1982). Situational frameworks and other semiotic resources than talk can scaffold the production of meaning between interlocutors. The resources brought in by the use of a digital camera affect not only the sequential structure of interaction but also ease the aphasic difficulties in finding words by scaffolding the intersubjective understanding.

The digital images contained in the camera and the mobility of the artefact aided the aphasic speaker's communicative competence, allowing him to manifest his knowledge by participating in the initiation and completion of a repair. The affordances of the camera facilitate interaction in two main ways: passing and receiving the camera act as an additional material resource to support the sequential organisation of the social activity, and the accessibility of the pictures on the camera screen to all of the participants adds a further semiotic resource assisting the topical flow of talk. The unit construction is transformed from verbal turns to multimodal semiotic units; the allocation of turns is linked to embodiment, giving and handling the camera; the epistemics is altered with the added dimension on who knows whom and what is in the pictures and who has the access to them.

Similarly to words in utterances, the semiotic affordances of the photographs are indexical; they can contextually be interpreted to refer to various states of affairs. Hence, incomplete utterances that might not be sufficient in themselves may become pragmatically sufficient in connection with the photographs, thus smoothing the communication between aphasic and other speakers and resulting in fluency as if there were no conversational impairment. The camera is used to

capture and present the photographer's own experiences and the photographs may in some instances be more easily associated with the author's personal life story than, for instance, ready-made pictograms. In addition to taking photographs, the camera allows them to be easily shared. In our case, these affordances turned the digital camera into a potential AAC tool.

Implications

Official AAC devices often require learning and training and are seen as symbols of 'substitutes for deficiencies'. In contrast, nowadays, mobile multimedia devices such as mobile phones or smart phones are common devices for all. The usability of any technological device and interface can be evaluated in relation to three conceptual levels of activities: handling, comprehensibility and applicability (Raudaskoski, 2009, pp. 46–49). Problems only in one level may hamper the overall usability. For instance, when considering augmentative tools in aphasia, the handling of devices may in many instances be somehow problematic since aphasic speakers often have motor problems as well. In addition, sudden and drastic changes in their communicative and physical skills often force aphasic speakers constantly to struggle with new challenges and may also affect their learning abilities and readiness. If an aphasic speaker in that situation is offered a new and fancy assistive device with a logic which should be learned from the beginning, he or she may refuse to use it, even though that person may have the competence to operate it or would be able to understand its applicability. As an everyday tool, a digital camera affords usability without excessive effort since it is quite easy to handle, its logic is simple, and its applicability is known.

Existing mobile applications would have a definitive benefit in the cases of the sudden loss of communicative skill, as the resistance to a familiar tool tends to be weaker than the suspicion of completely new artefacts. Since the familiar uses and the weaker resistance would apply to both people with complex communication needs as well as those around them who are of key importance in meeting the communicative challenges (i.e. family, speech therapists, etc.), previously known and already domesticated technologies have an advantage in the new application areas. If people in a new situation could resort to some familiar device, this might support the remaining communicative skills rather than focusing on lost abilities, which might provide a positive basis for the rehabilitation process (Johnson et al., 2008). The learning of new uses for an old tool may also be smoother than the adoption of completely new artefacts. In the fluency afforded, mobile media tools seem to differ from most official augmentative devices (cf. Wilkinson et al., 2011).

Improving participation in the daily living activities of people with complex communication needs requires the identification of critical skills for communicative competence (Beukelman & Mirenda, 2005). It is noteworthy that in the episodes analysed in this chapter, the use of the camera was spontaneous, which demonstrates the aphasic person's communicative competence in coping with face-to-face interaction. At any rate, language impairment acquires a profound moral dimension in conversation, as all participants are forced to come to terms with how they are to treat someone manifesting troubles in the most crucial domain of human competence (Goodwin, 2003). The sophisticated ability of a spouse to adapt her actions to the situational needs of her husband certainly stems from everyday familiarity with conversation with him. In talk-in-interaction participants must be able to allow the aphasic speaker to establish competence and epistemic status. The fluent and natural use of the digital camera in our example supported the nuanced formation of social actions and narrowed the gap between people with different levels of linguistic skill.

The need for more cross-fertilisation between design for disability and design for all is beginning to be recognised, which may open a path for the realisation of the ubi-tech potential for people with special needs (Pullin, 2009). Ubi-tech has the unquestionable potential to enhance natural and equal conversation in everyday interactions. This kind of convivial interaction supports social closeness and may help to establish, maintain and develop personal relationships (Beukelman & Mirenda, 2005). Ubiquitous technology can both augment communication and support epistemic authority that would not be expressed without prosthetic IT tools (Callon, 2008). At best, ubi-tech tools may decrease communicative impairments, resulting in increased activity and more equal participation in daily life.

References

Aaltonen, T. (2010). Mind-reading, a method for understanding the fragmented story of an aphasic man. In M. Hyvärinen, L-C. Hydén, M. Saarenheimo, & M. Tamboukou (Eds.), *Beyond narrative coherence* (pp. 49–66). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/sin.11.04aal

Aaltonen, T., & Raudaskoski, S. (2011). Storyworld evoked by hand-drawn maps. *Social Semiotics*, 21(2), 317–336. DOI: 10.1080/10350330.2011.548652

Annable, G., Goggin, G., & Stienstra, D. (2007). Accessibility, disability, and inclusion in information technologies: Introduction. *The Information Society*, 23, 145–147. DOI: 10.1080/01972240701323523

Arminen, I. (2005). *Institutional interaction: Studies of talk at work*. Aldershot: Ashgate.

Arminen, I., Auvinen, P., & Palukka, H. (2010). Repairs as the last orderly provided defense of safety in aviation. *Journal of Pragmatics*, 42, 443–465. DOI: 10.1016/j.pragma.2009.06.015

Arminen, I., & Weilenmann, A. (2009). Mobile presence and intimacy – reshaping of social actions in mobile contextual configuration. *Journal of Pragmatics*, 41, 1905–1923. DOI: 10.1016/j.pragma.2008.09.016

Atkinson, J. M., & Heritage, J. (Eds.). (1984). *Structures of social action: Studies in conversation analysis*. Cambridge: Cambridge University Press.

Beukelman, D., Fager, S., Ball, L., & Dietz, A. (2007). AAC for adults with acquired neurological conditions: A review. *Augmentative and Alternative Communication*, 23(3), 230–242. DOI: 10.1080/07434610701553668

Beukelman, D., & Mirenda, P. (2005). *Augmentative and alternative communication: Supporting children and adults with complex communication needs*. (3rd edition). Baltimore: Paul H. Brookes.

Blackstone, S., Williams, M., & Wilkins, D. (2007). Key principles underlying research and practice in AAC. *Augmentative and Alternative Communication*, 23(3), 191–203. DOI: 10.1080/07434610701553684

Bloch, S., & Wilkinson, R. (2004). The understandability of AAC: A conversation analysis study of acquired dysarthria. *Augmentative and Alternative Communication*, 20(4), 272–282. DOI: 10.1080/07434610400005614

Callon, M. (2008). Economic markets and the rise of interactive agencements: From prosthetic agencies to habilitated agencies. In T. Pinch, & R. Swedberg (Eds.), *Living in a material world: Economic Sociology meets Science and Technology Studies* (pp. 29–56). Cambridge, MA: MIT Press.

Clarke, M., & Wilkinson, R. (2008). Interaction with cerebral palsy and their peers 2: Understanding initiated VOCA-mediated turns. *Augmentative and Alternative Communication*, 24, 3–15. DOI: 10.1080/07434610701390400

Drew, P. (1997). 'Open' class repair initiators in response to sequential sources of troubles in conversation. *Journal of Pragmatics*, 28, 69–101. DOI: 10.1016/S0378-2166(97)89759-7

Gibson, J. (1979). *The ecological approach to visual perception*. Hillsdale: Erlbaum.

Goffman, E. (1981). *Forms of talk*. Oxford: Blackwell.

Goodwin, C. (1995). Co-constructing meaning in conversation with an aphasic man. *Research on Language and Social Interaction*, 28(3), 233–260. DOI: 10.1207/s15327973rlsi2803_4

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32, 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X

Goodwin, C. (2003). Conversational frameworks for the accomplishment of meaning in aphasia. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 90–116). Oxford: Oxford University Press.

Haakana, M., & Kurhila, S. (2009). Other-correction in everyday interaction: Some comparative aspects. In M. Haakana, M. Laakso, & J. Lindström (Eds.), *Talk in interaction: Comparative dimensions* (pp. 152–179). Helsinki: Finnish Literature Society.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research: Analyzing social interaction in everyday life*. London: Sage.

Heritage, J. (1984). *Garfinkel and ethnomethodology*. Cambridge: Polity Press.

Heritage, J., & Raymond, G. (2005). The terms of agreement: Indexing epistemic authority and subordination in talk-in-interaction. *Social Psychology Quarterly*, 68(1), 15–38. DOI: 10.1177/019027250506800103

Higginbotham, D. J., Shane, H., Russell, S., & Caves, K. (2007). Access to AAC: Present, past, and future. *Augmentative and Alternative Communication*, 23(3), 243–257. DOI: 10.1080/07434610701571058

Holland, A. (1982). Observing functional communication of aphasic adults. *Journal of Speech and Hearing Disorders*, 47, 50–56.

Hutchby, I. (2001). *Conversation and technology from telephone to the internet*. Cambridge: Polity Press.

Jefferson, G. (1987). On exposed and embedded correction in conversation. In G. Button, & J. R. E. Lee (Eds.), *Talk and social organisation* (pp. 86–100). Clevedon: Multilingual Matters.

Jefferson, G. (1996). On the poetics of ordinary talk. *Text and Performance Quarterly*, 16(1), 1–61. DOI: 10.1080/10462939609366132

Johnson, R. K., Hough, M. S., King, K. A., Vos, P., & Jeffs, T. (2008). Functional communication in individuals with chronic severe aphasia using augmentative communication. *Augmentative and Alternative Communication*, 24(4), 269–280. DOI: 10.1080/07434610802463957

Kagan, A. (1998). Supported conversation for adults with aphasia: Methods and resources for training conversation partners. *Aphasiology* 12(9), 816–830. DOI: 10.1080/02687039808249575

Klippi, A. (1996). *Conversation as an achievement in aphasics. Studia fennica linguistica* 6. Helsinki: Finnish Literature Society.

Kurhila, S. (2001). Correction in talk between native and non-native speakers. *Journal of Pragmatics*, 33, 1083–1110. DOI: 10.1016/S0378-2166(00)00048-5

Laakso, M. (1997). *Self-initiated repair by fluent aphasic speakers in conversation. Studia Fennica Linguistica* 8. Helsinki: Finnish Literature Society.

Laakso. M. (2003). Collaborative construction of repair in aphasic conversation: An interactive view on the extended speaking turns of Wernicke's aphasics. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 163–188). New York: Oxford University Press.

Laakso, M., & Klippi, A. (1999). A closer look at the "hint and guess" sequences in aphasic conversation. *Aphasiology*, 13(4–5), 345–363. DOI: 10.1080/026870399402136

Laakso, M., & Sorjonen, M-L. (2010). Cut-off or particle – ways of initiating self-repair in conversation. *Journal of Pragmatics*, 42, 1151–1172. DOI: 10.1016/j.pragma.2009.09.004

Laakso, M., & Tykkyläinen, T. (2009). Gendered practices of negotiation? Comparing girls and boys' practices of making proposals in same-sex peer play. In M. Haakana, M. Laakso, & J. Lindström (Eds.), *Talk in interaction: Comparative dimensions* (pp. 279–298). Helsinki: Finnish Literature Society.

Laine, M., & Martin, N. (2006). *Anomia: Theoretical and clinical aspects*. New York: Psychology Press.

Lasker, J. P., Garret, K. L., & Fox, L. E. (2007). Severe aphasia. In D. R. Beukelman, K. L. Garrett, & K. M. Yorkston (Eds.), *Augmentative communication strategies for adults with acute or chronic medical conditions* (pp. 163–206). Baltimore: Paul H. Brookes.

Lindström, A., & Mondada, L. (2012). Assessments in social interaction: Introduction to the special issue. *Research on Language and Social Interaction*, 42(2), 299–308. DOI: 10.1080/08351810903296457

McKelvey, M. L., Dietz, A. R., Hux, K., Weissling, K., & Beukelman, D. R. (2007). Performance of a person with chronic aphasia using personal and contextual pictures in a visual scene display prototype. *Journal of Medical Speech\-Language Pathology*, 15(3), 305–317.

Milroy, L.. & Perkins, L. (1992). Repair strategies in aphasic discourse: Towards a collaborative model. *Clinical Linguistics & Phonetics*, 6(1&2), 27–40. DOI: 10.3109/02699209208985517

Mondada, L. (2008). Using video for a sequential and multimodal analysis of social interaction: Videotaping institutional telephone calls. *Forum: Qualitative Social Research*, 9(3), Art. 39.

Mondada, L. (2012). The embodied and negotiated production of assessments in instructed actions. *Research on Language and Social Interaction*, 42(2), 329–361. DOI: 10.1080/08351810903296473

Oelschlaeger, M. L., & Damico, J. S. (2000). Partnership in conversation: A study of word search strategies. *Journal of Communication Disorders*, 33, 205–225. DOI: 10.1016/S0021-9924(00)00019-8

Perkins, L. (2003). Negotiating repair in aphasic conversation: Interactional issues. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 147–162). Oxford: Oxford University Press.

Pomerantz, A. (1980). Telling my side: 'Limited access' as a 'fishing' device. *Sociological Inquiry*, 50, 186–198. DOI: 10.1111/j.1475-682X.1980.tb00020.x

Pullin. G. (2009). *Design meets disability*. Cambridge: The MIT Press.

Raudaskoski, S. (2009). *Tool and machine: The affordance of the mobile phone*. Acta Universitatis Tamperensis 1441. Tampere: Tampere University Press.

Rauniomaa, M., & Keisanen, T. (2012). Two multimodal formats for responding to requests. *Journal of Pragmatics*, 44(6–7), 829–842. DOI: 10.1016/j.pragma.2012.03.003

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation, *Language*, 50(4), 696–735. DOI: 10.2307/412243

van de Sandt-Koenderman, M. W. M. E. (2004). High-tech AAC and aphasia: Widening horizons? *Aphasiology*, 18(3), 245–263. DOI: 10.1080/02687030344000571

Schegloff, E. (1979). The relevance of repair to syntax-for-conversation. In T. Givón (Ed.), *Syntax and semantics. Vol. 12: Discourse and syntax* (pp. 231–246). New York: Academic Press.

Schegloff, E. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organization of repair in conversation. *Language*, 53(2), 361–382.

Stivers, T., & Sidnell, J. (2005). Introduction: Multimodal interaction. *Semiotica*, 156(1–4), 1–20. DOI: 10.1515/semi.2005.2005.156.1

Streeck, J., Goodwin, C., & LeBaron, C. (2011). *Embodied interaction: Language and body in the material world*. Cambridge, MA: Cambridge University Press.

Wilkinson, R. (1995). Aphasia: Conversation analysis of a non-fluent aphasic person. In M. Perkins, & S. Howard (Eds.), *Case-studies in clinical linguistics* (pp. 271–292). London: Whurr.

Wilkinson, R., Bloch, S., & Clarke, M. (2011). On the use of graphic resources in interaction by people with communication disorders. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world* (pp. 152–168). Cambridge: Cambridge University Press.

Organising the soundscape

Participants' orientation to impending sound when turning on auditory objects in interaction

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This chapter examines two auditory objects, i.e. devices that produce sounds when in use: audio entertainment systems and vacuum cleaners. Despite their apparent differences, both objects raise similar relevancies for how and when they are employed. The chapter demonstrates that participants treat the turning on of an auditory object as negotiable and requiring disengagement from other involvements, such as talk. Consequently, turning on an auditory object occurs typically at points where the participants have brought a previous interactional activity to a close collaboratively and where the possibility of turning on the auditory object has been explicated either verbally or physically.

Introduction[1]

In interaction, participants draw on different aspects of their surroundings and render particular objects, or certain features of those objects, meaningful to the activities that they are engaged in. Based on the main human senses, participants may orient to and treat objects as visible, audible, tangible, olfactory, gustatory and imagined or recollected. Conversation analysts and others interested in the intricacies of human interaction have tended to focus on two of these, namely

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on what participants look and touch, and studies have shown how various visual and tactile resources are drawn upon to establish mutual orientation and understanding between participants as well as to adopt and develop profession-specific practices of interpretation (see, e.g. Fasulo & Monzoni, 2009; Goodwin, 1997, 2000; Hindmarsh, Reynolds, & Dunne, 2011; Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Nishizaka, 2011). Some attention has also been paid to how participants draw on olfactory or gustatory resources, when eating and assessing edibles (e.g. Mondada, 2009; Wiggins, 2002, 2013) or while cooking (Mondada, this volume).

Surprisingly, however, there is not much research focusing on *auditory* features of objects, taking into consideration sounds that are not vocally produced by participants but that they, the participants, may nonetheless render meaningful in interaction. Spoken interaction relies to a great extent on hearing, and ambient sounds are often available to us analysts as well (although even sounds can remain elusive without members' knowledge, as noted by Ochs, 1988). It thus seems natural that if the ear, along with the eye, is one of the primary mediums for interaction, we also need to consider how sounds in general and the auditory features of objects in particular may potentially be oriented to, integrated into, or even treated as interruptive of, interaction.

In modern society, many sounds are produced by or with objects, and previous research has attested that such auditory objects can produce sounds that constitute social actions. The auditory object that has been studied the most from this interactional perspective is the telephone. Schegloff (1968) first argued that the initial ring constitutes a summons, making an answer relevant and thus the absence of an answer accountable. Others have since shown such conditional relevance to hold even though the telephone has technically developed from landline to mobile and from handheld to handsfree (see, e.g. Arminen & Leinonen, 2006; Haddington & Rauniomaa, 2011; Hutchby & Barnett, 2005). Other auditory objects may similarly call for a responsive action: an audible alarm used in a hospital compels nurses to look for the location of the alarm and, consequently, the patient room and patient in question (Sanchez Svensson & Tap, 2003).

Not all auditory objects, however, produce intermittent sounds that primarily function as a summons; in fact, many produce sounds either as the purpose or a side effect of their use. Such objects and the sound they produce may nevertheless be oriented to by participants as in need of coordination with interaction and possible other activities (see Nevile & Haddington, 2010), even to the degree that they shape the interactional contributions of participants in a similar fashion as a co-participant's production of talk does. Haviland (2011), for instance, examines different musical ensembles and shows how the careful coordination of individual

musicians, their bodies and their instruments in physical and musical space makes up a performance. Heath (1983), in turn, illustrates how the whirling and clicking of a computer in the consultation room of a doctor make both the doctor and patients synchronise their articulation of turns-at-talk with the sounds produced by the computer, even when none of the participants are otherwise engaged with the computer.

Finally, objects – as well as human agents – may produce what is often referred to as noise, i.e. sounds external and hence non-focal to the interaction, sounds that are typically beyond the participants' control but that may nevertheless have a (negative) impact on the perceptive and cognitive abilities that are required to participate in interaction (McKellin, Shahin, Hodgson, Jamieson, & Pichora-Fuller, 2007). Interactions regularly take place in more or less noisy environments, for instance in cafés (Laurier, Whyte, & Buckner, 2001), classrooms (Hodgson, 1999) and the workplace more generally. Depending on the level and type of noise, such sounds can have various effects on interaction, as evidenced by participants employing a range of resources, including prosodic marking (Goodwin, 1996), repair initiations, lengthier turns and even a complete absence of talk (McKellin et al., 2007). These effects suggest that external sounds, produced by people and objects during but not necessarily in or for interaction, can significantly impinge on the kind of interaction that can take place between participants. This further emphasises that the soundscape is an important aspect of the surroundings for the participants and that the auditory features of an object, i.e. an object's ability to produce sound, is of relevance to participants.

In this chapter, we shall illustrate how participants orient to the auditory quality of objects, or the ability of objects to produce sound, as something that is relevant for their own participation in interaction. Specifically, we shall demonstrate that participants treat the turning on of an auditory object as something that requires disengagement from other involvements, such as talk. Turning on an auditory object typically occurs only at points where participants have brought an interactional activity to a close, collaboratively, and where the possibility of turning on the auditory object has been explicated either verbally or physically. We shall thus illustrate that participants orient to an object's ability to produce sound – before any sounds are actually produced, or as they are beginning to be produced – as a significant impediment for further interaction with co-participants. We shall focus on two auditory objects as they feature in interaction because of their impending sound: the entertainment system of a car (i.e. radio or compact-disc player), and a vacuum cleaner. We shall examine how these objects are employed and oriented to in interaction when participants are about to turn them on or are in the process of turning them on.

Data

This study is based on two sets of data that involve auditory objects. One set comprises 14 hours of video recordings of ordinary everyday interaction between English-speaking participants travelling in a car (Habitable Cars corpus, courtesy of Eric Laurier, University of Edinburgh). Here, the auditory object is an audio entertainment system, which is turned on 17 times. The second set comprises 13 hours of video recordings of interactions in the Danish home help system, where elderly people are visited in their own home by caregivers. Here, the auditory object is a vacuum cleaner, which is turned on 15 times.

There is a range of potentially significant differences between the two sets of data, including object (audio entertainment system vs. vacuum cleaner), language (English vs. Danish), context (everyday vs. institutional) and setting (car vs. house). As auditory objects, vacuum cleaners and audio entertainment systems differ in terms of why they produce sounds and what kinds of sounds they produce: audio entertainment systems are used precisely because they make sounds, and there may not necessarily be any clear point in time at which the use should be initiated or ceased (i.e. radio stations provide programmes around the clock and CDs can be played repeatedly). By contrast, vacuum cleaners produce sounds as a side effect of their being used and the period of time one uses them for is in principle limited (i.e. while there is something to vacuum). Our data also differ in terms of the context in which the auditory objects are employed: entertainment systems may, but need not, be used during a car journey, whereas the use of a vacuum cleaner is a predefined task that the home help must perform as part of her visit to an elderly person. The use of the two objects further differs in terms of their physical space and setting: inside a car, co-participants cannot easily escape the sound of the entertainment system once turned on (although they may alter the soundscape of the car's cabin, for instance, by negotiating the volume, or by using personal portable media players with headphones), whereas in the home-help visits, the participant who is not physically engaged in using the vacuum cleaner is free to move from room to room and may thus ultimately choose to seek refuge in a place away from, or completely shielded from, the intruding noise.

Despite all these differences, as our analysis will show, audio entertainment systems and vacuum cleaners also share some significant features of sound production and thus, as particular kinds of auditory objects, ultimately make the same array of interactional organisations relevant. Unlike telephones or alarms and more like computers, audio entertainment systems and vacuum cleaners are operated by co-present parties and do not produce sounds that work as a summons, nor do they preclude simultaneous interaction between participants. It is the surrounding world that provides contextual relevancies for turning on both

of these devices (e.g. an audio entertainment system may be turned on for traffic news on the radio, and a vacuum cleaner may be turned on because the task of cleaning awaits), and the turning on can practically be done by only one person at a time. Nevertheless, participants in interaction orient to the turning on of these devices as something that should be done in sequentially relevant places and that, even then, should not be performed as a unilateral action that the participant with access to the object has alone decided upon.

The data excerpts have been transcribed according to the conventions presented in Jefferson (2004), and images have been included in the transcripts to capture the bodily conduct of the participants in alignment with their vocal contributions.

Turning on auditory objects

In what follows, we shall show that although it is possible for participants to interact while an auditory object is running, the *turning on* of such objects is treated as something that requires disengagement from other involvements, such as talk, and as something that should not be performed as a unilateral action, independently of whatever other contingencies may be relevant. We shall begin by providing evidence that the turning on of these objects is typically done only after a prior activity is appropriately brought to a close, then discuss in more detail how this is negotiated between co-participants, and finally present cases where turning on is not done at a sequentially relevant place and is thus treated as interruptive and accountable.

Initiating a sequence involving an auditory object

Our first case (Excerpt 1) comes from the Danish home help setting. The home help's institutional purpose is to assist the pensioner with basic tasks, which in this case means vacuuming the living area. At the same time, however, home help visits usually take on a social character, where the home help fills the role of a guest, by both accepting food and drink from the elderly and by engaging in conversation that does not centre on any institutionally relevant aspects (see, e.g. Heinemann, 2011). Whilst the home help is thus presumably entitled to turn on the vacuum cleaner at any point, as the use of this object is a prerequisite for her accomplishing the institutionally defined task, the turning on of the vacuum cleaner is throughout these data treated as something to be done in a coordinated fashion, i.e. at a point in time where it will not be considered interruptive of the on-going talk.

The excerpt begins at a point where the pensioner is coming to the end of a story she is relating about her recently repaired dental bridge, a story that, when initiated, resulted in the home help (HH) turning off the vacuum cleaner and hence suspending the institutional task that she was engaged in. Once the pensioner's story is clearly finished, the home help makes an enquiry in lines 69–71 about a dental technician (*ham Lyngborg* 'that guy Lyngborg') whom the pensioner, the home help implies, could have consulted instead of her regular dentist, *Lauritsen* (who had to send the dental bridge somewhere else to get it repaired). In the transcript, VAC refers to the vacuum cleaner and consecutive hyphens (--) stand for the sound of the device.

Excerpt 1 (Home help, 10 dentist; 0:19:26.1)



During the pensioner's story-telling the home help turns her body and her gaze towards the pensioner.

69	HH:	*>.hh< Jahmen ham ude i Nykøbing han a' han ikk' tektik-* >.hh< Yesbut that guy in Nykøbing he is he not tektik-
70		*tandtekniker=da,* a dental technician=then,
71		*[ham Lyngborg >eller hva' han-<* that guy Lyngborg >or whatever he-<
72	P:	*[Jo men det- det' jo: det' (j) alti' Lauritsen* Yes but that- that's JO it's (JO) always Lauritsen
73		*jeg har f[ordi jeg har jo £tænder£ endnu jo s[å;* I have because I JO have £teeth£ still JO so;
74	HH:	*[Nå.* *[Jerh.* Oh/Right. Yeah.
75		(2.4)
76	P:	*[Så jeg k- s:å t[ænkte jeg (.) ha' ku' han ordne det.* So I c- s:o I figured (.) he could fix it.
77	HH:	*[Ok↑ay,* *[Jerh.* *Ok↑ay,* Yeah.



The home help turns her upper body away from the pensioner, towards the vacuum cleaner.

78 HH: *Jerh.*
Yeah.

79 (3.0)





The home help pushes the vacuum cleaner away with her foot, and then bends to turn it on.

80 VAC: ----------

The home help's utterance in lines 69–71 comes across more as an assertion than as a question because of the negative interrogative construction (Heritage, 2002) and the modal particle *da* (Heinemann, 2009). This assertive element is also evident from the way in which the pensioner responds to the enquiry in lines 72–73: she first produces a 'yes' that confirms the status of the person referred to, and then an account for why she nevertheless used her regular dentist, *Lauritsen*. The pensioner presents this account as reasonable by including the epistemic adverb *jo* (Heinemann, Lindström, & Steensig, 2011, p. 128). Moreover, she concludes her explanation with *så*, which, like the English *so*, projects "an unstated upshot after a prior turn has been brought to possible completion" (Raymond, 2004, p. 192). The home help in turn treats the pensioner's answer as closing implicative: she first responds (line 74) with the change-of-state token *nå* (Emmertsen & Heinemann, 2010; Nielsen, 2002), which displays that she is currently informed where she was previously uninformed (see Heritage, 1984, on the English *oh*), and then with the acknowledgement token *jerh* 'yeah', which signals that she has nothing more to contribute (see Jefferson, 1993). Finally, after a long pause of 2.4 seconds (line 75), the home help closes the sequence with *okay*, which has been shown to initiate movement toward closure in other contexts, for instance, in terminating telephone calls (Schegloff & Sacks, 1973).

The contributions of both participants thus indicate that the story-telling sequence and the subsequent sequence-expanding inquiry are complete at around line 77, and that an entirely new activity can now be initiated. The presence of a juncture point here is supported by the fact that although the pensioner starts a turn-at-talk in overlap with the home help's *okay* (line 76), this turn can best be understood as a post-expansion (Schegloff, 2007), which merely finishes the upshot that the pensioner projected with her turn-final *så* (line 73). At the same time as these two turns are produced, the home help, in orientation to the projected sequence closure, begins to disengage from the interaction physically through torqueing her upper body away from the pensioner (line 77; see Schegloff, 1998, on "body torque") and moving first her left hand and then the whole of her upper body towards the vacuum cleaner. Finally, she positions the vacuum cleaner with her foot, turns it on with her left hand and begins to vacuum (lines 79–80).

What this example illustrates is that turning on the vacuum cleaner, despite the institutional relevancies that may come into play in this particular context, requires disengagement from other interactional activities. Disengagement is managed at a co-constructed and negotiated position in the on-going interaction, where another activity (here a story-telling) can be recognised as having reached its conclusion. Whilst home help visits may be a particular kind of context for talk, and whilst the vacuum cleaner may be a particular type of auditory object, we find the same pattern of interdependence emerge when the entertainment system of a car is turned on, as illustrated in our next example (Excerpt 2).

Here, Liz is on the school run with her two children, Lucy and Noel. Lucy is sitting on a booster seat in the front, while Noel is sitting in the back and does not participate in the conversation in this excerpt. At the very start of their journey, Lucy has found a CD in the glove compartment and requested that they play it. Liz has postponed the activity, suggesting that they first *get started* (data not shown). In Excerpt 2, Lucy again requests that the CD be put in the player (line 07).

Excerpt 2 (Habitable Cars, 3 not acting; 00:00:21)

```
01  LIZ:    °But you can give it a wave if you like,
02           to give it a wave?°
03           (0.7)
    l&l      wave at the camera
04  LIZ:     ↑Woohoo:::,
05           [he he he he he he
06  LUC:     [.hhh hh he:h
```




Lucy turns her gaze towards the CD player and the CD. After having waved at the camera, she brings her right hand back to the CD.

```
07  LUC:     Now [could you put that in?
08  LIZ:         [.hhh      What will Dawn and Elena think.
```



Lucy lifts the CD towards the CD player.



```
09           (0.6)
```

Lucy lowers the CD back to her lap.

```
10  LIZ:     They'll think we're bonkers.
```



```
11           (0.3)
```

Lucy lifts the CD towards the CD player.

```
12  LUC:     °.tsk Mummy?
13           [(can w- we-)°
```

14 LIZ: [*Cause (-) we got a camera in our car,*



Liz brings her left hand to the CD player and ejects a CD.

15 LIZ: *we're absolutely bonkers.*

16 (1.8)



Liz takes out the CD from the player.

17 LIZ: *Do we really have to listen to this?*



Liz takes the CD from Lucy.

18 LUC: *Yeah,*
19 (2.8)



Liz inserts the CD in the CD player.

Lucy produced her previous request at a possible juncture between activities, when Liz had finished preparations for the journey (i.e. fastening Noel's seatbelt and getting into the car herself) but had not yet turned on the engine and begun to drive. Rather than constituting a deferred or remote proposal that would have called for fulfilment at a later time (see Lindström, forth), that first request made an immediate uptake relevant. Liz, however, treated the activity of embarking on a journey as not yet finished and Lucy's request as unfulfillable at that point (see Rauniomaa & Keisanen, 2012; see also Keisanen, Rauniomaa, & Haddington, in press). Here, Lucy produces her request for a second time, *now could you put that in* (line 07), marking it explicitly as a subsequent occurrence, rather than as a pursuit, with the initial temporal adverb *now*. The participants may deem this in many ways to be a more propitious moment for the request. Firstly, the participants have clearly 'got started' and their journey is now well under way. Secondly, they are now waiting at a red light and there are no pressing driving-related activities that require Liz's attention. Thirdly, at the beginning of the excerpt, Liz and Lucy are engaged in talk about the camera, which is mounted on the dashboard and recording their interaction, but this sequence soon reaches a possible completion.

Since the start of their journey and her previous request, Lucy has been keeping the CD in her lap, holding it with her hands, thus apparently maintaining its relevance in the current interactional event (see Keisanen & Rauniomaa, 2012). An appropriate moment for dealing with the CD seems to occur in lines 05–06, where Liz and Lucy jointly laugh and thus indicate that the current topic can be closed (see Jefferson, 1979). Lucy's bodily behaviour indicates her orientation

to the joint laughter as potentially sequence-closing: while she produces her last pulse of laughter (line 06), she turns her gaze away from the camera, first looking to where the CD player is located, and then looking towards the CD. At the same time, she waves at the camera and then returns her right hand to the CD. She then initiates her request, *Now could you put that in* (line 07), simultaneously lifting the CD up towards the CD player. Liz, however, overlaps with Lucy's request by continuing to talk about the potentially peculiar aspects of having a video camera in the car. Lucy therefore brings the CD back to her lap, taking a better grasp of it with both her hands (line 09). After Liz's turn has come to a possible completion in line 10, Lucy again lifts the CD towards the player, summonses Liz (*Mummy*, line 12) and begins what is probably another version of the request (*can w- we*, line 13). Liz now fulfils Lucy's request by taking another CD out of the player (lines 15–16) and taking the one from Lucy to put it in (lines 17 and 19) – albeit somewhat reluctantly, as Liz's turn indicates: *Do we really have to listen to this?* (line 17).

Excerpts 1 and 2 illustrate how participants in interaction do not simply turn on, or request a co-participant to turn on, an auditory object arbitrarily, or immediately, when the need arises. Rather, the turning on of an auditory object, such as a vacuum cleaner or an audio entertainment system, is postponed until an on-going sequence of talk and other actions can be brought to a close jointly by the participants. The excerpts thus show that the turning on of an auditory object is anything but an action which one participant could simply choose to do (or not do) unilaterally; participants integrate this action into, and mark its dependence on, the overall sequential development of their interaction. The distribution of actions between participants thus in itself reveals something about the priorities that participants have when engaging with auditory objects. In the following section, we shall explore this aspect in more detail by examining two cases in which the turning on of an auditory object is negotiated between participants.

Negotiating the turning on of an auditory object

As we illustrated above, participants withhold turning on an auditory object until sequence closure of some on-going talk or other action has been achieved. In this section, we shall show that the sequential closure only allows for the *potentiality* of turning on the object, whilst the actual turning on is then treated as something still to be managed and negotiated by the participants. This was already partially evident in Excerpt 2, in which Lucy requested her mother to insert a CD in the player, thus treating it as a matter to be negotiated. One could argue that the need to formulate the turning on of the audio entertainment system as a request was

due either to Lucy's inability to insert the CD into the player herself (possibly because she could not reach the player or did not know how to operate it) or to Liz's greater entitlement to operate the CD player in her capacity as both the mother and the driver. In Excerpt 3, however, it is the parent driver who enquires whether she can turn on the audio entertainment system.

Here, Jennifer is driving and her daughters, Suzy and Kelly, are sitting on the back seat. The car is standing still behind a bus, and Jennifer is leaning against the edge of the car door window, resting her cheek on her hand. As in Excerpt 2, the driver is not currently engaged in any driving-related activity that requires her full attention. Similarly to Excerpts 1 and 2, the participants have at this point reached the potential closure of a prior sequence: Jennifer has quizzed Suzy on her homework and assesses her performance with *Well done Suzy* (line 01), and Suzy responds with a *Thank you* (line 02).

Excerpt 3 (Habitable Cars, 14 Capital; 00:00:02)

01 JEN: *.nff .mt Well done Suzy:.*
02 SUZ: *°(Thank you.)° Yay:,*



Jennifer straightens up and turns toward the centre console.

03 JEN: *Capital hh?*



Jennifer stretches out her left arm and leans forward toward the centre console, to open the flap covering the audio entertainment system controls.

04 SUZ: *Eh, no, >not just yet<. [(--)*
05 JEN: *[Oh-kay.*



Jennifer remains leaning forward.

06 SUZ: *Sorry. Cause ehm, (--) (--)*



Jennifer closes the flap, straightens up and begins to drive as the vehicles ahead move forward.

Jennifer then attempts to initiate a new activity: she proposes to turn on the radio. She orients to the audio entertainment system that is located in the centre console of the car by turning her gaze toward it, stretching out her arm and even leaning her whole upper body toward it. During this bodily orientation, Jennifer also produces the name of a particular radio station with a rising appeal intonation (*Capital hh?*, line 03) and opens the flap covering the audio entertainment system. This appeal thus clearly mobilises a response from the co-participants (see Stivers & Rossano, 2010). Suzy rejects the proposal: *Eh, no, not just yet* (line 04). Although Jennifer acknowledges the rejection with *Oh-kay* (line 05), she remains leaning toward the centre console and keeps her hand on the flap, as if to wait for an approval that she may turn the radio on, perhaps tuning in to a different station. When Suzy apologises for the rejection and begins to provide an account (line 06), Jennifer finally closes the flap and straightens herself up in order to begin driving again.

Whilst participants in cars overtly – and typically verbally, as in Excerpt 3 – negotiate not only whether the entertainment system should be turned on, but also what should be played, and at what volume and so on, the institutional setting of the home help visit and the auditory object employed there seem to have an effect on how the participants orient to the object. Thus, in our data, the turning on of the vacuum cleaner is never overtly requested by the pensioner (cf. Excerpt 2), nor does the home help ever ask for permission to turn the vacuum cleaner on (cf. Excerpt 3). Nevertheless, we find similar, though perhaps more subtle, indications that the turning on of the vacuum cleaner is considered a joint action and something that can be at least overruled, if not rejected, by the pensioner. This is the case in our next example, Excerpt 4, which illustrates how the home help's attempt to turn on the vacuum cleaner at an otherwise sequentially relevant point of completion is abandoned because the pensioner initiates a new sequence of talk.

In this excerpt, the home help, who is in the process of vacuuming the living room carpet, has turned off the vacuum cleaner to enquire whether a meeting that is to be arranged between the pensioner and the home help's mother (who is interested in local history and wants to look through some documents that the pensioner has) must take place before Christmas. Having disconfirmed this, the pensioner mentions a neighbour who was surprised that the home help's mother does not use her car. The excerpt begins when the home help responds by stating that it is better for her mother to use her bicycle (lines 01–03). At this point, where the enquiry about the meeting is clearly over, the home help turns away, steps towards the vacuum cleaner while pulling the tube towards her (line 01), and then bends down and reaches for the button (line 02).

Excerpt 4 (Home help, 8a bicycling; 0:28:50.3)

01 HH: *>Nahm' hun ve' nu hellere cykle.=å'hun har å' godt*
>Nyeahbut she'd NU rather cycle.= and it's good for




The home help looks at the pensioner while delivering the information about her mother, but then turns away, towards the vacuum cleaner.

02 HH: *a' når hun har gigt så har hun*
her when she has arthritis then it's



The pensioner pulls out a book from the bookcase while the home help bends over the vacuum cleaner, reaching for the button.

03 HH: *godt [a' å'*
good for her to

04 P: *[>.hh Bondens< brød.*
>.hh Farmers< bread.



The home help straightens up.

05 (0.1)

06 P: *Det' a' Hå Pe Hansen.*
That's by Hå Pe Hansen.



The pensioner opens the book and the home help leans further towards her.

07 (1.3)

08 P: *Der sitter en he:l mængde*
There's a whole bunch sitting there

09 (3.8)



The home help pulls the tube towards herself with her left arm while taking a step towards the pensioner.

At the point at which the home help bends down towards the vacuum cleaner and stretches out her arm to reach for the on/off button (line 02), but just before she presses it, the pensioner announces the title of a book she has just pulled out from a bookcase, *Bondens brød* (line 04).

Although the participants have not talked about the book before, the announcement makes it seem as if this is a book that the pensioner has been looking for and has now found, which in itself could be enough to catch the home help's attention. Additionally, the announcement is produced with a step-up in pitch and loudness, a localised speeding up and in close temporal proximity to the home help's verbal and physical actions that indicate that the current activity of talking is about to be closed and the next physical action of vacuum cleaning is about to start. These features of the pensioner's announcement are all phonetic parameters that are similarly employed in "abrupt-joins" (Local & Walker, 2004) that serve to pre-empt "a turn-in-production's transition relevance by the 'early' production of a second unit" (p. 1376). In other words, the pensioner can here be heard to pre-empt the move by the home help to close the current interaction between them and, in particular, the projected subsequent move towards turning on the vacuum cleaner. The home help, in turn, displays how finely tuned her orientation to the interaction is, firstly, by disengaging from the vacuum cleaner as soon as the pensioner produces the first syllable of her announcement (line 04) and, secondly, by turning her whole torso to engage more fully in the new sequence of interaction (lines 06 and 09). The home help thus further displays that she has, at least for the present, abandoned the vacuum cleaning altogether.

Excerpts 3 and 4 illustrate that reaching sequence completion before initiating the turning on of an auditory object is not enough to ensure that the object be turned on: participants must also be in agreement that such turning on is the next relevant action. Participants orient to this necessity, for instance, by inviting the other to accept the turning on (Excerpt 3), or by abandoning this action when there is evidence that a co-participant is about to launch a new interactional sequence (Excerpt 4). In showing their readiness to abandon the turning on of an auditory object in this manner, participants display a priority of action where interaction is rated higher than the employment of an auditory object. Although these two actions, once under way, do not necessarily preclude each other, participants seem to treat them as alternatives that cannot be carried out concurrently. In the following section, we shall look at further evidence for this by discussing cases in which the turning on and employment of an auditory object is considered and treated as interruptive or accountable, i.e. as something that works at a different level than the interaction that may or may not be going on between participants.

Turning on as interruptive and accountable

Although the clear majority of our cases follows the patterns described in the previous two sections, there is nothing in practical terms that prevents participants from turning on an auditory object outside any sequentially relevant place and without orienting to co-participants while doing so. Excerpts 5 and 6 are instances of how an auditory object is turned on outside a sequentially relevant place, but they at the same time serve to shed further light on the general organisation that surrounds the use of auditory objects. That is, in their violation of the norms that otherwise guide the use of an auditory object, these excerpts show the participants in effect orienting to the very same norms.

In Excerpt 5, a home help turns on the vacuum cleaner at a point where sequential completion has not been achieved but then accompanies her action with a verbal component that clearly treats the turning on as an accountable action. The excerpt begins where the home help has moved the vacuum cleaner into the pensioner's living room, where the pensioner has been showing the home help the sweater that she is currently knitting. The home help enquires about another sweater that the pensioner had once showed her (lines 03–05). Note that hyphens (---) are used in the transcript to describe the fairly loud buzzing noise of an active vacuum cleaner (VAC) and periods (…) the quieter start-up and close-down sounds.

Excerpt 5 (Home help, 4 sweater; 08:27.5)

```
03  HH:     =>Ja hva' me' den orange du ha'de lavet det< der
            =>Yes what about the orange one you made< that

04          eh:m::::: (0.9) frynser forne'en, >Går du no'ensinde
            eh:m::::: (0.9) tassels at the bottom, >Do you ever

05          i den mer'?<
            wear that anymore?<

            ((9 lines left out in which P and HH try to establish which
                sweater HH is talking about))

16          (2.0)
```



The pensioner moves past the home help towards the clothes cupboard where she keeps her knitting.

```
17  HH:     Det sy's jeg da du ha'de en engang,
            I do think you had one once,

18  HH:     a' der var me' frynser,
            which had tassels,
```



19 (0.9)

The home help leans towards the vacuum cleaner.

20 HH: [>*Nu starter jeg al'så li' maskinen.*<
>Now I'll just start the machine you know.<

21 VAC: [.....----------.....----------






The home help presses the power button to turn the cleaner on, then off, then on again, before straightening up and beginning to vacuum.

The home help does not receive an answer to her enquiry ('do you ever wear that anymore?', lines 04–05), apparently because the pensioner is unable to recall the sweater referred to. With the answer pending, the pensioner goes to the cupboard where she keeps her sweaters, presumably to remember and identify the sweater visually (line 16). The answer is thus delayed, but the pensioner's embodied actions suggest that she is still in the process of finding the answer. It is at this moment in the interaction that the home help leans towards the vacuum cleaner (line 19), then bends over it and finally presses the button to turn it on (line 21). In a similar way to Excerpts 1 and 4, the bodily actions of the home help here display a step-by-step disengagement from the on-going interaction with the pensioner, to an interaction, of sorts, with the vacuum cleaner. However, in contrast with the examples above, the turning on of the auditory object is not done at a sequence-closing position, but while the interaction is still on-going, here because of the pending answer. It is evident that the home help herself understands her engagement and turning on of the vacuum cleaner in this position as potentially problematic and, as a minimum, accountable, because she immediately stops herself, turns the vacuum cleaner off again before much sound has been produced, and then verbally informs the pensioner that she will start the machine, before again turning it on (line 21).

The way in which the home help formulates her informing, in particular by using the adverbs *lige/li* and *altså* (line 20), further shows her orientation to the turning on being done in a potentially problematic position. The former adverb

is similar to the English *just* and, with it, the home help seems to treat her action (her turning on of the vacuum cleaner) as inconsequential or unimportant, the implication being that it can be halted at any point, should the pensioner find the sweater in question. The latter adverb cannot as easily be translated into English, and its use and function have not yet been comprehensively described on record for Danish or any related languages, but here it is seems to work in treating the turning on of the vacuum cleaner as being a consequence of the delayed, pending answer. The adverb *altså* thus here further indicates that the turning on is done only because it is evident that the answer will not be provided anytime soon. In this way, the home help treats her own turning on of the vacuum cleaner in this position as potentially interpretable as interruptive, or at least as accountable, i.e. she flags this particular turning on as a marked action.

A more extreme case of how turning on an auditory object may interrupt an on-going activity is found in our final example, Excerpt 6, where a participant turns on the audio entertainment system specifically to interrupt, or at least disengage herself from, the on-going interaction. Here, Cathy is driving her car, with three children on the back seat (Ella, Iris and Dean). The children are quarrelling by playing on sounds, imitating one another, and trying to stop each other from producing such imitations (lines 03–20). In the transcript, RAD refers to the radio and CD to the CD player, and text after a subsequent colon indicates what is being said or sung.

Excerpt 6 (Habitable Cars, 11 lu lu lu lu luh; 00:00:31)

```
01  CAT:    They're copying you Iris.
02          If [you're quiet, THEY MIGHT co[py you.
03  IRI:       [.hh lu lu LU               [LU LUH
04  DEA:                                   [STOP [I::::T.
05  ELL:                                         [.hh LU LU LU LU LUH
06  DEA:    [LU LU LU LU LUH LUH LU LUH
07  IRI:    [STO:::::::::::::::::::P
```



Cathy grimaces while the children on the back seat make loud noises.

```
08  DEA:    >LU LU LU LUH< LU LU LU LUH
09  IRI:    @Stop.@
```



Cathy glances in the rearview mirror.

```
10  ELL:    >lu lu lu [lu luh<
11  IRI:              [lu lu [@LU:::::::::H@
12  DEA:                     [LU LU LU LU LUH
```

13 *LU LU LUH L:U L:U L:U L:U lu lu lu la:::h*



Cathy turns her gaze to the centre console, brings her left hand to the controls of the audio entertainment system, and turns the system on.

14 ELL: *Quit it, dufus.*
15 IRI: *lu lu lu lu [luh*
16 RAD: [(--) ((talk on the radio))
17 DEA: *LU LU LU LU [LUH*
18 IRI: [*@STO:: ::P*





After changing gears and monitoring the traffic, Cathy turns her gaze back to the centre console and brings her left hand back to the controls in order to turn on the CD player.

19 ELL: *quit it [dufus.*
20 DEA: [*YOU: STO::P*
21 CD: *your mother lied, [mon cher,* ((music playing))
22 IRI: [*he he HAH HAH*



Cathy smiles and takes a sideways glance at the back seat.

23 CD: *separate your right from wrongs, come and sing a different song,*
24 *the kettle's on, so don't be long, mon cher, so come on,*
25 *l[et me entertain you*
26 CAT: [*°Let° me entertain you* ((singing))

Cathy first tries to quieten the three children by encouraging one of them, Iris, to stay silent and let the others imitate her (lines 01–02), but this has no apparent effect on the conduct of the children. Instead, they raise their voices (lines 03–08). Cathy grimaces and glances at the children in the rear-view mirror but does not vocally interfere with the children's quarrelling (line 07). While approaching a junction and slowing down the car, however, she glances at the centre console and brings her left hand to the controls of the audio entertainment system (line 13). She turns the system on, and talk on the radio can be heard (although indecipherable, line 16). A moment later, Cathy stops the car at a red light and, after changing gears, brings her left hand back to the controls (line 18). This time, a CD begins to play, mid-way through a song (lines 21–22). As soon as the music begins to play, the children quieten down, Iris laughing a little at first (line 22). This seems to be the desired result: in response to the children quietening down and Iris laughing, Cathy smiles somewhat smugly and turns her head slightly to give the children a sideways glance. In other words, we find clear evidence in both Cathy's and the children's conduct that the auditory object is here turned on with

the express purpose of interfering with an on-going activity – which is indeed, in consequence, successfully halted.

Excerpts 5 and 6 are exceptional in that the participants appear to flaunt the norms or patterns otherwise followed in the use of auditory objects: participants withhold turning on an auditory object until a sequential closure of a prior activity has been achieved, and then they only do so in a stepwise fashion that allows the turning on to be established as a joint action agreed upon by all concerned participants. Cases such as Excerpts 5 and 6 are rare in our data, and this rarity gives further support to our finding that there are indeed general norms for the turning on of an auditory object. Moreover, as the two excerpts illustrate, when participants conduct themselves in a manner that flaunts these apparent norms, they do so for a purpose and in ways that nevertheless highlight the existence of the norms.

Conclusion

The current chapter has its beginnings in a realisation that we came to when comparing our observations on two very different auditory objects that we had each examined separately: the employment of vacuum cleaners and audio entertainment systems is based on the same set of interactional contingencies, despite the evident differences of the objects and their contexts of use. Simply put, vacuum cleaners and audio entertainment systems are both objects that produce sounds more or less continuously when in use, but their sounds do not prevent participants from engaging in talk at the same time. Both are also objects that can practically be used by only one participant at a time, but their use may affect everyone present.

Our analyses indeed confirmed a range of similarities in how participants may come to turn on such auditory objects: rather than turning them on in a unilateral and arbitrary fashion, participants orient to the existence of certain social norms pertaining to when and how auditory objects should be turned on. Participants show this orientation by: (1) withholding turning on such objects until the sequential closure of a prior activity has been accomplished, (2) initiating the turning on in a stepwise fashion that allows it to be established jointly (or, alternatively, to be rejected by co-participants), and (3) treating deviations from this pattern as accountable social actions. In these respects, the turning on of auditory objects is similar to how interactants more generally negotiate and navigate their participation with other *human* participants, as described, for instance, by Egbert (1997) in the context of 'schisming', where conversation is split up as a collaborative effort

between co-participants. Since the turning on of auditory objects, in much the same way as schisming, seems to preclude simultaneous engagement with the current interactional partner, we could conclude that the interactants almost treat auditory objects as third participants.

At this point, a caveat is in order: objects possess various physical, kinetic or iconic properties (Heinemann, Landgrebe, Mitchell, & Buur, in press), which may each in turn invite a range of affordances (Gibson, 1977) that participants make relevant at particular moments of interaction. In terming the devices under investigation as auditory objects, we have perhaps implied that the auditory property of these objects is the most relevant feature for participants and, in particular, that it is the auditory quality of these objects that makes participants coordinate their engagement with them in the way that they do. However, interactants can also be seen to coordinate their engagement with, and handling of, objects that do not produce sound during the on-going talk. Laurier (2008), for instance, shows how café customers, as a pair, time the last sipping of drinks with their talk as they are preparing to leave, and LeBaron and Jones (2002) discuss how a client cues her departure from a beauty salon to another client by lifting and holding her handbag. Similar coordination between engaging with objects and engaging in talk is found in contexts where objects are exhibited or in other ways presented as available either for viewing or handling, for instance, in museums and shops (see, e.g. De Stefani, this volume; Kreplak & Mondémé, this volume; vom Lehn, 2013; vom Lehn, Heath, & Hindmarsh, 2001). In these settings then, the handling of, and orientation to, more or less silent objects also seems to be influenced by the sequential organisation of talk or to influence that organisation. Such handling may certainly be done in somewhat different ways than what we have described for the auditory objects, since it is apparently unproblematic for interactants to engage with such silent objects while interacting.

A more relevant parallel to our study of auditory objects and participants' employment of these objects in interaction can perhaps be found in studies of workplace settings, or workplace studies (Heath, Knoblauch, & Luff, 2000; Luff, Heath, & Hindmarsh, 2000), where participants may be required to navigate between different engagements because there are "alternative activities competing for a worker's involvement" (Schegloff, 1998, p. 553). In such contexts, it can be shown, in very similar ways to what applies to our auditory objects, that participants will regularly prioritise on-going talk over the initiation of a work-related activity. Toerien and Kitzinger (2007), for instance, illustrate how a beauty therapist, although perfectly able to talk to her client while threading the client's eyebrows, will wait for the on-going talk to be brought to a close before initiating a new task. With this in mind, it is difficult to determine whether it is the actual sound produced by our auditory objects, rather than the activities involved in

engaging with these objects more generally, that requires so much cognitive, visual and auditory attention that it impedes sufficiently on the participants' ability to maintain what Goffman (1963) termed a 'focused encounter'.

The fact that participants can actually engage in talk when the auditory objects are already turned on, however, suggests that vacuuming and listening to the radio or a CD are not on a par with other interactional tasks in requiring much cognitive or visual attention. Moreover, in reverse cases that we have not discussed here but will analyse in another study, namely when auditory objects are being turned off, at least some contributions made by human co-participants seem to be prioritised over contributions made by these auditory devices. That is, when an auditory object is already on and a participant begins to talk in overlap with the sounds produced by the object, the participant responsible for handling the device may eventually turn it off in order to give precedence to talk. This initial observation, together with the present findings that when the objects are turned on, participants initially fall silent (giving space to the sounds produced by the objects) and that participants may reject the turning on of an auditory object if they deem a spate of talk to be still in progress, suggests that participants themselves render the auditory properties of vacuum cleaners and audio entertainment systems to be relevant for interaction.

References

Arminen, I., & Leinonen, M. (2006). Mobile phone call openings: Tailoring answers to personalized summonses. *Discourse Studies*, 8, 339–368. DOI: 10.1177/1461445606061791

Egbert, M. (1997). Schisming: The collaborative transformation from a single conversation to multiple conversations. *Research on Language and Social Interaction*, 30, 1–51. DOI: 10.1207/s15327973rlsi3001_1

Emmertsen, S., & Heinemann, T. (2010). Realization as a device for remedying problems of affiliation in interaction. *Research on Language and Social Interaction*, 43, 109–132. DOI: 10.1080/08351811003738059

Fasulo, A., & Monzoni, C. (2009). Assessing mutable objects: A multimodal analysis. *Research on Language and Social Interaction*, 42, 362–376. DOI: 10.1080/08351810903296481

Gibson, J. J. (1977). The theory of affordances. In R. Shaw, & J. Bransford (Eds.), *Perceiving, acting and knowing: Toward an ecological psychology* (pp. 67–82). Hillsdale, NJ: Erlbaum.

Goffman, E. (1963). *Behavior in public places*. New York, NY: The Free Press.

Goodwin, C. (1997). The blackness of black: Color categories as situated practice. In L. B. Resnick, R. Säljö, C. Pontecorvo, & B. Burge (Eds.), *Discourse, tools and reasoning: Essays on situated cognition* (pp. 111–140). Berlin: Springer. DOI: 10.1007/978-3-662-03362-3_6

Goodwin, C. (2000). Practices of color classification. *Mind, Culture and Activity*, 7, 19–36.

Goodwin, M. H. (1996). Informings and announcements in their environment: Prosody within a multi-activity work setting. In E. Couper-Kuhlen, & M. Selting (Eds.), *Prosody in conversation: Interactional studies* (pp. 436–461). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511597862.013

Haddington, P., & Rauniomaa, M. (2011). Technologies, multi-tasking, and driving: Attending to and preparing for a mobile phone conversation in a car. *Human Communication Research*, 37, 223–254. DOI: 10.1111/j.1468-2958.2010.01400.x

Haviland, J. B. (2011). Musical spaces. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world* (pp. 289–304). Cambridge: Cambridge University Press.

Heath, C. (1983). Research note: Computer-aided diagnosis in the consultation. *Sociology of Health & Illness*, 5, 332–344. DOI: 10.1111/1467-9566.ep10491847

Heath, C., Knoblauch, H., & Luff, P. (2000). Technology and social interaction: The emergence of 'workplace studies'. *British Journal of Sociology*, 51, 299–320. DOI: 10.1080/00071310050030190

Heinemann, T. (2009). Two answers to inapposite inquiries. In J. Sidnell (Ed.), *Conversation analysis: Comparative perspectives* (pp. 159–186). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511635670.007

Heinemann, T. (2011). From home to institution: Roles, relations and the loss of autonomy in the care of old people in Denmark. In P. Backhaus (Ed.), *Communication in elderly care* (pp. 90–111). London: Continuum.

Heinemann, T., Landgrebe, J., Mitchell, R., & Buur, J. (in press). Narrating value networks and business models through tangible materials. *TAMARA* (Special issue on Materiality & Storytelling).

Heinemann, T., Lindström, A., & Steensig, J. (2011). Addressing epistemic incongruence in question–answer sequences through the use of epistemic adverbs. In T. Stivers, L. Mondada, & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 107–130). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511921674.006

Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action* (pp. 299–345). Cambridge: Cambridge University Press.

Heritage, J. (2002). The limits of questioning: Negative interrogatives and hostile question content. *Journal of Pragmatics*, 34, 1427–1466. DOI: 10.1016/S0378-2166(02)00072-3

Hindmarsh, J., Reynolds, P., & Dunne, S. (2011). Exhibiting understanding: The body in apprenticeship. *Journal of Pragmatics*, 43, 489–503. DOI: 10.1016/j.pragma.2009.09.008

Hodgson, M. (1999). Experimental investigation of the acoustical characteristics of university classrooms. *Journal of the Acoustical Society of America*, 106, 1810–1819. DOI: 10.1121/1.427931

Hutchby, I., & Barnett, S. (2005). Aspects of the sequential organization of mobile phone conversation. *Discourse Studies*, 7, 147–171. DOI: 10.1177/1461445605050364

Jefferson, G. (1979). A technique for inviting laughter and its subsequent acceptance/declination. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 79–96). New York, NY: Irvington Publishers.

Jefferson, G. (1993). Caveat speaker. Preliminary notes on recipient topic-shift implicature. *Research on Language and Social Interaction*, 26, 1–30. DOI: 10.1207/s15327973rlsi2601_1

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13–31). Amsterdam /Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Keisanen, T., & Rauniomaa, M. (2012). The organization of participation and contingency in prebeginnings of request sequences. *Research on Language and Social Interaction*, 45, 323–351. DOI: 10.1080/08351813.2012.724985

Keisanen, T., Rauniomaa, M., & Haddington P. (in press). Suspending action: From simultaneous to consecutive ordering of multiple courses of action. In P. Haddington, T. Keisanen, L. Mondada, & M. Nevile (Eds.), *Multiactivity in social interaction*: *Beyond multitasking*. Amsterdam/Philadelphia: John Benjamins.

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?" A simple matter of trust. *Journal of Pragmatics*, 43, 521–541. DOI: 10.1016/j.pragma.2009.09.009

Laurier, E. (2008). Drinking up endings: Conversational resources of the café. *Language & Communication*, 28, 165–181. DOI: 10.1016/j.langcom.2008.01.011

Laurier, E., Whyte, A., & Buckner, K. (2001). An ethnography of a neighbourhood café: Informality, table arrangements and background noise. *Journal of Mundane Behavior*, 2, 1–30.

LeBaron, C. D., & Jones, S. E. (2002). Closing up closings: Showing the relevance of the social and material surround to the completion of an interaction. *Journal of Communication*, 52, 542–565. DOI: 10.1111/j.1460-2466.2002.tb02561.x

Lindström, A. (forthcoming). Accepting remote proposals. In G. Raymond, G. H. Lerner, & J. Heritage (Eds.), *Enabling human conduct: Naturalistic studies of talk-in-interaction in honor of Emanuel A. Schegloff*. Amsterdam/Philadelphia: John Benjamins.

Local, J., & Walker, G. (2004). Abrupt-joins as a resource for the production of multi-unit, multi-action turns. *Journal of Pragmatics*, 36, 1375–1403. DOI: 10.1016/j.pragma.2004.04.006

Luff, P., Heath, C., & Hindmarsh, J. (2000). *Workplace studies: Recovering work practice and informing systems design*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628122

McKellin, W. H., Shahin, K., Hodgson, M., Jamieson, J., & Pichora-Fuller, K. (2007). Pragmatics of conversation and communication in noisy settings. *Journal of Pragmatics*, 39, 2159–2184. DOI: 10.1016/j.pragma.2006.11.012

Mondada, L. (2009). The methodical organization of talking and eating: Assessments in dinner conversations. *Food Quality and Preference*, 20, 558–571. DOI: 10.1016/j.foodqual.2009.03.006

Nevile, M., & Haddington, P. (2010). *In-car distractions and their impact on driving activities*. Road Safety Grant Report 2010-001. Canberra: Australian Government, Department of Infrastructure and Transport.

Nielsen, M. F. (2002). Nå! En skiftemarkør med mange funktioner [Oh! A change-of-state token with many functions]. In *Studier i Nordisk 2000–2001* (pp. 51–67). Copenhagen: Selskab for Nordisk Filologi.

Nishizaka, A. (2011). Touch without vision: Referential practice in a non-technological environment. *Journal of Pragmatics*, 43, 504–520. DOI: 10.1016/j.pragma.2009.07.015

Ochs, E. (1988). *Culture and language development. Language acquisition and language socialization in a Samoan village*. Cambridge: Cambridge University Press.

Rauniomaa, M., & Keisanen, T. (2012). Two multimodal formats for responding to requests. *Journal of Pragmatics*, 44, 829–842. DOI: 10.1016/j.pragma.2012.03.003

Raymond, G. (2004). Prompting action: The stand-alone "so" in ordinary conversation. *Research on Language and Social Interaction*, 37, 185–218. DOI: 10.1207/s15327973rlsi3702_4

Sanchez Svensson, M., & Tap, H. (2003). Alarms – localization, orientation and recognition. *International Journal of Human-Computer Interaction*, 15, 51–66. DOI: 10.1207/S15327590IJHC1501_05

Schegloff, E. A. (1968). Sequencing in conversational openings. *American Anthropologist*, 70, 1075–1095. DOI: 10.1525/aa.1968.70.6.02a00030

Schegloff, E. A. (1998). Body torque. *Social Research*, 65, 535–596.
Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208
Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, 7, 289–327.
Stivers, T., & Rossano, F. (2010). Mobilizing response. *Research on Language and Social Interaction*, 43, 3–31. DOI: 10.1080/08351810903471258
Toerien, M., & Kitzinger, C. (2007). Emotional labour in action: Navigating multiple involvements in the beauty salon. *Sociology*, 41, 645–662. DOI: 10.1177/0038038507078918
vom Lehn, D. (2013). Withdrawing from exhibits: The interactional organisation of museum visits. In P. Haddington, L. Mondada, & M. Nevile (Eds.), *Interaction and mobility: Language and the body in motion* (pp. 65–90). Berlin: De Gruyter.
vom Lehn, D., Heath, C., & Hindmarsh, J. (2001). Exhibiting interaction: Conduct and collaboration in museums and galleries. *Symbolic Interaction*, 24, 189–216. DOI: 10.1525/si.2001.24.2.189
Wiggins, S. (2002). Talking with your mouth full: Gustatory *mmms* and the embodiment of pleasure. *Research on Language and Social Interaction*, 35, 311–336. DOI: 10.1207/S15327973RLSI3503_3
Wiggins, S. (2013). The social life of 'eugh': Disgust as assessment in family mealtimes. *British Journal of Social Psychology*, 52, 489–509. DOI: 10.1111/j.2044-8309.2012.02106.x

Cultivating objects in interaction

Visual motifs as meaning making practices

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This chapter explores patterns of repeated orientations to physical objects in interactants' visuo-spatial and haptic surround. A number of examples are presented from advice-giving activities in various institutional settings, where participants-in-interaction initially draw on material objects at hand while pursuing a particular line of explanation, and then return to these objects at later intervals. The analysis suggests that the objects are afforded representational properties through their being anchored to some referent in the talk, and that participants subsequently draw on these associations for describing, disambiguating or clarifying aspects of the relatively complex procedural frameworks discussed in the settings. This suggests that the temporal stability of material objects available to participants makes them an ideal resource to be developed as visual motifs.

Introduction

This study explores patterns of orientations to material objects as they are drawn upon as resources for symbolic representation in interaction. We observe how objects brought into play as constitutive elements in referential practices (Hanks, 1992), leave residual traces of a semantic affordance which can be further mobilised by participants in later episodes. In this way, an object, having been indexed in one particular way during a spate of interaction, retains this semantic charge. This in turn affords participants a resource for subsequent production of mutilayered representations in the unfolding activity (Goodwin, 2003c; Hutchins & Palen, 1997; Streeck, 2009a). We are interested here in how interactants develop reference over stretches of time within an activity, through their recurrent displayed orientations to the objects located in the setting. The analysis presented suggests that such recurrent orientations are drawn on as composite *leitmotifs* which contribute to meaning-making practices in interaction.

Leitmotifs are traditionally associated with narrative art. They refer to a compositional technique where, for example in opera, a musical fragment, a prop or a colour scheme is associated with particular elements of the narrative, e.g. a character, an idea, or situation. These elements constitute resources that can be recycled at later stages to provide for narrative continuity and thematic complexity (e.g. Ho, 1994). Pertinent to the current volume, this study explores how objects brought into mutual elaboration with speech and embodied action can provide participants with a similar residual resource for later referential development across a stretch of everyday focused interaction.

According to Goodwin (for example 2000a, 2003a), mutual elaboration occurs at the intersection of different *semiotic fields*, where signs from different modalities are brought into a locally relevant semantic relationship. Such configurations have been explored most notably in Goodwin's work on 'environmentally coupled gestures' (Goodwin, 2007a, 2007b), gestures that coordinate talk and features in the physical environment. Such research has been primarily concerned with describing the constitution of *single* instances as they feature in a spate of interaction (e.g. Goodwin, 2003c, 2007a; Nishizaka, 2006). It has been argued, however, that "a great deal of gestural depiction is *sequential* depiction, imagery being built up over time" (Streeck, 2009b, p. 206, emphasis in original; see also Enfield, 2004). This type of embodied social practice, the incremental development of imagery in interaction, has received relatively little attention in interaction analytic research.

A number of lines of inquiry have started to address this paucity of research on body visual conduct over longer stretches of discourse. Enfield (2004), for example, has demonstrated how information represented by a gesture can be carried forward from a previous to a subsequent utterance through the use of a gesture *hold*. Other studies have looked at gestures being reproduced across different speakers' turns at talk. Lerner (2002) addressed instances of choral production of gesture, *gesture-matching*. In instructional settings, Koschmann and LeBaron (2002) and Arnold (2012) have shown how repeating gestures embedded in an instruction is one way for learner participants to display understanding (see also de Fornel, 1992 on return gestures).

Elsewhere, using data from monologic narrative retellings within experimental settings (e.g. McNeill, 2000; McNeill & Levy, 1993) and elicited narration tasks (Kataoka, 2009, 2010), researchers have explored the role of gestural 'catchments' in developing thematic cohesion, affording "a thread of consistent visuo-spatial imagery running though a discourse segment that provides a gesture-based window into discourse cohesion" (McNeill, 2000, p. 316, on catchments; see also Kendon, 1972; Laursen, 2005). These examples have not, on the whole, focused on gestural conduct produced in relation to objects in the immediate surround (but see Arnold, 2012; Kataoka, 2009).

The current chapter seeks to contribute to these lines of investigation by considering sequences in naturally occurring focused encounters where an initial orientation to an object in constructing a referent is re-occasioned at subsequent points. The material properties of these objects afford interactants stable visual resources that can be brought into focus at relevant points. By tracking recurrent participant orientations to particular objects made relevant at various points in a section of discourse, we gain further understanding of the representational affordances (Gibson, 1979; Hutchby, 2001) of objects oriented to in interaction.

Data and method

I present a number of examples drawn from a collection of such leitmotifs identified in video data of institutional activities carried out at a Danish university. The data consist of some nine hours of video recordings of help desk service encounters at an international office and study guidance meetings, most of which were recorded using multiple cameras. In these settings, students approach support staff with some concern relating to their studies or stay, and the staff member is either able to assist with the issues personally, or alternatively will provide the student with information on where else they would be able to obtain the requested information or support. Advice sought after in these encounters varies in complexity from relatively straightforward (for example advice on registering for a residence permit), to highly complex, where various interconnecting agents and activities are mapped against a timeline that may stretch from the client's past (for example, previous education) and present to the possible future outcomes. The meetings can be categorised as high-stakes encounters, as they may concern people's livelihoods, their legal status, and their well-being, and as such in these encounters it is important that mutual understanding is sufficiently achieved, regardless of what language participants are using. The data used for the current analyses involve English as the medium of interaction. None of the participants here, however, has English as a first language.

Although the objects that commonly feature in the data – for example notepads, writing utensils, tables, computer monitors – constitute the utilitarian tools of these institutional activities, they appear to be drawn on in addition as visual resources for participants to develop meaning across larger stretches of interaction. In the analyses, we focus on how participants mobilise these objects on successive occasions in the service of meaning development, each time bringing them into mutual elaboration with verbal referents through embodied actions such as gesticulation, physical contact and gaze orientation.

The methodological approach adopted here corresponds with that found in other similar interaction analytic studies that draw on insights originating in the sociological work by, amongst others, Harold Garfinkel, Erving Goffman, Harvey Sacks, and Albert Scheflen (for example, Goodwin, 1981; Heath, 1986; Hindmarsh & Heath, 2000; Kendon, 1990; Sacks, Schegloff, & Jefferson, 1974; Streeck, 1996), broadly drawing on the micro-ethnographic traditions of conversation analysis and context analysis. This methodological approach allows an analysis to chart the concomitant deployment of verbal, visual, tactile and material resources, as participants in naturally occurring focused encounters develop a range of referents. The unit of analysis here is the vocal-with-visual-action composites which constitute such co-present interaction, and more pertinent to this study those which feature repeated orientations to material objects in the setting.

Introduction to the phenomenon

The images below are a selection culled from a thirteen-minute meeting between a study guidance counsellor and a student (this meeting also features in the third analysis below).

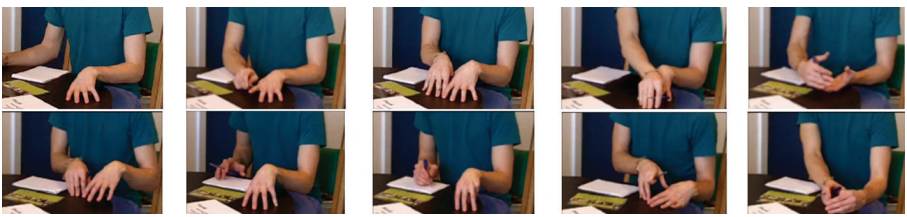


Figure 1. Recurrent hand orientations to table section in a counselling meeting

We note that the counsellor, Adam, keeps returning his hands to a particular section of the table surface in front of him.[1] The first time he does this is approximately one minute into the meeting, the final time he does is a minute from the end. In between, Adam returns one or both hands to the particular section of the table on a number of occasions. He places his hand(s) on this section of the table, he points to it, and produces various hand-shapes in this area. His hand or hands are positioned in the area for various periods of time, and this occurs as he pursues particular topic development relating to the procedural framework concerning

1. The counsellor here also uses various other objects and locations recurrently throughout the meeting, one of which we will look at in greater detail in the analytic section.

the student's desire to become a high school teacher in Denmark by completing a Master's degree. For example, he may refer to this particular location on the table as he speaks about the Danish Master's programme (1m01) [i.e. at one minute and 01 second], a Bachelor's degree (1m07), high school certification (1m11), the high school subject of Danish literature (1m52), how many hours of a particular high school subject is required (1m56), additional educational requirements (4m32) teacher training (7m12), qualifications (8m44), and knowledge requirements (11m40).

The question that presents itself is what, if anything, this recurrent orientation to this section of the table brings to the ongoing business at hand, which is here a discussion of possible trajectories available to the student. If the referents expressed in speech on these occasions are so widely different as those listed above, what linking element does the visual motif afford the interaction, and how is this structurally woven into the discourse?

In what follows, we will look at three sequences. We will follow an extended set of recurrent body visual *motifs* from the same meeting discussed above and a shorter sequence where two participants develop the visual motif in partnership. First, however, we will consider single recurrences of an orientation to a location on a table area, much in the same way it is used in the example above. In this example, Milly, a member of staff at a help desk, reaches out and touches a particular location on the counter surface on two occasions (Figures 2 and 4). Transcription conventions are based on those developed by Gail Jefferson (e.g. 2004). The transcript is complemented with frame grabs, which are tagged in the transcription with # (see also Mondada, e.g., 2003).

Excerpt 1 LTSH-day3-SE-1038

```
16 MIL:→  you have of course (.) a free (0.4) #study place. (.)
          Figure                              #2
17      → at that #university? (.)
          Figure  #2
18          but #next to that you c-
          Figure #3
19      →       #you m- might have a scholarship,
          Figure #4
20            a #Nordplus (.) scholarship,
          Figure #5
```



Here, Milly initially touches the right hand location on the counter at the same time as producing a verbal reference to a university the student is applying to visit. She brings her fingers down on the counter here on both *study place* and *university* (Figure 2). Subsequently, when the staff member refers to the *scholarship*, she

returns her hand to the exact location (Figure 4) on the desk. In what follows, we will consider how this location on the desk is used and developed in these two moments of contact. First, however, we should take a closer look at the sequence in which this is embedded, and how the topic of the scholarship is introduced.

Analysis: Sequence 1 – single, local recurrences

In the current sequence, Che, a fulltime international student from an Asian country, has just submitted an application form pertaining to a Nordic study-exchange programme, *Nordlys*, and then asks when he might hear from the university about the outcome of the application. As the participants attend to the timing of the decision regarding his application in lines 01–11, the topic of scholarship funding is raised and subsequently developed.

Scholarships are different things to different people at different stages of their procedural life. A scholarship may be a pot of financial support that allows for somebody to do something, but it is also something that is applied for, generated and awarded. Indeed in this sequence, scholarships are applied for by students and by institutions; they are granted by funding bodies and by institutions; scholarship funding is allocated to and shared between applicants; they provide financial support to undertake certain activities; and they are named. How the scholarship's different stages, agents, sources, trajectories and understandings are demarcated from one another is a matter to which participants need to attend in the somewhat complex unpacking of the related procedural framework. In the following sequence, we note how the counsellor mobilises the structural properties of the counter area in the service of this differentiation.

Excerpt 2 LTSH-day3-SE-1038

```
01 MIL:   I think in four weeks or so
02        you will will have an answer for from #us.
          Figure                              #7
03 CHE:   [i:n] in
04 MIL:   [but]
05 MIL:       in #four weeks.
          Figure #8
06 CHE:   in four [weeks]
07 MIL:           [but ] (0.3)
08 MIL:   er we also apply #(.) for: #scholar#ships. so
          Figure          #9       #10     #11
09        [we] we might not know? (0.5) in four weeks
10 CHE:   [hm]
11 MIL:   how many money we have for scholarships.
12        (0.5)
13 MIL:   er:::m.
14 CHE:   do you mean that I can have a scholarship.
```

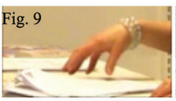
```
15 MIL:      yeah #er next to: #(0.3)
             Figure #12          #13
16      →    #you have of course (.) a #free (0.4) study place. (.)
             Figure #14                  #15/16
17      →    at that university? (.)
18              but #next to that you c-
             Figure #17
19      →          #you m- might have a scholarship,
             Figure #18
20                  a #Nordplus (.) scholarship,
             Figure #19
21           (0.5)
22 CHE:      okay,
23 MIL:      [we don't know] the amount yet.
24 CHE:      [that's cool ]
```



for us



in four weeks



we also apply



for scholar-



-ships



yeah er: next



to (0.3)



you have of course a (.) free



(0.3) study place

Procuring the scholarship

Immediately prior to this sequence, Che has asked about when he might be informed of the outcome of his *Nordlys* application. Milly informs him that it will take about four weeks (lines 01–02). As she produces *from us* in line 02, Milly lifts her right hand from a rest position (Kendon, 1980)[2] at the side of the application document (on *from*) and brings the tips of her fingers down onto the counter (on *us*; Figure 7), placed approximately one third of the way across from her position. The hand is kept in this location throughout lines 03–08, with Milly tapping the same location on the counter on ***four*** *weeks* (line 05),[3] ***but*** (line 07) and ***apply*** (line 08), lending further visual emphasis to the words stressed vocally in

2. *Rest position* has been discussed elsewhere by Sacks and Schegloff (2002/1973) as 'home position'. Jürgen Streeck (personal communication) cautions against the use of this term, arguing: "Hands have not one home position, but only temporary rest positions relative to the physical setting, including body posture, and activity within which their owner finds herself. Moreover, 'home' insinuates that the hands 'normally' return to the position from which they departed for the gesture or act, for which there is no evidence."

3. Bold-faced font is used to indicate the syllable with which is produced in synchrony with the gesture stroke. In this case, the point in which the hand is brought into contact with the object.

her turn[4] (Figure 8). She then lifts her hand momentarily (Figure 09), reaches forward (Figure 10) and draws it back again (Figure 11) in what resembles a pulling motion on *scholar-*, with the hand again coming to stand on the counter on ***-ships***. Coupled with the word *scholarships*, Milly's hand movement appears to demonstrate visually that the scholarship in this formulation is something that needs to be procured from an external source, rather than provided by the 'us' that she has earlier located in the more proximal position on the counter (in line 02, Figure 07). Furthermore, this location having been semantically charged with *us* previously, the trajectory of the scholarship is indexed as *inbound* at this stage, in line with the pulling gesture, as opposed to, for example, directed from the funding source directly to the student-applicant.

Allocating the scholarship

When Milly subsequently presents an account for perhaps not being able to provide Che with information on the available scholarships (lines 09–11 *we might not know (0.5) in four weeks how many money we have for scholarships*), she produces three open handed gestures, two mid-turn and one in turn final position. As Milly says *we might not know* (line 05), she briefly brings her hands together in front her and moves them apart laterally (on *not know*). She subsequently produces two two-handed *offering* gestures (see Streeck, 2009b), one on *how many money* and a turn-final offering gesture on *have for scholarships* (Streeck, 2009b). Here, we see that the trajectory marking the earlier procedural stage has changed direction, with the scholarship now directed away from the institutional representative and toward the student-applicant. We note, in how he subsequently responds, that this is also Che's understanding. He leans forward and produces a candidate understanding check, paraphrasing her prior turn to check whether she means that he may be in line to be offered a scholarship (line 14). Milly produces a confirmation, and builds on to this an extended formulation which fleshes out the procedural framework within which his application is constituted. It is here that we find the two embodied actions introduced earlier.

4. The tapping of the counter is further matched in line 05 (***four*** *weeks*) and 08 (***apply***) with head nods.

Using the scholarship

In line 15, as Milly says *yeah*, she brings her hands into the space immediately above the application form lying on the counter in front of her (Figure 12), while at the same moment diverting her gaze from Che's face to the location of her hands. Streeck (1993) has described how a speaker's looking at their gesturing hands can act to mark the relevance of the hand gestures. Che's gaze follows that of Milly to look down at the hands and their framing position over the application form. Milly brings the fingertips of both hands down onto the document on ***next*** *to*:, looks back up to Che, and subsequently lifts her right hand up to the previous position above the document, following this with a number of relatively dynamic moves. She touches the document lightly on *of* ***course*** (Figure 13), then moves the hand much higher, a move that is tracked by Che, as he reorients his gaze up and on to Milly's face (Figure 14). At this point, Milly then moves the hand quickly back to the document on ***a free***, before producing a dynamic arc from there to a location halfway across the counter and to the side of the application, touching down on ***study place*** (Figure 15). As she does so, she tilts her head to the right, which acts to highlight the hand movement in the same direction (see McClave, 1999).

The gaze orientation of the participants may account for the increased dynamic of the embodied actions at this point. Gullberg and Holmqvist (2002) suggest that "[a]s long as gestures are moving, peripheral vision is sufficient for detecting (and processing) the broader gestural information (location, direction, or size) even when gestures are performed in the periphery" (2002, p. 212).[5] With mutual gaze established, Che will then still be able to make out the movements of Milly's hands as she positions them in different locations around the counter. Indeed, as she extends her formulation of *a free study place* with *at that* ***uni****versity*, she momentarily lifts her hand and brings it down again in the same spot, keeping the hand mobile in this location (Figure 16). As she does so, she matches the hand with a head lift and nod, which is in turn matched by Che.

5. Gullberg and Holmqvist's (2002) findings suggest that it is *holds*, cessations of movement in hand gesture, that peripheral vision has difficulties monitoring. This accounts for recipients orienting gaze to *holds* to a far greater degree than to moving hands (which peripheral vision is better able to detect).

Excerpt 3 LTSH-day3-SE-1038

```
15 MIL:      yeah #er next to: #(0.3)
             Figure #12          #13
16      →    #you have of course (.) a #free (0.4) study place. (.)
             Figure #14                  #15/16
17      →    at that university? (.)
18           but #next to that you c-
             Figure #17
19      →         #you m- might have a scholarship,
             Figure#18
20                a #Nordplus (.) scholarship,
             Figure #19
21           (0.5)
22 CHE:      okay,
23 MIL:      [we don't know] the amount yet.
24 CHE:      [that's cool ]
```



As Milly restarts the formulation she embarked upon earlier in line 15, she retracts her hand to a more proximal position, tapping the counter to the side of the document twice, as she says *but **next** to **that*** (Figure 17). She then reaches back over to the *precise* location where she touched the counter earlier as she mentioned *study place at that university* (lines 16 and 17), and brings her hand down onto the counter again at the start of ***you** c- you m- might have a scholarship*, keeping it there for the duration (Figure 18), with Che producing a head nod at the moment Milly makes contact with the surface.

By recycling the location on the counter initially established as representing a *study place* at a foreign university, Milly's current formulation can build on the previously occasioned reference. The *scholarship* (line 19) *here* relates to financial support for undertaking the study visit, rather than the external funding applied for by the home university (see section *Procuring the scholarship*), or a pot of funding available to share out by the home university (see section *Allocating the scholarship*). In this way, the particular location on the counter surface is occasioned as a visual, physical *leitmotif* that can be recycled subsequently as a resource for individuating a particular referent within a shared indexical field (Hanks, 1992).

Closing the circle

To complete the description of the procedures relating to the scholarship, Milly finally returns to the source of the scholarship, providing its name this time, *a Nordplus (.) scholarship* (line 20). She retracts her hand and taps the document twice, both on ***No****rdplus* and ***sch****olarship* (Figure 19). As she says *scholarship* here, Che nods his head three times in acknowledgment, and says *okay that's cool* (lines 22 and 24). We note then that by tapping the document while speaking of *a Nordplus scholarship*, Milly is able to skilfully index the source of the funding this time around, the *Nordplus* network, of which *Nordlys* (to which the application is related) is a sub-programme.

In formulating the procedural framework in this way, Milly, the staff member, has been able to disambiguate the different possible understandings of 'scholarship', and furthermore, is able to do this without needing to encode the range of different readings solely in the linguistic channel (for this, see also Goodwin, 2000b, 2006). The analysis indicates that these embodied actions allow for particular locations on physical objects to be charged with a particular reference through being brought into relation with other sign systems, here speech. This location, a reference point constituted upon a temporally stable, concrete material object in the immediate visuo-spatial and haptic field, may then act as a *metonymic* resource for later recycling through a repeated orientation to the location. As in Enfield's (2004) study, reference is carried forward visually from a previously constructed utterance. Here, however, it is done through a re-occasioning of an orientation to an object, rather than a gesture *hold*.

Gesture has been argued to be primarily a speaker phenomenon (McNeill, 1992; Schegloff, 1984), and we see this distribution in the sequence discussed. Koschmann and LeBaron (2002), however, have cautioned against neglecting the way gestural performance is *recipient designed* (see also Nevile, 2007; Streeck, 1994), and argue for the importance of finding evidence in recipient responses for the consequentiality of gesture in developing subsequent understanding (p. 270). The following example shows how particular gestural orientations to the same help desk counter surface are taken up and further developed by two parties to an encounter.

Analysis: Sequence 2 – A collaboratively occasioned visual leitmotif

Although in the previous example the counter surface is mobilised only by the staff member as one resource to structure reference in the unfolding talk, it is not always a resource confined to a single interlocutor. In the following example, we will see how the structure of the same object, a help desk counter, is used initially

by one participant, yet how the coupling of object and spoken referent is subsequently taken up by an interlocutor and further developed. As in the previous episode, the current sequence involves a student-client and a member of the help desk staff discussing an aspect of the procedural framework involved in applying for a position on a study exchange programme, namely the timeframe. The encounter here involves two Danish students, Erik and Tom, and a member of staff, Li, originally from an East Asian country.

Excerpt 4 LTSH-day4-SE-1222

```
01 ERI:   but I'm on I'm on my #second semester #right now
          Figure               #21              #22
02        (0.4)
03 ERI:       do #I have to apply (0.3)
          Figure #23
04        before the fifteenth if I w- want to go at any (0.4)
05              #point (0.2) of my
          Figure #24
06        can I can I #apply #next year perhaps
          Figure      #25    #26
07        (1.4)
08 ERI:   must it be this year
09        (0.5)
10 LI:    erm next year I think then you you apply #next year
          Figure                                    #27
11        (0.9)
12 ERI:   I apply #next year?
          Figure  #28
13 LI:    yeah [if you er] #you want to go like er
14 ERI:        [  yes    ]
          Figure          #20
15        (0.4)
16 LI:    two thousand ten the autumn (0.2)
17        then you apply #(0.4)
          Figure         #29
18        before the february fifteenth this year
19 ERI:            #this [year]
20 LI:                   [  th]en if it's #next year
          Figure #30                      #31
21        (0.3)
22 ERI:   [ah ]
23 LI:    [aut]umn then you #apply
          Figure            #32
24           (0.2)
25 ERI:   so [if it's the t]wo thousand [elev]en
26 LI:       [next year]                [yeah]
27 ERI:   I [apply] next year
28 LI:      [yeah ]
29 LI:    yeah
30        (0.4)
31 ERI:   okay
```



second semester



right now



do I have to apply



at any point



can I apply



next year perhaps

Fig. 20



you want to go like er 2010

Initial mapping of the timeframe

In lines 01–08, Erik requests information pertaining to the timing of submitting an application for a study exchange trip. Contained in the request are a number of references to time: *my second semester now* (line 01), *before the fifteenth* (line 04), *at any point* (line 04–05), *next year* (line 06) and *this year* (08). In the production of the question, Erik uses the counter as one resource to demarcate between the different time frames. As he initiates the turn in line 01, Erik establishes eye contact with Li, removes his elbow from the counter and produces with his index finger a circling gesture upon the counter surface (Figure 21). The gesture coincides with *my* ***second semester***, and marks out an area of the counter in front of him. Immediately following this, in conjunction with *right now*, he taps the desk twice with his stretched index finger, roughly in the centre of the circle he had previously marked out (Figure 22). An initial observation is then that an expanse of time (a *semester*) is represented here visually by an expanse of space, and a point in time (*right now*) by a spot in the visual field. Further evidence for this is found in how Erik further constructs his turn.

As Erik says *do I have to apply* (line 03), he taps the desk five times in the same place as above. The first tap is again produced with the index finger, with the remainder of the taps performed with his extended middle finger (Figure 23). He appears then to index (rightly too) this counter as the place where this activity, applying to participate in a study exchange programme, is conducted. He then raises the pointing finger above the counter on *before the* and brings it down on the surface again on ***fifteenth*** and keeps it standing there for the duration of *if I w-want to go*. Erik then prepares the next gesture on *any*, retracting the finger from the counter and bringing both hands together in front of him. He then opens up his arms during the 0.4 second silence, spreading his hands along the side of the counter so that they both come to rest either side of him on the side of the counter surface, with palms facing inwards (Figure 24). The hands are subsequently kept there for the rest of the interrupted turn *point (0.2) of my*. We see again that points in time (*the fifteenth*) are marked visually with a single point in the visual

field, with stretches of time (*any point in my*) given visual representation through a marking out of a larger area, here utilising the structural properties of the long side of the counter surface.

When stretches of time are represented visually in the current data, they have the tendency to be organised along a horizontal line in front of the body, with the present placed in front of the person producing the gesture, and then past and future placed either side.[6] At this point, Erik has spread his hands laterally along the counter, but has not indicated a particular direction as referring to the past or future. This he does, however, in what follows. The hands are kept in position as he restarts the question *can I can I* (line 06), but he then retracts his left hand along the counter, producing a finger point to the central area of the counter on *apply* (Figure 25). We may note that he has previously pointed to this area as he spoke of applying at the outset of this turn (line 03) and that this point echoes this earlier gesture. More importantly though, he then returns his hand to the left side of the counter on ***next*** *year perhaps*, although now producing a pointing gesture with his index finger placed on the counter (Figure 26). We may assume then that the left region of the counter surface is used here to represent future time. What, however, does his interlocutor make of this?

Uptake and development of the timeframe motif

For most of Erik's turn (lines 01–06), Li has had his gaze oriented at the information sheet, which he and the two students had been discussing immediately prior to this sequence. In line 03, he disengages eye contact from Erik, directing it to the sheet of paper, and gradually rotating it until it faces in his direction for reading. With his gaze down at the document, Erik's gesticulation is still firmly within his peripheral vision, with Erik's primary gesturing left hand active very much in the vicinity of the document. There is no explicit orientation to the gestures produced here. However, when speakership changes, we see Li adopt the same positioning upon the counter that we previously witnessed from Erik.

Excerpt 5 LTSH-day4-SE-1222

```
10 LI:    erm next year I think then you you apply #next year
          Figure                                   #27
11        (0.9)
12 ERI:   I apply #next year?
          Figure  #28
```

6. The tendency is furthermore for the future to be placed to the right, with past on the left.

```
13 LI:     yeah [if you er] #you want to go like er
14 ERI:         [ yes    ]
           Figure          #20
15         (0.4)
16 LI:     two thousand ten the autumn (0.2)
17         then you apply #(0.4)
           Figure         #29
18         before the february fifteenth this year
19 ERI:          #this [year]
20 LI:                 [ th]en if it's #next year
           Figure #30                  #31
21         (0.3)
22 ERI:    [ah ]
23 LI:     [aut]umn then you #apply
                             #32
24         (0.2)
25 ERI:    so [if it's the t]wo thousand [elev]en
26 LI:        [next year]                [yeah]
27 ERI:    I [apply] next year
28 LI:       [yeah]
29 LI:     yeah
30         (0.4)
31 ERI:    okay
```



you apply next year



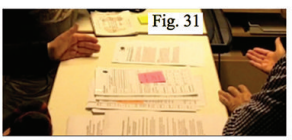
I apply next year?



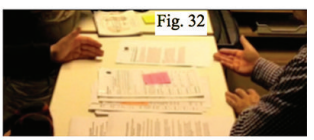
before the February 15th this year



this year



then if it's next year



then you apply

Erik's question is first completed at the end of line 06 (see Excerpt 4), *can I can I apply next year perhaps*. What follows is a relatively lengthy pause, during which Li looks up and away from where the two students are standing. This looking away has been described elsewhere as displaying an information retrieval episode, such as in searching for a word (e.g. Goodwin & Goodwin, 1986). Erik responds to this by reformulating the question as *must it be this year* (line 08). As he does so, Li turns back to the counter to face the students and says *erm next year I think then you you apply next year* (line 10). As he produces the first *next year*, he brings his right hand from its rest position on the counter in front of him and places it to his right, at the opposite side of the counter to where Erik's hand rests (Figure 27). He follows this with a circling wrist rotation of the hand and places the hand again, although with open palm this time, at the same location along the counter on the

second *next year* (Figure 28). Erik and Li's hands are now positioned parallel in relation to one another across the counter, although this does not necessarily indicate that Li has adopted Erik's gestural motif of using the structure of the counter to mark a timeline. We find more evidence for this, however, in how Li expands on his formulation.

Li brings his hand down in the same location on a number of further occasions in what follows (*you want to go* line 13; *two thousand and ten* line 16 and *the autumn* line 16). At the same time he reorients his gaze to the gesturing hand, which in turn occasions Erik and Tom to look down at the gesture also (see Figure 20 above). Li and Erik subsequently re-establish mutual gaze as Li repositions his finger in the location above the desk in front of him and says *then you apply* (line 17), pointing down at the surface in the 0.4 second pause that follows (Figure 29). He then brings the pointing index finger down onto the surface as he produces ***be**fore the **feb**ruary fifteenth **this** year*, with taps occasioned on ***be**fore*, ***feb**ruary fifteenth*, ***this** year*. Erik produces a confirmation request in the next turn, *this year* (line 18) matching Li's pointing gesture in a parallel location across the counter (Figure 30), where he had earlier placed the ***right now*** (line 01) and *before the **fif**teenth* (line 04). Again, both gestures are aligned across the counter, and in addition, we see that Li has fully adopted Erik's schematic representation of the timeline under discussion.

Finally, Li moves his hand back to his right as he expands further with *then if it's **next** year* (line 20). Interestingly, here he does not place his hand at the counter, but keeps it suspended in the space a little behind the counter during the 0.3 second silence and the extension *autumn* (line 23; Figure 31). Erik produces a change-of state token (Heritage, 1984) *ah* (line 22), with his left hand again following Li's so it is in a parallel position, albeit resting on the desk. Li then moves his own hand to the counter as he says *then you **ap**ply* (line 23), keeping it there for *next year* (line 26; Figure 32). Although Li's formulation here has mentioned *next year* twice, by separating the gesture locations for (1) the desired study abroad period (*next year*) and (2) the timeframe for submitting an application (*next year*), he provides further visual differentiation between the two, where the help desk counter serves as a referent for the activity of submitting an application (a motif we saw Erik establish earlier in lines 03, 06 and 12). Erik subsequently rounds off this sequence by reformulating Li's prior turn as a confirmation check in lines 25 and 27. Again, the future time frame is marked with the same patterning observed earlier, with the open left hand being brought into contact with the counter to his left on *two thousand **el**even*, the hand returning to the central area on *I **apply*** and extended again to left position on ***next** year*. As Li produces the final confirming *yeah* (line 29), Erik folds his hand and acknowledges Li's confirmation with *okay*. He then removes his hand from the counter as the second student initiates a question.

We see in this example how the structural properties of the help desk counter surface are used collaboratively by the participants as a resource to mark out different temporal elements of the procedural framework relating to the application process for a future study exchange position. Once a particular motif is introduced by one of the interlocutors, it is taken up by the other.

Although this pattern has been described elsewhere for instructional settings (e.g. Arnold, 2012; Koschmann & LeBaron, 2002), here the recycling of prior gestural production is not occasioned as a display of understanding of a prior embodied instruction. Here, the participants build on the embodied work performed upon the counter, recycling the locations and the shapes produced with the structural properties of the object as resources with which further referents are developed. The student uses the help desk counter as a symbolic representation of various timeframes pertaining to the activity of submitting an application to undertake a study exchange. The member of staff subsequently adopts this schematic representation, but also further develops it, for example in differentiating between a future timeframes for the application procedure and for the study exchange period.

A final point worth noting is that this collaborative work is done without any explicit gaze orientation on the part of the participants being directed at one another's hand movements. Each produces instances of visual conduct that resemble those produced previously by their co-participants, even though these were only available within the field of general or peripheral vision in relation to the gaze fixation points.[7]

In these two examples, we have looked at relatively short sequences where we see recurrent orientations to structures at hand. We will turn now to a longer section of interaction to demonstrate how these leitmotifs feature beyond single discourse units such as proposition sequences. We focus here on a different object than has been discussed up to this point, namely a doorway connecting one room with another.

Visual leitmotifs developed over larger sequences

The final example presented here concerns a 13-minute study guidance counselling meeting. Here, Tina, a client from an East Asian country, is inquiring about the possibilities of taking a Master's degree, with a view to becoming a high school

7. Ciolek and Kendon (1980, citing Hall, 1963, 1964 and Webb, 1964) differentiate between peripheral vision, which encompasses a 180 degree range, general vision (60 degrees), clear vision (12 degrees) and detailed vision (1 degree). Of course, we can never know for sure what is actually *seen* by someone, regardless of where her gaze is fixated.

teacher in Denmark. A number of visual motifs feature in the encounter. The one we focus on here first features some five minutes into the meeting, when they are discussing possible subject combinations, and where the counsellor, Adam, produces a number of pointing gestures to one particular door in the room.[8]

The doorway in question connects the room where the participants are engaged in the counselling meeting with an adjacent office used by the counsellors for other administrative duties. The door is closed, and as such there is no visual access to the office next-door. Two other doorways lead into the room, one connecting an office unconnected with the counselling staff, and one leading to the general reception area. Clients may be brought into the designated room for counselling meetings either directly from the reception area, or through the counsellor's office. All doors are kept closed during the meetings.

At the point where we enter the meeting here, the participants are addressing which subjects can be combined in a Master's programme.

Excerpt 6 LTSH-meeting17; 5:24–5:29

```
01 ADA:   um you will have to make a choice (0.3)
02        between some already fixed (0.2)
03        combinations [of ] #subjects
04 TIN:              [okay]
          Figure          #33
05        (0.4)
06 ADA:   which you can find on the #internet
          Figure                  #34
07        and I can show you #where you can find them
          Figure             #35
```

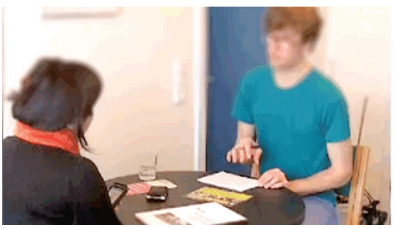


Figure 33

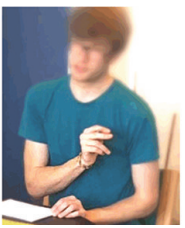


Figure 34



Figure 35

8. I use *door* and *doorway* interchangeably here, and both in the sense of the physical structure that acts as a portal from one space to another. In the case at hand the door is closed, but the participants would be free to move to the other room, which constitutes an alternative workspace for the counsellor, if they so chose to.

In line 03, Adam, the study guidance counsellor, produces a deictic gesture to the notepad lying on the table in front of him as he mentions Tina's possible ***sub****jects* (line 03, Figure 33), then brings his right hand up to shoulder height and produces a pointing gesture in the direction of the door situated to his left as he refers to *the* ***int****ernet* (line 06, Figure 34). As he does so, he also tilts his head in the same direction, which, similar to earlier example (Excerpt 1, Figure 15), acts to highlight the direction of the point (McClave, 1999). He retracts his hand to a rest position on the table (*and I can show you*), before motioning in the direction of the doorway on ***where you*** *can find* (line 07, Figure 35) and to the notepad again on ***them*** (line 07).

We are interested here in his use of the doorway to refer to *the* ***int****ernet* (line 06). In the room designated for the counselling meetings, there is no computer present and neither participant has a laptop at hand. There are, however, a number of desktop computers in an adjacent office, one of which is sometimes used for assisting student-clients with accessing online information. The doorway to Adam's left is the one that leads to this office and as such, the closed door appears to be used here to refer to the adjoining office space where a computer is available.

Although the availability of the computer in the adjacent space is known to Adam, it is less likely that Tina, the client, is aware of this resource. Goodwin, in his research on interactions with his father, a man with severe aphasia, has described how the parties to the interactions were able to draw on common ground understandings of the lived world (Clark, 1996), in particular geographic and social space, to make sense of his father's pointing gestures (Goodwin, 2003b, 2006). In the current example, such common ground is somewhat limited, as counsellor and client have asymmetrical epistemic access to the structural properties that make up the "transposed space" (Goodwin, 2006, p. 14) of the office next-door, and neither have visual access to the space. Nonetheless, Tina may be in the position to draw on common ground understandings of institutional activities (Kidwell, 2000) in order to make sense of Adam's composite utterance (Enfield, Kita, & de Ruiter, 2007). Furthermore, as she entered through the office, she may have noted the layout and the resources present in the environment. Neither Adam, however, nor we as analysts, are in the position to know exactly what knowledge is triggered by Adam as he points to the door that leads to the office space in the adjoining room. What is evident, however, is that the pointing gesture to the doorway is introduced in conjunction with talk pertaining to the internet.

By pointing to the door as he introduces the topic of online resources (*which you can find on the internet*) he associates the object of the door or doorway with online activity. As in the previous examples, the doorway is now a resource for referring back to on later occasions to index the online world. He immediately

makes use of this in the remainder of his turn, where the activity of *I can show you where* is indexed as referring to an internet search through his accompanying deictic gesture to the door. A short while later, Adam uses the same structure again in the production of a subsequent turn (see below). Here, however, there is no mention of the internet (or anything referring to online activity) prior to where it is produced, as was the case in the example above.

Excerpt 7 5m58–6m12

```
01 ADA:   that would be uh (0.5) that might be an option
02        I'm not sure
03        [we would] #have to check it
          Figure     #36
04 TIN:   [ hm:    ]
05 ADA:   but co- communication is offered in english
06        so english and communication might be an option
07 TIN:   I I checked it
08 ADA:     you [#checked it]
          Figure#37
09 TIN:         [  it's     ] like combination=
10 ADA:   =okay [so ] if if you #checked it then it is an option
          Figure                #38
11 TIN:         [yeah]
```

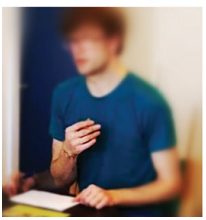


Figure 36

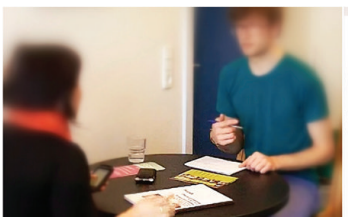


Figure 37

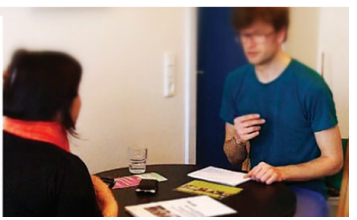


Figure 38

In line 03, Adam suggests they check up on a query from her (relating to subjects she would need to take a particular Master's degree). Although he does not include verbally where this check would take place, he raises his right hand from a rest position at the table, and motions to the door as he explains *we would* ***have*** *to check it* (Figure 36), retracting the hand again subsequently. After Tina suggests that she had already checked up on this (line 08), Adam raises the same hand again to produce a finger point at the door as he issues a confirmation check *you* ***checked*** *it* (line 08, Figure 37), and again on *if* ***if*** *you checked it* (Figure 38). Although Tina does produce a hand gesture in line 09 as she reports her findings (*it's like combination*), a pointing gesture that switches back and forth to the door and away, it provides only weak evidence that Tina actually displays any kind of uptake of Adam's use of the doorway to refer to online resources. Stronger evidence can be found some time later, however. At the seven and a half minute mark, both Adam and Tina produce explicit pointing gestures to the door.

Excerpt 8 7:33–7:57

```
01 ADA:   the thing is uhm (0.9) one thing is as I s-said before
02        that you have to have (0.6) your (0.7) uhm (0.3)
03        your (0.6) B.A. papers #estimated
          Figure                 #39
04 TIN:   hm[m]
05 ADA:     [b]y this institution (0.4) I [think it's]
06 TIN:                                   [  Ciri-   ]us
07        (0.3)
08 ADA:   yeah not in the yeah [the yeah th- th- the yeah]
09 TIN:                        [yeah they have #new name ]
          Figure                                 #40
10 TIN:   [I guess they change their website]
11 ADA:   [I  I  I  I  can  never  remem-  ] remember huh
12 TIN:   but [I #bookmarked the website so] i can
13 ADA:       [   Cirius    yeah          ]
          Figure #41
14 ADA:   yeah I have #bookmarked it as [Cirius too so ha ha]
15 TIN:                                 [ha ha ha okay ha ha]
          Figure      #42
```

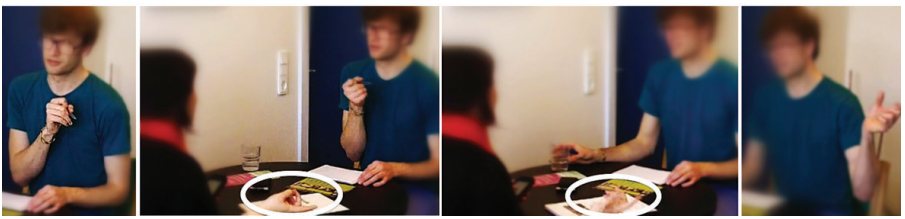


Figure 39 **Figure 40** **Figure 41** **Figure 42**

Here in lines 01–05, Adam displays some difficulties retrieving the new name for The Danish Agency for International Education, an agency formerly named *CIRIUS*. The way this is brought off has the hallmarks of a collaborative word search, marked with hesitations, intra-turn pauses and gaze aversion (Goodwin & Goodwin, 1986). Here, however, Adam also raises his pen-holding right hand up to shoulder height and produces a pointing gesture to the door, while tracking his gaze in the direction of the point, and keeping it in this position for the remainder of the turns in lines 05–08 (Figure 39). Following the 0.4 pause in line 05, Tina offers the former name of the agency, *Cirius*, as a candidate for the institution to which he is attempting to put a name. Adam responds with a qualified acceptance of her suggestion, upon which Tina rotates her hand and produces a palm-up pointing gesture to the doorway as she says in lines 9 and 10, *yeah they have a* ***new*** *name I guess they change they website* (see Figure 40). The agency is associated here with its online presence, and Tina is able to use Adam's referring back, and, in addition, his fishing in the direction of the doorway to discern to which of the earlier mentioned institutions he is referring. Tina's gesturing is subsequently matched in turn by Adam pointing a number of times to the door with his pen.

Tina subsequently retracts her hand to a rest position on her lap beneath the table, but brings the hand out again to produce a second pointing gesture to the doorway as she says *I bookmarked the website* (line 14, Figure 41). Adam in turn raises his left hand in the same direction and produces a holding gesture at shoulder height as he responds with *yeah I have **book**marked it as Cirius too* (line 14, Figure 42). This gesture may refer to the conventional place for locating webpage bookmarks in browser programmes such as Internet Explorer and Chrome, i.e. the top of the browser window. Interestingly, however, the browser window here is represented visually in the direction of the door.

In the remainder of the 13-minute encounter, Adam and Tina refer to the internet and to *CIRIUS* a handful more times, the final time being just seconds from the closing of the meeting. Again, we see similar embodied displays being used on these occasions.

It appears then that once the particular visual leitmotif has been established, it can be recycled even beyond the shorter sequences within which it was initially used (discussed in the first two examples above). On each occasion, the object may develop its particular affordances for symbolic representation in an accumulative fashion, with the semantic load (Koschmann & LeBaron, 2002) increasing incrementally. Where a doorway is singled out as representing access to the internet, it may be invoked later in the unfolding talk to index online resources or activities. Subsequently, if used to index the online presence of a particular agent within the procedural framework being discussed, the object can come to be used as a reference point to said agent (or agency, as in this case), or a resource connected with this referent.

Once established, a leitmotif such as this one can then be used alongside other leitmotifs, each operating as a resource to differentiate between the various intersecting agents, timelines and activities involved in the procedural frameworks at the heart of these discussions. We note in fact that the current example is taken from the same encounter as the example depicted in Figure 1 in the introduction. These were two out of a number of motifs that were interwoven into the fabric of the unfolding interaction.

Discussion

This chapter has described one particular meaning-making practice involved in the "interactive organization of knowledge" (Goodwin, 1996, p. 399) in co-present interaction. This involves what I have described as the development of *leitmotifs* through recurrent orientational displays to particular objects in the visuospatial and tactual surround. The analyses demonstrate how participants are able to perform an initial mobilisation of representational affordances (Gibson,

1979; Hutchby, 2001) of objects in the setting, and then subsequently draw on the resulting semantic correspondences in developing reference over larger stretches of discourse. A particular reference generated by these aggregating actions, which include objects, speech, gesture and vocal conduct being brought into mutual elaboration with one another, is then drawn on and developed in an incremental fashion as a composite *leitmotif* in later symbolic representation.

In the cases discussed here, participants were able to fluidly skip-connect (Laursen, 2005; Local, 2004) back to earlier points of reference in the encounters, while formulating aspects of relatively complex procedural frameworks which include a host of interconnecting referents. The data show participants drawing on whatever materials are at hand in order to accomplish this, including those material objects found in the immediate surround. In the cases presented here, and concerned with encounters between students and administrative staff at a university, members draw on help desk counter- and table-top surfaces, documents, and an adjacent doorway, as resources for the symbolic representation of particular thematic elements topicalised and developed in the meetings. Observing co-participants assembling for one another such components of meaning-making into hybrid and dynamic aggregates of semiotic resources provides us not only with insight into the rich tapestry that constitutes co-present interaction, but also the moment-by-moment interpretive faculties participants-in-interaction deem propitious.

Koschmann and LeBaron (2002) have argued that the meaning of a gesture is contingent on its relationship to "its preceding (and succeeding) forms of visible and vocal interaction" (2002, p. 263). By remaining sensitive to the use of objects as temporally stable – yet semantically accumulative – visual resources for symbolic representation, this study takes up Streeck's (2009b) argument that embodied conduct builds on sequences of prior imagery. This is an under-represented area in interaction analytic research, where the general focus has been on utterance constructs in their local sequential context, rather than how they are constituted as themes within patterns which extend beyond the traditionally more narrow sequential environment surrounding turns-at-talk. This opening of the research aperture to attend to larger stretches of interaction should not, of course, take the place of detailed microanalytic scrutiny. Rather it may complement it by enriching our understanding of the types of resources members draw on their interactions. Goodwin (2006) has suggested that "attempting to specify an analytic frame that does not exclude crucial components of the phenomenon being examined might enable us to ask more sensible questions." (2006, p. 120). By continuing to extend the focus of interaction analytic research to include the indexing and development of objects oriented to by co-participants in interaction over larger stretches of time, a fuller understanding can be achieved of how these complex patterns of reference are occasioned, maintained and developed. In line with this, the current study has explored how the representational affordances of the objects brought

into mutual elaboration with other sign systems may gain in complexity on each occasion, accruing semantic material incrementally across stretches of discourse.

In the world of opera, Giacomo Puccini called this type of patterning *thematic reminiscence*, a *leitmotif* technique where prior semiotic material – a musical phrase, a colour, a prop – was recycled at later points in a work to allow for greater narrative complexity as a story unfolded. It would be speculative to consider that this technique has roots in less dramatic orders of social organisation. However, as the study presented here shows, there appears to be evidence of a similar technique being used in activities much closer to home: in the mundane, everyday interactions in which we ourselves are involved.

References

Arnold, L. (2012). Dialogic embodied action: Using gesture to organize sequence and participation in instructional interaction. *Research on Language and Social Interaction*, 45(3), 269–296. DOI: 10.1080/08351813.2012.699256

Ciolek, T. M., & Kendon, A. (1980). Environment and the spatial arrangement of conversational encounters. *Sociological Inquiry*, 50(3–4), 237–271. DOI: 10.1111/j.1475-682X.1980.tb00022.x

Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511620539

De Fornel, M. (1992). The return gesture: Some remarks on context, inference, and iconic gesture. In P. Auer, & A. di Luzio (Eds.), *The contextualization of language* (pp. 159–176). Philadelphia: John Benjamins. DOI: 10.1075/pbns.22.11for

Enfield, N. J. (2004). On linear segmentation and combinatorics in co-speech gesture: A symmetry-dominance construction in Lao fish trap descriptions. *Semiotica*, 149(1/4), 57–123.

Enfield, N. J., Kita, S., & de Ruiter, J. P. (2007). Primary and secondary pragmatic functions of pointing gestures. *Journal of Pragmatics* 39(10), 1722–1741. DOI: 10.1016/j.pragma. 2007.03.001

Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston, MA: Houghton Mifflin.

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.

Goodwin, C. (1996). Transparent vision. In E. Ochs, E. A. Schegloff, & S. Thompson (Eds.), *Interaction and grammar* (pp. 370–404). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511620874.008

Goodwin, C. (2000a). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32(10), 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X

Goodwin, C. (2000b). Pointing and the collaborative construction of meaning in aphasia. *Texas Linguistic Forum*, 43, 67–76.

Goodwin, C. (2003a). Conversational frameworks for the accomplishment of meaning in aphasia. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 3–20). Oxford: Oxford University Press.

Goodwin, C. (2003b). Pointing as situated practice. In S. Kita (Ed.), *Pointing: Where language, culture and cognition meet* (pp. 217–241). Mahwah, NJ: Lawrence Erlbaum.

Goodwin, C. (2003c). The semiotic body in its environment. In J. Coupland, & R. Gwyn (Eds.), *Discourses of the body* (pp. 19–42). New York: Palgrave Macmillan.

Goodwin, C. (2006). Human sociality as mutual orientation in a rich interactive environment: Multimodal utterances and pointing in aphasia. In N. J. Enfield, & S. C. Levinson (Eds.), *Roots of human sociality: Culture, cognition and interaction* (pp. 97–125). London: Berg.

Goodwin, C. (2007a). Environmentally coupled gestures. In S. D. Duncan, J. Cassell, & E. T. Levy (Eds.), *Gesture and the dynamic dimension of language* (pp. 195–212). Amsterdam/Philadelphia: John Benjamins.

Goodwin, C. (2007b). Participation, stance and affect in the organization of activities. *Discourse & Society*, 18(1), 53–73. DOI: 10.1177/0957926507069457

Goodwin, M. H., & Goodwin, C. (1986). Gesture and coparticipation in the activity of searching for a word. *Semiotica*, 62(1/2), 51–75. DOI: 10.1515/semi.1986.62.1-2.29

Gullberg, M., & Holmqvist, K. (2002). Visual attention towards gestures in face-to-face interaction vs. on screen. In I. Wachsmuth, & T. Sowa (Eds.), *Gesture and sign languages in human-computer interaction* (pp. 206–214). Berlin: Springer. DOI: 10.1007/3-540-47873-6_23

Hanks, W. F. (1992). The indexical ground of deictic reference. In A. Duranti, & C. Goodwin (Eds.), *Rethinking context: Language as an interactive phenomenon* (pp. 43–76). Cambridge: Cambridge University Press.

Heath, C. (1986). *Body movement and speech in medical interaction*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628221

Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 299–345). Cambridge: Cambridge University Press.

Hindmarsh, J., & Heath, C. (2003). Transcending the object in embodied interaction. In J. Coupland, & R. Gwyn (Eds.), *Discourse, the body and identity* (pp. 43–69). Basingstoke: Palgrave.

Ho, M. (1994). *The leimotiv technique in Puccini's La Boheme, Tosca and Madame Butterfly: A critical examination of transformation processes*. PhD dissertation. University of Saskatchewan, Saskatoon.

Hutchby, I. (2001). Technologies, texts and affordances. *Sociology*, 35(2), 441–456. DOI: 10.1177/S0038038501000219

Hutchins, E., & Palen, L. (1997). Constructing meaning from space, gesture, and speech. In L. B. Resnick, C. Pontecorvo, & R. Säljö (Eds.), *Discourse, tools, and reasoning: Essays on situated cognition* (pp. 22–40). Berlin: Springer.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–32). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Kataoka, K. (2009). A multi-modal ethnopoetic analysis (Part 1): Text, gesture, and environment in Japanese spatial narrative. *Language & Communication*, 29, 287–311. DOI: 10.1016/j.langcom.2009.05.003

Kataoka, K. (2010). A multi-modal ethnopoetic analysis (Part 2): Catchment, prosody, and frames of reference in Japanese spatial narrative. *Language & Communication*, 30, 69–89. DOI: 10.1016/j.langcom.2009.06.002

Kendon, A. (1972). Some relationships between body motion and speech. In A. Siegman, & B. Pope (Eds.), *Studies in dyadic communication* (pp. 177–216). New York: Pergamon Press. DOI: 10.1016/B978-0-08-015867-9.50013-7

Kendon, A. (1980). Gesticulation and speech: Two aspects of the process of utterance. In M. R. Key (Ed.), *The relationship of verbal and nonverbal communication* (pp. 207–227). The Hague: Mouton.

Kendon, A. (1990). *Conducting interaction: Patterns of behavior in focused encounters*. Cambridge: Cambridge University Press.

Kidwell, M. (2000). Common ground in cross-cultural communication: Sequential and institutional contexts in front desk service encounters. *Issues in Applied Linguistics*, 11(1), 17–37.

Koschmann, T., & LeBaron, C. D. (2002). Learner articulation as interactional achievement: Studying the conversation of gesture. *Cognition and Instruction*, 20(2), 249–282. DOI: 10.1207/S1532690XCI2002_4

Laursen, L. (2005). Towards an embodied grammar: Gesture in tying practices constructing obvious cohesion. *Online proceedings of the 2nd International Conference of the International Society for Gesture Studies*. ENS LSH & ICAR Research Lab.

Lerner, G. (2002). Turn-sharing: The choral co-production of talk-in-interaction. In C. Ford, B. Fox, & S. Thompson (Eds.), The language of turn and sequence (pp. 225–256). Oxford, England: Oxford University Press.

Local, J. (2004). Getting back to prior talk: and-u(h)m as a skip-connecting device. In E. Couper-Kuhlen, & C. E. Ford (Eds.), *Sound patterns in interaction: Cross-linguistic studies from conversation. Studies in linguistic typology*. Amsterdam/Philadelphia: John Benjamins.

McClave, E. Z. (1999). Linguistic functions of head movements in the context of speech. *Journal of Pragmatics*, 32, 855–878. DOI: 10.1016/S0378-2166(99)00079-X

McNeill, D. (1992). *Hands and mind*. Chicago: University of Chicago Press.

McNeill, D. (2000). Catchments and contexts: Non-modular factors in speech and gesture production. In D. McNeill (Ed.), *Language and gesture* (pp. 312–328). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511620850.019

Mondada, L. (2003). Working with video: How surgeons produce video records of their actions. *Visual Studies*, 18(1), 58–73. DOI: 10.1080/1472586032000100083

Nevile, M. (2007). Seeing the point: Attention and participation in the airline cockpit. In L. Mondada, & V. Markaki (Eds.), *Interacting bodies. Online proceedings of the 2nd International Conference of the International Society for Gesture Studies*. ENS LSH & ICAR Research Lab.

Nishizaka, A. (2006). What to learn: The embodied structure of the environment. *Research on Language and Social Interaction*, 39(2), 119–154. DOI: 10.1207/s15327973rlsi3902_1

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50, 696–735. DOI: 10.2307/412243

Schegloff, E. A. (1984). On some gestures' relation to talk. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 266–296). Cambridge: Cambridge University Press.

Streeck, J. (1993). Gesture as communication I: Its coordination with gaze and speech. *Communication Monographs*, 60(4), 275–299. DOI: 10.1080/03637759309376314

Streeck, J. (1994). Gesture as communication II: The audience as co-author. *Research on Language and Social Interaction*, 27(3), 239–267. DOI: 10.1207/s15327973rlsi2703_5

Streeck, J. (1996). How to do things with things: Objets trouvés and symbolization. *Human Studies*, 19, 365–384. DOI: 10.1007/BF00188849

Streeck, J. (2009a). *Gesturecraft: The manu-facture of meaning*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/gs.2

Streeck, J. (2009b). Forward-gesturing. *Discourse Processes*, 46(2–3), 161–179. DOI: 10.1080/01638530902728793

PART B

Objects as practical accomplishments

Shaping and creating

Cooking instructions and the shaping of things in the kitchen

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This chapter looks into the kitchen as a place where things are transformed into culinary preparations. On the basis of a video-recorded cooking course in which a group of trainees prepared a dinner under the supervision of a chef, I examine how objects are assembled, manipulated and transformed in a visibly embodied way. The chef instructs the trainees on how to prepare some ingredients and they organise their actions to follow these instructions. The analysis deals with the manipulation of ingredients at three key moments within this sequence of cooking instructions: the chef's instructions; questions following instructions; and instructed action leading to the final shaping of the ingredients. The first moment shows how objects have features that are taken for granted by experts; the second shows how participants work to identify the relevant aspects of the objects they manipulate; the third reveals the normative way in which objects are expected to be transformed.

Introduction

Cooking can be seen as the skilled process of transforming things into ingredients and, ultimately, into culinary preparations. This study deals with the locally situated manipulation and transformation of things in the kitchen, in instructed actions following instructions given by a chef. Cooking is a perspicuous setting, within which we may examine how objects are assembled, manipulated and transformed in a publicly accountable, visibly embodied manner. There are many ways of cutting things into pieces; there is, however, only a limited number of recognised, acceptable, technically correct ways of mincing, slicing or trimming an ingredient in a kitchen lead by a chef. Ingredients are not inert objects that can be enrolled in whatever course of action; they are configured and transformed through the situated work of following instructions. Within the course of instruction, and as part of the skilled way of following them, a set of relevancies emerge that shape the manipulated objects and constitute them into adequately prepared ingredients.

This chapter is based on a video-recorded cooking course in which a group of trainees prepared a dinner under the supervision of a chef. The chef instructed the trainees on how to prepare some ingredients and they organised their actions to follow these instructions. The analysis deals with the manipulation of ingredients at three key moments within a complex sequence of cooking instructions: (a) the formulation of instructions by the chef; (b) the production of questions following instructions, orienting to their indexicality and their 'et cetera' character (Garfinkel, 1967); and (c) the production of instructed action, which leads to the final shaping of the ingredients. The first moment shows how objects are often described as having features that might be taken for granted, especially by experts; the second points to the work participants do to identify the relevant aspects of the objects they must then manipulate; the third reveals the normative way in which objects are expected to be transformed.

Manipulating and shaping objects in instructions

As shown by Wittgenstein (1953), Garfinkel (1967) and a number of ethnomethodological studies (e.g., Amerine & Bilmes, 1988; Lerner, 1995; Macbeth, 2011; Mondada, 2011a, 2011b, 2014; Sanchez Svensson, Luff, & Heath, 2009; Suchman, 1987), following instruction is a complex action that relies on the situated understanding of the instruction. Instructions are necessarily incomplete, indexical and underdetermined – that is, they are characterised by their *et cetera provision* (Garfinkel, 1967, 2002). They become intelligible *in situ* and within the action of following them. The next action – the instructed action – in turn reveals what the doer has understood of the instruction, how she has interpreted it, and what aspects of it have been made relevant. Instructions rely on a tissue of relevancies that have to be recognised and reflexively oriented to in the course of following them.

Instructions can be organised as paired actions: the utterance of instructions projects and normatively expects a next action that follows and realises them – that is, instructed actions. Instructed actions can be in the form of a verbal response but also in the form of an embodied action (Mondada, 2011a, 2011b, 2014). In the case of adjacency pairs (Schegloff, 2007; Schegloff & Sacks, 1973), the next action is inspected by the participants, who might assess and repair its timing, positioning and formatting. That is, the format of the next action is subjected to public scrutiny and monitored by the co-participants. It is the place in which expertise and competence are displayed (Mondada, 2011b), both by the follower of the instruction and by those observing him.

Within the conversation analytic tradition, instructions have been considered relative to the action within which they are implemented – mainly in directives and requests – and to the way they are configured, in formats that are sensitive to different forms of entitlement (Antaki & Kent, 2012; Craven & Potter, 2010; Curl & Drew, 2008; Davidson, 1984; Heinemann, 2006; Lindström, 2005). However, still understudied is how directives are achieved within embodied courses of action and by taking into account the material ecology of that action (Goodwin & Cekaite, 2013; Mondada, 2011a, 2014; Sanchez Svensson, Heath, & Luff, 2007).

As part of the ethnomethodological tradition, instructions have been studied in and across a variety of activities, although mostly in educational and training settings – such as in school laboratories (Amerine & Bilmes, 1988) or scientific laboratories (Lynch & Jordan, 1995), classrooms (Macbeth, 2011), crochet lessons (Lindwall & Ekström, 2012), surgery (Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Sanchez Svensson, Heath, & Luff, 2009) and driving lessons (De Stefani & Gazin, 2014).

In most such settings, following instructions relies in a crucial way on an adequate manipulation of objects, which are grasped, handled, looked at and manipulated in specific ways. In the kitchen, this manipulation specifically involves the useful disposition of objects on the work surface, the skilful use of tools and the relevant transformation of ingredients, with proper consideration of their relevant features, composition, texture, structure, visual appearance, etc.

This study focuses on the way in which ingredients are shaped by instructions and the actions that follow them in the kitchen. Instructions are crucially reliant on the "massive relevance of the achieved coherence of phenomenal details of embodied jobs" (Garfinkel, 2002, p. 210). Among these "phenomenal details", the specific ways in which things are constituted, articulated, assembled, as well as possibly manipulated and transformed – for example cut, trimmed, sliced, minced, etc. – are important for the understanding of the instructions and constitute evidence for demonstrable compliance.

Instructions suppose a certain way of seeing and handling things, of grasping them, holding them in one's hands, inspecting them, turning and manipulating them, considering the relevant features to be preserved, selected, evidenced and, finally, shaping them. Thus, instructions are a powerful way of revealing – and, at the same time, reflexively achieving – the situated relevancies and features of objects. These features are not evident and taken for granted; they can be known in advance, discovered or learned, depending on the competence and epistemic status of the doers. In cooking, for instance, things – such as equipment, tools and ingredients – are handled smoothly and unfussily by experienced cooks. For beginners, however, ingredients and equipment are much more opaque objects:

novices might not yet see what ingredients have to become when they manipulate them and this affords multiple alternative courses of action, generating multiple decisions to be taken virtually at each step of the procedure – some of which may be decisions that may not be topicalised in instructions.

Cooking consists of the transformation of things – from natural elements to prepared ingredients and, ultimately, to cooked or prepared items. In following cooking instructions in the kitchen, participants not only orient to the intelligible character of the first action and along what makes the next action both praxeologically relevant and normatively correct from a culinary perspective; they also orient to the visible, touchable and smell-able features of the ingredients that emerge from and are shaped by their skilful, instructed actions.

The aim of this analysis is to contribute to a praxeological analysis of objects as they interact, considering how they are practically and situatedly manipulated within participants' actions, how their relevancies emerge and are discovered within specific activities, and how their features are shaped within instructed actions.

Data

The data this study is based on are extracted from a video-recorded cooking session in which a Parisian chef, Ginette, instructs a small group of trainees – Mary, her husband Oscar, Tom and Rita – in preparing a three-course lunch they will eat together. The participants come from the USA (Mary and Oscar, as well as Rita) and Australia (Tom) and have different gastronomic competences: Rita works in a restaurant in Los Angeles and has been Ginette's assistant in the past; Tom has taken various courses with chefs in different countries; Mary speaks about her sister, who is good at cooking; and Oscar is presented and displays himself as having very limited cooking experiences. All interact in English, which is a second language for Ginette; sometimes Ginette will switch to French in addressing Rita, who lived in France for some time, and is bilingual.

The meal preparation has been video recorded by one mobile and four fixed cameras distributed around the kitchen. For the purposes of this chapter, I used the feeds from only two cameras to document the space within which the action occurred from two complementary perspectives. All participants were informed of the study and agreed to be recorded; their names have been replaced by pseudonyms.

In the data analysed here, I focus on instructions that deal with natural ingredients – like eggs, mushrooms, fennel and shallots – and their preparation for the next cooking action. I have voluntarily restricted the cases studied to these

ingredients and actions and will forego discussion of how the participants dealt with more complex and evolving items, like sauces, soufflés, creams, etc. (see, for example, Traverso & Galatolo, 2008, which deals with cooks' work on the texture of pancakes). My emphasis on simple initial ingredients shows that even a straightforward request, for instance to cut a vegetable or to break eggs, can generate complex decisions about the actions that can or must be performed with and on them.

Although there is a large body of literature on dinner conversations in conversation analysis and ethnomethodology, studies about the way in which meals are prepared are much more limited. The literature analysing the situated actions of cooking and preparing meals is scarce and focuses mainly on the importance of the spatial and contextual organisation of cooking activities. For example, Conein (1997) studied the arrangement of the kitchen table according to the recipe to be made; Garfinkel (2002) discussed how a blind person organised her kitchen space in order to sustain her cooking actions; and Galatolo and Traverso (2005) analysed how two cooks coordinated and distributed tasks in a small restaurant kitchen. Following a recipe while cooking has been the topic of a pioneering study on instructions by Goldberg (1975); Goodwin (2009) analysed how a little girl and an adult read and prepared to cook a given recipe; and Stukenbrock (2012) looked at how cooks exhibit their technical skills in a TV programme.

In this study, I am interested in how cooking instructions lead to the transformation of objects and reveal relevant features of the ingredients within their preparation. Looking at objects through the lens of cooking instructions shows how objects are actually seen in a particular way, are specifically configured and then transformed for the practical purposes of the cooking activity.

Demonstrably manipulating objects: Chef's instructions

During the lesson studied here, a significant part of the meal preparation is performed by the trainees following instructions given by the chef. In this section, I consider how objects are introduced by the chef showing how they are to be prepared. In subsequent sections, I analyse how these objects are handled by the trainees.

First, at the beginning of a new sequence, ingredients are generally introduced as referents in the on-going talk and demonstrably taken in hand. They are then manipulated and eventually transformed in an exemplary manner as the chef instructs the trainees as to how to mince, cut and slice them. The indexicality of instructions, as well as their recipient-designed character, shapes the peculiar way in which the objects are formulated and handled during the chef's explanation, as

well as the way in which they are observed and inspected by the trainees during the demonstration.

In the first excerpt, Ginette, the French chef, explains how to prepare eggs for a soufflé. Here the introduction of the ingredient – *eggs* (line 01) – is first achieved within a comment about their biological characteristics and the consequences for their preparation – among other things, the separation of the yolk and the white. The instruction proper comes later on (see also Goldberg, 1975, on the separation of ingredients and actions in cooking recipes).

Excerpt 1 (eggs)

```
01 GIN:   ok+ay.+ (0.2) now, (0.4) +eggs.
            +claps her hands+      +...tends LF twd eggbox->
02        (0.3)
03 GIN:   [hein,
          [right,
04 ?      [mhm,
05 GIN:   °you cannot make a soufflé+ >without eggs.°<
                                 -->+grasps eggbox-->
06        (0.6)+
             ->+puts it besides the pan->
07 GIN:   SO,+ in this c+ase, we gonna add (0.+9) eight eggs, (0.4)
           ->+          +turns back----------+grasps metal bowl->
08        is what is required+ for this quantity:, (0.5)+ .h and of
                          --->+brings bowl on the table--+checks if-
09        cou:rse what is very+ important, (0.2) is to s+ep-,
          -it's clean w LH----+puts bowl on the table---+
10        ±(  ) need to be separated because ±of course it's± the
          ±looks at MAR-OSC-----------------±turns---------±l.TOM
11        egg whites that± [make [the ±whole thing ri:se,
                        ->±looks at MAR±
12 MAR:                      [mhm
13 TOM:                           [(  )
14 GIN:   .hhh SO, (.) about (0.2) eggs. and egg whites.
15        (0.3)
16 GIN:   .h +the ONly, +k+ey:# to eh (0.5) successfully egg whites±
             +grasps ramequin+puts it beside the bowl+
   fig                            #fig. 1
17        fluffy, (0.2) is, fat free.
```

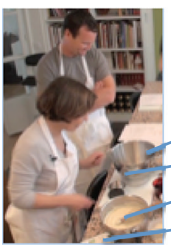


Figure 1

In the excerpt, Ginette introduces and organises the objects for the recipe. The explanation is delivered while Ginette simultaneously assembles the relevant objects – including both tools and ingredients – needed for the action she will then demonstrate; the objects are placed in her immediate environment, on the table.

Her explanation introduces the main ingredient – eggs (line 01) – both with a lexical 'hanging' form, without any article (see also De Stefani, this volume) and with a movement of the hand toward the egg-box, which was brought beside the pan, where the preparation for the soufflé is to be made.

When she announces the number of eggs to be added (line 07), she turns to a work surface behind her and grabs a large metal bowl, which she then places on the table. She inspects the bowl with her left hand while producing an assessment in a pseudo-cleft construction (line 09), projecting a point that is specifically highlighted concerning the separation of white and yolk. She continues (line 14), announcing the conditions necessary to achieve a successful soufflé (lines 16–17), while she grasps and brings closer a ramequin, which she positions beside the metal bowl.

These actions prepare the ecology of the demonstration, which begins immediately afterwards. Although not all the objects grasped during the explanation are named, they are all related to her on-going talk and their mobilisation anticipates their relevance within the demonstration: for example, the ramequin is grasped at the moment in which the explanation of the separation of yolk from white, for which this tool is needed, is projectable.

Ginette's first embodied actions therefore are concerned with the preparation of the stage (Garfinkel, 2002, p. 212ff.) – which is completed at the end of this first fragment (Figure 1). As Lynch, Livingston and Garfinkel (1983), as well as Conein (1997), have shown, an appropriate arrangement of objects is crucial for the subsequent actions that might be performed with and upon them – and actually strongly projects their sequential order. The spatialisation of objects is an important preliminary step within the cooking process since it secures their availability, strengthens their visual affordances, associates them in relevant groups and pre-organises the order in which they will be grasped and used.

Moreover, the way in which the conditions for a successful operation are described is specifically formatted for the addressees, both verbally and visually. On the verbal side, the repeated use of *of course* (lines 09 and 10) displays that what is explained might already be known by and to the recipients (Stivers, 2011). On the visual side, this is enhanced by the fact that at that very moment, Ginette turns alternatively to Mary and Oscar and then to Tom (lines 10–11), who each produce some minimal response (lines 12–13). Thus the chef orients to ingredients as epistemically informed objects – that is, as objects that possess known-in-advance or not-yet-known features, depending on the competence of the trainees.

This structures further descriptions of the objects to be manipulated in the recipe, as in Excerpt 2:

Excerpt 2 (eggs, continued)

```
16 GIN:   .h +the ONly, +k+ey: ±to eh± (0.5) successful±ly egg whites±
             +grasps ramequin+puts it beside the bowl+
                              ±t. MAR±                ±turns to MAR-±
17        ±fluffy, (0.2) ±is, fat free.± (0.6) the fat is
          ±looks at MAR--±looks at RIT-±looks at MAR--->
18        in the egg yolk, [I don't n±eed to tell you ±that,
                              -->±turns to TOM----±l.TOM->
19 MAR:                    [mh
20 GIN:   I'm su[re± you know,
               --->±
21 TOM:          [hum mh ((nods))
22 GIN:   .hh ±A:nd the± fat is,± (.) could be eh on the (0.3)± in
             ±t.MAR---±t.RIT---±                              ±t.MAR->
23        the pot if the pot is not clean. the pot does± not need
24        to± be: (0.3)± comment on dit eh coppered
                         how do you say
          ..±t to TOM--±turns to RIT-->
25        (0.5)
26 GIN:   at all.±
             -->±turns to MAR->
27 MAR:   ah
28 GIN:   b±ut it needs to be c±lean. hHH [that's for su±re±
29 MAR:                                   [((laughs))
          ->±                  ±looks at TOM-----------±,,±
30 TOM:   sure
31 GIN:   voilà.
          that's it.
32        (0.3)
```

Ginette explains the conditions for a successful soufflé, emphasising the importance of 'fat-free' whites and consequently creating a distinction between them and the yolk, which contains fat. This principle makes relevant and important a clear separation between two components of the natural ingredient, a separation that can be achieved only through human action. Therefore, it has precise practical consequences for the imminent manipulation of the eggs as well as for the use of tools like the bowl that contains the whites. Both aspects have an epistemic dimension: a competent cook knows not only the difference between egg white and yolk but also knows how to separate them.

No participant has yet been selected to break the eggs and Ginette alternately gazes at Mary and Tom. Interestingly, she does not gaze at Oscar at all and only briefly looks toward Rita. Thus, Mary and Tom are particularly addressed as recipients of Ginette's talk; she monitors their responses and the knowledge they display about what she says. This is made explicit when she turns to Tom and says, *I don't need to tell you that. I'm sure you know* (lines 18 and 20), to which both Mary and

Tom respond (lines 19 and 21). Again, when expanding her explanation about the pot, which has to be clean (that is, not fatty) but does not need to be coppered, Ginette turns alternatively to each of them and they respond to her – Mary with laughter (line 29) and Tom by saying *sure* (line 30). She also turns toward Rita during her word search (line 24) – Rita in this case being addressed as a francophone participant able to help in finding the word in English. So the unfolding of the explanation is very carefully recipient-designed, orienting toward specific competences and epistemic positions that are attributed to the co-participants (Heritage, 2012).

Ginette then initiates the demonstration proper, turning to the table, showing the participants how to break an egg and how to put the yolk in the pan and the white first in the ramequin and then in the metal bowl, in the process using all of the tools she has previously assembled. The demonstration offers an exemplary handling and manipulation of the ingredient, exhibiting the right gestures and highlighting the importance of correctly ordering objects and tools within the work space. During this demonstration, Ginette's talk is closely coordinated with the details of her manipulations of the egg.

Excerpt 3 (eggs, continued)

```
33 GIN:    A:ND, a trick I +learned a long time ago:, +(0.4) is (.)
                           +grabs eggbox-------------+takes 1 egg->
34         euh+ (0.4) euhm+ ptk you NEver, if you gonn+a, especially
            ->+breaks it--+opens it above the ramequin+separates w/y-
35         if you're gonna separate them. (0.3) but even if you
           -pouring the white in the ramequin-->
36         are not gonna separate them. you don't add an egg when
37         the whole are separated (0.5) to: euh anything (0.6)
38         eh directly. you go through a ramequin, because (.)
39         if you gonna add an egg whole egg[yolk+ (.) he:re,+
40 TOM?:                                    [mhm
   gin                                       -->+puts y in pan+
```

Ginette announces her 'trick' (line 33) while picking up an egg. She suspends the projected talk (*is (.) euh (0.4) euhm*, lines 33–34), while she breaks the shell in two and lets the white fall into the ramequin. Then she demonstrates the trick, as she alternately manipulates the two halves of the shell (line 35). This manipulation is repeated as she talks about what *not* to do and counsels on the use of a ramequin (line 38), which she uses to collect the white. Finally, she pours the yolk into the pan. At this stage, her manual demonstration is complete, although she has initiated a bipartite construction projecting more to come (a first part launched by *because if*, line 39, projecting a second part that will be realised later, after she asks Mary to stir the yolk and the existing soufflé mass).

The instructions' progressivity and format are not only sensitive to the simultaneous manipulation of objects and tools; they are also shaped by the

orientation toward the knowledge attributed to the recipients – their epistemic status (Heritage, 2012) – as in the following excerpt, in which Ginette demonstrates how to mince shallots:

Excerpt 4 (shallots)

```
01 GIN:   voilà.
          that's it.
02        (0.3)
03 GIN:   meanwhile, we'll do the the the::::: fennel after. (0.3)
04        euh:: let's do the shallots,
05        (0.9)
06 GIN:   that we gonna add to the mushrooms
07 TOM:   mhm
08 GIN:   +so:, (0.5) we go back here
          +walks to the working plan w 2 shallots in her LF-->
09        (0.4)
10 GIN:   now, I imagine you know (0.4) the: ehm+ (0.4) quick,
                                          -->+puts 2 shallots-
11        the smart way to:+ (.) mince sha- +shallots or onions.+
          -on cutting board+takes a knive---+cuts 1 head--------+
12        °it's the same thing hein,°
13        +(1.0)
          +cuts horizontally---->
14 GIN:   shallots are used+ (   ).
                      --->+
15        (0.9)
16 GIN:   voilà. +so you keep the root, (.)
          that's it.
                 +peels-->
17        you know [that± the root [matters±
18 MAR:            [mhm
19 OSC:                           [hum
   gin                  ±looks at MAR/OSC-±l.at TOM->
20 GIN:   everybody knows± [that now
21 TOM:                    [mhm
   gin                 -->±
```

After having verbally introduced the shallots (line 04), Ginette puts them on the work surface as she says *I imagine you know*, thereby projecting her explanation with this epistemic verb. Interestingly, she does not verbalise the 'quick' and 'smart' way to cut them, but she instead engages in a demonstration of how to do so (lines 11–14).

She cuts the shallot in silence (line 13) and only then does she point out that the root has not to be removed (line 16), again using the verb *you know* (line 17) in mentioning this detail. At that point, Mary provides an early acknowledgment (line 18) – displaying her knowledge not only via a *mhm*, but also by positioning it very early in overlap; Oscar produces a similar early acknowledgment (line 19), as Ginette has gazed at them both. She then turns to Tom, who produces an acknowledgment, too (line 21). Their responses confirm what she then formulates in so many words: *everybody knows that now* (line 20).

The demonstration exhibits the relevant features of the objects, implying the existence of technical and correct ways of handling them. Their accountability is more or less explicitly calibrated depending on the epistemic status attributed to the trainees: the orientation to the knowledge, skills and habits of the participants is a public warrant for either the development or the curtailment of explanations, leading Ginette to consider that she either does or does not need to expand upon them.

This is the case in the following excerpt, too, where she instructs the participants on how to cut the fennel while orienting to the fact that Rita might have her own, perhaps better, way of doing so:

Excerpt 5 (fennel)

```
01 GIN:  okée:, what are we doing ne:xt+ euh?
         >>walks around the table------+stops by the fennel->
02       (0.2)
03 GIN:  ah oui alors now we're gonna trim,
         oh yes so
04       (0.4)
05 GIN:  alors, I don't know how you †do that† because I'm sure
         so,
                                       †points at RIT†
06       you do fennel more often than I do:,+
                                            -->+takes a fennel-->
07       (0.5)
08 GIN:  but, (0.2) personally I (  ) I (take) this, +of course
                                                  --->+cuts bottom->
09       (0.1) | (1.0)|+
   eve       ->|while cutting the fennel, the cutting board slips|
   gin            ->+
10 GIN:  +U:::H,   °mer+de°
                   °shit°
         +fin. cutting+turns the fennel-->
11       (1.0)
12 GIN:  oh la là, c'est +dur.
         oh my god, it's hard.
                   --->+cuts the head-->
13       (0.2)
14 GIN:  this,+
           -->+
15       (0.5)
16 GIN:  okey+
             +grasps the waste and looks around->
17       (0.3)
18 GIN:  and then ri::ta, (0.*5) how, d'you:
   rit                        *brings the waste bowl to GIN->
19       I think fennel*+ is huge was+*te,
   rit              -->*              *takes the bowl away->
   gin                 +throws the waste in the bowl+
20 RIT:  hum
21 GIN:  °by the way°
22       (0*.6)
   rit   ->*
23 GIN:  hein,+
         right
              +goes away-->
```

Here again we see how an object is grasped and then exemplarily shaped by the cook as she orients to the particular epistemic status of her trainees.

The fragment begins with an instruction positioned at the beginning of a new phase of the meal preparation, which is nicely formulated here with *what are we doing next?* (line 01). This 'next' is prompted by what Ginette encounters as she moves along the table: she spots the fennel lying on a plate and announces that the next action will consist of *trimming* (line 03), without uttering the object of the verb. This confirms the importance of the spatialisation of the objects, which provides specific and ordered forms of affordance throughout the process of preparation.

Before naming and grasping the fennel, Ginette completes a pre-sequence, in which she orients again to the competence of a co-participant – here, Rita, who is looking at her while the others are busy mincing shallots and to whom she points to (line 05) – which, in this case, might exceed her own (lines 05–06). Rita does not answer (line 07), and so Ginette continues by first cutting the bottom of the fennel (line 08), referred to in an indexical way (*this*), as something that is self-evident (*of course*, line 08), and then removing the head of the vegetable without any further instruction (line 09).

After having secured the slippery board and thrown away the waste, Ginette projects the continuation of her operations on the fennel, again by reference to what Rita would do (*and then ri::ta, (0.5) how, d'you:-*, line 18). What is projected by this term of address and interrogative form is suspended, followed by an assessment of fennel, in general. Rita responds in a minimal way to the latter and not at all to the former action. Finally, as the waste has already been thrown away, Ginette walks away, thereby definitively abandoning the completion of her explanation and the preparation of the fennel, leaving Rita with the vegetable in front of her, to be chopped.

In this excerpt we can note various references to the object and an incipient manipulation of it, which are formatted in an incomplete and even unfinished way, evoking what Rita knows and is competent in doing. Although Rita does not respond – and therefore does not align with the expert status assigned to her – the explanation is abandoned partway through and Rita is left with the fennel as an obvious object to be manipulated. As we will see below, this generates a question about how it is to be chopped.

In sum, in all of the excerpts analysed here, the introduction of a new object to be prepared as an ingredient is achieved both verbally, by naming it as the 'next' relevant item, and manually, by grasping it and placing it on the work surface. Exemplary transformations of the objects are part of the demonstration. However, instructions about how to complete the required operations remain highly indexical, oriented to the potential or assumed knowledge of the participants, treating

certain relevant features as obvious and therefore leaving instructions incomplete and unfinished, both verbally and manually.

The next step is the adequate shaping of the ingredient by the trainees, within their instructed actions. What comes next is often *not* the transformation of the object, however; instead, a participant asks a question of clarification, thus delaying the instructed action on the ingredient and consequently preserving its integrity.

Delaying objects' transformations: Trainees' questions following instructions

After an instruction has been initiated by the chef and an instructed action has been projected, the next action is often *not* an instructed action following the instruction. Instead, the action with the objects is often suspended and a trainee initiates a question-and-answer sequence.

The inserted sequences both reveal certain characteristics of instructions and highlight relevant features of the objects to be transformed. On the one hand, questioning instructions shows that, as exhaustive as it might seem, an instruction remains always indexical and undetermined (Garfinkel, 2002). On the other hand, questions also show that an ingredient can be seen and treated in many possible ways and involves the taking of decisions at each step of its manipulation. Possible variations in the ways of manipulating objects are oriented to be normatively defined by the skills or the style of the cook as well as by the tradition or style of cooking: they are checked by orienting to the "best possible way" of carrying out the action.

Goldberg (1975) noted that, within the adjacency pair 'Instruction' / 'Receipt', repairs can be initiated either as insertion sequences or after the pair has been completed. Often these repairs take the form of questions dealing with some aspect of the instruction (Goldberg, 1975, p. 280). In the cooking lesson studied here, the latter possibility applies but not the former: instructions are coupled with demonstrations that cover the entire process before the trainees are asked to perform them. So Goldberg's serial format – in which instructions proceed, item by item, along with the instructed responses – is not observed here. Questions and repair occur at the end of the demonstration and before the trainee begins to perform the action.

In this section, I focus on question-and-answer sequences, as they not just postpone the projected transformations of the objects but also achieve specific manipulations that strongly orient to the preservation and integrity of these objects, while simultaneously sketching some of their *possible* modifications.

The following occurs after Excerpt 4. Ginette has just shown Mary how to mince shallots, referring to the fact that she might know how to treat its root. However, Mary's next action is not mincing but asking a question about how to do so:

Excerpt 6 (shallots)

```
01 GIN:    voilà (.) yeah
           that's it
   mar     >>immobile w her knive above the shallot-->
02         (0.5)
03 MAR:→   do you wanna+ them Ωso cut °(     )°#
   gin                 +turns tow MAR's cutting board-->
   mar                     -->Ωrepeated cutting in the air-->
   fig                                  #fig. 2
04 GIN:    voi[+là:,+
           that's it
05 MAR:       [+tchu tchu tchuΩ [tchu
                       ---->Ω
   gin       ->+,,,,+
06 GIN:                          [exactly.        +tom,
                    +takes next shallot, peels it+
07         you wanna do one Ωtoo?#
   mar                      Ωcuts repeatedly-->
   fig                           #fig.3
```



Figure 2



Figure 3

Ginette has just placed some shallots on Mary's cutting board. Instead of cutting them, Mary keeps her knife in the air, immobile above the shallot, ready to cut; she looks to Ginette, who is preparing another shallot on the board beside her.

Mary asks for additional instructions before beginning to cut. Her enquiry is formatted in a way that integrates the manner of cutting as a gesture done in the air, at the end of her turn (line 03, Figure 2), which is further expanded upon by a sound that is iconic to the repeated cutting she simulates over the shallot (line 05). So Mary enacts the way of cutting without actually cutting the shallot; in this way, she preserves the integrity of the ingredient and the reversibility of her action while clearly indicating a possible cut.

Ginette confirms the sketched gesture (*exactly*, line 6); as she turns away to suggest to another participant that he take a shallot, too, Mary begins to cut the shallot on her work surface (Figure 3).

So we see that, even when instructions are presented as something that is known in advance, recipients ask questions before following them. Their actions upon the object orient to *possible* transformations but also to the fact that these are irreversible. Questions asked stop the manipulation and preserve the items' shape; at the same time, simulating of gestures, rehearsing, trying to cut or to incise them, all exhibit possible trajectories and outcomes of the imminent transformative action.

Another occurrence of the same phenomenon is observable in the next excerpt, which followed immediately after Excerpt 5:

Excerpt 7 (fennel)

```
19 RIT:    I think fennel*+ is huge was+*te,
   rit                 -->*              *brings the bowl away->
   gin                     +throws the waste in the bowl+
20 RIT:    hum
21 GIN:    °by the way°
22         (0*.6)
   rit     ->*
23 GIN:    hein,+
           right
                +goes away-->
24         (0.7)
25 RIT:→   *après tu cou#pes au mili*eu?* et tu prends# le cœur*
           then   you cut    in the middle? and you take the core
           *puts knive on top of fen*,,,*LH gest of throwing away*
   fig                 #fig.4                          #fig.5
26         quand même,
           eventhough
27         *(1.0)*
   rit     *knive up and down in the air above the fennel*
28 GIN:    +ah+# ben oui, *j'enlève# le* cœur, (.) *°oui bien sûr.°*
           oh for sure,    I take off the core, (.) °yes of course.°
           +turns back to ROS->
   rit                    *gest of taking aw*      *..............*
   fig         #fig.6              #fig.7
```

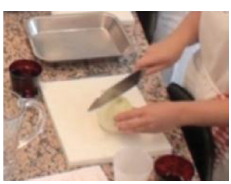


Figure 4

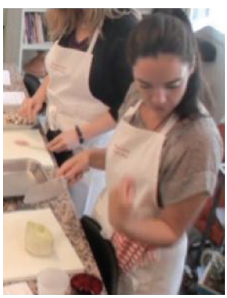


Figure 5

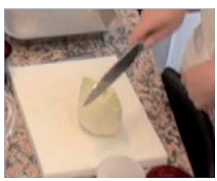


Figure 6



Figure 7

```
29          *just like an endive, actually I compare* them
   rit      *cuts the fennel in two-----------------*grasps core->
30          to en+dives.
   gin        -->+goes away->>
```

As we noted in the discussion of Excerpt 5, Ginette walked away before finishing the preparation of the fennel and before completing her utterance in reference to Rita's best way of doing it. In front of the cutting board, Rita – in a manner very similar to Mary's in Excerpt 6 – approaches the top of the fennel with her knife without cutting it. Instead, she asks a question (lines 25–26; Figures 4–5). In the absence of a response (line 27), she enacts the gesture of cutting by raising and lowering the knife above the fennel and performing a gesture highlighting a particular part of the fennel, referred to as the core. Ginette answers (line 28), confirming the action of removing the core – which is simultaneously enacted by Rita's gesture (line 28; Figures 6–7) and similar to that which she performed in asking her question (line 25). As Ginette repeats her confirmation (lines 28–29), Rita cuts the fennel in two and grasps the core while Ginette walks away.

So we see that, even in reference to an action for which Rita has been recognised as potentially more competent than the instructing chef, before this action can be achieved, a question is inserted in an attempt to detail the way in which it is to be carried out and how the object is to be regarded and shaped. A potential action and its local relevancies are therefore sketched out and checked before the object is irreversibly altered. This postpones the cut until the instruction has been clarified.

A final occurrence of such a question occurs in the following excerpt, in which Ginette treats Rita as an assistant rather than as a trainee, delegating to her a preparatory task (slicing the mushrooms). This action is first formulated as *trim off the tail*, but turns out to be more complex than that:

Excerpt 8 (champignons)

```
01 GIN:    tiens.  Rita  [si tu veux déjà faire ça pour moi
           come on. Rita [if you want do this for me yet
02 RIT:                  [oui
                         [yes
03 GIN:    j'sais pas y a iz ont jamais (   ), c'est-
           I don't know there is they have never (  ), it's-
04         tu dois faire ça:, ou tom +tiens tu fais faire.
           you have to do that:, or tom come on you ask to do.
                                      +gives bowl-->
05         .h (0.3) [euh] qu'ils en+*lèvent les queues,
           .h (0.3) [ehm] that they take off the tails,
                                 -->+
   rit                              *takes bowl->
06 TOM:              [hum hum]
07 GIN:    you just trim off the: euh (0.7)
08         euh (1.0) tail *°whatever you wanna c-°
                          *put down bowl and takes a mushr->
```

```
09 RIT:→  (  ) ta*il. eh simplement (sur l'ensemble)?
                       just (on the whole)?
            ->*shows mushr to GIN-->
10        (0.7)
11 GIN:   hein?*
          what?
             ->*
12 RIT:→  et +>après couper?<
          and then cut?
             +RH shows cutting-->
13        (0.5)
14 GIN:   non non,+ mais on+ va les laver, non non ben* [I think
          no no     but we're gonna wash them, no no well
   rit         -->+,,,,,,,,+
   gin                                                *takes mshr->
15 RIT:                                                 [d'accord
16 GIN:   you know my grand mother [used to peel those, and
17 RIT:                            [just trim+ off the little+ tail
                                          +cutting gesture+
18 GIN:   *I +think those need to be peeled!
           ->+peels w. knive--->
   rit    *looks at GIN, comes closer to her-->
   tom                                    !looks at GIN-->
19        (0.5)
20 GIN:   .h I think [these* are actually* go to [be peeled
21 RIT:              [yeah *
                        -->*goes back----*
22 TOM:→                                            ![just (.) just
   tom                                           -->!looks at RIT->
                                                    knive on mshr->
23        trim them off or:
24 RIT:   just trim off! the bottom and then [here
25 GIN:                                      [tu vois?+
                                             [you see?
                                                   -->+
                    -->!
26        (0.4)
27 GIN:   voilà. !like that, *(0.2) tiens! j'te donne *ça::, so:,
          that's it                  look   I give you that
   tom          !cuts the bottom--------!
   rit                    *.....................*takes mshr->
28        !once they are done,
   tom    !peels w. hands-->
29 MAR:   mhm
30 GIN:   oké* I show you+
   rit     ->*cuts-->
   gin                  +continues to peel the mshr w. knive->
31        (3.*6)*
   rit     ->*  *peels w. hands->
```

Ginette asks Rita to take care of the mushrooms. She formulates her instruction in various ways: first as a request, with an hypothetical construction (line 01); then as a directive with a deontic verb (line 04); and finally, with an imperative present, asking Rita to delegate the action to Tom (line 04). The instruction is addressed in French to Rita; it is then reiterated in English, when addressed to Tom (line 07). While uttering this complex instruction, Ginette gives Rita a bowl full of mushrooms (lines 04–05).

At this stage, the instructed action consists of removing the tails or stems. Rita does not immediately do this, however; instead, she asks a question (line 09), showing Ginette the mushroom. After Ginette produces an open next turn repair initiator (line 11), Rita does not repeat her first question but instead enquires as to the next action (line 12), cutting the mushroom – which she also enacts with her right hand (line 12).

Ginette rejects her guess, although speaking of something else (cleaning the mushroom) and then introduces another instruction, concerning the peeling of the mushrooms (line 16) – an action she initiates (line 18), using a knife. During Ginette's turn, Rita instructs Tom (line 17), reiterating the first instruction (trim off the tail) and then performing a 'cutting gesture'. Whereas Ginette adds a new action (peeling), Rita repeats and minimises the previous one (trimming). Both concern different features of the ingredient (its tail vs. its surface).

As previously done by Rita before she followed the instruction to peel the mushrooms, Tom asks a question too (lines 22–23). Rita confirms the trimming instruction while Ginette engages in a visible demonstration of peeling (lines 25, 27, and 30) – although her two trainees have already begun to peel their mushrooms. Interestingly, they do so with their hands, whereas Ginette does so with a knife. This might display – both in the temporality of their action and in its form – some kind of autonomy from her; this also displays Ginette's more precise, professional way (vs. their mundane way) of performing the action.

In this case, two participants, both ready to follow instructions, first ask questions (lines 09, 12, and 22–23) before performing a simple action in which they have been instructed both verbally and manually. Finally, the participants perform the action autonomously, by doing it simultaneously with the instructor and in a different manner (with their hands vs. with a tool).

These cases show how instructions, even when they concern a simple action, are never straightforward: ingredients – be they eggs, fennels, mushrooms, etc. – do not offer a unique way of being manipulated but can be broken, cut, peeled, trimmed or minced in any number of ways. Correspondingly, these ways of shaping them select and highlight different visual and morphological features, inviting to see them from different perspectives. Participants check with the instructor as to the correct way of following the instructions and of seeing the objects. Thus they orient to the fact that these actions are irreversible, as shown by them stopping their action while asking a question or enacting it in the air rather than on the object itself. Their enactment of the gesture that will transform the object refers in a precise way to the shape, orientation, form and partitioning of the object, which is generally neither referred to nor described in the verbal instruction. They also treat that particular shaping of the object as excluding other ways of preparing it

once it has been cut; in this way, errors in transforming ingredients in the kitchen are treated as irreparable. This irreversibility of action has structuring effects on the progressivity of the work of following instructions.

Shaping objects: The situated work of following instructions in instructed actions

Only when instructions have been either further specified or confirmed do participants actually engage in the instructed action. I described the manner in which the manipulation of ingredients was instructed and demonstrated by the chef; I then showed that instructions were often followed by questions, displaying their incompleteness for the participants and highlighting the relevant features of the object. At that point, the object was not yet transformed. In this section, I show how the irreversible transformation of the object is achieved by one participant following instructions. The normative expectations concerning the 'right' preparation of the ingredients are embodied in the monitoring of the instructed action, through which the other participants enact the appropriate gesture or action to be performed and consequently point out the relevant features of the ingredient under transformation that must be highlighted and respected.

In Excerpt 9, we return to the breaking and separating of eggs. After Ginette's instructions, Oscar is invited to prepare the eggs needed. The excerpt shows how he manages the first one:

Excerpt 9 (eggs)

```
01          %(1)%
   osc      %takes an egg w RH%
02 OSC:     %egg whi#tes, % (.) egg y%olk
            %points LH pot%points ram%and looks at MAR->
   fig                #fig.8A/B
```



Figure 8A/B. "whi#tes" (OSC points at the bowl as others watch him)

```
03          (0.8)%
                ->%
04 RIT:     y[es,
05 TOM:      [( !  #   ! ) yes!
                !points!,,,,,,!
   fig             #fig.9
06 MAR:     n- Ωye#s+ you ( *          )
                Ωp pan+gest w 2H--------->
   fig             #fig.10
   rit                       *points to bowl--->
07 RIT:     (  ) the whi#te goes in %here, (.) *
                                              -->*
   osc                                  %ready to break->
   fig                  #fig.11
08          *and the yolk Ω goes in the*re,*
            *points to yolk pan--------*,,,*gest above->
   mar                  -->Ω
```



Figure 9

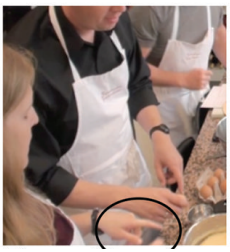


Figure 10



Figure 11

```
09 OSC:     ah
10 RIT:     so once you're done,* (.) then you add the* egg* white
11          there
```

After Ginette delivered the instructions she left the kitchen and Oscar was selected as the one who would take care of the eggs. His actions are hesitant and occasion the collective repetition of the instructions, as well as an intense monitoring of the instructed action – thereby highlighting the possible appropriate ways of transforming the ingredients and preventing possible mis-transformations. Thus, the support Oscar receives from the other participants, in the absence of Ginette, further illustrates the relevant features of objects and their transformations.

He takes the first egg in his right hand and, before actually breaking it, performs a kind of rehearsal of the action to come: he points to the metal bowl, saying *egg whites*, and then to the ramequin, saying *egg yolk* (line 02; Figure 8). He also turns to his wife, Mary, upon completing this rehearsal; in this way, he addresses her as having an epistemic authority. Mary, however, responds only after Rita and Tom. All answer affirmatively (lines 04, 05 and 06), and all point to one of the tools (Tom, line 05, Figure 9; Mary, line 06, Figure 10; Rita, line 06, Figure 11). Confirmations and instructions for Oscar are thus produced by all of the co-participants while he performs his action.

At this point, two sets of instructions overlap. On the one hand, Rita points to the bowl where the egg white is to go and then to the pan, where the egg yolk is to go, while repeating the entire formulation of the instruction (lines 07–08; Figure 11). On the other hand, even earlier Mary makes an alternating gesture with both hands, showing the manipulation of the two half shells in separating the white and the yolk (Figure 11). Different layers of juxtaposed hands cover Oscar's work space, while he is ready to proceed with his action (line 07). These gestures enact different trajectories of the object, highlighting different relevant aspects of its on-going transformation – which is enacted but not yet performed.

The next excerpt concerns the second egg broken by Oscar. Here, too, the co-participants watch him, monitoring his progress and offering various comments that display their competence in various ways, both verbally (Rita and Tom) and manually (Mary, who again, with her alternating gestures, simulates the manipulation of the shells in order to separate the white and the yolk). In this way, they each point to the relevant instructed features of the object:

Excerpt 10

```
01 OSC:    ((breaks the second egg))
02 MAR:    ((laughs))
03         %(1.3)
   osc     %manipulates the egg alternating the 2 shells-->>
04 RIT:    because if you *ever make a mistake,
                          *gesticulates-->
05         when you are doing your* eggs, you don't
                                  -->*palm open horiz tow ram->
06         want* do it over all# your eggs,* cause then you
            -->*emphatic gesture-----------*emphatic gesture->
   fig                            #fig.12
07         (ruin) [ALL of you [eggs* right]
                                   ->*
08 TOM:           ![or,       [!or# if you get a bad!] one.=
                  !............!palm open hor-------!
   fig                             #fig.14
09 RIT:    =yeah, or if you get a ba[d one
10 TOM:                             [(a bad egg) happens (0.2)
11         occasi[ona[ll[y (  )
12 RIT:              [ye[ah, Ωit #do#es
13 MAR:                 [°°(  Ω                °°)
                             Ωalternating gesture-->
   fig                     fig.14#  #fig.15
14         (0.5) # (0.5)Ω (1.0) Ω(2.#0)Ω
   mar               -->Ω       Ωleans over the ramΩ
   fig          #fig.16             #fig.17
```



Figure 12



Figure 13



Figure 14

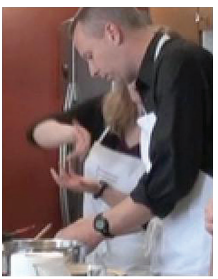


Figure 15

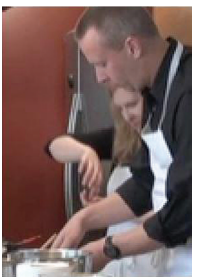


Figure 16



Figure 17

As Oscar is breaking the second egg, Mary bursts into laughter, indexing Oscar's action as laughable and pointing him out to be a novice. This is further enhanced by the way in which Rita and Tom attend to Oscar's actions.

Rita accompanies Oscar's action with a new explanation (lines 04––07), which accounts for the need to use the ramequin (see Ginette's comments in Excerpt 1). Her account is embodied by a series of gestures that occupy the space of the table between her and Oscar (Figure 12), as she points to the ramequin with an open, prone hand (Kendon, 2004) and gesticulates in an emphatic way (Figure 13), exhibiting the relevance of the objects' previous spatial arrangement.

Rita's display of expertise is complemented by Tom who, in overlap, adds another circumstance under which the ramequin could be useful (line 08), also pointing at it with a prone hand (Figure 13). In a latched turn, Rita immediately agrees and repeats Tom's turn, thereby restating her own epistemic authority (Stivers, 2005); in turn, Tom expands upon the topic in slight overlap (lines 10–11), and Rita again agrees with him (line 12). This series of agreements display not only their alignment in the normative instructions they address to Oscar but also their epistemic competition (see also Goldberg, 1975, pp. 292–293, about displaying vs. simply claiming expertise in turns following instructions). Both point to various potentially relevant aspects of the egg, such as the accidental mixture of yolk and white or the possibility of having a rotten egg.

At that moment, both look at one another while Mary softly says something to Oscar, performing the alternating gesture that simulates the separation of the white and the yolk as Oscar was doing while manipulating the shells (Figures 14–16). Her movements closely follow Oscar's manipulations and are even frozen as Oscar hesitantly performs the task (Figure 16); moreover, Mary visibly leans over his work, clearly monitoring it (Figure 17).

In this way, each participant display some kind of supervision of Oscar's work, which hereby becomes a collectively instructed action. This makes the manipulation of the ingredient both a collectively enacted action and a *normative* action, oriented to the expected preservation and transformation of particular features of the object. This continues in the following excerpt, which is immediately subsequent to the preceding one:

Excerpt 11 (continues from Excerpt 10)

```
15          %(1.0)
   osc      %raises the shell-->
16 MAR:     here Ωin the pot#
                 ΩRH points vertically to the pan-->
   fig                    #fig.18
17          (0%.4) Ω (0.2)% (0.2)
   osc      ->%pours the yolk in the pan%
               ->Ω
18 TOM:     (  ) ((laughs))
19 OSC:     ((laughs)) an hour+ later ((looks at TOM))
   rit                      +..........-->
20 RIT:     and* now,* !your #white egg right in the*re.
             ->*points* points to the bowl----------*
   tom                !..............-->
   fig                     #fig.19
21 TOM:     °°(this goes in here)°°
22 OSC:     °ah!°
   tom       ->!takes ramequin and pours it in the bowl->
23          (3.#0) ! (0.3)
   tom          -->!
   fig        #fig.20
```



Figure 18

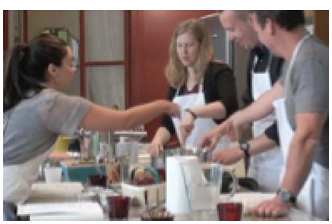


Figure 19



Figure 20

```
24 RIT:    *it's more important to have really really keen
           *gesticulating-->
25         eggwhites, if there is a little bit of white in the
26         yolk it's:,* you know. (.) something °you don't
                      -->*
27         (have to worry)°
28         (1.5)
```

Once Oscar has separated the yolk and the white, he raises the shell containing the yolk (line 15) and looks around. Mary provides an instruction (line 16), pointing at the pan (Figure 18), into which she is steering the yolks and the preparation for the soufflé (Figure 20). Following the instruction, Oscar pours the yolk into the pan (line 17).

This occasions a comment by Tom, who laughs (line 18), to which Oscar responds with laughter and self-ironic appreciation (line 19). At the same moment, Rita points toward Oscar and issues another instruction, this concerning the white (line 20), while simultaneously pointing toward the bowl into which it is to be poured (Figure 19). This instruction is given by Tom, too, in a lower voice (line 21), to whom Oscar responds with a change-of-state token (Heritage, 1984) (line 22). It is Tom who grasps the ramequin and pours the egg white into the bowl (Figure 20). Rita makes another comment, drawing attention to the long and careful manner in which Oscar separated the yolk and the white and addressing the relevance of the precision of that separation (lines 24–27), gesticulating again over the table.

Across this unfolding of instructions and explanations, the participants are clearly treating Oscar as someone who is not able to perform the operation in an autonomous way and are treating his work as an action that has to be closely guided step by step. In so doing, they highlight the various sequential moments at which decisions have to be taken and timed actions have to be performed in order to both preserve and transform the relevant features of the object at hand. Moreover, they point to the importance of the placement and distribution of the objects within the workspace, carefully orchestrated by the chef in the initial explanation (Excerpt 1). These placed objects are revealed as having asymmetrical features for the practical purposes of cooking: while the yolk can tolerate being mixed with a bit of white, the white has to be perfectly clean. In turn, this asymmetry renders as non-relevant the equal care Oscar displays in manipulating yolk and white, further highlighting his novice status.

Conclusion

This chapter discussed the articulation between instructions/instructed actions and the shaping of objects. More particularly, by focusing on the transformation of ingredients in cooking, the chapter described some systematic aspects of three sequential moments: the demonstrative manipulation of objects in the chef's instructions; the delay of instructed action thanks to inserted questions and answers initiated by the trainees, which preserve the integrity of the object and orient to the irreversible character of their transformation; and finally, the definitive shaping of the ingredients in the realisation of the instructed action.

These moments cast light both on the organisation of instruction and on the properties of the objects. For the former, they reveal the inescapable indexicality of instructions, which are always incomplete even when they are further specified and made explicit. This indexicality – and the 'et cetera clause' noted by Garfinkel (1967) – is revealed in particular by the frequent insertion of question-and-answer sequences between the giving of instructions and the performing of the instructed action. These sequences also show how instructions become intelligible in the course of the instructed action that follows and retrospectively make them accountable. For the latter, instructed objects reveal how objects acquire their relevant features in a praxeological context. Cooking instructions make some features of the ingredients relevant and others not; conversely, when confronted with only the ingredient, novices may hesitate if having to select from among the various ways of recognising the item's relevant features. What characterises the skilled way of cutting, trimming, chopping or slicing ingredients is the unhesitating achievement of an irreversible action that transforms the item. What characterises the action of the learning novice is the hesitation and posticipation of the definitive cut and the achievement of alternative gestures, rehearsing, sketching and simulating the cut, thereby highlighting and checking the possible relevant features of the object to be shaped. In this sense, objects shaped in the course of following instructions reveal that, at every step of the sequential unfolding of the action, some of their material features could be made relevant, and raises the issue of how to perform the action, how to format it, how to configure the gesture, as well as how to decide what are the relevant details of the object to address, preserve, transform, alter or conserve. The issues raised by these decisions are brought into sharper relief by the fact that these actions have an irreversible, and thus irremediable, character.

Cooking is a perspicuous setting in which to study the importance of placing and arranging objects in space prior to their manipulation, as well as the importance of seeing and selecting some features of objects and adopting the right actions to preserve or to change them. Cooking can be seen as the manipulation

and transformation of objects as they become ingredients and acquire specific, relevant features within the recipe and for the practical purposes of the culinary activity. The non-evidence of simple instructions, such as, "break an egg", "cut the fennel", or "trim the mushrooms", shows the specific praxeological and normative features the objects acquire in the course of a specific action, and the competences and skills expected among the persons manipulating them. Ingredients are neither inert nor docile objects but they acquire their specificities, their normative and cultural characteristics, their situated relevancies, only within the course of an action and, more precisely, within the sequence of instruction and instructed action.

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Transcription conventions

Talk has been transcribed according to conventions developed by Gail Jefferson. An indicative translation is provided line per line, in italics. Multimodal details have been transcribed according to the following conventions (see Mondada, 2007):

* *	each participant's actions are delimited by use of the same symbol
*–-->	action described continues across subsequent lines.
*–-->>	action described continues until and after excerpt's end.
––>*	action described continues until the same symbol is reached.
>>–	action described begins before the excerpt's beginning.
….	action's preparation.
,,,,,	action's retraction.
rit	participant doing the action is identified in small characters when not the current speaker or when the gesture is made during a pause.
fig	figure; screen shot
#	the exact moment at which the screen shot has been recorded

References

Amerine, R., & Bilmes, J. (1988). Following instructions. *Human Studies*, 11, 327–339. DOI: 10.1007/BF00177308

Antaki, C., & Kent, A. (2012). Telling people what to do (and, sometimes, why): Contingency, entitlement and explanation in staff requests to adults with intellectual impairments. *Journal of Pragmatics*, 44, 826–889. DOI: 10.1016/j.pragma.2012.03.014

Conein, B. (1997). L'action avec les objets: Un autre visage de l'action située? [Action with objects: Another view on situated action?] *Raisons Pratiques*, 8, 25–45.

Craven, A., & Potter, J. (2010). Directives: Entitlement and contingency in action. *Discourse Studies*, 12, 419–442. DOI: 10.1177/1461445610370126

Curl, T. S., & Drew, P. (2008). Contingency and action: A comparison of two forms of requesting. *Research on Language and Social Interaction*, 41(2), 129–153. DOI: 10.1080/08351810802028613

Davidson, J. (1984). Subsequent versions of invitations, offers, requests, and proposals dealing with potential or actual rejection. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action* (pp. 102–128). Cambridge: Cambridge University Press.

De Stefani, E., & Gazin, M. D. (2014). Instructional sequences in driving lessons: Mobile participants and the temporal and sequential organization of actions. *Journal of Pragmatics,* 65, 63–79.

Galatolo, R., & Traverso, V. (2005). Two cooks at work: independent and coordinated lines of action. In L. Mondada, & V. Markaki (Eds.), *Interacting Bodies: Proceedings of the 2nd International Society for Gesture Studies Conference*.

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs: Prentice-Hall.

Garfinkel, H. (2002). *Ethnomethodology's program*. New York: Rowman & Littlefield.

Goldberg, J. A. (1975). A system for the transfer of instructions in natural settings. *Semiotica*, 14, 269–296. DOI: 10.1515/semi.1975.14.3.269

Goodwin, C. (2009). Embodied hearers and speakers constructing talk and action in interaction. *Cognitive Studies*, 16(1), 51–64.

Goodwin, M. H., & Cekaite, A. (2013). Calibration in directive-response trajectories in family interactions. *Journal of Pragmatics*, 46, 122–138. DOI: 10.1016/j.pragma.2012.07.008

Heinemann, T. (2006). "Will you or can't you?": Displaying entitlement in interrogative requests. *Journal of Pragmatics*, 38, 1081–1104. DOI: 10.1016/j.pragma.2005.09.013

Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 299–345). Cambridge: Cambridge University Press.

Heritage, J. (2012). Epistemics in action: Action formation and territories of knowledge. *Research on Language and Social Interaction*, 45(1), 1–29. DOI: 10.1080/08351813.2012.646684

Kendon, A. (2004). *Gesture: Visible action as utterance*. Cambridge: Cambridge University Press.

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43, 521–541. DOI: 10.1016/j.pragma.2009.09.009

Lerner, G. H. (1995). Turn design and the organization of participation in instructional activities. *Discourse Processes*, 19(1), 111–131. DOI: 10.1080/01638539109544907

Lindström, A. (2005). Language as social action: A Study of how senior citizens request assistance with practical tasks in the Swedish home help service. In A. Hakulinen & M. Selting (Eds.), *Syntax and lexis in conversation* (pp. 209–230). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/sidag.17.11lin

Lindwall, O., & Ekström, A. (2012). Instructions-in-interaction: The teaching and learning of a manual skill. *Human Studies*, 35, 27–49. DOI: 10.1007/s10746-012-9213-5

Lynch, M., & Jordan, K. (1995). Instructed actions, in, of and as molecular biology. *Human Studies*, 18(2–3), 227–244. DOI: 10.1007/BF01323211

Lynch, M., Livingston, E., & Garfinkel, H. (1983) Temporal order in laboratory work. In Knorr-Cetina, K., & M. Mulkay (Eds.), *Science observed* (pp. 205–238). London: Sage.

Macbeth, D. (2011). Understanding as an instructional matter. *Journal of Pragmatics*, 43(2), 438–451. DOI: 10.1016/j.pragma.2008.12.006

Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. *Discourse Studies*, 9(2), 195–226.

Mondada, L. (2011a). The organization of concurrent courses of action in surgical demonstrations. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world*. (pp. 207–226). Cambridge: Cambridge University Press.

Mondada, L. (2011b). The situated organization of directives in French: Imperatives and action coordination in video games. *Nottingham French Studies*, 50(2), 19–50. DOI: 10.3366/nfs.2011-2.002

Mondada, L. (2014). Instructions in the operating room: How surgeons direct the assistant's hands. *Discourse Studies,* 16(2), 131–161.

Sanchez Svensson, M., Heath, C., & Luff, P. (2007). Instrumental action: The timely exchange of implements during surgical operations. In L. Bannon, I. Wagner, C. Gutwin, R. H. R. Harper, & K. Schmidt, (Eds.), *Proceedings of the 10th European Conference on Computer-Supported Work* (pp. 41–60). London: Springer.

Sanchez Svensson, M., Luff, P., & Heath, C. (2009). Embedding instructions in practice: Contingency and collaboration during surgical training. *Social Health & Illness*, 31(6), 889–906. DOI: 10.1111/j.1467-9566.2009.01195.x

Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, 8, 289–327. DOI: 10.1515/semi.1973.8.4.289

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Stivers, T. (2005). Modified repeats: One method for asserting primary rights from second position. *Research on Language and Social Interaction*, 38(2), 131–158. DOI: 10.1207/s15327973rlsi3802_1

Stivers, T. (2011). Morality and question design: "of course" as contesting a presupposition of askability. In T. Stivers, L. Mondada, & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 82–106). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511921674.005

Stukenbrock, A. (2012). Empraxis und Displacement: Überblendete Räume als interaktive Ressource [Empraxis and displacement: Overblended spaces as interactional resource]. In H. Hausendorf, L. Mondada, & R. Schmitt (Eds.), *Raum als interaktive Ressource* [Space as an interactional resource]. Tübingen: Narr.

Suchman, L. (1987). *Plans and situated actions: The problem of human machine communication*. Cambridge: Cambridge University Press.

Traverso, V. & Galatolo, R. (2008). Accès multiples au(x) contexte(s): l'exemple de cuisinières en action [Multiple access to contexts: The example of cooks in action]. *Verbum*, 2–3, 231–256.

Wittgenstein, L. (1953). *Philosophical investigations*. Oxford: Blackwell.

To follow the materials

The detection, diagnosis and correction of mistakes in craft education

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This chapter investigates the role and function of textile materials in relation to corrective sequences in craft education. The analyses explicate how problems are detected, how problems are diagnosed and how problems are corrected and solved. When students encounter problems related to their making of a textile object, there is a disruption in the progression of the activity. Disruptions in progressivity in the analysed setting are not heard in intervening talk, but seen in the ways the materials have turned out. Correspondingly, actions used to overcome these problems, whether conducted in talk or otherwise, are not done on talk but on actions and materials involved in the making of objects.

Introduction

Craft is essentially about the making of objects. In craft activities, materials such as yarn, fibres, wood and metal are gradually worked into functional artefacts. To ensure the adequate progression of the activity, and thereby the material realisation of the anticipated object, it is crucial for crafters continuously to monitor the materials in terms of the object-to-be. In this chapter, a collection of video recorded episodes of instruction in textile craft education is presented and analysed. The chapter focuses on sequences where students detect a problem or a potential problem in the materials, and where teachers help the students to diagnose and find a solution to this problem. On a general level, sequences like these are not unique to craft instruction. Students working with individual assignments in science and math education, for instance, also request the teachers' help to diagnose problems and correct mistakes. Still, what it means to detect, diagnose and solve a problem is closely tied to specific tasks, techniques and skills.

As students of craft make their understanding publicly available through embodied actions, and through the progression of the materials they work with,

the conditions for finding and handling problems arguably differs from educational activities where students' understandings do not share the same manifest character (cf. Ekström, 2012). While tasks in science, for example, also result in material products such as graphs and diagrams, science students might follow instructions and produce the intended outcome but still not understand the principles the task was supposed to show (Lindwall & Lymer, 2011). As the manifest character of craft competences provides teachers with continuous displays of students' understandings and misunderstandings, such gaps between knowing and doing are not always equally relevant. Besides explicating a common type of corrective sequence, this chapter focuses on the role and function of the textile materials in relation to the different phases of the investigated interaction: how problems are detected in the materials, how the materials are used to diagnose problems, and how materials as well as actions are subjected to correction.

In the last two decades, there has been a growing concern for the ways in which the physical setting, objects and the body feature as integral parts of social interaction (Streeck, Goodwin, & LeBaron, 2011). When it comes to the actual production of material objects, several studies have investigated the work practices of architects and designers (Fasulo & Monzoni, 2009; Murphy, 2004, 2005, 2012) as well as the education for these professions (Hindmarsh & Heath, 2003; Ivarsson, 2010; Lymer, Lindwall, & Ivarsson, 2011; Murphy, Ivarsson, & Lymer, 2012). A common theme in this literature is how future, not-yet-existent objects are envisioned by incorporating plans, sketches and other inscriptions into the embodied interaction. The studies have also shed light on how objects are evaluated, assessed and understood as part of their production. As demonstrated by Fasulo and Monzoni (2009), for instance, assessments of objects-in-progress might be assigned values with regard to their future development: positive appraisals can be used to terminate the work on an evaluated aspect, whereas negative assessments can be used to propose directions for further work. In relation to this, it is possible to differentiate proposals that are delivered as suggestions from those that are used to initiate corrections. It is one thing to criticise the aesthetics of a restaurant in an architectural plan for not being exciting enough, and another thing to say that the ventilation is too small for a professional kitchen (Lindwall, Lymer, & Ivarsson, 2008). While both criticisms propose directions for further work, the latter frames the issue in terms of an error that needs to be corrected.

The ways in which corrections are delivered and heard are tied to the organisation of the activity, including its purpose and the participants involved. In many circumstances, exposed correction of the conduct of other people tends to be dispreferred (Jefferson, 1987). If the recipient of an utterance is able to understand it adequately enough to produce a correction, he or she could potentially produce a sequentially appropriate next turn instead of a correction – if, for instance,

someone understands a question well enough to correct it, he or she could just as well provide an answer to the question directly without a preceding correction (Schegloff, Jefferson, & Sacks, 1977, p. 708). Since there is, in this sense, no interactional need for the correction, there must, in the words of Macbeth (2004, p. 725), be a "special motive" to its production. The notion of "motive", so conceived, is not about an antecedent condition, nor is it ascribable to any mental realm, but relevant as an endogenous and constituent feature of the intelligibility of action (Macbeth, 2004). A likely motive heard in other-initiated corrections is disagreement, but in instructional corrections, another "special motive" can routinely be found (cf. Goodwin, 1994; Hindmarsh, Reynolds, & Dunne, 2011; Keevallik, 2010; Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Mondada, 2009; Weeks, 1985). As Macbeth (2004) convincingly shows, conversational repair and instructional correction should be understood as two different, co-operating organisations. While the former has its "motive" in the orientation to the achievement of a common understanding, the "special motive" of the latter is to be found in the task, identities and achievements of instruction. As will be shown in the analysis, there is yet another "special motive" at play in the investigated sequences. Besides instructing the student in the relevant techniques, the corrections are also, and in some cases primarily, oriented towards the material progression of the anticipated object.

The empirical case

The study reported in this chapter is part of a project that investigates teacher education programmes in "sloyd" (Ekström, 2012). The school subject "sloyd" (in Swedish: "slöjd") is a compulsory part of Swedish comprehensive school and includes textile craft, woodwork and metalwork. As a result of sloyd being a school subject, there are also teacher education programmes specialising in the subject. In total, 75 hours of video of lectures and workshops in textile craft have been recorded from three different sites. The sequences analysed in this chapter were all recorded at workshops focusing on felt-making and yarn techniques. The workshops were held in small groups and they included frequent one-to-one instructions based on the students' individual needs and problems. In total, excerpts from three sequences involving three different techniques have been selected for analysis: felt making (Excerpt 1a, b), Tunisian crochet (Excerpt 2a, b) and machine knitting (Excerpt 3). As previously pointed out, the chapter investigates corrective sequences where some problem is found in the materials and where the student is the one who initially notices the problem. In relation to this interest, two previous studies conducted within the project are relevant. In Ekström, Lindwall, and Säljö (2009), some differences between listening to instructions as part of a lecture and

listening to instructions when one is about to perform the technique with tools and material in hand are explored (cf. Garfinkel, 2002, p. 200). Like the sequences analysed in this chapter, the students call the teacher's attention when they need help to proceed with the assignment. In the case analysed in Ekström et al. (2009), however, the issue is not that the students have detected a problem in the materials that they are working with, but that they are unsure about how to begin with the assignment in the first place. Lindwall and Ekström (2012) investigate the interplay between the design of instructions in the form of corrections and the observable attempts to follow these instructions. The study sets out to show how "the materiality of the project makes it possible for the two parties to methodically and meticulously adjust their actions in accordance with each other, and towards the gradual realization of the aimed-for results" (p. 27). There are two central differences to the sequences investigated in this chapter: first, it is the teacher who detects the mistakes and initiates the correction; second, what is corrected is the actual performance of the technique and not the material as such.

The use of video to investigate craft activities introduces a set of methodological and analytical challenges. As noted by Streeck, "naturalistic research on human interaction has primarily conceived the human body and its movements in visual terms" (2013, p. 69). But even though the handling of tools and materials can be captured and observed on film, craft involves specialised techniques that rely on embodied, kinaesthetic and tactile experiences. It is possible to see and characterise the sequences as instances of correction and instruction without an understanding of the techniques, but in order to come to terms with the specific nature of the problems – including how these problems are grounded in objects and materials – experience of the techniques is needed. As part of the analysis, the techniques practised in the recorded workshops have therefore been tried out by the authors. Still, since the video recordings only present the embodied conduct in terms of its visual and acoustic features, certain actions and sensations, of consequence for how the interaction proceeds and problems are solved, are still hard or even impossible to capture analytically.

The production, examination and handling of materials and objects are not socially accountable in the same way as talk-in-interaction. An additional challenge particular to some of the investigated sequences is that the students have stopped to do what they are doing and started to examine the object. In attempts to describe what students and teachers are doing when they examine the material – by holding it, looking at it, turning it around, stretching it and so on – it is difficult to move beyond generalisations without turning to speculation. When it is the progression of the anticipated object, rather than the achievement of a common understanding that "motivates" the actions, what is done is not primarily designed to be understood by someone else. This also means that actions and

activities are not necessarily met by any sequentially relevant next action, making it impossible to apply fully the conversation-analytic proof procedure (Sacks, Schegloff, & Jefferson, 1974) of relying on displayed next-turn co-participant understandings. Although not being sequentially organised in turns, there is still an order to crocheting, knitting or weaving that can be found in the embodied actions and operations of the crafter (Lindwall & Ekström, 2012). Given the instructional character of the analysed sequences, moreover, additional analytical opportunities are provided: not only do the teachers address the material to find a solution, they also instruct the student in what they should and should not do (cf. Lindwall & Lymer, 2005, p. 392).

The mentioned challenges are also relevant in relation to the use of transcriptions. Representations of the analysed activities are constructed using a combination of pictures from the recordings as well as transcriptions of the verbal interactions, written commentaries and graphic elements such as arrows and lines used to illustrate, for example, movement and direction. The spoken interaction has been transcribed with the system developed by Jefferson (1984) and includes both the original dialogue in Swedish and an English translation. When dynamic actions are depicted as still images, important features of the activities are lost. In all the investigated sequences, it is important how the participants' bodies move with and in relation to tools, materials and each other: the hands continuously turning, stretching and feeling a material, the wandering gaze examining the combination of materials, the changing flow of the body's movement when some difficulty occurs. Even though the transcripts include images from the recordings, these renderings can only show an instantaneous and static arrangement of bodies and materials and not similarly their trajectories and their interrelated transformations. A series of still images might give a rough idea of how materials are moved and oriented to, but the images alone would not be enough to experience the pace of movements, to see very minute but central details or to differentiate novice and expert actions. While not solving this issue, descriptions of the analysed activities are included in the transcription in order to make it easier for a reader to follow what is happening.

Analysis

In the introduction to a special issue on diagnostic work, Büscher, O'Neill, and Rooksby (2009, p. 110) point out that "the work of determining and categorising the trouble, and scoping for what to do about it (if anything) often go hand-in-hand". Even though this partly holds for the sequences investigated in this chapter, they are regularly organised as a set of steps or phases. The sequences begin with a student detecting a problem or the indication of a possible problem in the

materials. If the teacher has not already noted that the student has encountered a problem, the student then requests the teacher's attention. After this, the teacher starts to diagnose the problem by investigating the material. As a final step, the teacher presents a solution to the problem either by instructing the student on how to go on or by actually solving the problem herself (or by a combination of both). In line with this overall structural organisation, the results are segmented in two sections: the first deals with the detection and diagnosis of the problem (what has gone wrong and why), whereas the second deals with the problem solving (what should be done and how).

Detecting and diagnosing a problem

Sanne (2009, p. 54) conceptualises diagnostic work "as the means to 'make matters speak': how practitioners make sense of problems through recognizing and ordering significant cues from the material stuff that they investigate". In the investigated sequences, the diagnostic work concerns both the existence (Excerpt 3) and cause (Excerpt 2a) of a problem. To an expert, both the nature of the problem and how it came about might be possible to determine instantly, thereby making further investigation of the materials unnecessary (Excerpt 1a and 2a). For the purpose of the instruction, however, the teacher can still choose to "make the matters speak" to the students (Excerpt 2a).

In Excerpt 1a, a group of students are making felted fabrics by rubbing and rolling combed wool in soap and warm water. When wool is worked like this, the fibres stick together and the material becomes more compact and shrinks. One of the students has rolled his wool in a sushi mat, which is a common technique for producing a flat felted material. After having checked with the teacher that it is the right time to open the roll, the student detects that his material has shrunk more than he expected and that it therefore is too small for the beer bottle cooler he intends to make. As the teacher is already monitoring the work of the student, the extensive shrinkage of the material is immediately visible to her too. While further examining the felted material, another problem is detected – the felt is separated in two layers instead of one as intended.

Excerpt 1a Felt making

```
01 STD     ↓o[:j]
           ↓oo[:ps]
02 ST2:    [Å DE BIDDE EN TU:MME↓TO(h)TT [HU HU ↑HA::]
           [N' IT BECAME A WEE TO(h)T    [HU HU ↑HA::]
03 TEA:                                  [h. hu]
04 STD:                                  [det blev] bara (.) skit
                                         [it became] just (.) crap
05         av det här ju
           of this (ju)
```



The teacher takes the material #1 and begins to visually and physically examine it by stretching it between her hands #2. The student touches the felt where the layers have not stuck together #3.

```
06 TEA:   ↓näedå #1
          oh↓no
07 STD:   ↓tycker du inte¿
          ↓don't you think¿
08 TEA:   näe:: det tror jag inte
          noe:: I don't believe so #2
09 SRD:   det där kommer aldri räcka till o nån
          that will never be enough for a any
10        gla:skyle- e: nån ölflaskakylare
          glass cool- e: em any beer bottle cooler
11        (1.2)
12 STD:   dom #3 har inte häftat ihop sig
          they haven't stuck
13        med varann där
          together there #4
```

The teacher sticks her finger between the layers.



Throughout the investigated recordings, in-breaths, sighs, imprecations and other exclamations such as *jösses* 'Jesus', *skit* 'crap' or *åhnej* 'oh no' commonly accompany the students' detections of problems. Using a notion by Goffman, the problem detections are regularly followed by response cries – "unable to shape the world the way we want to, we displace our manipulation of it to the verbal channel, displaying evidence of our alignment to the on-going event" (Goffman, 1978, p. 801). While categorising it as a form of "self-talk", Goffman argues that response cries are recipient designed and can say something about the nature of their source: the Swedish *oj* (01), which marks the detection of the initial problem, is here translated to 'oops' and signals something unexpected or some loss of control and defines what happened as an accident (cf. Heritage, 1984). There is thus an element of surprise in the way that the felt material is perceived when uncovered from the sushi mat.

By citing a Swedish folk tale about a man who orders a suit from a tailor but in the end receives just a small part of a mitten, a fellow student addresses the unexpected smallness as a joke. Whereas the fellow students and the teacher starts to laugh, the phrasing of the student's, 'it became just crap of this (ju)' (lines 04–05), is rather that of a complaint. The student's words not only point to a problem, but also declare that the materials have turned into 'crap' and are rendered useless for the current purpose. In this context, the modal particle *ju* that tags the formulation of the problem implies that the strong negative assessment is something that the others agree on (cf. Heinemann, Lindström, & Steensig, 2011); it claims that they all can see that the result was 'just crap'. By doing this, it also invites a response from the co-participants, and perhaps particularly from the teacher.

While the teacher disagrees with the student's assessment, the student, with his *tycker du inte* 'don't you think' (line 07), questions the teacher's disagreement. Not simply taking the teacher's disagreement as a matter of fact, the student still invites the teacher to come up with a solution. The teacher's *näe: det tror jag inte* 'no I don't believe so' (line 08), which is produced while she examines the material, both answers the student's polar question in the negative and reformulates the epistemic grounds of the issue. There are interesting differences in the ways in which the two parties approach the problem. In the student's questioning of the teacher, he uses the Swedish verb *tycka* (line 07), which translates to 'think', 'regard' or 'consider', a word primarily used when communicating something as an opinion that is not necessarily based on facts or knowledge. In responding to the student's question, the teacher changes the verb to *tro* (line 08), which translates into 'believe' or 'suppose'. In contrast to *tycka*, the Swedish *tro* connotes an orientation towards the matters discussed as a question of right or wrong. From the teacher's phrasings, the question is not about two different opinions, but whether it is possible to find a way to continue working with the materials despite the obvious problems.

As the felted material is much smaller than expected, the student in Excerpt 1a is immediately able to see and realise that he has encountered a problem. This can be contrasted with Excerpt 2a, where the student's initial noticing leaves it to the teacher to assess whether there is a problem. Before this sequence, all the students have been asked to make a small fabric consisting of rows that each contains ten stitches. When working with this technique, it is important to keep track of the number of stitches that are gathered on the needle. As it turns out, this is something that the student has failed to do.

Excerpt 2a Tunisian crochet

01	STD:	*nu har jag helt* now all of a sudden
02		*plötsligt ↓femton* I've got ↓fifteen
03		*(0.4) masker kvar* (0.4) stitches left
04	ST2:	ehe hehehehehehe
05	TEA:	*ja:: #1* yea::h
06	STD:	*>ska det va- ska det* >shall it be- shall
07		*↑va det<* it ↑be that<
08	TEA:	*↓näe* ↓noe



The teacher walks towards the student, reaches out and takes the materials.

09 ST2: heheheHAHAHA [haha]
10 TEA: *[det] är ett vanligt ↑fel (.)*
[it's] a common ↑mistake (.)
11 ***#2** så det förvånar mig ↑inte hehehe .hh*
so it ↑doesn't surprise me hehehe .hh

The teacher positions herself on the table in front of the student, who gazes towards the material in the teacher's hands #2.



12 TEA *DÄRFÖR ATT (.) här finns dä: flera*
BECAUSE (.)here there are several
13 *(0.7) alternativ å ta i och då har*
(0.7) alternatives to take in and you
14 ***#3** du liksom börjat här med att*
have sort of begun here by taking
15 *ta i en maska för mycket där*
in one stitch too much there

The teacher moves her thumb back and forth on the first stitches on the needle #3.



When following instructions, novices recurrently "attempt to ensure a coherent correspondence" (Livingston, 2000, p. 252) between the provided instructions and their progressing work. In Excerpt 2a, it is not the materials as such that occasion the student to invite the teacher's assessment, but a discrepancy found between the instructions and what he has done. After having paused to count the stitches, the student detects and declares to the room that he has fifteen stitches left. In contrast to the previous case, the initial formulation does not explicitly assess the object negatively but reports seemingly neutrally on a matter of fact. Still, counting 15 stitches when having been asked to make 10 is hardly evidence for a "coherent correspondence" between instructions and what he has done. This is something the student himself underscores with his overly surprised intonation as well as the use of *plötsligt* 'suddenly' (line 02). The student's noticing engenders laughter and some smiles from fellow students. The teacher's po-faced 'yeah' (line 05) confirms his detection but does not tell the student whether he has done something wrong. Similarly, the teacher's free-standing 'noe' (line 08) as a response to the student's question if he should have 15 stitches, confirms a problem, but does not explicitly orient to the student being in need of further guidance. While the teacher's short and literal confirmation and answer do not immediately address the student's utterances as a request for assistance, she nevertheless approaches the student (line 08) and continues by instructing him (lines 12–15). Her actions show that despite her humorous or playful verbal responses to the student's actions, she has nevertheless heard the student's formulations as a request for assistance.

In relation to the weaving of a basket, Ingold (2000, p. 345) writes about how "the temporal rhythms of life are gradually built into the structural properties of things", and how the "regularities of form" found in the object embody the "regularities of movement that gave rise to it". A correspondence between form and movements can be found in the student's Tunisian crochet as well, although

not the form and movements aimed for. When making a stitch, there are several places where the needle can be inserted, but only some of these are correct. Without the relevant skills, it is therefore easy to make stitches where one should not. After having classified what the student has done as a 'common mistake' (line 10), the teacher starts to show and explain the reasons for this mistake by literally unravelling what the student has done. By saying 'here there are several alternatives' (lines 12–13) and by pointing along the stitches on the needle with her thumb (lines 14–15), the teacher establishes an inspectable field of past and present actions. With words and deictic gestures, she demonstrates what the student has done and what he has done wrong: 'you have sort of begun here by taking in one stitch too many there'. Through these actions, the teacher locates the trouble source, or "the correctable" (Weeks, 1996, p. 264), among the stitches gathered on the student's needle. Notably, the terms *here* and *there* simultaneously index specific parts of the materials as well as past movements and actions. An instructive account of the student's past actions is recreated by juxtaposing descriptions of past actions with present material results from these actions (lines 13–15).

While previous studies have demonstrated how present materials are used to envision future plans (e.g. Hindmarsh & Heath, 2003; Murphy, 2004, 2005), Excerpt 2a instead shows how materials are used to explicate past actions. In Excerpt 3, the teacher also sets out to explicate the work the student has done previously, but this time she does so by asking a series of questions. The excerpt features a student who uses a knitting machine to make a triangular shawl. The student has completed the first half of her shawl, which means that she should now gradually decrease the number of stitches in order to get the triangular shape that she wants. A short moment after she has begun with this part, she interrupts the knitting and starts to closely examine the results. As a consequence of the technique she uses, the ends of the knitted materials have a tendency to curl up, which, in turn, makes it difficult to actually discern the shape of the shawl.

Excerpt 3 Machine knitting



Having interupted her knitting, the student quitely examines the material for 36 seconds.

The teacher turns in the student's direction and gazes towards the the material.

01 STD: *men det känns som (.) att*
but it feels like (.) that

```
02          (3.7)
03          nånting inte ↓stämm::er men det gör det ↑kanske
            something isn't ↓ri::ght but perhaps it is
04          (1.3)#1
05          för att den har rullat ihop sig så
            cause it has curled up like like that
06          (0.6)
07          för att den min:skar i:nte:
            cause it doesn't decrea:se
08          (2.4)
09 TEA:     lägger du  ih[op #2 (.) ↓två] här?
            do you put to[gether (.) ↓two] here?
10 STD:                 [jättemycket]
                        [a whole lot]
11          (1.0)
12 STD:     ja tar en å sätter på nästa
            I take one and put onto the next
13 TEA:     ja: vad gör du ↓sen?
            yea:h what do you do ↓then?
14          (0.6)
15 STD:     sen drar ja tre
            then I pull three
16 TEA:     m: (.) ser du till att
            m: (.) do you make sure that
17          nålen är borta ↓också¿
            the needle is gone ↓as well¿
18          (0.7)
19          annars så stickar ju
            otherwise it will (ju)
20          den där nästa varv.
            knit on the next row.
21          (5.1)#3(3.2)
22 STD:     de   [ve::t j-]
            that [I do::n't kn-]
23 TEA:          [a det har inte] gått in [här] på ↓jättemånga varv
                 [a it hasn't] decreased  [here] for ↓many many rows
24 STD:                                   [näe]
                                          [no:]
25          .tk a ↓jösses.
            .tk oh ↓Jesus.
```



The teacher points towards the edge of the kitting.



The teacher reaches out and grabs the knitting.

In contrast to the previous cases (Excerpts 1a and 2a), the student's formulated noticings in Excerpt 3 are accompanied by several hesitations and mitigations. She frames the problem in terms of what 'it feels like' (line 01), rather than as a response cry, negative assessment or formulations of some specific feature. The ontological status of the problem is vague: there might be a problem and there might not, and she provides grounds both for her interpretation of this as a problem: 'cause it doesn't decrease' (line 07), and why this might be a misinterpretation: 'cause it has curled up like that' (line 06). As the student has made the design for the shawl herself, she knows that it should gradually become smaller on the right side as the knitting progresses. When examining the emerging shawl, she focuses on the edges of the materials and specifically on the right side. Despite her holding the materials in her hands and being aware of the intended shape, she cannot determine whether the materials have developed according to the plan. The issue

is not simply about understanding specific features of the developing materials, but also about being able to see these features in the first place (cf. Goodwin, 1997). To see whether the shawl has the intended shape does not only demand relevant skills and knowledge, but it also necessitates an embodied examination of the material under scrutiny.

In common to the previous sequences, the student in Excerpt 3 is not explicitly addressing the teacher in this first turn: the student is continuously looking at the materials and there are aspects of the intonation and pace of the formulation that make it sound like self-talk. Like the response cries in the previous sections, however, one could still hear these comments as recipient designed; it is clear that the teacher who sits next to the student and who is working with a project on her own will overhear what the student says. After the student's utterance in line 03, at which point the noticing of a potential problem has been formulated, the teacher turns towards the material and looks at it. Instead of further investigating the shawl itself, the teacher launches a series of questions that ask about the actions leading up to the potential problem. This way of performing an initial diagnosis trades on an asymmetrical and complementary distribution of knowledge and experience, and has some parallels in the interrogative series found in calls to emergency services or in the interaction between doctors and patients (e.g. Boyd & Heritage, 2006; Zimmerman, 1984). The teacher is more knowledgeable with regards to the correct procedure and the mistakes novices typically make, whereas the student could be expected to be able to tell what she has done or not done before the potential problem emerged.

The fact that the student is not really sure whether she has pushed back the needle into the non-knitting position indicates that there could be a problem. If done correctly, two stitches should be put on the same needle at one of the edges of the materials and the then empty needle should be pushed back into a non-knitting position. Otherwise, the needle will be used in the following row and the number of stitches will not decrease. At this point, the teacher turns to the materials and starts to examine how the stitches on the right side of the shawl are assembled. She soon discovers that the number of stitches has not 'decreased here for many rows' (line 23), which also implies that the student has not pushed back the needle. As craft activities leave material residues, the developing materials have the potential to "speak" about the actions involved in their creation (cf. Sanne, 2009). When the student cannot immediately recall a previous procedure, the teacher might therefore consult the object in order to retrospectively reconstruct what the student has done. By examining the individual stitches on the right side of the shawl, it is thus not only possible for the teacher to see that a problem exists,

but also that this problem must have emerged when the needle at the edge was not properly pushed back.

To sum up, students' detections of potential problems are indicated in response cries, exclamations and sighs (Excerpt 1a), in the ways in which the student investigates the materials (Excerpts 2a and 3), and in verbal formulations of problem detections (Excerpts 1a, 2a and 3). In some of the investigated sequences, the problem immediately presents itself as such to the students (Excerpt 1a). In other sequences, the students need expert assistance to decide whether they really have encountered a problem (Excerpts 2a and 3). What unproblematically presents itself as a problem to someone with the relevant skills and knowledge does not have to be equally clear-cut to a novice. Conversely, what comes across as an error beyond repair to a novice might not be equally problematic in the eyes of an expert.

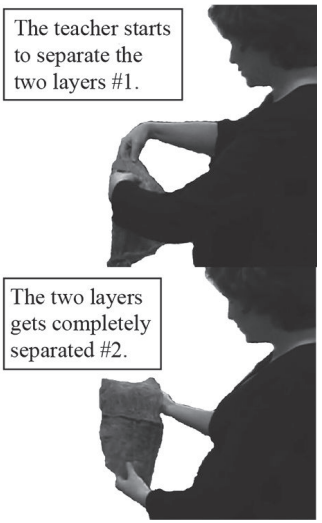
Solving problems and correcting mistakes

After the student's detection of a problem and the following diagnosis, the interaction between student and teacher mainly concerns the future of the materials, how the problem should be solved and what the student should do next. The retrospective orientation of troubleshooting is thus turned into a prospective orientation of proposing solutions or correcting mistakes. How a problem is solved is highly dependent on the mistakes made and the materials and techniques used. In the investigated sequences, two general approaches can be found: to follow the materials in a new direction (Excerpt 1b) or to take some steps back by undoing what previously has been done (Excerpt 2b).

In the end of Excerpt 1a, where the student was working with felt techniques, the teacher states that she does not think that the student's project has turned into crap. In Excerpt 1b, the discussion continues with a focus on what the student should do next. One can note that the two parties here are oriented towards two separate problems. The first one, which was noted in the very beginning of Excerpt 1a, concerns an unexpected shrinkage of the materials. In the end of that episode, they notice an additional problem – the felt is separated into two layers instead of one single layer. Responding to this, the teacher stretches the felt between her hands and examines to what extent the layers have stuck together by inserting her finger between them.

Excerpt 1b Felt making

```
14 STD:    de:t bli::r ↓nålen sen
           it get to be the ↓needle later
15         (1.3)
16 TEA:    det kan bli ↓nålen men-
           it might be ↓the needle but-
17         (2.6) #1
18 TEA:    det kan också va ↑såhär (.)
           it might also be ↑like this (.)
19         att du ska skita i å
           shouldn't give a damn about
20         (0.7) #2
21 TEA:    försöka få ihop dom
           trying to stick them together
22         [å i stället göra-]
           [and instead do-]
23 STD:    [OJ dom satt] inte
           [OH they hadn't] stuck
24         ihop särskilt mycket alls
           very much at all
25 TEA:    ne.hh dom gjorde ↓inte det
           no.hh they ↓didn't
```



In felt making, it is not possible to simply undo and redo the work. Felted wool cannot, for example, be unravelled as knitting or crocheting or undone as sewing. Once the wool fibres are attached, it is not possible to separate them without completely destroying the material. This forces the teacher and the student to focus on solutions other than reconstructive actions. In relation to this, one can note that neither student nor teacher explicitly orient toward the source of the problem or the student's mistake. Unlike other sequences, it is not the performance of the student that is being corrected. Rather, it is the material progression of the anticipated object that seems to motivate the interaction between the two parties.

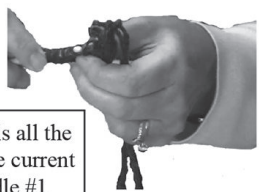
In this excerpt, the student and the teacher propose two different ways to proceed: to use a felting needle to attach the layers (line 14) or to work with the felted layers separated and unfolded (lines 15–18). The irreversible characteristics of the technique necessitate solutions that take their departure in the current state of the materials. The student proposes that a felting needle should be used to attach the two separated layers. While this might be a way of fastening the separate layers, the suggestion does not address the unexpected shrinking of the felted material. The teacher's proposal leads the project in another direction. By unfolding the material, the size of the felt increases and the felt might therefore be large enough for the beer bottle cooler that the student intended to make. Instead of addressing the separation of the layers as a problem, the teacher incorporates it as a solution to the initial problem with the shrinkage.

In his explorations of how semiotic fields with different properties are organised with reference to each other, Goodwin (2013) uses the metaphor of "lamination". Applying this idea to the investigated sequences, it is not only the felted material that is layered, but there is also a laminated structure to the actions involved. The proposals of both the teacher and the student follow immediately after a new aspect of the material has been revealed. The student's proposal to attach the layers with a felting needle is produced directly after the teacher has used her finger to show that the layers have not stuck (line 12). The teacher's proposal to work with the unfolded material (lines 15–18) is sequentially timed with the revelation of the complete separation of the two layers. In this way, the sequential organisation of the interaction draws on the unfolding examination of the felted material. In common with other task-oriented activities (e.g., Goodwin & Goodwin, 1996; Hindmarsh & Heath, 2000), the participants not only respond to each other but also to relevant features of the materials they are working with.

In Excerpt 2b, it is primarily the actions and competence of the student that are being corrected. Like all the other sequences, it is the student who detects the potential problem while working with the materials. In contrast to the previous excerpt (1a, b), however, the detection occasions the teacher to correct the performance of the student. After having pointed out what the student has done incorrectly (Excerpt 2a, 12–13), the teacher undoes most of what the student has done. She then demonstrates what should be done instead. Throughout Excerpt 2b, the student's gaze is directed towards the crocheting in the teacher's hands.

Excerpt 2b Tunisian crochet

16	TEA:	*så att vi- **#1** (4.7) spolie:rar (0.5)*
		so that we- (4.7) spoil (0.5)
17		*↑största delen av ditt arbete*
		the ↑largest part of your work
18	STD:	*huhuhuhu *tack fröken**
		huhuhuhu *thanks teach*
19	TEA:	**ja:ha*: just det*
		yea that's right
20		(1.2)
21	TEA:	*så (0.6) eh (0.3) och dom*
		so (0.6) eh (0.3) and the ones
22		*som går snett så här **#2***
		that are slanting like this
23		*ska man inte ta i för*
		one shall not take in cause
24		*det är omslaget (.)*
		that's the yarn-over (.)
25		*från föregående varv*
		from the previous row
		((4 turns omitted))

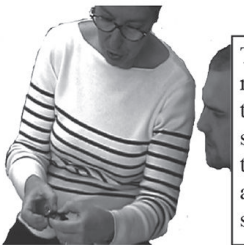


The teacher pulls all the stitches from the current row off the needle #1.



The teacher points with her thumb on the stitches #2.

30	*utan det är dom som*	
	rather it's the ones that	
31	*(.) går rakt ner å #3*	
	(.) go straight down n'	
32	*som går ända ner till*	
	that goes all the way down	
33	*uppläggningsvarvet det är*	
	to the initial row it is	
34	*bara dom du ska ta i*	
	only them you should take in	



The teacher moves her thumb in a straight trajectory across the stitches #3.

In order for the student to proceed with the project, what has already been done must be *spolierad* 'spoiled'. With an ironic 'thanks teach' the student continues in the same joking frame as previously (Excerpt 2a). Undoing what has been done is regularly oriented to as something unwanted or dispreferred by the students. It might, however, not be the actual undoing so much as the later redoing that the undoing implies that engender signs of frustration or weariness among the students. While doing something a first time might be treated as fun or engaging, redoing the same thing as result of a mistake is seldom oriented to in this way. When the student in Excerpt 3 is told that it has not 'decreased here for many many rows', which implies that she has to redo a lot, she replies with a strongly dispirited *.tk a Jösses* 'tk oh Jesus'. In contrast, the student in Excerpt 2b has recently begun with his project and the part that is deconstructed did not take long to complete. In addition, the Tunisian crochet is not made for its own sake but to try and practise the manual skill.

Although the problem oriented towards here is seen in how the material object is assembled and not the actual performance of the student (cf. Lindwall & Ekström, 2012), it is nevertheless the actions of the student rather than the object as such that are being corrected. In her instructions, the teacher builds a contrast between incorrect (lines 21–25) and correct performance (lines 30–34). In common to other corrective sequences (e.g., Keevallik, 2010; Reed, Reed, & Haddon, 2013; Weeks, 1996), previous actions are used as a backdrop for the prospective and instructive moves. The teacher shows what the student has done previously in terms of 'one shall not take in' (line 23), before the correct way of proceeding is introduced 'rather it's these ones' (line 30). In this way, faulty and correct actions form what Weeks (1996, p. 269) calls a "contrastive pair". Originally introduced in relation to musical rehearsals, a contrastive pair consists of a description of a faulted version shortly followed by the prescribed version – it combines the localisation of a trouble source with the offering of a preferred or correct version.

Livingston (2008, p. 100) writes, "[r]ealizing what the instructions describe depends on the work that we do to find their adequacy. The ability to find that adequacy is, to some extent, what 'skill' is". To the novice, who has not yet acquired the

required skills, it can be hard to find this adequacy without any help or guidance. In order to proceed, the student needs to consult the materials and the embodied demonstration by the teacher. At the same time, the teacher's verbal directions are central in guiding the student in what to look for. The demonstration builds on the embodied actions in relation to the materials, and the verbal contributions highlight features, distinctions and contrasts which the student might have trouble seeing in actions and materials. How, for instance, the 'slanting' character of some stitches should be seen in relation to the ones that are 'straight' and that go 'down to the initial row'. Thus, what the embodied demonstration shows more precisely, and the relevant differences between the stitches, both result from the laminated structure of the instructions.

Conclusion

> Neither brick nor mortar, nor soil, nor the ingredients in the kitchen, nor paints and oils, are objects. They are materials. And what people do with materials, as we have seen, is to follow them, weaving their own lines of becoming into the texture of material flows comprising the lifeworld. (Ingold, 2010, p. 6)

This chapter analyses activities where textile materials are transformed into craft objects. Given the title and topic of this volume, it is worth noting that the ways in which people interact with materials can be differently organised compared to the ways in which they interact with the tools they use. In the investigated setting, the characteristics of both materials and tools are central to how the work is organised and how it proceeds. Nonetheless, there are clear differences in the ways a crafter orients towards materials compared to tools. Materials are both shaping and shaped by the actions and procedures of the crafter. Another way of putting this is that materials are gradually transformed through activity and that they therefore can be inspected in terms of previous actions. As part of skilled performance, the crafter continuously monitors and assesses the material results of what is done. This is necessary if the crafter is to be responsive to the materials' progressive development. In short, the crafter has to 'follow the materials'. When Ingold writes about following the materials, he stresses that it should be understood in an active rather than a passive sense. Like the hunter who follows a trail "must remain ever alert to visual and other sensory cues in an ever-changing environment and must adjust his course accordingly" (Ingold, 2010, p. 9), so must the practitioner be alert and ready to adapt to the ways in which the materials develop. This also implies attentiveness to potential mistakes and other problems. If a problem is detected at a late stage, there is the risk that everything that has been done has to be redone or that the materials are rendered useless.

As has been shown, the materials and their characteristics are decisive for how problems are detected, diagnosed and solved and for how both actions and materials might be subject to corrections. With the students' detection of some kind of trouble source, such as extensively shrunk felt, too many stitches on the crocheting needle and a non-existent decrease in the knitting, there is a disruption in the normal progression of the activity. By analysing a set of corrective sequences, the central aim has been to show how such disruptions are handled. How progression and potential disruptions are handled are crucial aspects of all interaction. As is repeatedly shown in studies of talk-in-interaction, "moving from some element to a hearably-next-one with nothing intervening is the embodiment of, and the measure of, progressivity" (Schegloff, 2007, p. 17). Generally, if some talk intervenes "between some element and what is hearable as a/the next […] it will be heard as qualifying the progressivity of the talk, and will be examined for its import" (Schegloff, 2007, p. 17). When, however, the interaction is aimed at the achievement of material objects rather than intersubjectivity or the progression of the communicative exchanges per se, both the orientation to and manifestation of progressivity change (cf. Nevile, 2007). The production of craft objects progresses in a directional fashion and encompasses a series of ordered procedures. Being able to handle the materials and skilfully move from one procedure to the next is therefore crucial for the ways in which the project develops. Following this, disruptions in progressivity are not heard in intervening talk, but seen in the ways that hands and instruments are moved (Lindwall & Ekström, 2012) or, as in the sequences investigated here, in specific aspects of how the materials have turned out. Correspondingly, the actions used to overcome these problems, whether conducted in talk or otherwise, are not primarily carried out on talk but on the actions and materials involved in making the objects.

While there is an orientation towards the continued production of objects in all the investigated sequences, there is also a more or less explicit orientation towards learning and instruction. The students in the workshops are expected to produce objects of craft, but they attend these workshops first and foremost to learn relevant skills and techniques. The teachers' diagnostic and corrective actions could thus be seen as having two "special motives": to fix the problem and to instruct the student by, for instance, correcting some faulty performance. There are interesting differences between the sequences in how these motives are played out. Determining the cause of a problem is in many situations (but not all, see for example Arminen & Poikus, 2009; Poole, Edwards, & Jarvis, 2009) an important aspect of finding a solution to the problem. In the investigated material, finding a cause could mean finding and correcting a mistake: either explicitly by contrasting the student's incorrect conduct with its correct counterpart (Excerpt 1b), or

embedded in interrogative series that ask about previous actions and operations (Excerpt 3). In both cases, the diagnostic work aims to uncover and show what mistake the student has done, whereas what they should do is treated as a relatively unproblematic issue of correction. This can be contrasted with Excerpt 1b, where the teacher does not orient towards any previous actions or mistakes in her investigation of the material. In this case, finding the mistake would not be part of a solution to the problem. Instead, the teacher has to investigate the material in order to find a potential way of solving the problem. What it means to 'follow the materials' thus differs between the sequences, depending on the materials used and on the "special motive" that primarily drives it.

References

Arminen, I., & Poikus, P. (2009). Diagnostic reasoning in the use of travel management system. *Computer Supported Cooperative Work*, 18(2–3), 251–276. DOI: 10.1007/s10606-008-9086-3

Boyd, E., & Heritage, J. (2006). Taking the history: Questioning during comprehensive history-taking. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care: Interaction between primary care physicians and patients* (pp. 151–184). New York: Cambridge University Press. DOI: 10.1017/CBO9780511607172.008

Büscher, M., O'Neill, J., & Rooksby, J. (2009). Designing for diagnosing: Introduction to the special issue on diagnostic work. *Computer Supported Cooperative Work*, 18(2–3), 109–128. DOI: 10.1007/s10606-009-9092-0

Ekström, A. (2012). *Instructional work in textile craft: Studies of interaction, embodiment and the making of objects*. Stockholms universitet: Studies in Education in Arts and Professions, 3.

Ekström, A., Lindwall, O., & Säljö, R. (2009). Questions, instructions and modes of listening in the joint production of guided action: A study of student-teacher collaboration in handicraft education. *Scandinavian Journal of Educational Research*, 53(5), 497–514. DOI: 10.1080/00313830903180794

Fasulo, A., & Monzoni, C. (2009). Assessing mutable objects: A multimodal analysis. *Research on Language and Social Interaction*, 42(4), 362–376. DOI: 10.1080/08351810903296481

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkheim's aphorism*. Lanham, MD: Rowman & Littlefield.

Goffman, E. (1978). Response cries. *Language* 54(4), 787–815. DOI: 10.2307/413235

Goodwin, C. (1994). Professional vision. *American Anthropologist*, 96(3), 181–209. DOI: 10.1525/aa.1994.96.3.02a00100

Goodwin, C. (1997). The blackness of black: Color categories as situated practice. In L. B. Resnick, R. Säljö, C. Pontecorvo, & B. Burge (Eds.), *Discourse, tools, and reasoning: Essays on situated cognition* (pp. 111–140). Berlin: Springer. DOI: 10.1007/978-3-662-03362-3_6

Goodwin, C. (2013). The co-operative, transformative organization of human action and knowledge. *Journal of Pragmatics*, 46(1), 8–23. DOI: 10.1016/j.pragma.2012.09.003

Goodwin, C., & Goodwin, M. H. (1996). Seeing as a situated activity: Formulating planes. In Y. Engeström, & D. Middleton (Eds.), *Cognition and communication at work* (pp. 61–95). Cambridge, MA: Cambridge University Press. DOI: 10.1017/CBO9781139174077.004

Heinemann, T., Lindström, A., & Steensig, J. (2011). Addressing epistemic incongruency in question-answer sequences through the use of epistemic adverbs. In T. Stivers, L. Mondada, & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 107–130). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511921674.006

Heritage, J. (1984). *Garfinkel and ethnomethodology*. Cambridge, MA: Polity Press.

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29(5), 523–562. DOI: 10.1177/089124100129023990

Hindmarsh, J., & Heath, C. (2003). Transcending the object in embodied interaction. In J. Coupland, & R. Gwyn (Eds.), *Discourse, the body and identity* (pp. 43–69). New York: Palgrave Macmillan.

Hindmarsh, J., Reynolds, P., & Dunne, S. (2011). Exhibiting understanding: The body in apprenticeship. *Journal of Pragmatics*, 43(2), 489–503. DOI: 10.1016/j.pragma.2009.09.008

Ingold, T. (2000). *The perception of the environment: Essays on livelihood, dwelling and skill*. London: Routledge. DOI: 10.4324/9780203466025

Ingold, T. (2010). The textility of making. *Cambridge Journal of Economics*, 34(1), 91–102. DOI: 10.1093/cje/bep042

Ivarsson, J. (2010). Developing the construction sight: Architectural education and technological change. *Visual Communication*, 9(2), 1–21. DOI: 10.1177/1470357210369883

Jefferson, G. (1984). Transcription notation. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 11–38). Cambridge, MA: Cambridge University Press.

Jefferson, G. (1987). On exposed and embedded correction in conversation. In G. Button, & J. R. E. Lee (Eds.), *Talk and social organisation* (pp. 86–100). Clevedon: Multilingual Matters.

Keevallik, L. (2010). Bodily quoting in dance correction. *Research on Language and Social Interaction*, 43(4), 401–426. DOI: 10.1080/08351813.2010.518065

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43(2), 521–541. DOI: 10.1016/j.pragma.2009.09.009

Lindwall, O., & Ekström, A. (2012). Instruction-in-interaction: The teaching and learning of a manual skill. *Human Studies* 35(1), 27–49. DOI: 10.1007/s10746-012-9213-5

Lindwall, O., & Lymer, G. (2005). Vulgar competence, ethnomethodological indifference and curricular design. In T. Koschmann, D. D. Suthers, & T.-W. Chan (Eds.), *Computer support for collaborative learning: The next 10 years* (pp. 388–397). Mahwah,NJ: Lawrence Erlbaum.

Lindwall, O., & Lymer, G. (2011). Uses of "understand" in science education. *Journal of Pragmatics*, 43(2), 452–474. DOI: 10.1016/j.pragma.2010.08.021

Lindwall, O., Lymer, G., & Ivarsson, J. (2008). Att ge och ta kritik: Examination i arkitektutbildning som hybrid aktivitet [Delivering and receiving criticism: Assessment in architectural education as a hybrid activity]. In K. Borg, & V. Lindberg (Eds.), *Kunskapande, kommunikation och bedömning i gestaltande utbildning* [Knowing, communication and assessment in aesthetic education] (pp. 199–211). Stockholm: Stockholm University Press.

Livingston, E. (2000). The availability of mathematics as an inspectable domain of practice through the use of origami. In S. Hester, & D. Francis (Eds.), *Local educational order: Ethnomethodological studies of knowledge in action* (pp. 245–270). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.73.10liv

Livingston, E. (2008). *Ethnographies of reason*. Aldershot: Ashgate.

Lymer, G., Lindwall, O., & Ivarsson, J. (2011). Space and discourse interleaved: Intertextuality and interpretation in the education of architects. *Social Semiotics*, 21(2), 197–217. DOI: 10.1080/10350330.2011.548642

Macbeth, D. (2004). The relevance of repair for classroom correction. *Language in Society*, 33(5), 703–736. DOI: 10.1017/S0047404504045038

Mondada, L. (2009). The embodied and negotiated production of assessments in instructed actions. *Research on Language and Social Interaction*, 42(4), 329–361. DOI: 10.1080/08351810903296473

Murphy, K. M. (2004). Imagination as joint activity: The case of architectural interaction. *Mind, Culture, and Activity*, 11(4), 267–278. DOI: 10.1207/s15327884mca1104_3

Murphy, K. M. (2005). Collaborative imagining: The interactive use of gestures, talk, and graphic representation in architectural practice. *Semiotica*, 156(1), 113–145.

Murphy, K. M. (2012). Transmodality and temporality in design interactions. *Journal of Pragmatics*, 44(14), 1966–1981. DOI: 10.1016/j.pragma.2012.08.013

Murphy, K. M., Ivarsson, J., & Lymer, G. (2012). Embodied reasoning in architectural critique. *Design Studies*, 33(6), 53–556. DOI: 10.1016/j.destud.2012.06.005

Nevile, M. (2007). Action in time: Ensuring timeliness for collaborative work in the airline cockpit. *Language in Society*, 36(2), 233–257. DOI: 10.1017/S0047404507070121

Poole, E., Edwards, K., & Jarvis, L. (2009). The home network as a socio-technical system: Understanding the challenges of remote home network problem diagnosis. *Computer Supported Cooperative Work*, 18(2–3), 277–299. DOI: 10.1007/s10606-008-9087-2

Reed, B., Reed, D., & Haddon, E. (2013). NOW or NOT NOW: Coordinating restarts in the pursuit of learnables in musical masterclasses. *Research on Language and Social Interaction*, 46(1), 22–46. DOI: 10.1080/08351813.2013.753714

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50(4), 696–735. DOI: 10.2307/412243

Sanne, J. (2009). Making matters speak: Trouble-shooting in railway maintenance. In M. Büscher, D. Goodwin, & J. Mesman (Eds.), *Ethnographies of diagnostic work: Dimensions of transformative practice* (pp. 54–72). Basingstoke: Palgrave MacMillan.

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organisation of repair in conversation. *Language*, 53(2), 361–382.

Streeck, J. (2013). Interaction and the living body. *Journal of Pragmatics*, 46(1), 69–90. DOI: 10.1016/j.pragma.2012.10.010

Streeck, J., Goodwin, C., & LeBaron, C. (Eds.). (2011). *Embodied interaction: Language and body in the material world*. Cambridge: Cambridge University Press.

Weeks, P. (1985). Error-correction techniques and sequences in instructional settings: Toward a comparative framework. *Human Studies*, 8(3), 195–233. DOI: 10.1007/BF00142993

Weeks, P. (1996). A rehearsal of a Beethoven passage: An analysis of its correction talk. *Research on Language and Social Interaction*, 29(3), 247–290. DOI: 10.1207/s15327973rlsi2903_3

Zimmerman, D. H. (1984). Talk and its occasion: The case of calling the police. In D. Schiffrin (Ed.), *Meaning, form, and use in context: Linguistic applications*. Georgetown University Round Table on Languages and Linguistics 35 (pp. 210–28). Washington, DC: Georgetown University Press.

Having a ball

Immaterial objects in dance instruction

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This chapter looks at how immaterial objects are manipulated into being for pedagogical purposes. Dance teachers employ objects to visualise subtle tactile and kinaesthetic experiences. The objects emerge in a situated manner within activity metaphors where alternative bodily activities are juxtaposed with the dance movement, taking for granted that these alternative activities are tacitly known or more basic. The objects have a temporally limited existence within activity metaphors that involve verbal explanations as well as embodied demonstrations of both the dance and the alternative activity. Furthermore, participants are shown to orient differently to object-implying gestures as opposed to fully-fledged whole-body enactments. In the latter, objects may be maintained collectively across time.

Introduction[1]

This study focuses on objects that are entirely constituted in and through interaction without ever materialising. While material objects can be referred to, touched, fetched, moved and manipulated in order to serve interactional ends, the objects in the current chapter are brought into being via embodied performances and accompanying talk. They appear in playful scenes within longer argumentative courses of action and are employed as explanatory devices. We will be looking at how dance teachers accomplish the pedagogical task of conveying tactile information to a class of students by using immaterial objects. The objects emerge in performed manipulations, such as hammering, throwing a Frisbee, or stretching a rubber band. They rely on sensorimotoric memory of typical movements related to them and do not involve materiality besides the human body and sometimes the floor. Immaterial objects emerge locally within limited time-scales and their durability is dependent on coordinated bodily actions.

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Using one's hands is one of the main means for accomplishing immaterial objects. There has been a considerable amount of research into gesture in interaction, both on how they organise interaction (Goodwin, 1986; Mondada, 2007) and on how meaning can be achieved with hands and materialities (Goodwin, 2003, 2007; Murphy, 2005; Streeck, 1996, 2009). For example, Murphy (2005, p. 117) shows how imaginary things in architectural design are "created with the pragmatic force of gestures, talk, and material objects like pencils and drawings". Streeck (2009, Chapter 4) discusses how people give gestural renditions of their manual work skills during conversation, enacting the very sensorimotor patterns that they also enact at work. This chapter builds on these findings but goes on to show that there is a contrast between gestures designating movements that involve objects, and object-focused enactments. Participants orient differently to these two types of embodiments. In addition, the study shows how the involvement of the whole body establishes a contrast between a mere gesture and an enactment.

Comparisons are regularly used in pedagogical activities to achieve a vivid explanation. When the aim is to teach bodies to behave in a new way, for example in dance classes, other bodily activities can be used as metaphors. Yet metaphors have almost exclusively been analysed as verbal expressions. They relate to a considerably different but more familiar conceptual domain, and therefore facilitate the understanding of something new (Kövecses, 2002). Alternatively, it can be argued that the relevant domain does not have to be particularly familiar in order to simplify understanding or highlight aspects of more complex issues. Much less research has been done on non-verbal metaphors, which mostly concentrates on the interpretation of music and dance (Johnson & Larson, 2003; Whittock, 1992). The current paper focuses on embodied metaphors that involve handling imaginary objects and analyses the nature and role of these objects within the interactional setting of dance classes. In contrast to earlier studies, the metaphors here are accomplished via coordinated verbal and non-verbal means, and grounded in different bodily activities. There is a large variety of embodied metaphors in the dance class data, including presenting the dancing body or a part of it as an object (lamp post, banana), enacting an object (Duracell bunny, Swiss army knife), or employing an alternative activity as an explanatory pedagogical method that may or may not involve an object (asking-answering, playing cricket). The term *activity metaphor* has been coined for the latter phenomenon.

Bodily experiences have for a long time played a central role in metaphor studies. It has been argued that they underlie all human understanding of everyday life. In their classic study, Lakoff and Johnson (1980, pp. 14–21) discuss how the human body, and its ability to look and grasp, forms the foundation of entire metaphoric systems and thereby understanding. The current study takes a

different approach and demonstrates how one bodily experience can be employed to establish a better understanding and production of another. Thus, in contrast to earlier studies, in this case both the comparative source of the metaphor and what it tries to explain are embodied activities. Among other things, dance movement can be explicated in terms of playing tennis, angling, and moving heavy furniture. In many of these metaphoric embodied presentations by the dance teachers, immaterial objects get visualised.

The method of the study is microanalysis of multimodal and embodied interactional exchanges between the pairs of teachers, who bring the objects to life in corrective instructional sequences. Crucially, neither the objects, nor their manipulation, are meant to be re-enacted by the students. Material objects emerging in relevant ways as part of instruction have otherwise been subject to a number of studies on teaching surgery, for instance (Koschmann, LeBaron, Goodwin, & Feltovich, 2011; Mondada, 2003). The dance studied here does not involve artefacts. The objects only emerge as assisting devices in instruction. Therefore, the focus of the analysis is not on displayed student understanding, apart from when the students participate in the establishment of the metaphor.

The data

The paper homes in on a single episode chosen from a larger body of recordings of dance classes.[2] Activity metaphors occur frequently in the data, once or twice in every class, and thus obviously constitute an important sense-making mechanism in this setting. Other cases are described in support of the focus episode. They all come from relatively advanced classes in Lindy Hop, a partner dance that is taught here as a social dance, rather than performance choreography. In social dancing one of the partners takes the role of the *lead* who has to communicate to the *follow* what to do next. The teaching therefore concentrates on the leading and following technique between the couple.

In the focus case, a ball emerges in the dance teachers' embodied instruction. It becomes visible as part of the embodied activities of bouncing and throwing. In the first section we will look at how the object is talked and manipulated into being through consecutive excerpts of a single episode. After that the properties and functions of immaterial objects will be discussed.

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2. The video recordings comprise 38 hours of group classes of different dances: swing (Balboa, Lindy Hop), step, and ballet. There are 17 teachers in the recordings who speak English, Swedish or Estonian, the groups of students ranging from six to about 60.

Hands-on accomplishment of an immaterial object

This section shows in detail how an immaterial ball emerges in the hands of the dance teacher couple during a single episode, drawing an analytical line between a gesture and a fully elaborated mime.

A throwing gesture

The focus episode takes place during an instructive sequence that follows a segment of practice in the class. The students have been trying out a step sequence in couples and are coming to a standstill, one after another. The follow teacher (Betty (the names have been changed)) moves to face the lead teacher (Tommy) and utters line 01. All data has been transcribed according to Jefferson (2004); # marks the timing of figures; + and * the timing of nonverbal behaviour, <0 breathy 0> and <@ smiling @> indicates that something is produced with breathy or smiling voice, respectively, and [space]- signifies an unfinished intonation unit.

Excerpt 1 (in Swedish; Vinter 2D; 10:07)

```
01 BET:     Jag vill prata om -
            I wanna talk about -
02          +(0.8)+
            +Betty looks at Tommy, stretches
            arms back and forth+
03 BET:     +e::h
            +steps closer to Tommy,
            hand movement continues+
04          (0.6)+
```

Betty's gaze, body as well as the language choice are recipient-designed for the lead teacher rather than the students, as the class is taught in English while the teachers are native speakers of Swedish. She accomplishes a syntactic-bodily unit (Keevallik, 2013) that involves a syntactic initiation 'I wanna talk about' but instead of the syntactically projected object the speaker uses her body to complete the unit and issue a coherent message to her partner. These kinds of gestures have been called *speech-linked gestures* by McNeill (2005, p. 5). Betty's back and forth hand movements are specifically designed for her partner and therefore less analysable for an outsider. Only with hindsight we can see that they amount to the first enactment of throwing and receiving a medium-sized round object. This analysis is supported by B's subsequent actions, as she is about to start developing the metaphor of *throwing*.

Excerpt 2 is the immediate continuation of Excerpt 1. On the first syllable in line 05 the teacher turns her gaze towards the students, and her voice becomes much louder to gain their attention. The corrective talk in this segment concerns

the dance figure *freeze* that was part of the step sequence they have just practised. In a freeze the lead dancer has to convey to the follow to stop and stand still in the middle of the dance.

Excerpt 2

```
05 BET:     I WANNA TALK A LITTLE BIT ABOUT THE FREEZE: -
06          the:: the: STOP feeling.
07          (.)
08          Eh- We- (.) Tommy and I always THInk about freeze
09          and stops like that, .h like e::h
10          SHAring some <0 energies 0>.
11          (.)
12          Flum flum flum. ((Swedish, most students
                                    understand it))
            Waffle waffle waffle.
13          .hh But heh that's how it is.
14          And Tommy is really trying-
15          I mean it doesn't have to do with the HAND.
16          (.)
17          That the HAND is totally still. It's -
18          (.)
19          It's helping, but it's not about that.
20          It's MORE about what he does and
21          transfer (.) from his body.
22          (0.2)
23          A::nd (0.3) mts ((smack)) if he KEEps it to himself,
24          it is SO hard for me to READ what he is doing.
25          .hh He need to THINK in his head that he is (.)
26          #THROWING (.) this (0.2) FREEZE on me.
            #fig.1
27          This KNN,[3] it's FOR ME, it's not about HIM (.)
28          standing STILL. It's about him (.)
29          GIving me some (.) thing to work on.
30          (0.4)
31 TOM:     Exactly.=
32 BET:     =Mm?
```



Figure 1. Betty's throwing gesture, sharply leaning forwards, gaze on the students. Left hand remains in the position where she illustrated *keeps it to himself*

3. *Knn* is a vocalisation that accompanies yet another embodied demonstration of the lead movement, conveying its sharpness.

This segment of instruction serves to teach tactile and embodied practices to other bodies without touching. It is structured around contrasts of what the lead of a freeze should and should not feel like (e.g. not using the hand but the body, not standing still but *giving something* to the partner) and involves many metaphors, such as *sharing some energies* and *reading* the lead. One of the metaphors is that the freeze has to be thrown on the follow.

As part of this metaphor, the teacher performs a throw, shown in Figure 1. She lifts her right hand and opens it for a throw while also abruptly leaning forward with her body. She does it twice, with the apexes on words *throw-* and *freeze* in line 26. She thereby establishes a metaphor for the dance movement both verbally and in an embodied way. The words *he need to think in his head* introduce something that has to be attended to in a subtle tactile way by any lead dancer. The dancers do not actually have to throw anything, but just apply the sensorimotor experience of a throwing movement. In addition, the throws are performed here at the level of the teacher's head while the contact between the partners in the actual dance is at the level of the hips. This further underlines the fact that the throws are not being performed as part of the dance. The verbal explanation together with the enactments accomplishes a metaphor where the assumedly more familiar and simpler bodily activity of throwing is used to teach the novel and more complex activity of leading in a couple dance.

Manipulating an object into existence

However, even though a throw always implies a throwable, Betty's enactments do not quite result in the visualisation of an object in her hand. Most importantly, she does not stretch her hand for a prototypical throw. The movements amount to a gesture designating the movement and highlighting its sharpness rather than a fully-fledged manipulation of an immaterial object. In contrast, in Excerpt 3, which is again the immediate continuation of the prior Excerpt 2, the two teachers jointly construct an immaterial ball. It initially appears in the hands of the lead teacher who starts bouncing it on *exer-*. He bounces it three times and throws it on *ball* in line 34, as shown in Figure 2. The words *bounce* and *throw* in the transcripts represent the moments when the immaterial ball is about to leave Tommy's hand, either towards the floor or into the air.

Excerpt 3

```
33 TOM:      khm And its eh - SOmetimes we do this exer+cise
   body                                                 +bounce
34           with *#a:- (.) +a throwing the *#BALL to Betty.
   body           *bounce   +bounce         *throw
                   #fig.2a                   #fig.2b
```

```
35              (0.3)
36 TOM:         It's like +#I can do THIS.
   body                   +bounce x2
                           #fig.3a
37              *(1.0)
   body         *T throw
38 BET:         +<@ Ye:s:, #and I can [catch] it? @>+
   body         +B catching and holding the ball+
                           #fig.3b
39 TOM:                                 [Yeah,]
40 BET:         Mm?
41 TOM:         +Uh,+
   body         +T makes a sign to get the ball back+
42              *(1.7)
   bodies       *B throw# + T catch & bounce x3
                      #fig.3c
43 TOM:         But I can also #do (.) #HWA.
   body                                  throw
                                 #fig.4a #fig.4c
44              (0.8)
```

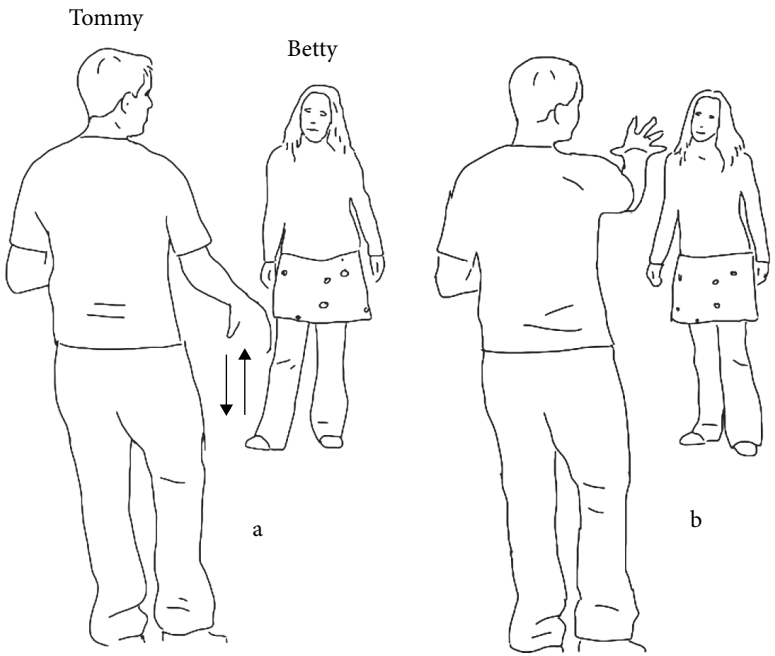


Figure 2a–b. Tommy bouncing and throwing the ball

Tommy's throwing gesture is more extended than Betty's was in Figure 1, which more strongly implies a ball in his hand, but he is still not engaging his entire body in the throwing; he leans back and his body is relaxed. Also, he is gazing at the students around him and not towards the trajectory of the ball. So the movement is still gesture-like; it is illustrative of the talk.

In the next attempt, however, Tommy engages his entire body as well as his partner in an enacted ball game. On *can do* in line 36 he again bounces the ball but

this time with his entire body bent forward, with a gaze at his partner, and moving towards her, as shown in Figure 3a. This results in her taking a step forward and engaging her body (compare Figure 3a to Figure 2 where she was disengaged during Tommy's bouncing).

Tommy throws the ball to Betty during the pause in line 37 and she catches it on *ye:s*, as shown in Figure 3b. In line 41 he makes a sign that he wants the ball back, Betty complies and throws it to him, as shown in Figure 3c. In comparison with her gesture in Figure 1, here her hands and body are fully committed to achieving a perfect mime of throwing a ball. By implication of this being a gestalt activity, an object moving along the imaginary trajectory produced by the interacting bodies becomes fully visible to the participants.

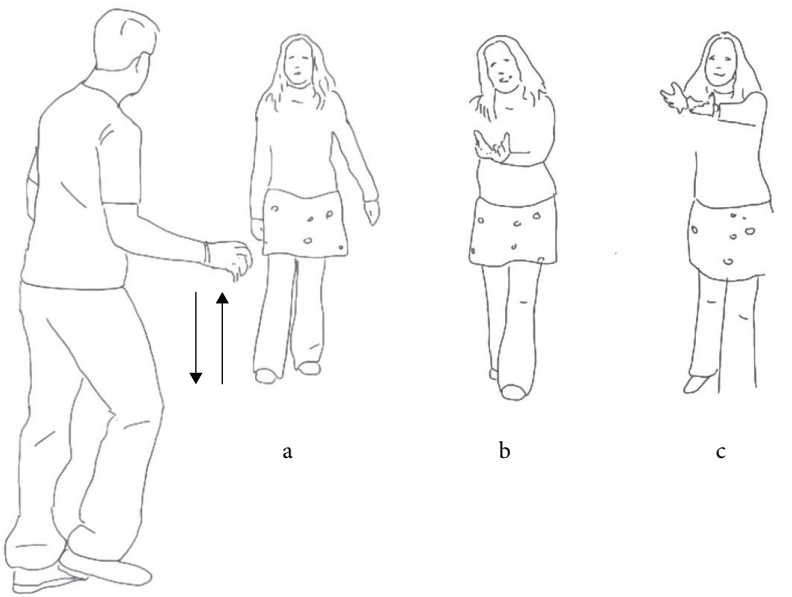


Figure 3a–c. The joint game

In line 43 Tommy once again bounces the ball and throws it back to Betty this time much harder, causing her to freeze, as shown in Figure 4.

The enacted ball game amounts to a contrastive pair, demonstrating the correct and the incorrect versions of a dance movement by means of a metaphor i.e. the soft throw is not enough. The instructive sequence continues by the lead teacher explaining why a sharp throw is necessary for the tactile lead-and-follow technique to work kinaesthetically (Excerpt 4). During this talk the teachers also jointly perform a freeze in the dance, first with an incorrect version of the lead (lines 50–51), and then with the correct one (lines 53–54). The resulting correct

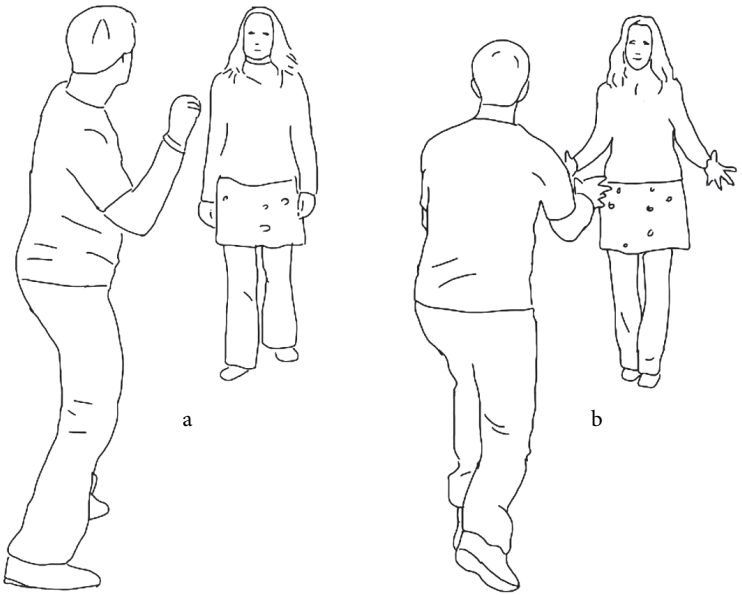


Figure 4a–b. Tommy throws the ball, Betty freezes

freeze is shown in Figure 5. The performance is accompanied by talk mentioning the throwing metaphor one last time, after which the entire instructive sequence comes to a close.

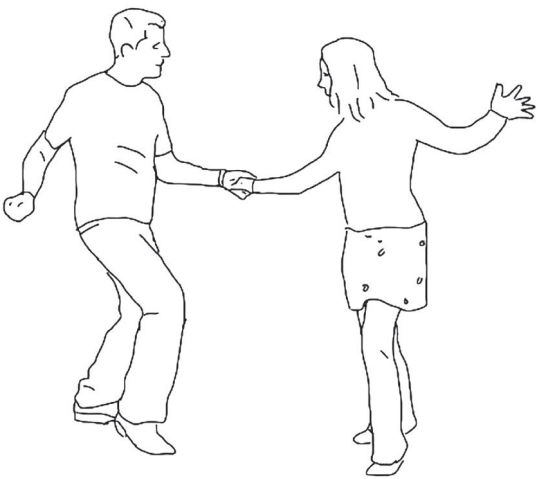


Figure 5. Freeze illustrated in the dance

Excerpt 4

```
45 BET:     [  Mmm.   ]
46 TOM:     [THAT will] (0.2) make her freeze.
47          (0.2)
48 TOM:     without T:ELling her,
49 BET:     Mm,=
50 TOM:     =with a hand or a grip or- (.) freeze-
51          CEAsing out like (0.3) like that.
52          I:t- WILL function. but it's unNECessary.
53          .hh It's ONLY by asking her by throwing (0.2)
54          #KHUH energy. (0.4) Pu:h.
            #fig.5
55          And I'm KEEping that for as long as I want to.
```

The instructive segment has thus involved the follow teacher initiating explanatory talk about leading the freeze movement, first accomplishing a monologue and individual throwing gestures (Excerpt 2). Then the lead teacher takes over and recruits the follow for a joint enactment of a ball game, framing it as an exercise, thus not an official part of the dance (Excerpt 3). Last, they demonstrate an ideal outcome of what they have just taught, performing the relevant dance moves.

The analytic focus here is on how the ball comes into being in Excerpt 3. The activity of throwing a ball is expressed in words and simultaneously enacted in embodiments. In contrast with Excerpts 1–2 and 4, in Excerpt 3 the ball is explicitly mentioned, being formulated as a relevant object. In addition, the ball is manipulated in ways that visualise some of its inherent properties, such as bouncability, but these are not at all relevant for the comparative pedagogical purposes. There is also some continuity of the object across time, as the ball is repeatedly bounced and thrown, and the lead teacher even asks for it back before performing the second throw. Last, the ball is kept alive by the two teachers. All of this is in contrast with how the throw is performed in Excerpt 2, and partly also in lines 33–34 of Excerpt 3 where it is more of an individual illustrative gesture. The participants' bodies are engaged differently in the case of a gesture as compared to an enactment. They seem to differentiate between imitating the movement in support of the talk on the one hand, and enacting a real ball game as a mime on the other. The first could be analysed as a type of a co-speech gesture. The latter comes close to what Enfield (2009, p. 18), who exclusively worked with co-speech gestures and not full-body mimes, called *mimetic enactment*: hands are moving as if they are doing something to or with the referent.

The second type of body movements, the instances where the ball really comes into being through its manipulation, should probably be considered something other than a gesture. First of all, this is because the entire body is involved in the enactment, as opposed to hands only, and second, because it cannot be treated as an accompaniment to talk. The enactment stands on its own, as we can also 'see' the ball being thrown between the participants when we switch

off the sound of the video recording. Obviously, we need talk to understand why this scene is enacted in a dance class, but the embodied actions are self-sufficient in visualising the ball. The embodied ball game can be classified as a *pantomime* according to McNeill (2005, pp. 5–11). Last but not least, the participants explicitly treat the two behaviours as different. In the first instances of enacting a throw, the partner does not react to the throwing gesture. Both the lead and the follow teacher stand relaxed through the other's talk up to line 35 in Excerpt 3, while in line 36 during the lead's talk and enactments the follow teacher prepares herself for receiving the ball with her gaze as well as her body orientation. In contrast to storytelling where mid-distance gaze is used in individual enactments (Sidnell, 2006), in the collective enactments discussed here the teachers employ mutual gaze. Furthermore, Betty takes a step toward Tommy, as shown in Figure 5. Thus, other participants may pick up on the immaterial objects and jointly keep them in sight and action. In the above case, the ball emerges temporarily in its manipulation by the teachers as part of a metaphor within the corrective segment of teaching.

Discussion: Interactional properties and functions of immaterial objects

Following up from the above sample case, this section discusses the role and function of immaterial objects in the current pedagogical setting. What are the specific affordances of immaterial objects as compared to material ones? How are they useful in dance teaching?

In comparison with material objects the immaterial ones display a range of specific properties, some of which are reflexive of, and consequential for, the evolving interaction. To start with, an immaterial object cannot be treated as a resource that happens to be around, which is then made relevant by the participants for interactive-organisational purposes. Therefore, it necessitates a different analysis from some earlier treatments of objects as recruited resources (e.g. Mondada, 2006, 2007; Streeck, 2011). Immaterial objects literally emerge in a situated way in sequences of interaction, where they have to be objectified and brought into play. Murphy (2005) discussed how inhabitable spaces are collectively imagined and maintained with the help of materials and precisely calibrated gestures. Talk and embodied conduct can also 'animate' or enliven physical objects in co-present interaction, as shown by Hindmarsh and Heath (2003). The ball is achieved by human bodies acting in real physical space and it borrows its affordances (as defined by Norman, 1988, p. 9) from a material ball.

As was shown above, objectification can be accomplished with manipulation and formulation. The teachers employ the two typical bodily actions that go with

a ball, bouncing and throwing. In addition, throwing is mentioned several times, which prototypically implies a ball, and the lead teacher also formulates the handled object as *a ball*. The object is partly defined with verbal devices. This, however, turns out to be a coincidental feature. There is also an episode in the data where one teacher explains that the feet have to stand still on the floor and the other takes a hammer and nails them to the floor. An immaterial object emerges vividly in his hands but neither the object nor the accompanying action is ever mentioned. Thus, immaterial objects may, but need not, be referred to. It is also difficult to point at them or touch them, which is otherwise a regular means of achieving reference (Eriksson, 2009; Hindmarsh & Heath, 2000; Nishizaka, 2011). This makes them different from the objects discussed so far in the literature on social interaction.

Crucially, immaterial objects are distinctly temporal, since they are completely intertwined with actions. In contrast to physical objects they do not have to be pointed out, picked up or fetched. All these activities would take time, during which the interactional flow may have to be suspended. Immaterial objects are brought into existence here and now for a fleeting moment, timed in perfect synchrony with talk and the participants' current projects. Neither do the objects need to be disposed of. As soon as the throwing metaphor has fulfilled its function, the ball disappears. In fact, the objects can disappear and reappear in accordance with the moment-by-moment needs of the participants, interwoven with the activities of the interactants. The follow teacher loses the ball in line 40 before she is asked to throw it back, and it suddenly reappears in her hands. Temporality is a dimension of most objects and can range from durability through centuries to considerably shorter time-spans (e.g. food orders being a case of objects with relatively short existence, see Richardson & Stokoe, this volume), with immaterial objects probably belonging to one extreme. The low durability of immaterial objects means among other things that if their visibility needs to be expanded in the activity, they have to be manipulated continuously or repeatedly. In the above example, the ball was thrown and bounced several times, so that it remained periodically visible throughout Excerpt 3. This reflects the nature of pedagogical demonstrations in dance classes that are characteristically repetitive (Keevallik, 2010). In any case, immaterial objects are situated within sequences of human interaction and do not have an independent existence beyond them.

Immaterial objects have to be easily recognisable in their manipulations in order to be exploited in the fleeting manner described in the focus case. They cannot involve items, which are exotic for the participants and which necessitate extensive verbal-gesticulatory presentation (see e.g. Enfield, 2009). Lack of materiality also implies that the objects do not emerge with specific colours, smells and textures, but are generic representatives of a class, as any ball or hammer.

Even the size of the ball above is somewhat amorphous, varying in the hands of the two teachers, and at one point being reduced to a pinchable object (just before Tommy's throw in line 34). As Streeck (2009, p. 207) has noted: "practical skills gesturally displayed are communicative, not practical acts". A ball can still be communicated despite the fact that if it were a real ball with a definite size and surface, it would be manipulated somewhat differently. Object manipulations apparently have to be sufficiently recognisable, and no more, in order for the objects to become visualised. There is no extra value in the dance teachers aiming at a watertight mime, as their task is simply to present a comparative activity in a sufficiently unambiguous way to make a point to the class. Furthermore, the teaching is not centred on the object itself but on the movements, the manipulation of the object. This is interactionally different from cases where immaterial objects are in focus, such as in the utterance analysed by Goodwin (2007), "So she sold me this But she didn't sell me this (0.2) or tha:t", where the enacted manipulations of the missing parts of a pitcher are used to refer to these parts. At the same time, both studies suggest that specific manipulability is a central feature of at least some objects, to the extent that their manipulation makes them recognisable.

Finally, an immaterial object can be maintained collectively, as was shown in the above analysis. The teachers calibrated their mutual distance and spatial placement according to the demands of a ball game, and timed their body movements so that a ball appeared between them. The timing of embodied actions for the collaborative maintenance of objects is crucial in many human activities and has, for example, proved to be a true challenge in video-mediated technologies because of delays (Luff, Heath, Kuzuoka, Yamazaki, & Yamashita, 2006). In the present case the collective manipulation was grounded in the current communicative project of the teachers: instructing how two people can move in a coordinated way after a signal by one of them. In other tasks, such as teaching a single body to spin, the objects within activity metaphors are manipulated individually. A case in point in the current data involves carrying a sandbag, which is to be held separately by the students who are learning to spin. There are thus many instruction- and action-specific aspects involved in the accomplishment and understanding of immaterial objects. In dance teaching, the ball, the hammer and the sandbag become visible within activity metaphors that pursue an embodied understanding of the focus activity, dancing.

From a pedagogical point of view, a physical activity that involves an object might be relatively easier to comprehend than subtle sensory experiences. Object-evoking teaching strategies are also used in other physical instruction settings, such as physiotherapy. Martin and Sahlström (2010) scrutinise an example where the physiotherapist asks a patient to proudly "show a medal" on his chest. The immaterial object is evoked for the patient to visualise and experience the correct

posture for recovery. Demonstrating the dance with a tactile lead does not appear to be as vivid as throwing the ball between the two teachers. Among other things, the leading technique cannot be exaggerated because it would ruin the dance, while an immaterial ball can be thrown very hard. The manipulated object thus makes the leading and following technique more visible than a straightforward dance demonstration would have done. It also clearly illustrates the kinaesthetics of the moving entity (a ball or the follow's body). Consequently, in this instructive setting the immaterial objects have a clear pedagogical function. They are in the service of visualising embodied knowledge for an entire class of students at a time. Conveying embodied and tactile knowledge in one-to-one instruction may be literally much more hands-on than described in this study (e.g. Nishizaka, 2007 on instructing a novice midwife, and Sanchez Svensson, Luff, & Heath, 2009 on training in surgery).

In the current data, immaterial objects appear as part of correction through metaphors. Metaphors in general appear frequently in the talk of dance teachers, as we could also witness in the above case, where the verbs *freeze, read, tell* and *ask* were used to designate embodied events in the dance. Activity metaphors involve a comparison of two activities, where one of them is elucidated in terms of another supposedly simpler or more familiar one. In the above episode, playing ball is treated as a tacitly known activity in the current cultural context while leading and following a freeze in the dance is the unknown activity to be targeted in the instruction. Metaphors use whatever material is available – locally and historically – and expand it in imaginative ways to structure new realms of experience (Streeck, 1996, p. 382). Nevertheless, each and every person in the class need not have experienced being hit by a ball in order to understand how one might freeze at that point. The metaphor has to be sufficiently recognisable in order to highlight aspects of the novel activity. An underlying assumption in the throwing metaphor is that the embodied experience of throwing a ball can be transferred to the lead-and-follow technique of the dance. Throwing can structure an understanding of the dance, in particular the tactile and kinaesthetic aspect of leading a dance partner.

Some of the objects are used repeatedly in dance class clarifications and the teachers methodically actualise them through coordinated action, as happens in the above case. The pre-planning is carefully formulated by the teacher couple. As early as in line 08 the follow teacher says *Tommy and I always think about freeze and stop like that*. The coordinated subject designates joint agency and the adverb *always* marks repeated action. Later on the lead teacher also expresses familiarity with the comparison by saying *Sometimes we do this exercise with throwing a ball*, also with a collective subject and an adverb indicating repetitiveness. The

throwing metaphor is first introduced by Betty, and unpacked by Tommy. They work together to make the ball game happen in a finely collaborative manner that suggests that this is not the first time that they use it. Indeed, a ball is often evoked in couple dance classes, as its manipulation bears an intimate similarity with leading a follow dancer: in both cases an external entity is guided into movement, while the manipulator can absorb its force and use its energy. The metaphor itself is thus hardly unfamiliar to the participants in this advanced class but it is treated as novel in connection with this particular move.

Once an object is established as an explanatory device in the class context, the teachers can re-deploy it as a mnemonic shortcut or elaborate on it across time. There is a case in the collection where the students are instructed to move their feet as if they were windscreen wipers. A little later, commenting on the same move, the teacher says: "Feel as if- if your foot was a windscreen wiper, it would wipe off the water from the window." In this way, an evoked object can be used for specific purposes across longer stretches of time. Its original deployment can be developed further, which extends its explanatory force to later instructions.

In contrast to what may be launched as pre-planned object evokings strategically chosen to make a pedagogical point, others occur *ad hoc* as noticings. When exploring a movement, teachers as well as students can come to a realisation about comparability to another activity. The noticings also become a part of the sense-making process in the class. In the following Excerpt 5, the teacher is explaining a hand and upper body movement, when a student provides a noticing. He compares the dance movement to a golf swing (line 11).

Excerpt 5 (in Swedish; Lindy 1A2; 13:29)

```
01 TEA:     Så försök å undvik å gå raka vägen,
            So try to avoid going straight,
02          (fågel)vägen. (.) å trycka.
            as the crow flies. (.) and push.
03          Utan S:LÄPP den härifrån, hhhh.
            L:et it go from here instead, hhhh.
04          (0.2)
05          Så pendlar den här upp bara för att
            So it swings up only because
06          (.) det här tar liksom stop.
            (.) it comes to like a stop.
07          (.) Så det inte är (0.5) en armrörelse vi FÖR,
            (.) So it's not (0.5) an arm movement that we lead,
08          (.) utan den är bara #Aaah,
            (.) but it's just Aaah,
                                #fig.6
09          (0.7)
10          å gungar lite så.
            and swinging a bit like this.
11 STU:     (En golfsvinga)
             A golf swing.
12 TEA:     Som en GOLFsvinga.
            Like a golf swing.
```

```
13          å jag golfar inte men det är (nog) #nåt
            and I don't play golf but I suppose it's something
                                                  #fig.7
14          liknande. (.) Så (.) ganska LÅNga armar, (.)
            like that. (.) So (.) quite long arms, (.)
15          å den bara PENDlar lite ner.
            and it just swings down a bit.
16          så långt bort det nu går. W:om.
            as far as it goes. Wh:oom.
```

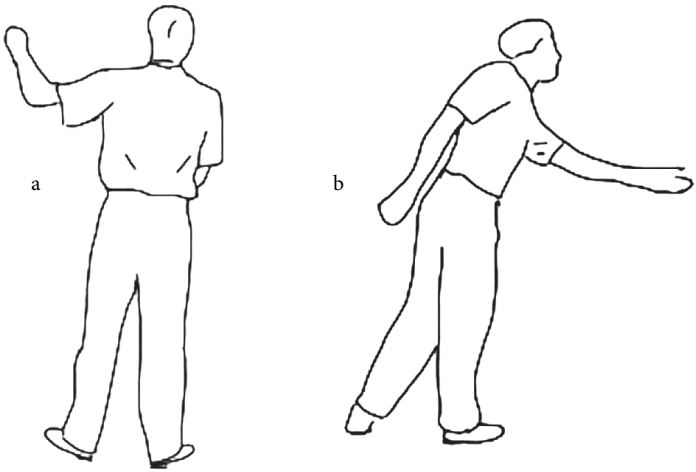


Figure 6. Dance move: up and stretch

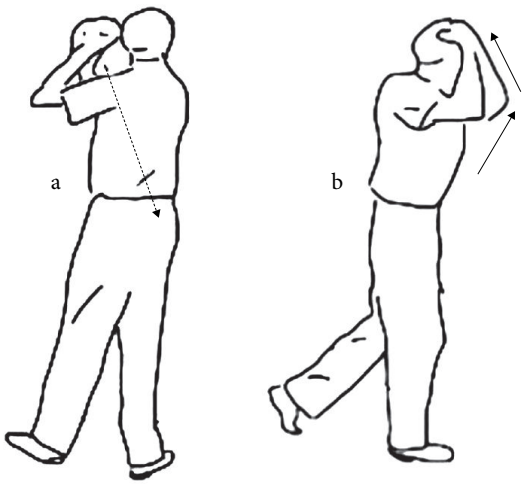


Figure 7. Golf swing: up and twist

The teacher tries out the metaphor offered by the observant student, and he does it in an embodied way. Thereby an invisible golf club emerges in his hands, as shown in Figure 7. Performing the golf swing, however, enables him to experience and study the differences between the movement he is trying to teach, illustrated in Figure 6, and a golf swing. This leads to further comments on the dance move in lines 14–16: in contrast to the golf swing the arm has to be long and move as far as possible. The comparative noticing has thus led to an elaboration of the dance instruction and the correction of a misunderstanding.

Noticed object-related metaphors abound in corrections. A teacher may characterise a student's movement as belonging to a different activity framework and thereby define it as wrong. For example, by saying that the student's hand should not be rowing, it is made clear that the correct dance movement is different from the one the teacher is observing. Furthermore, it implies that the partner's hand should not be manipulated as an oar. Thus, activity metaphors function as sense-making devices. They constitute a teaching aid that helps the participants to inter-subjectively juxtapose familiar movements with learnables and ultimately achieve a new embodied understanding. It has been argued that metaphors underlie all human understanding: "we define our reality in terms of metaphors and then proceed to act on the basis of the metaphors" (Lakoff & Johnson, 1980, p. 158). Activity metaphors are yet another way to define something new in terms of something simple and known, but instead of comparing concepts, they juxtapose bodily activities. Paradoxically, numerous verbal metaphors, especially orientational ones, arise from the fact that we have bodies of the sort we do and that they function as they do in our physical environment (Lakoff & Johnson, 1980, p. 14). Metaphors such as up and down, front and back are grounded in our physical and cultural experience. Our basic experience of physical force and motion also shape the logic of talk about musical motion (Johnson & Larson, 2003). Similarly, our prior bodily experiences make it possible to teach dance in terms of throwing a ball, carrying a sandbag, playing golf, or rowing.

Conclusion

This paper has discussed how immaterial objects are brought into being within activity metaphors in dance classes, objects which never materialise and which are not always formulated. Immaterial objects are not resources, which happen to be around and which can be simply picked up by participants; instead they have to be actively manipulated into being and yet their durability is limited. They are timely representatives of their class and become visible in manipulations that typically

accompany them. This suggests that type-specific manipulability is a constitutive feature of at least some objects, such as the ones discussed in this study. Objects become recognisable as such through their manipulation.

At dance classes objects appear in activity metaphors that are deployed as conscious teaching strategies as well as those discovered on the spur of the moment. Activity metaphors are employed for the task of achieving salient and memorable instruction by way of comparison. The metaphors are multimodal accomplishments insofar as they necessitate a verbal explanation as well as embodied demonstrations of both the dance and the alternative activity. Immaterial objects as part of them constitute a qualitatively specific and temporally precise interactional affordance. Ultimately the metaphors serve the intricate task of conveying embodied information from one body to another without touching. It is the students' task to transform the embodied experience of a known or simpler activity into understanding a more complex novel one. In the above cases, this involves a transfer from an object-oriented activity to one involving only human bodies. Judging from the frequency of metaphor use in the classes, this is a useful strategy.

Activity metaphors that involve objects are typically used in an instructive segment of the dance class. Objects in the metaphors help to present a more salient visual demonstration of the bodily experience than a performance of the dance move. Object-evoking metaphors are a solution to the specific problem of how to convey a personal physical experience from one body to another. They furthermore underline the intersubjective nature of bodily experiences in the material world. The above object manipulations rely on individual sensorimotoric memory as well as common recognisability of the manipulations. Immaterial objects invoke the embodied and shared nature of human knowledge about how to manipulate objects, among other things.

References

Enfield, N. J. (2009). *The anatomy of meaning: Speech, gesture, and composite utterances*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511576737

Eriksson, M. (2009). Referring as interaction: On the interplay between linguistic and bodily practices. *Journal of Pragmatics*, 41(2), 240–262. DOI: 10.1016/j.pragma.2008.10.011

Goodwin, C. (1986). Gestures as a resource for the organization of mutual organization. *Semiotica*, 62(1/2), 29–49. DOI: 10.1515/semi.1986.62.1-2.29

Goodwin, C. (2003). Pointing as situated practice. In S. Kita (Ed.), *Pointing: Where language, culture and cognition meet* (pp. 217–241). Mahwah, NJ: Lawrence Erlbaum.

Goodwin, C. (2007). Environmentally coupled gestures. In S. Duncan, J. Cassell, & E. Levy (Eds.), *Gesture and the dynamic dimensions of language* (pp. 195–212). Amsterdam/Philadelphia: John Benjamins.

Hindmarsh, J., & Heath, C. (2000). Embodied reference: A study of deixis in workplace interaction. *Journal of Pragmatics*, 32(12), 1855–1878. DOI: 10.1016/S0378-2166(99)00122-8

Hindmarsh, J., & Heath, C. (2003). Transcending the object in embodied interaction. In J. Coupland, & R. Gwyn (Eds.), *Discourse, the body and identity* (pp. 43–69). New York: Palgrave Macmillan.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–32). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Johnson, M., & Larson, S. (2003). "Something in the way she moves": Metaphors of musical motion. *Metaphor and Symbol*, 18, 63–84. DOI: 10.1207/S15327868MS1802_1

Keevallik, L. (2010). Bodily quoting in dance correction. *Research on Language and Social Interaction*, 43(4), 1–26. DOI: 10.1080/08351810903487791

Keevallik, L. (2013). The interdependence of bodily demonstrations and clausal syntax. *Research on Language and Social Interaction*, 46(1), 1–22. DOI: 10.1080/08351813.2013.753710

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43(2), 521–541. DOI: 10.1016/j.pragma.2009.09.009

Kövecses, Z. (2002). *Metaphor: A practical introduction*. Oxford: Oxford University Press.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.

Luff, P., Heath, C., Kuzuoka, H., Yamazaki, K., & Yamashita, J. (2006). Handling documents and discriminating objects in hybrid spaces. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems*. Montréal, Québec, Canada, ACM, 561–570.

Martin, C., & Sahlström, F. (2010). Learning as longitudinal interactional change: From other-repair to self-repair in physiotherapy treatment, *Discourse Processes*, 47(8), 668–697. DOI: 10.1080/01638531003628965

McNeill, D. (2005). *Gesture and thought*. Chicago & London: University of Chicago Press. DOI: 10.7208/chicago/9780226514642.001.0001

Mondada, L. (2003). Working with video: How surgeons produce video records of their actions. *Visual Studies*, 18(1), 58–73. DOI: 10.1080/1472586032000100083

Mondada, L. (2006). Participants' online analysis and multimodal practices: projecting the end of the turn and the closing of the sequence. *Discourse Studies*, 8(1), 117–129. DOI: 10.1177/1461445606059561

Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. *Discourse Studies*, 9(2), 195–226.

Murphy, K. (2005). Collaborative imagining: The interactive use of gestures, talk, and graphic representation in architectural practice. *Semiotica*, 156(1/4), 113–145.

Nishizaka, A. (2007). Hand touching hand: Referential practice at a Japanese midwife house. *Human Studies*, 30(3), 199–217. DOI: 10.1007/s10746-007-9059-4

Nishizaka, A. (2011). Touch without vision: Referential practice in a non-technological environment. *Journal of Pragmatics*, 43(2), 504–520. DOI: 10.1016/j.pragma.2009.07.015

Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.

Sidnell, J. (2006). Coordinating gesture, talk and gaze in reenactments. *Research on Language and Social Interaction*, 39(4), 377–409. DOI: 10.1207/s15327973rlsi3904_2

Sanchez Svensson, M., Luff, P., & Heath, C. (2009). Embedding instruction in practice: Contingency and collaboration during surgical training. *Sociology of Health and Illness*, 31(6), 889–906. DOI: 10.1111/j.1467-9566.2009.01195.x

Streeck, J. (1996). How to do things with things: Objets trouvés and symbolization. *Human Studies*, 19, 365–384. DOI: 10.1007/BF00188849

Streeck, J. (2009). *Gesturecraft: The manu-facture of meaning*. Amsterdam/ Philadelphia: John Benjamins. DOI: 10.1075/gs.2

Streeck, J. (2011). The changing meaning of things: Found objects and inscriptions in social interaction. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world* (pp. 67–78). Cambridge: Cambridge University Press.

Whittock, T. (1992). The role of metaphor in dance. *British Journal of Aesthetics*, 32, 242–249. DOI: 10.1093/bjaesthetics/32.3.242

Experiencing and identifying

Establishing joint orientation towards commercial objects in a self-service store

How practices of categorisation matter

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This chapter investigates how persons shopping together initiate orientation towards commercial objects that populate self-service stores. Drawing on the methods developed in conversation analysis, it discusses the actions that shoppers accomplish when introducing a 'new' object into their interaction. In the supermarket setting, objects are available resources: as customers navigate through the aisles of the store, they use (commercial) objects as landmarks, as resources allowing them to organise their overall shopping activity, to initiate buying decisions, to engage in topic talk, etc. This study furthermore discusses the multimodal resources that shoppers employ when establishing a joint focus of attention, and analyses the categorisation work that they accomplish when orienting towards objects that are on sale.

Introduction

In this chapter I look at ordinary shopping activities of couples and at the ways in which individuals shopping together orient to objects available in a supermarket. Self-service stores are a perspicuous setting (Garfinkel & Wieder, 1992, p. 184) for analysing objects from an interactional perspective. Their topographic arrangement is such that the commercial goods are maximally displayed: they are visually available to people browsing the shelves and may generally also be handled. I look at how shopping couples make the available objects relevant, e.g. as they organise their navigation through the store, as they establish a joint focus of attention, or simply talk about a commercial object. I do so by analysing a videotaped corpus of three couples shopping in a supermarket located in the Italian-speaking part of Switzerland (four hours). I show that individuals shopping together accomplish crucial categorisation work that allows them to 'see' objects in specific ways and thus to display to each other the accountability of their actions. Practices of

reference to and categorisation of objects are intertwined with how shoppers act as a couple, as I show in the concluding part of this chapter, where I pull together the different analytical strings.

Goods, products, objects

Objects used as commodities have a century-old research tradition in the human and social sciences, in particular in anthropology. Early anthropological research on goods has indeed been most influential for the study of sociality. Malinowski's (1922) analysis of the production, distribution and consumption of goods in the social and religious life of indigenous inhabitants of New Guinea had a major impact not only on anthropology (e.g. inspiring Mauss' (1923/1924) work on gift exchange), but also on more recent work on the social meaning of consumption (Appadurai, 1986; Douglas & Isherwood, 1979; Miller, 1987). In sociology, Bourdieu (1979) argued for the necessity to study the practical use of objects of consumption, whereas Hindmarsh and Heath (2000, p. 525) introduced the notion of the "sociology of the object". Most sociological work on commercial goods remained however confined to theoretical, reflective considerations (e.g. Bartoletti, 2002; Semprini, 1999).

Interactionally oriented research on commercial settings has paid only marginal attention to objects, with a few exceptions: conversation analysis was influential for studies such as Merritt (1976), Lamoureux (1985) and Aston (1988).[1] Since these studies merely draw on audio recordings, (commercial) objects turn up at best in referential descriptions. Only recently did work based on video recordings allow for a more comprehensive appraisal of the role that objects play in interactions taking place in commercial settings (see Clark & Pinch, 2010; De Stefani, 2011; Haakana & Sorjonen, 2011 for an extensive bibliography). While these studies mainly focus on the interactional conduct in commercial environments, research on how (commercial) objects are handled and oriented to by the shoppers is still rare.[2]

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1. See also Mitchell's (1957) early description of service encounters observed in marketplaces in Cyrenaica (Eastern Libya).

2. In this study I will speak of *objects*, *commercial objects* or *products* without implying any specific categorial distinction.

Objects as resources for spatial orientation

Shopping in a self-service store has been described as an alternation between mobile and stationary sequences of interaction (De Stefani, 2013), and is thus similar to the way people move through museum exhibits (e.g. vom Lehn, 2013) or when taking part in touristic guided tours (De Stefani, 2010; Stukenbrock & Birkner, 2010). Shopping couples recurrently face the problem of organising their joint navigation through the supermarket, and spatial orientation is constantly at stake. Shoppers routinely use objects as landmarks for orientation and for the overall organisation of their shopping tour. While moving through the aisles of the store, shoppers may refer to objects that are not visible in the immediate physical environment, but that they treat as supposedly available in another area of the store. The first excerpt shows Teresa introducing 'the boxes' (*le scatole*) as objects that she intends to 'get' (*prendere*). However, this is not just an announcement of a possible next action; rather, reference to 'the boxes' allows Teresa to identify a specific area of the supermarket as an intermediate goal of the couple's shopping tour:

Excerpt 1 (cons45111, 24:09–24:15)[3]

01	TER:	*andiamo verso la cucina che dovrei prendere le:, (0.6)*
		let's go towards the kitchen 'cause I should get the:, (0.6)
02		*le scatole da metter via la roba,*
		the boxes for stowing the things,
03		(0.3)
04	MAR:	*°che bella.°= ((looking at a sweater on a mannequin))*
		°how beautiful.°=
05	TER:	*=invernale.*
		=for the winter.

At lines 01–02 Teresa suggests moving 'towards the kitchen' (*verso la cucina*), as she names the area in which she locates 'the boxes' (*le scatole*) for stowing winter garments. In doing so, she defines the 'kitchen' as an area that the shoppers will have to reach at some point of their shopping tour. By referring to 'the boxes' she accounts for her proposal to move towards a specific area of the supermarket: 'the boxes' serve thus as a resource for spatial orientation within the supermarket.

Spatial orientation is particularly relevant at the end of stationary episodes of interaction, after the shoppers have made a (positive or negative) buying decision: at that point shoppers can systematically be seen to look for a 'next' potentially purchasable product, as shown in the following excerpt:

3. Talk has been transcribed according to conventions developed by Gail Jefferson (see Jefferson, 2004). Refer to the appendix for a list of symbols used for the transcription of multimodal phenomena.

Excerpt 2 (cons45111, 11:30–11:45)

```
01 MAR:   gra[zie mille arrivederci buo[na giornata.
          thank you very much goodbye have a nice day.
02 EMP:      [grazie arrivederci.
              thank you goodbye.
03 TER:                                [poi ti fa niente se guardo
                                        then you don't mind if I look at
04        le: le:^hm: marmella:te quelle robe lì?
          the: the:^uhm: ja:ms those things there?
05        (1.5)
```

While Maria is ending the interaction with an employee at the cheese counter (lines 01–02), Teresa introduces the 'jams' (*marmella:te*) as a next food item to 'look at' (lines 03–04). In doing so, she does not refer to a specific object, but rather to a food category (see also the turn final general description *quelle robe lì* 'those things there'). As in the previous excerpt, Teresa's reference to an object (category) is one way of organising the couple's navigation through the store and thus spatially orienting herself with regard to the shopping activity at hand. Shoppers are thus constantly negotiating the intermediate goals of their navigation through the supermarket, rather than just moving through a "repeatedly experienced, personally ordered and edited version" (Lave, 1988, p. 151) of it.

I have so far looked at how shoppers use objects as landmarks for orienting themselves in the supermarket by referring to objects that are not present in the immediate environment. In the remainder of this chapter I will analyse episodes in which shoppers modify their orientation by creating a joint focus of attention with respect to an object that is available in the immediate environment, thereby constituting a "focal event" (Goodwin & Duranti, 1992, p. 3).

Establishing a joint focus of attention

As shoppers move through the supermarket, they repeatedly orient their gazes and bodies to the objects surrounding them. Orientation towards objects may be achieved with different degrees of engagement, ranging from a quick glance at an object to the establishment of an object-focused sequence of interaction, which is systematically achieved by adopting a stationary posture.

A first illustration of the latter case is given in the following excerpt: Maria and Teresa are walking silently down an aisle, one behind the other. Maria then turns towards a travel bag and starts lifting it with her right hand. Shortly after, Teresa comments on the action that she has just witnessed:

Excerpt 3 (cons45111, 35:43–36:31)

```
01          (10.5) • (1.1) • (1.0)
                    •Fig.1   •Fig.2
02 TER:     •pesa più la valigia del con[tenu:to.
             the bag is heavier than (its) conten:t.
            •Fig.3
03 MAR:                                 [ˇeh
                                         yeah
```







Figures 1–3. Maria and Teresa orienting towards a travel bag

This brief excerpt illustrates some recurrent features of joint orientation observable in self-service stores. The practice is regularly initiated by one member of the couple who displays his or her orientation towards an object present in the immediate environment. In Excerpt 3, Maria embodies her new orientation by walking towards a travel bag and by handling it (Figures 1–3). Maria's action is witnessed by Teresa, who treats it as a remarkable undertaking. Teresa self-selects at line 02 and observes that 'the bag is heavier than (its) content' (*pesa più la valigia del contenu:to*). With this turn, Teresa accomplishes a series of relevant actions: (a) she identifies the object that Maria is handling; (b) she comments on the action that Maria is performing and produces a (negative) assessment of the object; (c) in doing so, she formulates grounds for not buying the object under consideration; (d) finally, Teresa demonstrates her understanding of the current shopping tour as a 'common activity', thus sustaining the ecology and the recognisability of the couple.

Initiating a change in orientation

A shopper's orientation towards a 'new' object of attention may be initiated silently (as in Excerpt 3). On many occasions, however, a change in orientation is also initiated with verbal resources. Co-shoppers may thus not only *see* that a change in orientation is occurring, they may also *hear* it.

One way in which shoppers may initiate joint orientation is by formulating "attention-getting devices" (see Ochs, 1979), as in the following excerpt: Piero is walking towards Carmine, after having briefly been in another area of the store to get a specific item. As Piero is approaching, Carmine starts talking to him:

Excerpt 4 (cons42271, 19:43–19:48)

```
01 CAR:   piero
02        (0.3)
03 PIE:   no no le cosce di pollo no.
          no no not the chicken legs.
04        (0.5)
05 CAR:   eh: perché, non ti •piacciono?
          uhm why, don't you like them?
                           •Fig.4
06 PIE:   no, non mi piace il pollo.
          no, I don't like chicken.
```



Figure 4. Piero and Carmine talking about chicken legs

As he pronounces his partner's name (line 01), Carmine is holding in his hands a pack of chicken legs. By calling out his partner's name, Carmine effectively orients Piero's attention towards the object that Carmine is handling. Indeed, Piero immediately identifies 'the chicken legs' as the object the ongoing sequence is about (*no no le cosce di pollo no* 'no no not the chicken legs'; line 03). Moreover, the strongly disagreeing stance of Piero's turn (initial and final negation) shows that he interprets Carmine's conduct as a buying proposal from which Piero now dissents.

Let us turn now to occurrences in which shoppers initiate orientation towards an object by formulating a referential expression, as in the following excerpt, where Valentina utters the words 'a pizza dough' (*una pasta della pizza*):

Excerpt 5 (cons4581, 08:12–09:33)

```
01          (4.7)
02 VAL:     qua nie:n•te,
            here no:thing,
                      •Fig.5
03          (0.2)
04 VAL:     +una pas•ta della +piz+za.•
            a pizza dough.
   val      +.....................+gaze twds AND-->
   and                        +...+gaze twds pizza dough-->
                  •Fig.6              •Fig.7
05          (0.4)
06 AND:     #hm#
            hm
   and      #nod#
   val       ~~>+gaze towards pizza dough-->
07          (0.3)
08 VAL:      pr+endi+la.
            get it.
   val           -->+
   and      -->+
09          (3.0)
```



Figures 5–7. Valentina and Andrew orienting towards the pizza dough

As Figure 5 shows, Valentina and Andrew are walking alongside a refrigerator with prebaked bread and dough. Valentina can be seen to scan the environment around her for commodities that she might want to purchase (*qua nie:nte* 'here nothing'; line 02). As Valentina formulates her turn at line 04, she first turns her head towards the area where she locates the pizza dough (Figure 6), and then shifts her gaze towards Andrew (Figure 7). This head movement is essential for the accountability of her action, since she first displays orientation towards the 'new' object – while at the same time uttering the words 'a pizza dough' (*una pasta della pizza*) – and then looks at Andrew, selecting him as the recipient and relevant next speaker. Andrew has been monitoring the different orientations of his partner's gaze and is now looking in the direction of the pizza dough. It is only after having had visual access to the object verbally introduced by Valentina that Andrew produces an acknowledgement (line 06), while at the same time nodding his head. The referential expression 'a pizza dough' (*una pasta della pizza*) is now

available for co-referential formulations, as can be seen in Valentina's directive at line 08 (*prendila* 'get it'), which encompasses the clitic pronoun *la* ('it'). This excerpt reveals a procedure that members of a couple methodically employ as they engage in joint orientation on an object, which can be outlined as follows:

1. Introduction of a 'new' referent by person A (line 04);
2. Acknowledgement and/or display of a change in orientation by person B (line 06);
3. Comment, directive, assessment, question etc. by person A (or B) (line 08).

The initiation of the new orientation may also be accomplished with more elaborated verbal resources, as can be seen in the following excerpt. Teresa and Maria are walking in an area of the supermarket where books are displayed:

Excerpt 6 (cons45111, 32:58–33:10)

```
01        (0.6)+(0.2)
   ter          +looks at book-->
02 TER:   *ah• *questo l'ho appena +letto è bellissimo.
          oh this one I've just read it it's very beautiful.
   ter    *....*points to book with left forefinger-->
   mar          +...................+looks at book-->
             •Fig.8
```





Figures 8–9. Maria and Teresa orienting towards a book

Teresa starts her turn with what Sacks (1992, vol. 2, pp. 87–97) calls an "environmental noticing", by which interactants display orientation towards a "just noticed" (p. 90) event or object (see also Heritage, 1984). Indeed, Teresa has just directed her gaze towards a book (line 01) and now further embodies her new orientation with a pointing gesture (Figure 8). She continues her turn with a formulation claiming first-hand knowledge of the book (*l'ho appena letto* 'I've just read it') and ends it with a markedly positive assessment (*è bellissimo* 'it's very beautiful').

Introducing the object in this way, Teresa claims her expert status (or K+ epistemic status) – which allows her, among other things, to formulate assessments on the object.[4] On the other hand, by delaying her response, Maria makes herself recognisable as a person who has not 'experienced', not read the book:

```
03          (1.7)*(0.2)*(0.1)
   mar           *.....*points to book with left forefinger-->
04 MAR:     •que[llo* lì?*
            that one there?
   mar           -->*,,,,*
            •Fig.9
05 TER:          [quest*o è proprio* molto bello.
                  this one is really very beautiful.
                    -->*,,,,,,,,,,,*
```

Maria withholds at first her response to Teresa's noticing and assessment. Rather, she expands the work of identification/localisation of the object by pointing to the book (Figure 9) and by asking a question (*quello lì* 'that one there'; line 04). Teresa thus replies and reformulates her positive assessment (*questo è proprio molto bello* 'this one is really very beautiful'; line 05).

Excerpts 5 and 6 differ, among other things, with regard to the verbal resources that shoppers employ when initiating change in orientation. These differences in turn construction reveal distinct actions that shoppers may accomplish as they create a new focal event, as I will explain in the subsequent section.

Locating and discovering objects

As demonstrated above, referential expressions are regularly treated as initiating orientation towards a joint focus of attention. They are systematically found either as stand-alone formulations (Excerpts 5, 7, 10) or as parts of a more elaborated turn (Excerpts 1, 2, 6). In the latter case, referential expressions may take different positions in the turn. For instance, in Excerpt 1 and 2 the referents occur in turn-final position (i.e. in the canonical position for grammatical objects in SVO languages such as Italian):

4. "[…] assessing a referent state of affairs in first position implies a claim of primary epistemic and/or moral rights to assess that state. We will abbreviate these as 'K+ rights', relative to those of a second speaker, who has lesser ('K–') rights" (Heritage & Raymond, 2005: 34).

Excerpt 1′

```
01 TER:   andiamo verso la cucina che dovrei prendere le:, (0.6)
          let's go towards the kitchen 'cause I should get the:, (0.6)
02        le scatole da metter via la roba,
          the boxes for stowing the things,
```

Excerpt 2′

```
03 TER:                                    [poi ti fa niente se guardo
                                        then you don't mind if I look at
04        le: le:^hm: marmella:te quelle robe lì?
          the: the:^ehm: ja:ms those things there?
```

Turn-final position of the referent is typically observed when shoppers have no or restricted visual access to the referred-to object. Contrast these two cases with Excerpt 6, which is produced in the presence of the material object, and in which the demonstrative pronoun *questo* ('this one') occurs in turn-initial position:[5]

Excerpt 6′

```
02 TER:  ah questo l'ho appena letto è bellissimo.
         oh  (this)F  (it)F  have-PRS.1SG  just  read-PRF  be-PRS.3SG  very
         beautiful
         oh this one I've just read it it's very beautiful.
```

From a syntactic point of view, Teresa's turn in Excerpt 6′ can be described as a so-called left dislocation, i.e. as a sentential construction headed by a noun phrase and followed by a co-referential pro-form (see Geluykens, 1992; Lambrecht, 2001; for left dislocation in Italian conversation see Duranti & Ochs, 1979; Monzoni, 2005). This syntactic construction can be described as a sedimented, grammaticalised solution for a practical problem that shoppers face systematically in the supermarket setting, and that consists precisely in orienting the joint attention towards a 'new' object and in subsequently saying something about that object. This is in line with Geluykens' understanding of the conversational origin of left dislocations, described as the outcome of a "three-stage, interactional process by which new referents are first introduced by the speaker, then acknowledged by the hearer, and finally elaborated upon by the speaker" (Geluykens, 1992, p. 33).

However, note that Teresa's verbal introduction of the referent occurs very early; she does not leave Maria the time to direct her gaze towards the newly introduced object or to acknowledge it. Rather, Teresa starts elaborating upon it *before* the recipient has been able to orient her gaze towards the object in question. By 'precipitating' the comment about the object that she has just introduced, Teresa

5. An additional gloss line has been added where necessary to make co-referential expressions detectable. In the gloss line these are surrounded by parentheses and followed by a subscript.

actually creates an event – the discovery of an unexpected object (see also the initial *ah*, corresponding to what Heritage (1984) calls a change-of-state token).

In the case of stand-alone referential expressions, the elaboration of the referent occurs later, typically as soon as the co-shopper displays visual orientation towards the newly introduced object:

Excerpt 5′

```
04 VAL:   una pasta della pizza.
          (a dough of the pizza)=
          a pizza dough.
05        (0.4)
06 AND:   hm
          hm
07        (0.3)
08 VAL:   prendila.
          get-PRS.2SG (it)=
          get it.
```

In this excerpt referent introduction occurs at line 04, acknowledgement by the hearer at line 06, and elaboration by the speaker at line 08, where Valentina employs the clitic pronoun *la* ('it'), which is co-referential with 'a pizza dough' (*una pasta della pizza*) at line 04. While in Excerpt 6′ we observe the introduction of the referent and its elaboration in the same turn, in Excerpt 5′ these actions are accomplished across several turns.[6] The latter case is recurrently observable: by organising the joint orientation in such a way, shoppers can be seen to *locate* an object in the immediate environment (rather than presenting it as a *discovery*, as in Excerpt 6′).

Categorising objects

I have so far treated objects as available entities that shoppers may refer or orient to when going about their ordinary shopping activity. But objects are not simply 'there' as ready-made commodities; rather, individuals need to make mutually recognisable how they 'see' the object on which they focus their attention. 'Seeing' is in fact socially accomplished and categorisation work is what allows individuals to display 'how' they see an object (see Goodwin & Goodwin, 1996; Nevile, 2013; Nishizaka, 2000, among others, for a conversation analytic approach to 'seeing').

---

6. This observation is in line with Couper-Kuhlen's understanding of grammaticalisation, according to which "what is on one occasion accomplished via a succession of (cross-speaker) actions can, on other occasions, be 'collapsed' into a single speaker's (expanded) turn" (Couper-Kuhlen, 2011, p. 424).

Talking about an object is thus not only a referential practice but also, and more importantly, a practice of categorisation. Conversation analysis has been looking at practices of categorisation ever since Sacks' (1992) work on the *Membership Categorization Device*. However, most of the work dealing with categorisation concentrates either on person reference to co-present participants or third parties (Enfield & Stivers, 2007; Sacks & Schegloff, 1979; Schegloff, 1996) or on place reference (Schegloff, 1972), whereas categorisation of and reference to objects have so far remained largely unexplored.

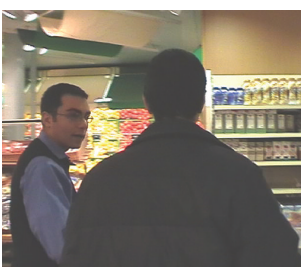
Layered object categories

The formulation of a referential expression is systematically treated as accountable by the co-shoppers. The following excerpt further illustrates this phenomenon: Carmine and Piero have just arrived in the dairy product section of the supermarket. Carmine has momentarily stopped walking and is scanning the environment around him, while Piero is moving towards him (Figure 10). In this situation, Piero utters the words *il latte* 'the milk' (line 02):

Excerpt 7 (cons42271, 11:40–11:59)

```
01          (7.8)•
                  •Fig.10
02 PIE:     il latte.•
            the milk.
                     •Fig.11
03          (1.3)
04 CAR:     il latte l'ho preso prim- eh- stamattina::•
            the milk I got it earli- uh- this morning::
                                                      •Fig.12
05 CAR:     [(a)
            (at)
06 PIE:     [ho capito però, (.) va beh c'è domani
            I understood but, (.) okay there's tomorrow
07          e dopodoma:ni. (.) eh: e lunedì.
            and the day after tomorr:ow. (.) uh: and Monday.
08          (1.0)
```





Figures 10–12. Carmine and Piero in the store's dairy area

As Figure 11 shows, the members of the couple adopt a rather 'unfocused' look after Piero has introduced the referent *il latte* 'the milk' (line 02): the positions of their bodies and heads are not aligned towards one specific focus of attention. They display, however, a general orientation towards the area where the dairy products are situated. This difference with respect to other occurrences of joint orientation – in which the shoppers located the object in question by gazing in its direction (see Excerpts 5, 6, 10) – can be explained with regard to the specific spatial configuration. Indeed, the area in which the interaction takes place is crowded with entities that could instantiate *il latte* 'the milk'. Carmine self-selects and explains that he has already bought milk the same morning (line 04): it appears that Carmine understood 'the milk' as a proposal to buy some milk.[7] This understanding does not rely merely on Piero's verbal production, rather, it displays the need to categorise newly introduced objects in terms of their 'purchasability'. In fact, Carmine treats Piero's turn as introducing a 'potentially purchasable' object – to which he replies by remarking that there is no need to buy any milk, since he just bought some on the same day. He thus formulates an account that allows him to transform 'the milk' into an item that does not need to be purchased. At line 06, Piero disagrees with this objection in an agreement-prefaced turn (*ho capito però* 'I understood but'; line 06), with which he depicts the amount of milk bought by Carmine as insufficient for the duration of three days ('there's tomorrow and the day after tomorrow uh and Monday'; lines 06–07). In doing so, Piero re-establishes the 'purchasability' of the milk. The categorisation of the object as 'purchasable' or 'non-purchasable' is relevant for the interaction at hand: if the object is treated as 'purchasable', the members of the couple go on selecting a specific object that they will put in their shopping trolley (see below); if the object is treated as 'non-purchasable' they can do 'topic talk' (see Excerpt 10), or they can stop talking about the object in question and look for a 'next' object.

The distinction between 'purchasable' and 'non-purchasable' objects suggested here recalls a categorial differentiation specified by Harvey Sacks and anecdotally related by Garfinkel and Wieder (1992, p. 185): one day, Sacks enters Garfinkel's office at the *Los Angeles Suicide Prevention Center*, announcing that he just became aware of the need to distinguish "possessable" objects from "possessitive" ones. The former are those objects that we can look at and that immediately appear to us as objects that we can possess; the latter term refers to those objects that we may

7. Interestingly, from a syntactic point of view, Carmine's turn can be described as a left dislocation: he repeats the referent *il latte* ('the milk') and then continues his turn with the co-referential clitic *l'* ('it'). In a setting in which a multitude of objects could possibly be regarded as instances of 'the milk', this is one way of displaying cognitive orientation towards the 'same' referent.

also encounter easily but that we know we cannot possess. This division appears to be particularly pertinent to self-service stores, populated not only by "possessable" commodities but also by objects that the customers may not (or may only temporarily) possess, such as shopping trolleys, advertising panels, decorative elements etc. From an ethnomethodological standpoint it is thus necessary to look at how the shoppers themselves treat the objects they focus on. An object's 'purchasability' is accomplished interactionally and can *ipso facto* be constantly renegotiated by the shoppers, certainly until they reach the checkout. In this sense, while most objects that shoppers can see in a store are 'on sale', it is through the interactional practices described here that these can become 'purchasable'. 'Purchasability' is hence a situated, locally established object category that shoppers work out collaboratively.

Once Carmine and Piero have agreed on treating 'the milk' as 'purchasable', they need to select one or more instance(s) of that category among the many objects that possibly fit the category:

```
09 CAR:   vuoi quello fresco o quello: a
          do you want the fresh one or the
10        lun[ga scaden-
          long ter- (one)
11 PIE:      [prendiamo quello a lunga scadenza visto che
              let's get the long term (one) since
12        siamo qui.
          we are here.
```

Faced with the task of selecting a specific exemplar of the category 'milk', Piero and Carmine can be seen to make relevant a further layer of categorisation, introducing the locally contingent subcategories 'fresh' (*fresco*) vs. 'long term' (*a lunga scadenza*) milk. Such subcategories do not (merely) rely on advertised categories – which are particularly numerous in the case of milk ('lactose free', 'low fat', etc.) – but are highly indexical. The categorisation work that shoppers accomplish is instrumental in the task of 'instantiation' that they are now facing; in other words, "participants [have] to produce in the nonce examples or instances of given categories" (Koschmann, LeBaron, Goodwin, & Feltovich, 2006, p. 381). The work of selecting an item and placing it in the shopping trolley can thus be described as a problem of associating the material objects present in the immediate environment with a category that the members of the couple have negotiated and agreed upon. Hence, categorisation and instantiation are fundamental operations for the essentially social practice that microeconomic literature habitually describes in terms of "decision-making" (see e.g. Blackwell, Miniard, & Engel, 2006).

Beyond 'adequate' descriptions

As shoppers categorise commercial objects, they do much more than just formulate adequate descriptions. Practices of categorisation are interactionally relevant in different ways, as the following two excerpts show. Excerpt 8 starts as Andrew moves towards his partner, Valentina, after having been in another area of the store where he grabbed a pack of cold cuts that he is now putting in the couple's shopping trolley.

Excerpt 8 (cons4581, 10:04–10:12)

```
01          (0.8)
02 VAL:     che schif- co[s'hai preso.
            how disgust- what did you get.
03 AND:                  [eh?
                          huh?
04          (1.2)
05 VAL:     *che cosa #sono questi.*
            what are these.
                       #stops walking
            *.....................*extracts product from shopping trolley
06          (0.4)
07 AND:     questi son #per me. h..#
            these are for me. h..
                        #...........#moves on with shopping trolley-->>
08          (1.2)#(0.3)*(0.7)
   val           #moves on-->>
   val                 *drops product into the shopping trolley
09 VAL:     abbiamo bisogno i cosi per eh (0.4) (fa-) (0.2) vieni con me.
            we need the things for uhm (0.4) (do-) (0.2) come with me.
```

Looking at the product that Andrew has just put in the trolley, Valentina first produces the negative (truncated) assessment *che schif-* ('how disgust-') and then asks *cos'hai preso* 'what did you get' (line 02). Thereby, she displays not only her negative stance towards the buying decision that her partner has made on his own ('you'), but also her difficulty in finding an adequate description for the product. After Andrew's repair initiation (line 03), Valentina reformulates her question in a way that makes her inability to categorise the product explicit (*che cosa sono questi* 'what are these'; line 05). As she produces this turn, she stops walking and extracts the product from the shopping trolley that she was pushing. Andrew replies (line 07) in a way that avoids categorisation of the product: by saying that 'these are for me' *questi son per me* (line 07), Andrew depicts himself as the only user/consumer of the product. In doing so, he yields an account for his not providing an adequate description of the product he has just decided to buy. At the same time he displays a strong orientation towards closing down this particular interactional episode, which he also embodies by taking over the control of the shopping trolley as he moves on. Valentina then drops the product into the trolley and initiates a new sequence about another product (*i cosi* 'the things'; line 09) that she intends to buy.

While Valentina displays *inability* to categorise the item selected by her partner (thereby exhibiting her negative stance towards that selection), Andrew treats categorisation work as *unnecessary*, thereby ascribing himself the sole responsibility of his buying decision. This episode suggests that by negotiating object categories, shoppers not only deal with the task of finding adequate descriptions and agreeing on their 'purchasability': at the same time they display their couplehood and renegotiate their rights and obligations within the couple.

In the following excerpt, an object is described with respect to the way in which it could be used: Maria grabs a shoe from a rack (Figure 13) and comments on it:

Excerpt 9 (cons45111, 45:25–45:50)

```
01          (8.8)
02 MAR:     °hai° bisogno di uccidere un po' di: (0.4) di ragni?
            °do you° need to kill some: (0.4) spiders?
03          (0.7)•
                 •Fig.13
```



Figure 13. Maria displaying a pointed shoe

```
04 TER:     <(i) ragni [tu adoperi le scarpe?>((laughing)) [((laughs))
            (the) spiders you use the shoes?
05 MAR:                [((laughs))                        [eh teh guarda
                                                           hey well look
06          che .h nell'angolo.
            'cause .h in the corner.
07          (0.5)
08 TER:     ah sì <quando [sono dentro incastrati,>((laughing))&
            oh yes when they are stuck inside,
09 MAR:                   [((laughs))
10 TER:     &.h io prendo l'aspirapolvere, sono più sadica di te.
            .h I get the vacuum cleaner, I'm more sadistic than you.
11          (3.0)
```

Here Maria presents the shoe that she is handling as an instrument for killing spiders (line 02) rather than an as item of footwear. This shows that an

understanding of objects as material items with specific characteristics and predefined affordances (Gibson, 1979; Norman, 1988) is insufficient. By categorising the shoe as she does, Maria shows that she treats the object as a resource for talk and not as a potentially purchasable product. Maria's comment on the shoe is understood as 'joking', as it gives rise to collective laughter (lines 04–05, 08–09) and to a discussion about different techniques for killing spiders, including using a vacuum cleaner (line 10). Episodes of this kind – in which sequences of laughter are construed with regard to commercial products – are typically found at the end of shopping tours (see De Stefani, 2011), as in the present case, which occurred as Maria and Teresa were walking towards the checkout. However, topic talk related to objects may also occur in prior phases of the shopping experience, as I will show in the following section.

Talked-about objects

The verbal introduction of a 'new' referent may be treated as initiating topic talk about that specific product (see Lamoureux, 1985, pp. 126–168), as in the last excerpt of this study. Teresa and Maria are standing in front of a shelf, each of them looking in another direction:

Excerpt 10 (cons45111, 15:56–16:30)

```
01          •(1.9)
            •Fig.14
02 TER:     amido di maisə,
            cornstarch,
03          (0.3)+(0.2)+(1.8)•
   mar           +.....+aligns gaze with TER's gaze
                            •Fig.15
```





Figures 14–15. Maria and Teresa orienting towards cornstarch

Figure 14 shows the gaze orientation of the ladies during the pause at line 01: they are both looking at different areas of the shelf, thus displaying individual orientations. In this situation Teresa utters the words *amido di maisə* 'cornstarch' (line 02), after which Maria orients her gaze in the same direction in which Teresa is looking (Figure 15). So far, the couple's conduct resembles Valentina's and Andrew's behaviour in Excerpt 5: person A first introduces a 'new' referent, person B locates the object by looking at it. Once joint orientation has been established, the excerpt continues as follows:

```
04 TER:    per fare le salse così (l')hai già preso qualche volta?=
           for making sauces (and) so did you already get it some time?=
05 MAR:    =no no no.
           =no no no.
06         (1.0)
```

As Teresa extends her turn (line 04), she uses a pronoun – (*l')hai* – that is co-referential with the previously introduced referent 'cornstarch' (*amido di maisə*). The significant difference with regard to Excerpt 5 resides in the action that Teresa accomplishes here: she can be seen to formulate a question about Maria's experience with that specific product. Maria immediately exhibits herself as someone who has no practical knowledge of cornstarch (line 05). The fact that Teresa asks a question at this point (rather than formulating a directive, as in Excerpt 5) is not incidental. In fact, by extending her turn in this specific way she makes her action accountable as 'doing topic talk'. Hence, Teresa and Maria continue talking about their experiences with cornstarch and other substances that can be used for binding sauces:

```
07 TER:    per le[gare.
           for binding.
08 MAR:          [perché sai- [sai che no: eh:] prendo sempre solo&
                 because you kno- you know I don:- uhm I always use only&
09 TER:                       [come legante.  ]
                               as a sauce binder.
10 MAR:    &la farina per [fare ((laughs))
           &flour for making ((laughs))
11 TER:                   [anch'io sono abituata colla farina.=
                           me too I'm used to flour.=
```

It is evident that in this excerpt decision-making is not at stake: at no point is the cornstarch treated as a potentially 'purchasable' product. It is treated as a resource for topic talk and can, as such, be categorised in accordance with the interactants' specific narrative needs.[8]

8. Issues of categorisation are indeed at stake: the sequence starts with the category 'cornstarch' (line 02), which is subsequently seen as belonging to the supercategory 'sauce binder' (lines 04, 07). The emergence of this umbrella category (or "collection" in Sacks' terms) thus allows for the introduction of another related item of that category, such as 'flour' (lines 08,

By establishing joint orientation to an object, shoppers not only engage in specific actions (e.g. making a buying decision, doing topic talk). In fact, object-focused episodes of interaction also allow the shoppers to exhibit to each other (and to negotiate) important facets of their relationship, as I will point out in this chapter's last section.

Final considerations

The analyses developed in this chapter have shown how members of a couple orient to objects and how these are made relevant in an everyday setting of interaction. Shoppers make relevant the objects' physical presence on the shelves of the supermarket, employing them as resources for initiating a joint focus of interaction. However, when shoppers make objects interactionally relevant, they systematically negotiate their categorial bearing. Object categories are fundamentally contingent with the local interactional environment. Shoppers can be seen to orient towards multiple categories for the 'same' object; the notion of 'layered object categories' captures this analytic finding. In self-service stores the members of a couple categorise the objects systematically with respect to their 'purchasability'. Objects are further categorised as commodities, e.g. with regard to specific properties, to the use that can be made of a product, but also to who is going to be the final user/consumer of it. Objects are thus both 'given' – as available resources for interaction – and 'constituted' through interactional practices of orientation and categorisation. Against the background of the categorisation work that members of a couple accomplish, it becomes evident that making a buying decision is a thoroughly interactional practice. However, by categorising the objects, the members of the couple do much more than just negotiate whether a product should or should not be bought; they also bring into being and mutually display locally relevant social relations. In the excerpts in which shoppers treated objects as 'purchasable' items (Excerpt 5, the 'pizza dough'; Excerpt 7, the 'milk'), the interactants are recognisable – for the analyst but more importantly for the members of the couples themselves – as forming a 'committed' couple. By actively contributing to the negotiation of an item's 'purchasability' a person makes use of his or her right and obligation to participate in a decision-making process that has consequences for the couple as a unit. In other words, the items that the members of a

11). This is, of course, an illustration of Sacks' "consistency rule corollary" (Sacks, 1992, vol. 1, pp. 247–248): 'flour' is to be heard as a category belonging to the collection 'sauce binder'. However, the categorial work that the participants achieve does not necessarily endorse a taxonomic hierarchy (see Bilmes, 2009).

couple agree to buy are treated as products 'for the couple'. Of course, members of such couples may still treat a product as 'for personal use', but such behaviour is accountable (see Excerpt 8).

The conduct of 'committed' couples contrasts with the way in which the third couple, Teresa and Maria, handles orientations towards a 'new' object. In this couple, newly introduced referents are systematically treated as resources for topic talk. Maria and Teresa are thus recognisable as another kind of couple: they are not 'partners' but friends who happen to shop together. Hence, the products they buy are not destined 'for the couple' but for each one's household; the fact that they use two shopping trolleys (see Figures 14, 15) materialises this specific social relationship.

The analysis has also ascertained specific verbal resources that shoppers recurrently employ when initiating orientation towards a joint focus of attention; in particular, by formulating a (stand-alone) referential expression members of a couple project the relevance of a next action, encompassing the acknowledgement of co-orientation and the elaboration of the object thus introduced. These actions can occur over several turns, but they can also be achieved within a single turn. With regard to Italian, turn-initial referents provide the opportunity to extend the turn with co-referential pronouns. This accounts for the occurrence of so-called left dislocated structures in the corpus analysed for this study. The findings emerging from the analyses presented in this chapter can thus be seen as a contribution both to the growing literature on interactional linguistics and to the study of situated human conduct. Phenomena commonly thought of as 'merely linguistic' (such as left dislocated constructions) are in fact closely related to issues of categorisation of both the objects and the participants, which are constantly interactionally renegotiated. Also, establishing a mutual reference to objects may serve different purposes, such as locating an object, initiating a buying decision, introducing a topic for conversation, exhibiting surprise, etc. In particular, this study highlights the need to look at the categorisation work that interactants accomplish when talking about objects: while ethnomethodologists and conversation analysts have extensively studied how interactants categorise persons and places, research on object categories is indeed still scarce. Finally, this chapter illustrates how an interactionally oriented approach may be fruitfully applied to study a mundane activity such as shopping and thus to provide a useful method of investigation for the field of consumer behaviour, which habitually relies on experimental surveys.

References

Appadurai, A. (Ed.). (1986). *The social life of things: Commodities in cultural perspective*. Cambridge: Cambridge University Press.

Aston, G. (Ed.). (1988). *Negotiating service: Studies in the discourse of bookshop encounters*. Bologna: Clueb.

Bartoletti, R. (2002). *La narrazione delle cose: Analisi socio-comunicativa degli oggetti* [The narration of things: A socio-communicative analysis of objects]. Milano: Franco Angeli.

Bilmes, J. (2009). Taxonomies are for talking: Reanalyzing a Sacks classic. *Journal of Pragmatics*, 41, 1600–1610. DOI: 10.1016/j.pragma.2008.10.008

Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2006). *Consumer behavior*. Mason: South-Western (10th ed.).

Bourdieu, P. (1979). *La distinction: Critique sociale du jugement* [Distinction. A social critique of the judgement of taste]. Paris: Les Éditions de Minuit.

Clark, C., & Pinch, T. (2010). Some major organisational consequences of some 'minor', organised conduct: Evidence from a video analysis of pre-verbal service encounters in a showroom retail store. In N. Llewellyn, & J. Hindmarsh (Eds.), *Organisation, interaction and practice: Studies in ethnomethodology and conversation analysis* (pp. 140–171). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511676512.008

Couper-Kuhlen, E. (2011). Grammaticalization and conversation. In H. Narrog, & B. Heine (Eds.), *The Oxford handbook of grammaticalization* (pp. 424–437). Oxford: Oxford University Press.

De Stefani, E. (2010). Reference as an interactively and multimodally accomplished practice: Organizing spatial reorientation in guided tours. In M. Pettorino, A. Giannini, I. Chiari, & F. M. Dovetto (Eds.), *Spoken communication* (pp. 137–170). Newcastle: Cambridge Scholars Publishing.

De Stefani, E. (2011). *"Ah petta ecco, io prendo questi che mi piacciono". Agire come coppia al supermercato: Un approccio conversazionale e multimodale allo studio dei processi decisionali* [Doing being a couple at the supermarket: A conversational and multimodal approach to decision-making processes]. Roma: Aracne.

De Stefani, E. (2013). The collaborative organisation of next actions in a semiotically rich environment: Shopping as a couple. In P. Haddington, L. Mondada, & M. Nevile (Eds.), *Interaction and mobility: Language and the body in motion* (pp. 123–151). Berlin/New York: De Gruyter.

Douglas, M., & Isherwood, B. (1979). *The world as goods: Towards an anthropology of consumption*. London: Allen Lane. DOI: 10.4324/9780203434857

Duranti, A., & Ochs, E. (1979). Left-dislocation in Italian conversation. In T. Givón (Ed.), *Syntax and semantics. Vol 12: Discourse and syntax* (pp. 377–416). New York: Academic Press.

Enfield, N., & Stivers, T. (Eds.). (2007). *Person reference in interaction*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511486746

Garfinkel, H., & Wieder, D. L. (1992). Two incommensurable, asymmetrically alternate technologies of social analysis. In G. Watson, & R. M. Seiler (Eds.), *Text in context: Contributions to ethnomethodology* (pp. 175–205). London: Sage.

Geluykens, R. (1992). *From discourse process to grammatical construction: On left-dislocation in English*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/sidag.1

Gibson, J. J. (1979). *The ecological approach to visual perception*. New Jersey: Lawrence Erlbaum.

Goodwin, C., & Duranti, A. (1992). Rethinking context: An introduction. In A. Duranti, & C. Goodwin (Eds.), *Rethinking context: Language as an interactive phenomenon* (pp. 1–42). Cambridge: Cambridge University Press.

Goodwin, C., & Goodwin, M. H. (1996). Seeing as a situated activity: Formulating planes. In Y. Engeström, & D. Middleton (Eds.), *Cognition and communication at work* (pp. 61–95). Cambridge: Cambridge University Press. DOI: 10.1017/CBO9781139174077.004

Haakana, M., & Sorjonen, M.-L. (2011). Invoking another context: Playfulness in buying lottery tickets at convenience stores. *Journal of Pragmatics*, 43(5), 1288–1302. DOI: 10.1016/j.pragma.2010.10.029

Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 299–345). Cambridge: Cambridge University Press.

Heritage, J., & Raymond, G. (2005). The terms of agreement: Indexing epistemic authority and subordination in talk-in-interaction. *Social Psychology Quarterly*, 68(1), 15–28. DOI: 10.1177/019027250506800103

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 24(5), 523–562. DOI: 10.1177/089124100129023990

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2006). The mystery of the missing referent: Objects, procedures, and the problem of the instruction follower. *CSCW '06 Proceedings of the 2006 20th Anniversary Conference on Computer Supported Cooperative Work*. New York, ACM, 373–382. DOI: 10.1145/1180875.1180932

Lambrecht, K. (2001). Dislocation. In M. Haspelmath, E. König, W. Österreicher, & W. Raible (Eds.), *Language typology and language universals: An international handbook* (pp. 1050–1078). Berlin/New York: De Gruyter, vol. 2.

Lamoureux, E. L. (1985). *An analysis of conversation in service encounters*. PhD dissertation, University of Oregon.

Lave, J. (1988). *Cognition in practice*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511609268

Malinowski, B. (1922). *Argonauts of the Western Pacific: An account of native enterprise and adventure in the archipelagoes of Melanesian New Guinea*. London: George Routledge.

Mauss, M. (1923/1924). Essai sur le don: Forme et raison de l'échange dans les sociétés primitives [An essay on the gift: The form and reason of exchange in archaic societies]. *Année Sociologique*, 1, 30–186.

Merritt, M. W. (1976). *Resources for saying in service encounters*. PhD dissertation, University of Pennsylvania.

Miller, D. (1987). *Mass consumption and material culture*. Oxford: Blackwell.

Mitchell, T. F. (1957). The language of buying and selling in Cyrenaica: A situational statement. *Hespéris*, 44, 31–71.

Monzoni, C. (2005). The use of marked syntactic constructions in Italian multi-party conversation. In A. Hakulinen, & M. Selting (Eds.), *Syntax and lexis in conversation: Studies on the use of linguistic resources in talk-in-interaction* (pp. 129–157). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/sidag.17.08mon

Nevile, M. (2013). Collaboration in crisis: Pursuing perception through multiple descriptions (how friendly vehicles became damn rocket launchers). In A. De Rycker, & Z. Mohd Don (Eds.), *Discourse and crisis: Critical perspectives* (pp. 159–183). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/dapsac.52.05nev

Nishizaka, A. (2000). Seeing what one sees: Perception, emotion, and activity. *Mind, Culture, and Activity*, 7, 105–123. DOI: 10.1207/S15327884MCA0701&2_07

Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.

Ochs, E. (1979). Transcription as theory. In E. Ochs, & B. B. Schiefflen (Eds.), *Developmental pragmatics* (pp. 43–72). New York: Academic Press.

Sacks, H. (1992). *Lectures on conversation*. Oxford: Basil Blackwell.

Sacks, H., & Schegloff, E. A. (1979). Two preferences in the organization of reference to persons in conversation and their interaction. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 15–21). New York: Irvington Publishers.

Schegloff, E. A. (1972). Notes on a conversational practice: Formulating place. In D. Sudnow (Ed.), *Studies in social interaction* (pp. 75–119). New York: The Free Press.

Schegloff, E. A. (1996). Some practices for referring to persons in talk-in-interaction: A partial sketch of a systematics. In B. A. Fox (Ed.), *Studies in anaphora* (pp. 437–485). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/tsl.33.14sch

Semprini, A. (Ed.). (1999). *Il senso delle cose. I significati sociali e culturali degli oggetti quotidiani* [The sense of things: The social and cultural meanings of everyday objects]. Milano: Franco Angeli.

Stukenbrock, A., & Birkner, K. (2010). Multimodale Ressourcen für Stadtführungen [Multimodal resources for guided city tours]. In M. Costa, & B. Müller-Jacquier (Eds.), *Deutschland als fremde Kultur: Vermittlungsverfahren in Stadtführungen* [Germany as a foreign culture: Mediation procedures in guided city tours] (pp. 214–243). München: Iudicium.

vom Lehn, D. (2013). Withdrawing from exhibits: The interactional organisation of museum visits. In P. Haddington, L. Mondada, & M. Nevile (Eds.), *Interaction and mobility: Language and the body in motion* (pp. 65–90). Berlin/New York: De Gruyter.

Appendix

Transcription conventions

Multimodal details have been transcribed according to the following conventions:

+	delimit a participant's gaze description
*	delimit a participant's gesture description
#	delimit a participant's body movement
….	gaze/gesture/movement preparation
,,,,	gaze/gesture/movement withdrawal
–-	gaze/gesture/movement maintained
–>	gaze/gesture/movement continues across subsequent lines
~~>	assumed gaze/gesture/movement initiation or ending
–>>	gaze/gesture/movement continues until after the excerpt's end
•	indicates the segment of talk presented in a screenshot

Artworks as touchable objects

Guiding perception in a museum tour for blind people

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In this chapter we contribute to the description of the interactional accomplishment of object use, by raising the following question "what kind of *objects* are artworks?", and consequently, "what kind of interactional practices do they configure?". By focusing on video-analysis of a guided tour for visually impaired persons (VIPs) allowed to touch artworks, we propose a praxeological analysis of situated procedures of artworks' formulation and palpation, opening on a reflection on aesthetic touch – both about the way it is reflexively accomplished and the way tactile experience is collectively and sequentially organised in interaction.

Introduction – Investigating a particular kind of object: Artworks

In this chapter we focus on particular objects, artworks, and investigate the interactional practices involved in the aesthetic experience of them, which, in our data, consists of their handling.

Usually, artworks are not meant to be manipulated. Traditionally, the museum space indeed implies that artworks are treated as objects of exposure: they are to be seen, observed from a distance, but certainly not touched. In this regard, artworks can be considered as paradigmatic objects in the etymological sense of the term (from the Latin word *objectum* which means 'what is placed before'). However, in our data, participants, who are visually impaired persons, are allowed to touch artworks during specific guided tours. The purpose of these tours is to provide blind persons with an aesthetic experience of artworks. The tours involve tactile manipulation, which gives participants an idea of the shape, the texture or the configuration of the contemporary artworks that are in front of them. So what kind of 'touchable' objects are artworks? How are they constituted as such? What are the interactional practices involved in their handling? And what kind of aesthetic experience do they provide?

These reflections aim at contributing to two major strands of research: first, to a general inquiry on the interactional constitution of objects, by focusing on the coordination of various perceptual resources; and second, following Dewey's seminal definition of "art as experience" (1934), to a growing body of research concerned with the elaboration of "practical aesthetics" (Heath & vom Lehn, 2004), sensitive to the social accomplishment of the aesthetic experience, and in which the interaction with specific objects, namely artworks, is central. Before proceeding with our analyses, we will state a few issues involved in the investigation of artworks as both aesthetic and interactional objects.

Artworks as aesthetic objects

In many respects, artworks are *not* ordinary objects, which leads us to ask what kind of 'oriented objects' (Garfinkel, 2002) they are. Moreover, the category of artworks includes a wide range of productions: pictures, drawings, sculptures, photographs, but also – and this is all the more relevant for contemporary art, which is our focus here – sensitive or immersive environments, and installations (i.e. artworks composed of several objects). What these objects have in common can be summed up in the following way: they are exhibited so as to be available for aesthetic perception, namely for a specific activity which mostly consists in experiencing their material features. Hence, we can assume that artworks are specific kinds of objects, or, to borrow Goodman's terminology (1976), that they are recognisable as specific objects insofar as they "function" as such: they are artefacts made and exhibited on purpose, which can be accessed under given (institutional, social and spatial) circumstances, and which afford a specific set of actions, that can be described as a general 'aesthetic conduct'. Since we share the interactional claim that an object is only accountable as an object-in-(inter)action, the following questions arise: how are artworks perceived? What do members practically do with them? And what kind of interaction is aesthetic experience?

Artworks' affordances: Thinking on the connection between object, perception and action

These questions strongly echo Gibson's interrogations in *Ecology of visual perception* (1979), in which he offered a major framework to analyse the correlation between perception, information and action. Gibson defined objects as material entities in the environment affording actions.[1] Yet, artworks occupy a specific

1. This theory has been very inspiring, but also widely discussed. See, among others, Conein (1997), Sharrock & Coulter (1998), and Quéré (1999).

place in Gibson's classification of objects, which has rarely been commented on. They belong to the category of "human displays", "a very special class of artificial objects", involving "solid images of several types, pictures of many sorts, and all the surfaces of the environment that bear writing" (Gibson, 1979, p. 42). He finally states that "a picture requires two kinds of apprehension, a direct perceiving of the picture surface along with an indirect awareness of what it depicts" (Gibson, 1979, p. 291). However, his conclusion is quite deceptive since he draws a radical distinction between ordinary visual perception on the one hand, and aesthetic perception on the other, which conducts him to eventually state that "the perplexities connected with the making and seeing of pictures" are "independent of the problem of visual direct perception": "the problems of aesthetics exist in their own right" (Gibson, 1979, p. 291). Despite this (relative) failure, what can Gibson's attempt teach us? We assume that it leads to a strong statement: an analysis of aesthetic conduct and activities cannot avoid paying careful attention to the object, its materiality and affordances.

From action to interaction: Artworks as interactional objects

Regarding these issues, interactional approaches provide useful insights, since they describe artworks as interactional objects. Analysing video recordings of visitors' conduct, Heath and vom Lehn "explore the ways in which the experience of exhibits in museums and galleries emerges in and through social interaction" (2004, p. 44). As they describe it, the coordination of talk and bodily conduct (postural orientations, pointings, moves) "provides the resources through which the sense of the object is reflexively constituted and by which it gains local, interactional significance" (Heath & vom Lehn, 2004, p. 53). Artworks are then defined as collaboratively and publicly constituted objects of experience.

In her contribution to this general perspective, Pitsch (2012) notices that such procedures fundamentally rely on a prior one, the identification of the exhibit as being a candidate for such activities. Analysing a guided tour in an exhibition devoted to the cultural history of sports, she shows how an exhibit, gymnastic apparatus, can be diversely apprehended, according to changing tasks-at-hand and interactional configurations: as an *ordinary object*, on which visitors can lean while being talked to about something else; as a *museum exhibit*, when it is selected by the guide as a focus of attention and commented on; and as a *practical* and *material object* to experience, since it is possible to use it. Although she does not deal with artistic objects strictly speaking, she stresses an important point: the object's materiality plays a central part in the visitors' conduct. In doing so, she provides an opportunistic way to reintroduce a reflection on the object 'per se' in an interactional perspective.

Touching artworks as an aesthetic experience

Indeed, the aesthetic experience crucially relies on artworks' material form, since some of them are to be seen, while others are to be heard, felt, read, walked through etc. In our data, *visual* artworks are constituted as *touchable* objects and, consequently, the aesthetic experience is accomplished through a process of handling.[2] The organisation of touch has already been a subject of investigation in EM/CA literature. For example, Nishizaka (2007, 2011), who conducted studies in the context of medical interaction between midwives and pregnant women, showed how palpation constitutes an interactional resource to produce an indexical reference and to agree on the exact location of the part of the body touched. But in those studies, palpation is investigated as a resource oriented to the practical task-at-hand, and certainly not as an aesthetic activity.

In this chapter, we provide a praxeological analysis of situated procedures of palpation, opening on a reflection on aesthetic touch – both about the way it is reflexively accomplished and the way tactile experience is collectively and sequentially organised in interaction. Then, we will see whether it is possible to describe it in terms of 'aesthetic experience', so as to reconsider the specific kind of 'object' an artwork may be.

Data and setting

The video data collected for this study were recorded in a contemporary art museum near Paris, which organises guided tours for visually impaired persons (VIPs). As mentioned above, the purpose of such tours is to provide VIPs, for whom ordinary contact with visual artworks is complex, with an alternative experience of contemporary art.

The guiding function is delegated between two guides, a museum lecturer (Patrick) and a blind artist (Sophie), who provide two different ways of accessing the artworks, drawing on their own distinct experience and knowledge. The main characteristic of such tours – on which we will focus here – is that VIPs are invited to experience some artworks through touch. During her preparatory visit, Sophie selects appropriate artworks, favouring sculptures or installations, which VIPs can more easily experience than photographs or paintings. After this visit, Sophie writes short poetical texts about her own experience of these artworks, that she reads out

2. Visual impairment and tactile perception has already been investigated within ethnomethodology and CA, see for instance Psathas (1976, 1992) and Relieu (1994).

to visitors during the tour.[3] Let us stress that these artworks are not meant to be touched – we could speak of an 'occasioned use' for the purposes of these tours.

In the one-hour tour we recorded, the group was composed of the two guides and about ten VIPs, some of them accompanied by sighted relatives. Four artworks were commented on, and two of them were touched. The sequence of events proceeds the following way:

a. Patrick leads the group to the (next) artwork.
b. Sophie recites a text.
c. Patrick briefly describes the artwork they are in front of.
d. A moment is devoted to the visitors' own experience (namely touching, in two cases).
e. Sophie recites a text.
f. Patrick makes a more general presentation of the artist.

Our analysis will specifically focus on two phases: the preliminary verbal description by Patrick (phases a and c), and the touching sequence experienced by blind persons (phase d). In this regard, these guided tours provide a perspicuous setting for the observation of the organisation of aesthetic manipulation.

Analysis: Artworks as tangible 'experience-ables'

Since the aesthetic experience cannot be conceived here as a visual experience, the two regimes of presentation (description and handling) that we mentioned provide new insights on the constitution of particular 'experience-able'. Vom Lehn (2010) indeed elaborated this notion in his analysis of a quite comparable setting: VIPs visiting an exhibition with sighted companions and touching certain exhibits. His analysis mostly dealt with the differential access participants have to artworks, and how they make available and align their own experience: reflexively, whereas "the VIP's actions render visible aspects of the works of art and provide the guides with resources to use in their descriptions of exhibits" (vom Lehn, 2010, p. 20), "the guide's descriptions, coupled with the tactile experience, allow the VIP to make sense of what he is feeling with his hands" (vom Lehn, 2010, p. 24). Through these procedures, exhibits are locally discovered and constituted as 'experience-able'. We would like to investigate more specifically how the artwork is constituted as a 'touchable' object, and what it implies:

---

3. Sophie indeed offers a model for VIPs about how to experience aesthetic objects as a blind person and it would have been very interesting to analyse her comments, which also contribute to constructing artworks as touchable objects. Unfortunately, because we had to make a choice in our analysis, we could not develop this point in this chapter.

1. How are certain artworks configured to be touchable?
2. How is palpation constituted as a possible mode of aesthetic perception?
3. What kind of perception and knowledge about artworks does it provide?

Formulating artworks

Within the context of guided tours, a first routinised activity with the selected artwork consists in introducing and constituting it as a focus of joint attention. In our data, since visitors do not see the artwork, this step is all the more important: the artwork's verbal formulation is a crucial resource to establish a common focus of attention (identifying the artwork, locating it in space) and to prepare the moment of experiencing (without anticipating visitors' subjective experience too much). Since, as Depperman explained, every formulation is "selective", "contingent", "purports to be relevant", "inference rich", and "provides a way of seeing things" (2011, p. 118), this initial formulation is highly consequential for the subsequent activity and therefore constitutes a perspicuous setting to observe how the artwork is preliminarily constituted.

From account to instruction. The following excerpt takes place immediately after Sophie's first recitation – and in this case, no indications about the artwork were provided before the recitation. The artwork in question is an installation, composed of a number of teddy bears as well as many teddy bears' paws, gut out and hung on the wall. After a pause, Patrick selects himself and produces quite a long turn to invite participants to experience the artwork they have just been told about.

Excerpt 1 Exploring_with_fingertips

(the following data are transcribed according to Jefferson's conventions for verbal material, and to Mondada (2007) for gestures and other embodied actions)



Figure 1. Patrick and Sophie, the two guides, are introducing the artwork to the visitors

```
01          (0.9)
02  PAT     alors (1) évidemment/ (0.6) c'est très difficile à s`
            so        of course         it's very difficult
03           figurer cette chose-là\ (0.6) c'est pour ça que: (0.4)
            to imagine this thing           that's why
04           je propose (0.4) à ceux qui sont non-voyants et
            i propose          to those who are blind   and
05           u::ni:qu`ment/ [(0.5) à ceux-là\ (0.3 + [0.2) parce que
            only                   to those              because it's
06  SOP                    [((petit rire))          [.hh
                          ((small laughter))
07  PAT     c'est une œuvre qui est (0.6) rel[ativement fragi:le
            an artwork that is            quite fragile
08  SOP                                     [>>(c'est un p`tit peu)
                                              it's a little
09           fragi:le<< quand même\ [°°comme toujours°°]
            fragile    still          as always
10 PAT                             [oui quand mêm-    ]quand même
                                     yes still      still
11          a[ssez fragile
            quite fragile
12 SOP       [((raclements de gorge))
               ((clears throat))
13          (0.5)
14 PAT      uniqu`ment à ceux-là de veni:r (0.4) euh:: explorer du
            only to those to come               euh      exploring
15          bout des doigts avec beaucoup d`délicatesse\
            with your fingertips with a lot of delicacy
```

Within this multi-unit turn, Patrick has to deal with several correlated tasks-at-hand: *sequentially*, managing transition from the previous activity to the next; *topically*, taking into account what has been said and contributing to the artwork's presentation; *practically*, preparing the handling sequence and providing specific instructions. These diverse and simultaneous activities draw on and produce a specific version of the artwork.

i. *Elaborating an on-practical-purposes version of the artwork.* At the beginning of his turn, Patrick exhibits that he draws on what Sophie said about the artwork, which is observable through the use of the adverbs *alors* 'so', to underline the sequential coordination between the two phases, and *évidemment* 'of course', which contributes to establishing that henceforth participants have a common access to the artwork.[4] However, the latter adverb, *évidemment*, prefaces a quite paradoxical account (lines 02–03): what the participants are supposed to share is presented as still relatively indeterminate, described as a 'thing', and qualified as 'hard to imagine'. Nevertheless, what could be interpreted as pointing to a relative incompleteness of Sophie's presentation is attributed to the artwork, a process

4. See De Stefani (2010) for an analysis of explanation sequences' beginning in guided tours, where he talks about "actions markers" for comparable adverbs in Italian ('allora' and 'dunque') that exhibit transition to a next action.

that the syntactic structure makes explicit.[5] Assessing the artwork as being hard to imagine – with the vocal emphasis ('very difficult') – is therefore a resource to engage in another experience of the artwork: given this constitutive property, the individual and bodily contact is exhibited as a necessary condition for a significant experience.

Another descriptive statement, on line 07, 'it is an artwork that is quite fragile', precedes and motivates the specific instruction. Within this segment, the initial 'thing' is specified, being categorised as an artwork. More significantly, another intrinsic property – which is not representational, but material – emerges: fragility. The formulation of this property emerges after a pause (line 07), interpreted by Sophie as possibly indicating Patrick's trouble: she then produces, in overlap, another descriptive account, 'it's a little fragile still as always' (lines 08–09). The property of fragility is then attributed to the general category of artworks, with the postponed temporal complement 'as always'. At the same time, this generalisation tends to exhibit that this specific artwork belongs to a wider class, and to 'normalise' the (still not formulated) instruction: in other words, it is not only because this artwork is fragile and these visitors are blind that they should pay specific attention, but because it is an ordinary conduct expected from any visitor experiencing any artwork. Hence, these formulations publicise certain properties of the selected artwork: individual and representational ('hard to imagine') properties, as well as general and material ('fragile') ones, through processes of qualification and generalisation. Yet these properties are relevant on-practical-purposes, insofar as they prepare the sequence.

ii. *Object-bound and recipient-design instruction.* The handling sequence is constituted as being bound to the artwork's properties: yet, it remains an occasioned use, since visitors are normally not allowed to touch it. The recipient-design is then actively exhibited, from lines 03–04: 'that's why I propose to those who are blind, and only to those'. The selection is made all the more salient with the pauses, lengthenings and vocal emphases on *u::ni:qu'ment* 'only', and the segment's repetition, after Sophie's turn, on line 13. The whole turn indeed prepares the instruction's formulation, which eventually arises on lines 13 and 14, and which is characterised by a strong periphrastical and modalisation process: 'exploring with your fingertips with a lot of delicacy'. These two aspects – object-bound and recipient-design – are finely sequentially intertwined in this extended turn to produce an *ad hoc* version of the artwork, reflexively cleared up by the final TCU, *i.e.* the practical instruction (lines 13–14).

5. In fact, the recitations are clearly not exhibited as providing 'objective' accounts of the artworks.

The formulation of instruction. The brief analysis of two short excerpts will allow us to observe some recurrences within preliminary formulations. The following sequence consists in the group's arrival in front of an artwork, namely an installation occupying a whole room and composed of numerous swings, spread out in the exhibit space, hung to the ceiling with chains and on the boards of which city maps are carved (see images of Excerpt 4 to have an insight of the installation).

Excerpt 2 Do_not_bump_into

```
01  PAT    on se trouve ici: devant une euh: à l'entrée
             we are here      in front of a- at the entrance
02         d'une euh: d'une salle/ (.) où il va être diffici:le
             of a room              where it's gonna be difficult
03         (.) de circuler\ (.) parce que (0.9) nous avons euh:
           to move               because          we have
04         une sorte de labyrin:the/ et que euh: les objets qui
             a sort of maze           and the objets that
05         sont là\ (0.6) et que:: sophie va évoquer/ euh son:t
           are here          and that sophie will evoke    are
06         des: objets assez fragiles\ qu'on n'a pas: le: vraiment
            quite fragile objects       that we must not really
07         euh: .h euh <qui faut v- pas vraiment bousculer\>
                              which must not be bumped into
08         voilà/
           there it is
```

As in the previous excerpt, Patrick's multi-unit turn accomplishes complex interactional work: he provides VIPs with locational coordinates; with the preliminary description of an artwork – as neutral as possible but relevant for the following activity, namely moving into this specific space; and eventually with a behavioural instruction.

Patrick actively produces a shared indexicality, through the use of deictics ('we are here' line 01, 'the objects that are there' lines 04–05). Formulating where participants are and what stands in front of them contributes to repairing the participants' differential access to the artwork, and to situate it in space, drawing participants' attention to the whole room. The description of formal properties – 'a sort of a maze' (line 04), 'quite fragile objects' (line 06) – affords specific conduct and prepares the formulation of the instruction. The syntactic structures used here also tend to attribute an agency to both space and the artwork, notably through the use of the passive form ('it's gonna be difficult to move', lines 02–03) and 'objective' visual description ('we have a sort of a maze', lines 03–04). The numerous repairs illustrate this process, as on lines 06–07: the initial active formulation is indeed repaired into 'which must not be bumped into', the passive mode implying a sort of normative behavioural rule, bound to the object itself.

After this preliminary formulation, the group moves into the room, to listen to Sophie's recitation. Patrick then takes the floor again, to invite visitors to experience the artwork:

Excerpt 3 Put_the_hands_to_see_closer

```
1    PAT  pour savoir ce que c'est que ces balançoires\ (1) je
            to know          what these swings are
2         vous propo/se . en tous cas/ . à ceu:x qui: sont non-
           I propose      at least        to those who are
3         voyants/ . de mettre les mains/ . pour voir de près\
          blind       to put the hands       to see closer
```

As in Excerpt 1, this invitation is produced as a complement to Sophie's previous turn. The initial 'fragile objects' are now qualified as 'swings', but nevertheless presented as remaining quite unspecified, still needing to be 'known' (line 01). Here also, the instruction is actively recipient-designed (lines 02–03) and, interestingly, reveals the prevalence of visual perception as a privileged access to the object. Through this formulation, 'put the hands to see closer' (line 03), the bodily contact is exhibited as a constitutive step for a proper experience, allowing visitors to have a detailed perception of the object at stake.

Elaborating a situated 'user's guide': The artwork as a recipient-designed object. Analysing these preliminary formulations of artworks provides insights into the guide's procedures to elaborate, within his turn, a common version of the artwork, and the *ad hoc* methods to experience it. In other words, Patrick offers a kind of 'user's guide' (Cometti, 2000), based on the formulation of the artwork's location in space and materiality, in order to provide relevant practical and recipient-designed instructions. The formulations also shed light on the procedures which attribute an agency to the artwork itself, through a highly selective description, syntactically favouring presentative and passive structures. Interestingly, the description is at the same time oriented towards intrinsic, permanent and 'objective' properties, as well as to practical and contingent ones, preparing the experience that visitors will have of it. Consequently, these excerpts show that this user's guide is neither permanent, nor given, but elaborated in a given situation. These sequences then contribute to problematising the idea that the artwork's affordances, apprehended both as a cultural object with which we 'know' how to behave, and as a singular object affording specific actions, are 'always available': as De Fornel states (1993, p. 244), the active qualification process is a crucial resource to exhibit objects' agency and to share their affordances publicly in a given context of activities.

Manipulation as aesthetic experience

The next step in our inquiry of the 'objectual' nature of artworks can be summed up in the following naive questions: what is the difference between the handling of artworks and the handling and prehension of everyday objects? What does it

imply that the touching at stake is not meant to be functional, since participants do not use artworks as tools for some specific purposes? Is there eventually a form of 'aesthetic handling' that radically differs from a mundane manipulation, and how is it accountable? We will now examine the characteristics of the aesthetic handling.

Gesture analysis, as it has been notably developed by Kendon (1990, 2004), McNeill (1992) or LeBaron and Streeck (2000) *inter alia*, provides useful insights for this question. Although it is often conceived as an investigation on the pragmatic and expressive functions of bodily or hand gestures, Streeck emphasised another aspect of manuality in a recent book (2009): the fact that "hands are not only organs of action and expression" but "also [an organ] of cognition and knowledge acquisition" (2009, p. 39).[6] And if "we gain most of our information about the world through taking, holding, using, and handling things, all of which involve grip as a stable form of body-to-object contact" (Streeck, 2009, p. 47), it is because the hand, thanks to the existence of fingertips' pads, and to the very texture of the skin, is one part of the body which is particularly acute to perceive information from the external world. Significantly, by placing handling at the heart of the perceptive process, Streeck stresses not only that grasping combines perception and action, but also reappraises visual perception, which has been taken for the prevailing sense at least since Merleau Ponty's *Phenomenology of perception*. Touching objects is a process of perceiving, acting and knowing, as we will describe in a sequential analysis of the artwork's handling.

The sequentiality of palpation. Let us examine the following transcript, which immediately follows the previous excerpt commented upon. The group is still in front of the installation composed of hanging swings, with maps carved on the swings' boards, and Patrick selects one person in the audience (Brigitte) and invites her to touch the piece:

Excerpt 4 A_swing

```
01    PAT   °si vous voulez bien avancer°
            if you may walk forward
02          (2.1)
03    PAT   voi:là (0.5) juste ici vous avez/ juste
            there it is   right here you have right
04          devant vous là/ au bout de votre main/
            in front of you at the end of your hand
05          une chaîne là . °voi:là\°
            a chain here     there you are
```

6. This book is the continuity of previous works on language and body as media of interaction and cognition (see for instance Streeck, 2003).

```
06          (0.9)
07    PAT   voi:lA (0.7) à cette chaîne+ +suspendue (1.4)
            that's it    to this chain   is hung on
08          b- une planche\ (.) une balançoire\
            a board                 a swing
09          (.) une lARge planche (.)imaginez
                 a broad board      let's imagine
10          maintenant/ (.) que juste derrière vous
                now        that right behind you
11          (.) à votre: euh: gauche (.)
               at your uh left
12          z`en avez +une autre/ (.) et ainsi d`suite
            you've got another one and so on
```

In his precise description of hand gestures, Streeck describes a sequentiality in the movement of grasping move, that can be summed up as follows:

a. a preparatory stage with a projective movement where the hand is oriented to the *extrinsic* properties of the object (its location, orientation or potential move, for instance);[7]
b. a contact period when the grip adapts to the object's *intrinsic* properties (its size, shape, density, etc.), and which can involve various prehensile postures;
c. finally, the release.

These canonical and typical stages are meant to describe ordinary practices of grasping: but how do they provide adequate descriptive resources for the handling of artworks by blind persons? Let us have a more detailed look at the preparatory stage (i), the contact period (ii), and the release (iii).

i. *The preparatory stage: Configuring the hand shape for touching the artwork.* At the beginning of the excerpt, Patrick is "shepherding" (Cekaite, 2010) one of the blind persons, whom he has invited to touch the piece.

Excerpt 4a

```
03  PAT:    voi:là (0.5) juste ici vous avez/ juste
             there it is  right here you have  right
04           devant vous là/# au bout de votre# main/#
             in front of you  at the tip of your hand
    fig                    #fig.2            #fig.3 #fig.4
```

7. Streeck calls this projective movement a "ballistic movement" (2009, p. 47 and p. 60), as a reference to the science that deals with the behaviour and effects of projectiles.



Figure 2



Figure 3



Figure 4

The couple stops just in front of the swing. While the guide's directions, motion and position, provide at least information on the object's extrinsic properties (its location), they are not relevant enough to give an idea of its intrinsic properties (the shape, the kind of material used, etc.). Though Brigitte has already been informed it was 'a swing', the information is not sufficient and the hand cannot project and configure a specific grasping shape. Therefore, she has to grope for an unspecified or undetermined object, as we saw in the previous screenshots.

Just after the production of indexical formula 'right here you have', 'right in front of you here', and more specifically just after the last indexical 'here', Brigitte releases Patrick's arm and raises her hand in a kind of generic 'groping for' gesture (Figure 2). At the same time Patrick is progressively lowering his arm (Figure 3), orienting to the failure of the identification of the location and, in a *corrective* movement (Keevallik, 2010; Lindwall & Ekström, 2012; Martin & Sahlström, 2010), smoothly reorienting the wrist of the blind woman towards the chain (Figure 4).

Excerpt 4b

```
05 PAT: #une chaîne là (0.1)#(0.1) °voi:là\°#
           a chain here          there you are
   fig  #fig.5              #fig.6          #fig.7
```

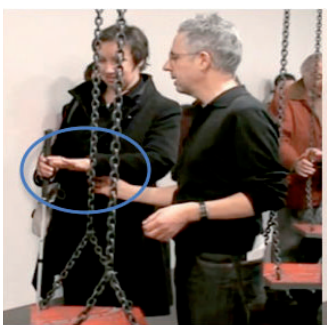


Figure 5



Figure 6

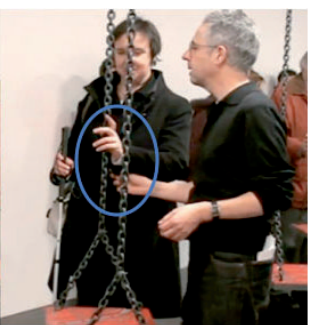


Figure 7

Interestingly, as Patrick performs a corrective gesture – by reorienting the wrist of the blind woman towards her left (Figure 5) – concomitantly, he gives a verbal cue revealing the kind of object she is supposed to touch: a chain. Instantaneously, Brigitte begins to shift her hand position, preparing for a grasping gesture, clearly characterised by the opposition of the thumb (Napier, 1980; Streeck, 2009). The gripping gesture is projected and pursued, virtually curling up the chain (Figure 6), and clearly orienting both to its extrinsic *and* intrinsic properties (that is to say respectively a vertical and quite thin object). While the chain is almost gripped, Patrick projects the completion of the grasping gesture and produces an assessment, 'there you are', that is fully performed as Brigitte is definitively holding the chain (Figure 7).

The preparatory phase of this handling process is highly co-produced and reveals the crucial interweaving of verbal instructions and tactile accomplishments: Patrick is indeed orienting to the completion of the gesture to produce either assessments or corrections.[8] The fact that the object at hand is an artwork first leads the blind woman to design a generic 'groping for' gesture: though Brigitte already knew she had swings in front of her, what the shape of her hand shows is that she was not oriented to a standard and referentially known swing. Once she obtains more specific pieces of information on its physical qualification, which necessarily implies formulation of 'a chain', that is to say to reattribute physicality and materiality to the artwork, then she is able to apprehend it.

ii. *The contact-period: The praxeology of tactile perception*. Still following Streeck, the contact period is defined as the moment when "fingers begin to enclose the object", and when "the hand now reaches for tactile contact and becomes responsive to tactile feedback" (2009, p. 51). From the verbal transcript, we observe an accumulation of noun phrases that all semantically refer to the object-swing, but that is qualified incrementally and adjusted to the tactile discovery made of it:

Excerpt 4c

```
07 PAT:  voi:lA (0.7) à cette chaîne+ +suspendue#
          that's it    from this chain+ +hangs
   bri                              -->+ +hand on seat>
   fig                                    #fig.8
08       (1.4) b- une planche\ . #une balançoire\+
                 a   board        a swing
   bri                                    --->+
   fig                             #fig.9
09       #une lARge +planche .
           a  broad  board
                    +hand go back up--->
   fig  #fig.10
```

8. See Mondada (2009) and Koschmann and Zemel (this volume) for comparative phenomena in a surgical context.

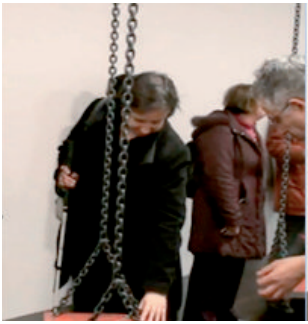




Figure 8 **Figure 9** **Figure 10**

Brigitte's hand is going down the chain, while, synchronically, Patrick is pronouncing 'from this chain hangs a board'. He interrupts his turn at the very moment when Brigitte's fingers reach the board (Figure 8) and makes a significant pause in order to let her experience the materiality of the board herself. Once Brigitte has made accountable, by the design and shape of her hand (all the fingertips' pads of the phalanxes lying flat on the board), that it was an horizontal object, then Patrick reveals its nature ('a board'). With a half-circle move of her hand, Brigitte makes accountable her perception of a flat, horizontal object with chains at its ends: Patrick then confirms 'a swing'. By formulating the name of the object *at this precise moment*, that is to say when the blind woman has made accountable her perception of the whole object in most of its properties, Patrick reproduces two kinds of presuppositions, both on the perception and on the aesthetic experience: (1) first, an 'anti-gestaltist', or 'atomist' approach to perception: the tactile perception has to proceed step by step, and progressively constructs the coherence of the whole. The artwork is first perceived in its details (a chain, a board), then constituted as a whole (a swing, several swings, an installation); (2) second, a classical position on the art experience, according to which subjective experience must precede verbal account. Patrick then orients to the continuation of the gesture accomplished by Brigitte – who still brushes her fingertips slowly along the board (Figure 10) – and finally produces another qualification, 'a large board'.

In this 'dynamic touch' (Gibson), the specific kind of gesture chosen by the blind woman, or the reconfiguration of her hand shape occasioned by the 'feedback' given by the object, accounts for a part of her own perceptive experience. Patrick's turns are then fine-tuned with the tactile discovery and these perceptive phenomena: the sequential distribution of his turns is adjusted to the temporality of the manual discovery – and never precedes it.

iii. *The release.* The last stage includes what Gibson referred to as 'haptic exploration'. Since the moment of manual exploration has ceased once the object-category was identified, it is obviously linked to the release. Let us examine what follows, going back from line 09:

Excerpt 4d

```
09 PAT:  une lARge # +planche (.) imaginez
          a broad    board        let's imagine
   bri                    +hand back up--->
   fig                  #fig.11
10       main+t`nant/# (.) que #juste derrière
            now             that right behind
   bri   --->+hand going back down---------->
   fig                   #fig12    #fig.13
11       +vous +# à votre: euh: gauche (.)
           you    to your  uh    left
         +drops+
   fig              #fig.14
12        z`en avez une autre/
          you've got another one
```

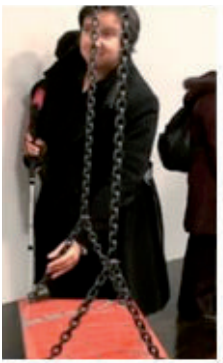


Figure 11



Figure 12

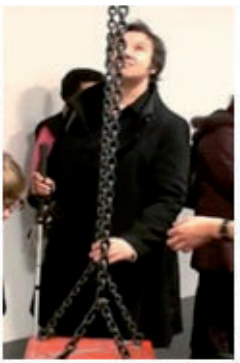


Figure 13

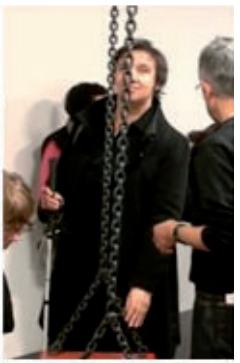


Figure 14

Brigitte performs shifting and sliding contacts on the chain, and the dynamic touch is very slow, again with fingertips (Figures 11 to 14). This slow explorative movement displays an embodied knowledge: the object is grasped in its entirety.

The characteristics of aesthetic palpation. The brief analysis of one last excerpt will allow us to exemplify observable features of aesthetic palpation: orientation to the texture and shape of the objects, slowness of the exploration and repetitiveness of the touch. In the following sequence, blind visitors stand in front of the installation previously mentioned in Excerpt 1, with stuffed teddy bear paws hung on the wall. Again, blind participants are collectively allowed to touch the artwork:

Excerpt 5 Paws

```
01       *(1.6)
   jea   *grasps MAR's arm-->
02 JEA:   voilà: [*t:: t- t'as#  ] beaucoup de:# petites&
            here    you you've got     lots of little
                 -->*puts MAR's hand on the small paw--->
   fig                        #fig.15           #fig.16
```



Figure 15



Figure 16

```
04 MAR:        [celui-là il est] fixé:\
                this one    is    stuck
05 JEA:   &pattes/*
           paws
          ------>*
```

In this sequence, Marc is manipulating two different paws, with the help of Jeanine, who guides his hand towards specific salient objects. He is touching the pieces, very carefully, orienting retrospectively to – and making relevant – the previous 'with your fingertips, with a lot of delicacy' instruction. With a closer look at how the palpatory gesture unfolds, we notice that for each touching, an identical pattern emerges:

Excerpt 5a

```
01        (2.2) # (0.5) # (0.5) # (0.5)
   fig          #fig.17 #fig.18 #fig.19
```

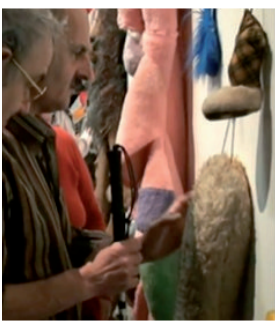


Figure 17

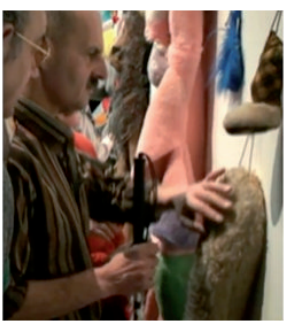


Figure 18

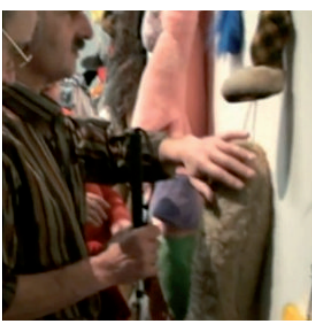


Figure 19

Marc touches lightly, sometimes with a little space between his palm and the paw, avoiding a firm grasp. He first draws a contour following gesture (Figures 17 and 18) and then focuses on the texture, in a very slow brushing movement (Figure 19).[9] The different stages in the handling process can also be found during the palpation of the second paw:

Excerpt 5b



Figure 20



Figure 21



Figure 22

An identical pattern is repeated (Figures 20 to 22): the size of the object is first projectively envisioned through a 'contour following' gesture, then the texture is evaluated through a light gentle touch.

Slow palpation, released carefully with fingertips and palm strokes, reproduces the ordinary temporality of contemplation – mostly characterised by slowness and traditionally displayed in front of a (visual) artwork. The aesthetic touch reproduces the normatively constrained conduct usually adopted in such contexts: by deploying a specific contemplative posture and adopting the distended temporality of aesthetic contemplation, visually impaired persons are tactilely 'doing being visitors'.

Accomplishing artworks as aesthetic objects. But what kind of objects are artworks then? This kind of handling is clearly not oriented towards the *material* properties of the artwork (in themselves, paws or swings are not fragile materials), but to the *symbolic* properties attached to them. To experience the latter, participants orient to artworks' details: the object is carefully envisioned in its specificity and its materiality, and then, through the careful and contemplative-like handling process, participants are dialectically orienting to the object *as an artwork*.

9. Streeck evokes the 'contour following' (defined as "smooth movements within a segment of the object's contour", 2009, p. 66) as a practice used to evaluate the shape of the object.

Conclusion

Experiencing and constituting artworks as touchable objects: Detail and singularity

The analysed sequences show how visitors' relation to artworks is configured from "distant experience" to "manipulatory experience" (Mead, 1932). Indeed, blind visitors do experience these – normally visual – artworks *as touchable objects*. The artwork's preliminary formulations, as a selective process oriented towards certain objects' properties, on-going activities and recipient-designed, provide a specific and practical version of the artwork, and constitute it as an object to experience. Interestingly, the instruction is not about how these objects feel, but about how to interact with them, which preserves part of discovery in the forthcoming bodily experience. The handling sequence, as a highly collaborative activity, sequentially accomplished within a specific temporality, displays a tactile intelligibility through which the artwork is achieved as a *touchable* and *aesthetic* object. More precisely, in these data, artworks are apprehended through a detail-focused perception of one of their elements (one swing, one or two paws), from which VIPs are invited to 'imagine' the artwork as a whole. The sequentiality of the activities and the coordination of various multimodal resources contribute to constituting the artwork as a singular object, which obviously belongs to a wider category but which is nevertheless apprehended through its distinctive material potentialities.

Providing an empirical contribution to aesthetic theory: A practical ontology of artworks?

These analyses also contribute to a wider debate in art theory about art ontology and the status of the artistic object in the aesthetic experience. This difficulty, in fact, has been widely analysed in art theory: what does it imply to consider that artworks are objects? This problem is referred to as the "physical object hypothesis" (Wollheim, 1992), and raises the question of the "definition of art" (Goodman, 1976): does the artistic property *lie in* the material object, and/or somewhere else? If so, does it lie in the artist's intention (mentalistic option), in the context in which it is exhibited (institutional theory), or in its public reception, i.e. in the uses and practices connected to it (pragmatist aesthetics)?

As we already mentioned, the interactional – and pragmatist – perspective provides a strong framework, in which objects are only apprehended as objects-in-interaction. But more specifically, regarding these issues, the moments we analysed reveal that these types of tours are based on a strong postulate: the aesthetic experience fundamentally draws on the bodily and perceptual experience of the artistic object. Actually, at least from our theoretical and methodological perspective, this is precisely the only *accountable* and *describable* dimension of the aesthetic

experience. Hence, following Dewey's seminal claim to 'ordinarize' the aesthetic experience and to describe how the latter proceeds, our data provide descriptions of situated experiences of singular objects. In doing so, we aim at taking part in the development of empirical and practical aesthetics, which would account for the diversity of aesthetic conduct as well as the distinctive properties of artworks.

Interacting with artworks: Observability and accountability of members' practices

We hope our analyses contribute to a general methodological and theoretical reflection about how people interact with objects, and we notably tried to account for how artworks are accomplished, through verbal and manual actions, as specific perceptive objects. Nevertheless, dealing with artworks as aesthetic objects allows us to address specific issues bound to the observability of what members practically do with such objects. In that regard, the setting we studied, in its sequencing and given its participants, makes all the more observable the different steps of aesthetic activity, normatively and hierarchically organised – at least, in the context of guided tours: verbally introducing the artwork, bodily experiencing it on one's own (the palpation being much more observable than the visual observation), before providing further comments on it and possibly discussing it collaboratively. More specifically, as we have tried to show, given the fact that the aesthetic activity does not consist in a set of practical actions (like grasping, throwing, shaking etc.), it implies providing descriptive and analytical tools to account for what happens, namely a specific perceptive process, and to be sensitive to the properties and functions of objects, as far as they are elaborated and made observable in interaction.

Transcription conventions

The data were transcribed according to ICOR conventions (2007):

`[`	overlapping talk
`=`	latching
`(.)`	micro pause
`(0.6)`	timed pause
`:`	extension of the sound or the syllable it follows
`/ \`	rising and falling intonation
`mine`	emphasis
`°uh°`	lower voice
`.h h`	aspiration and out breath
`>>…<<`	acceleration
`(…)`	uncertain segment

An indicative translation is provided line per line, in order to help reading the original.

Description of gestures and actions are transcribed according to the following conventions (Mondada, 2007):

`* *`	Gestures and actions descriptions are delimited between two identical
`+ +`	symbols synchronised with correspondent stretches of talk
`-->*`	Gesture continues until the same symbol is reached
`.....`	Gesture's preparation
`---`	Gesture's apex is reached and maintained
`,,,,,`	Gesture's retraction
`bri`	Participant making gesture is identified when (s)he is not the speaker
`im.`	The exact point where screen shot has been taken is indicated by a
`#`	specific sign showing its position within turn at talk.

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References

Cekaite, A. (2010). Shepherding the child: Embodied directive sequences in parent-child interactions. *Text & Talk*, 30(1), 1–25. DOI: 10.1515/text.2010.001

Cometti, J.-P. (2000). *Art, modes d'emploi. Esquisses d'une philosophie de l'usage*. [Art, user's guide: Outline of a philosophy of use] Bruxelles: La Lettre Volée.

Conein, B. (1997). L'action avec les objets: un autre visage de l'action située? [Action with objects: Another face of situated action?] *Raisons Pratiques*, 8, 25–46.

De Fornel, M. (1993). Faire parler les objets. Perception, manipulation et qualification des objets dans l'enquête policière. [Make the objects talk. Perception, handling and qualification of objects in police investigation] *Raisons Pratiques*, 4, 241–265.

De Stefani, E. (2010). Reference as an interactively and multimodally accomplished practice: Organizing spatial reorientation in guided tours. In M. Pettorino, A. Giannini, I. Chiari, & F. Dovetto (Eds.), *Spoken communication between symbolics and deixis* (pp. 137–170). Newcastle: Cambridge Scholars Publishing.

Deppermann, A. (2011). The study of formulations as a key to an interactional semantics. *Human Studies*, 34(2), 115–128. DOI: 10.1007/s10746-011-9187-8

Dewey, J. (1980 [1934]). *Art as experience*. New York: Perigee Books.

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkeim's aphorism*. Oxford: Rowman & Littlefield.

Gibson, J. J. (1986 [1979]). *The ecological approach to visual perception*. New York: Taylor & Francis.

Goodman, N. (1976). *Languages of art*. Indianapolis: Hackett.

Heath, C., & vom Lehn, D. (2004). Configuring reception. (Dis-)Regarding the 'spectator' in museums and galleries. *Theory, Culture and Society*, 21(6), 43–65. DOI: 10.1177/0263276404047415

Keevallik, L. (2010). Bodily quoting in dance correction. *Research on Language and Social Interaction*, 43(4), 401–426. DOI: 10.1080/08351813.2010.518065

Kendon, A. (1990). *Conducting interaction: Patterns of behavior in focused encounters*. Cambridge: Cambridge University Press.

Kendon, A. (2004). *Gesture: Visible action as utterance*. Cambridge: Cambridge University Press.

LeBaron, C., & Streeck, J. (2000). Gesture, knowledge, and the world. In D. McNeill (Ed.), *Review of language and gesture: Window into thought and action* (pp. 118–138). Cambridge: Cambridge University Press.

Lindwall, O., & Ekström, A. (2012). Instruction-in-interaction: The teaching and learning of a manual skill. *Human Studies*, 35, 27–49. DOI: 10.1007/s10746-012-9213-5

Martin, C., & Sahlström, F. (2010). Learning as longitudinal interactional change: From other-repair to self-repair in physiotherapy treatment. *Discourse Processes*, 47, 668–697. DOI: 10.1080/01638531003628965

McNeill, D. (1992). *Hand and mind: What gestures reveal about thought*. Chicago: The Chicago University Press.

Mead, G. H. (1932). The physical thing. In *The philosophy of the present* (pp. 119–139). LaSalle: Open Court.

Mondada, L. (2007). Transcript variations and the indexicality of transcribing practices. *Discourse Studies*, 9, 809–821. DOI: 10.1177/1461445607082581

Mondada, L. (2009). The embodied and negotiated production of assessments in instructed actions. *Research on Language and Social Interaction*, 42(4), 329–361. DOI: 10.1080/08351810903296473

Napier, J. (1980). *Hands*. New York: Pantheon.

Nishizaka, A. (2007). Hand touching hand: Referential practice at a Japanese midwife house. *Human Studies*, 30(3), 199–217. DOI: 10.1007/s10746-007-9059-4

Nishizaka, A. (2011). Touch without vision: Referential practice in a non-technological environment. *Journal of Pragmatics*, 43, 504–520. DOI: 10.1016/j.pragma.2009.07.015

Pitsch, K. (2012). Exponat - Alltagsgegenstand - Turngerät. Zur interaktiven Konstitution von Objekten in einer Museumsausstellung. [Exhibition object – Everyday object – Turn-taking device. On the interactional constitution of objects in a museum exhibition] In H. Hausendorf, L. Mondada, & R. Schmitt (Eds.), *Raum als interaktive Resource* [Space as an interactional resource] (pp. 233–273). Tübingen: Narr.

Psathas, G. (1976). Mobility, orientation and navigation: Conceptual and theoretical considerations. *New Outlook for the Blind*, 9, 385–391.

Psathas, G. (1992). The study of extended sequences: The case of the garden lesson. In G. Watson, & R. M. Seiler (Eds.), *Text in context: Contributions to ethnomethodology* (pp. 99–122). Newbury Park: Sage.

Quéré, L. (1999). Action située et perception du sens. [Situated action and the perception of meaning] *Raisons Pratiques*, 10, 301–338.

Relieu, M. (1994). Les catégories dans l'action. L'apprentissage des traversées par des élèves non-voyants. [Categories in action. Learning to cross a road for visually impaired persons] *Raisons Pratiques*, 5, 185–218.

Sharrock W., & Coulter J. (1998). On what we can see. *Theory & Psychology*, 8(2), 147–164. DOI: 10.1177/0959354398082001

Streeck, J. (2003). The body taken for granted: Lingering dualism in research on social interaction. In P. Glenn, C. D. LeBaron & J. Mandelbaum (Eds.), *Studies in language and social interaction: In honor of Robert Hopper* (pp. 427–440). Mahwah, NJ: Lawrence Erlbaum.

Streeck, J. (2009). *Gesturecraft: The manu-facture of meaning*. Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/gs.2

vom Lehn, D. (2010). Discovering "experience-ables": Socially including visually impaired people in art museums. *Journal of Marketing Management*, 26(7–8), 764–769. DOI: 10.1080/02672571003780155

Wollheim, R. (1992). *Art and its objects*. Cambridge: Cambridge University Press.

Incidental and essential objects in interaction

Paper documents in journalistic work

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A large body of work points to the special status of paper documents in the ecology of objects in the workplace. In this chapter, we revisit this work, focusing on the role of paper in the everyday work of journalists. We examine three quite different empirical examples where paper documents feature in interaction, supporting, in turn, the structuring of conversation, collaboration and inter-organisational interaction. Based on these examples we argue for a distinction between *object-focused interactions* and *object-implicating interactions*. In addition, and related to the dual nature of documents being both material objects and carriers of information, we identify an analytic dimension along which interactions with objects can be placed, that from *incidental* to *essential*.

Introduction

Within the various areas of work concerned with objects in interaction, documents, and especially paper documents, occupy a central place. Paper documents have drawn the interest of researchers working in design-oriented fields, where the ambition has been to develop and build digital technology to support work and leisure activities (e.g. Signer, 2006; Stifelman, Aarons, & Schmandt, 2001; Yeh et al., 2006). A key concern in this body of research is to understand how interaction and work is intertwined with the use of paper documents of various kinds, so that new technologies can be fitted to these use practices (Luff, Heath, & Greatbatch, 1992; Sellen & Harper, 1997, 2002). Elucidating the *affordances* of paper, and how these may be preserved in shifts to digital technologies, has been one recurring topic of analytic and empirical attention (Gaver, 1996). Another line of work, taking its point of departure in conversation- and interaction-analytic interests, is concerned with understanding the role of paper documents for interaction more generally. Studies of, for instance, meeting talk (Asmuss & Svennevig, 2009; Deppermann, Schmitt, & Mondada, 2010), architectural design work (Mondada, 2012), medical

interaction (Jones, 2009) and academic supervision (Svinhufvud & Vehviläinen, 2013) have shown the various intricate ways that documents feature as resources for work and talk-in-interaction. A third strand of research should be mentioned, which approaches documents on a more organisational level, tracking the flow of information through documentary practices in workplaces and the ways in which documents feature in intersections between professions and other social-organisational boundaries (Lutters & Ackerman, 2002; Mambrey & Robinson, 1997; Star & Griesemer, 1989).

In the present study, we revisit this body of research through an empirical study of journalistic work. Three quite different situations in which paper documents feature in interaction are examined. These situations illustrate, respectively, how paper documents support conversation, how they are implicated in the collaborative organisation of work, and how they are used in inter-organisational interaction (e.g. in encounters between journalists and gatekeepers of intended shooting sites). Two interrelated themes are then discussed. First, we identify an analytic dimension along which interactions with objects can be placed, that from *incidental* to *essential* involvements of objects in interaction, and suggest that a distinction is made between *object-focused interactions* (cf. Hindmarsh & Heath, 2000) and various forms of *object-implicating interactions*. Second, we highlight a number of levels of specification at which objects may be approached: from material (e.g. paper), to empty forms (e.g. a blank printer paper), to docile records (e.g. a printed meeting agenda), to oriented objects (e.g. a material resource with the aid of which a topic shift is accomplished). We argue that it is only at the last level of analytic specification – the level of oriented objects – that we can begin to properly talk about objects in interaction.

A preliminary observation to make at the outset is that what we see when documenting actual naturally occurring interactions are different instances of oriented objects in use. In light of this observation, it is clear that one preliminary title of ours, 'uses of paper in journalistic work', would have been a misnomer, as participants in each instance rather make use of particular documents such as notes, agendas or press releases, with each use constituting the document in a particular way. Just as one would not say that a batter hitting a ball is engaged in wood use, but rather that he or she uses a bat for performing a baseball-relevant action, the journalists in our material are not handling paper as a material, but rather putting paper documents to use in the performance of work-relevant activities.

Setting and data collection

The present study was undertaken at TV4 Göteborg, a local news channel airing in Gothenburg, Sweden, and its surroundings. TV4 is a privately owned commercially run national television network. The local news is aired four times in the morning and two times in the evening. The reason for selecting journalistic work to do the study was that it is a type of work that easily lends itself to following whole work cycles. In the news production business, there is a deadline each day, or even several times a day, when the work has to be finished and released as a product. Consequently, an observer can follow how paper documents are used in all aspects of the work, from the point when a decision is made of covering a certain event to the point when a piece of news is aired (in the case of broadcast television).

An ethnomethodologically inspired workplace study (Luff, Hindmarsh, & Heath, 2000) has covered most parts of the work of making the news. When relevant and possible, video recordings of interaction around documents and screen-based activities were made. Documents used in the work have been collected as well. The work with the news has been followed throughout the day, from the morning meetings to the afternoon when the broadcast is put together and aired. Observations were made of the reporters' work of preparing before going into the field, as well as of their mobile work; then, the work of cutting the video to the final piece was documented, as were the news presenters' preparations for the broadcast; and finally, observations were made during the actual broadcast, both within the studio and from the control room. The video recordings have focused on interaction around screen-based information and paper, particularly at the morning meetings and at the arrangement of desks where the crew working with the upcoming news is seated. The episodes examined in the article are quite different in character: the first one draws primarily on the ethnographic fieldwork; the other two examples are based on transcriptions from the video documenting parts of the work. While studying the use of paper documents at the TV station, we made an effort to capture all parts of the work. This means that we examined not only 'easy to study' examples from stationary environments within the office, but also activities where journalists are mobile, thus highlighting the multiplicity of ways in which paper documents can serve as resources for interaction and work.

Paper documents in interaction at TV4

In the following, we provide analyses of three types of situations where paper documents are used as interactional resources. That is, these excerpts are illustrations of how pointing to, moving, visibly looking at, showing, or otherwise orienting to

and manipulating different types of documents, are resources for designing and understanding action. First, we show how a printed press release becomes a part of establishing the TV crew's presence at an intended shooting site as a legitimate activity; second, we describe how a printed paper is used as a resource to get a conversation during a morning meeting back to serious business; and, third, we analyse a sequence where passing on a post-it note implies passing on responsibility for a task.

Paper documents in support of negotiating access in the field

In the mornings, the editor-in-chief gives the reporters their work to do that day. The reporters then prepare their work before going out in the field, to interview someone, or to attend a trial or a sports event, etc. Giving someone 'a job' to cover is commonly done by giving the reporter a piece of paper referred to as the task-sheet (in Swedish: *utlägg*). The task-sheet can be many different things, e.g. a telegram printed from TT Reuters news service, a press release sent to the news station, a copy of a preliminary investigation report concerning a case to be brought up in the city court, etc. These papers are either printed by the editor-in-chief just before being handed over to the reporter or retrieved from the so-called diary, a paper archive system, organised according to date, where upcoming events are gathered. The task-sheet is then used in a number of ways during the workday, acquiring many different properties. In this excerpt, we will see how a reporter uses the paper in the field to negotiate access to a shooting location.

The reporter receives a printed press release sent to the news station from a company making incontinence protection, announcing 'the best public restrooms in Gothenburg'. This will be covered in the local news as the final piece of the news, what they call the 'round part' of the news, i.e. the more humouristic or less serious parts of the news. This evening's news presenter, Fabian, will also act as the reporter in this case. Fabian and a photographer go together out in the field to make a short piece on the restrooms.

Excerpt 1 (from fieldnotes)

Two public restrooms are the target for this news piece. They are both located in the Central Station of Gothenburg. Arriving at the first of these two sets of lavatories, the reporter and photographer comment that it wasn't as impressive as they had thought. Fabian checks his papers, yes, it was the bus terminal where the toilets were located. They are in the right place.

The photographer starts arranging the video equipment. He adjusts the light settings, while the reporter walks around to check how they will film. A uniformed woman walks up to them and asks if they have permission to film. Fabian admits that they don't have such permission. She gives them a phone number to someone they can call

and ask for permission, and the woman walks away. The photographer makes the call from his mobile phone, and is put on hold. They wait around. The woman comes back: 'Did you get hold of her?' 'No. What is it about?', she asks. Fabian explains that this restroom facility has been selected as Gothenburg's best: 'Maybe you have heard about it'. She hasn't. Fabian takes out of his pocket the press release, and shows it to her. She looks at it briefly and says 'I don't read the newspapers'. They are not allowed to film.

Filming in public is a potentially controversial activity, and in this type of location one presumably needs a particularly good excuse to operate a video camera. The crew encounters problems as a member of the staff discovers what they are doing, and they have to provide an explanation. The press release at this point is invoked as a resource in explaining the official business they are there to do, thus attempting to legitimise their presence and actions.

The staff member's 'I don't read the newspapers' effectively ends the conversation, and the news crew walks away to look for another shooting site. In the next excerpt, we see how the press release is used in a similar way when they finally gain access to film the restrooms:

Excerpt 2 (from fieldnotes)

Fabian and the photographer continue to the next restroom facilities, where the other toilet is located just next to a left luggage. Fabian walks up to the counter and explains to a member of the staff why they are there. He shows the paper, the man takes it and walks away reading. He makes a call, and holds the paper and looks at it while talking. He gives it back to the reporter, and says that it is okay to film, after he has cleaned the toilets. The reporter and photographer enter the facilities and make the short clip.

In these excerpts, the paper is used at two separate occasions to negotiate access to the field. The document is employed in the work of establishing the reporters' presence as official business, thereby avoiding the risk that the reporters are seen as just anyone with a camera wanting to film the lavatories. Providing the press release at these instances in interaction brings an authoritative outside source into their conversation. The document along with verbal explanations is used as a resource to formulate their actions, which might seem dubious in the environment in question, as a legitimate part of work. The paper does not contain any official proof that Fabian is in fact a journalist. The information on the paper nevertheless becomes relevant in the interaction; in fact, it makes possible the ways in which the members of staff manage their contact with their superiors in that it serves as a resource in formulating the crew's presence as relevant and acceptable. The paper provides a reason for the reporters being at the site and doing what they are doing.

These findings tie in with what has been observed in previous studies, that printed media are commonly treated as more official and true than hand-written information:

> [o]ne can view verbal communication, handwritten records and electronic records existing in a rough kind of hierarchical order, whereby what is communicated or documented has an increasingly 'permanent' character, becomes more authoritative, accountable, and potentially available to a wider audience.
>
> (Hardstone et al., 2004, p. 146)

Bringing a printout of an electronic record (the press release) thus implies bringing an official voice into the conversation, giving the reporters' claims a 'true' and 'valid' quality.

The press release is not a standardised type of document that routinely features in intersections between disparate social worlds and professional niches (such as the forms examined under the rubric of 'boundary objects', see Star & Griesemer, 1989), and not an established point of contact between social worlds whose interactions have been institutionalised and conventionalised (Star & Griesemer, 1989). In this case, the intersection is not an inter-organisational boundary, but a point of contact between a journalist and gatekeepers of the intended shooting location. The document is contingently invoked as a resource for managing an out-of-the-ordinary event, for this short interaction only. That is, the quality of supporting translations between journalistic relevancies and those guiding the work of the restroom staff is something that the press release acquires only in interaction. The restroom staff is unfamiliar with this type of document, and for them it is not organisationally recognisable and relevant. A situational relevance for all practical purposes must thus be accomplished in the interaction; through explanation and reading, for instance.

That the task-sheet was used in these ways was not an isolated event; similar observations were made in other dealings with the public and interviewees. When going out in the field, the journalists would often carry documents, sometimes the day-list handed out at the morning meeting (see Excerpt 3), or maps, telephone numbers, etc. These documents would every now and then be invoked in negotiating access, as in this example, or finding the right person to talk to, finding the way to a shooting location, etc. This example provides an initial illustration of the highly contingent and opportunistic uses of paper documents evident in our data material. The press release was designed to bring attention to a certain event with the hopes this would be covered in the news, not primarily to function as means to gain access to the field, or to be shown to members of the society in general. This ties in with the previously described usefulness of paper documents in mobile work for "opportunistic appropriation… in a range of circumstances, both predictable and unpredictable" (Perry, O'Hara, Sellen, Brown, & Harper, 2001, p. 335).

Paper documents in the management of meeting talk

It has been argued that "[m]eeting talk is fundamentally intertwined with written documents", e.g. agendas and other documents to discuss during the meeting, and that this practice has not received much detailed analytic attention (Asmuss & Svennevig, 2009, p. 11). Excerpt 3 is presented as an example of a practice that has been found to be recurring in the data material; the object, a meeting agenda, is regularly incorporated in the verbal and embodied actions (often performed by the editor-in-chief) that mark and achieve the commencement of the morning meeting. As such, it is employed as a material resource for accomplishing topic and activity shifts (see Mikkola and Lehtinen, this volume).

The editor-in-chief begins each morning with judging the news situation for the day, based on reports in other media, a telegram service, and information they have gathered previously about events occurring that day. She then puts together and distributes copies of a list of the news that is discussed during the morning meeting. This document is called the 'day-list' (in Swedish: *daglistan*), and it lists the names of the staff working that day, as well as the different possible stories or items that the current day's broadcast could potentially be composed of.

In Excerpt 3, we will show how the day-list is brought into play in the interaction, just as the talk transfers from social small talk to the first topic of the meeting: evaluation of yesterday's news. The staff has just watched the morning news. Carro is the editor-in-chief in charge of the group this morning and has distributed the day-list. They are waiting for some additional staff members to arrive. Hans, the news presenter who has just finished in the studio, arrives but does not find a seat and looks around for a chair. While waiting, they discuss one employee's recent visit to the hairdresser and then drift off into a somewhat jocular conversation about different hairstyles. This topic is wrapped up in a series of turns that culminates in the following sequence.

Excerpt 3 (Video: Morning meeting)

ELI = Elin, TOB = Tobias, CAR = Carro (the editor-in-chief), TOM = Tom and HAN = Hans (the news anchor)

```
01 ELI:  [okej nu vet vi allt om=
         okay now we know everything about=
02 TOB:  [det var en spännande period eh,
         it was an ex- exciting period in eh,
03 ELI:  =Carros,
         =Carro's,
04 TOB:  hehh.
         hehh.
```

```
05 CAR:  det var tider det
         those were the days
06 ELI:  herregud=
         oh lord=
07 TOB:  =väldigt roligt tycker jag
         =very funny I think
08 ELI:  jag är helt chockad
         I'm in total shock
09 CAR:  *så var det.* yes!
         *that's how it was.* right!
         *holds papers with both hands, hits them on her knee and
         leans forward, gazing at papers*
10       e::h jag vet inte om- *>Pontus vill nog inte riktigt* va
         med,< #
         e::h I don't know if- *>Pontus doesn't seem* to want to
         join us,<
    car  *turns and looks behind her*
    fig  #figure 1
11 CAR:  *vi kan prata lite om gårdagen* (.) vi hade
         *we can talk a little bit about yesterday* (.) we had
    tom  *glances towards Carro's papers, leans over and looks at
         the table, glancing back down at the papers, leans back
         again*
13       ju *skoljobb från Kungälv*
         we had *a school job from Kungälv*
    han  *rolling a chair towards the group*
    car  eye-gaze directed at papers
14       *vi hade* Veronica Lind, vi hade fake live på Frölunda
         *we had* Veronica Lind, we had fake live at Frölunda
    han  *sits down*
```



Figure 1. The morning meeting, with the editor-in-chief, Carro, sitting to the right looking at the day-list. Tom, to the upper right, begins his movement towards the table (see line 10 in transcript)

In this excerpt, we can see how the group manages the transition from talk that is not in any direct way work-related to getting on with the business of going over yesterday's news. Below, we will focus on how the day-list features in this transition. One thing is particularly noteworthy with respect to the day-list: although used and oriented to as a resource for managing the activity shift to a discussion of yesterday's news, the document does not actually contain any information about this topic. Thus, neither the informational content, nor, as we shall argue, the task or activity related rationale for distributing the paper during this meeting, give an exhaustive account of the ways in which the day-list is used here. Action sequences such as these have been described by Boden (1994) as sharing a general orienting pattern in the immediate opening section, consisting of "an assessment of attendance and/or a proposal to 'get started', which is typically prefaced by a standard topic transition marker such as: so, okay, uh, ehm" (p. 96). We would argue that, apart from talk, the construction of actions such as these also employs available material resources (cf. LeBaron & Jones, 2002; Svinhufvud & Vehviläinen, 2013); and one ubiquitously available resource, especially in formal meetings, is paper documents. Boden (1994) mentions paper documents only in passing, as typically distributed at the start of meetings but rarely relied upon in any explicit way. This excerpt shows how paper documents can be deeply intertwined with talk and gesture for the purposes of managing interaction in activity shifts.

The group ends the pre-meeting talk (see Mirivel & Tracy, 2005) leading the conversation on to the actual work to be done: discussing the recent broadcasts. Lines 01–06 in the excerpt all connect with the topic of the editor-in-chief's past hair-styles, a subject that is effectively ended with Carro's utterance at line 09: 'that's how it was. right!'. While setting up a closure-relevant sequential environment of summaries and assessments, some in idiomatic form (cf. Drew & Holt, 1998), lines 01–06 still allow for the possibility of further talk on the previous topic. Carro's utterance on line 09 is different in this regard, as it forcefully establishes the topic of hairstyles as concluded. The utterance has the double function of wrapping up previous talk and moving on to the next topic. The use of 'right' (our rendering of what in the original was the use of the English word *yes*) has a similar function as *okay* in that it can function as a "means of simultaneously attending to prior turn while also setting-up next-positioned matters (topics/activities)" (Beach, 1993, p. 329). Being the editor-in-chief, and thus the chairperson for the meeting, Carro has a certain privilege in the administration of the turn-taking and topic organisation of the meeting (Asmuss & Svennevig, 2009).

The ways in which the editor-in-chief designs her utterance relies upon a complex intermingling of talk and gestures, with the use of the paper document as an important feature. Note, again, that the content of the paper is a list of *today's* jobs, and the editor-in-chief's gaze (line 09) at the paper as she manages the topic

transition to 'talk a little bit about yesterday' (line 11) is presumably not an act of retrieving information. The timely glances and gestures at the day-list that recurrently feature in this kind of sequence thus have less to do with the task-related rationale for distributing the paper at the meeting, e.g. that it is to be used as a shared agenda of news items to consider and discuss, than with the conversational actions it makes possible. Note that the visible orientation to the agenda prompts Tom to begin a search for a copy; its irrelevance for the content of the ensuing talk is thus not immediately clear to all participants. As Carro says 'yesterday', however, the incipient search is aborted.

The role of the document in this particular action sequence can be understood in the following way: first, it provides a readily available object at which Carro can direct her gaze, disengaging from the ongoing topic and activity of casual conversation; and second, by enabling an easily readable reference to the intended work of the meeting, the printed day-list can be used as a tool for the management of activities that diverge from the accountably serious business of the setting. In that respect, visibly manipulating and orienting to the day-list could be said to perform a similar function as would an utterance saying 'back to work', although allowing the activity shift to be done in a much less direct and confrontational manner. A lexical gloss (cf. Goodwin, 2000) on action performed through gesture would furthermore downplay the distinctiveness of the material resource provided by the paper document. The editor's orientations to the document are rather being implicated in interaction in a way that would sort them under the same general rubric as gestures, tones of voice, directions of gaze and so on; that is, the document becomes one in a range of multimodal resources for the management of interaction.

Paper documents as a resource in the delegation of work

Interactions around paper documents occur in innumerable ways at TV4. Some interactions are relatively formal and organised, as the one described above. Others are brief and informal, but nevertheless important for the ongoing coordination of work. Additionally, documents themselves vary in their degree of formalisation and standardisation, influencing their status as known-in-common 'kinds' of documents within the organisation. Thus, while meeting agendas such as the day-list (as discussed in the previous section) are expected and recognised, requiring no particular presentation or formulation, other documents in use acquire their significance in an ad hoc way, by virtue, for instance, of the particular notes they carry or the specific situation in which they are brought into play. The next sequence takes place in the afternoon on the same day as the previous excerpt.

In the afternoon, the editor, who today is Mia, comes in and works alongside the editor-in-chief, Carro, for a couple of hours to catch up on the news situation. The editor is in charge when the editor-in-chief leaves and is also in charge in the control room during the airing of the evening news.

Mia and Carro are sitting at the news desk with Mia positioned at the editor's desk. Mia is engaged in a telephone conversation with a reporter out in the field when the secretary working at the reception walks up to the desk, holding a post-it note. She walks past Mia and up to Carro.

Excerpt 4 (Video: The desk)

MIA = Mia, CAR = Carro, SEC = the secretary

```
01 MIA:  ((talking on the phone)) heh (.) ja [det kan man också
         göra
         heh (.) yes that one can do
02       det kanske är ännu bättre
         that is maybe even better
    sec  walks quickly towards Carro's desk
03 SEC:  [*°jag* tror att du ska ta (det här) telefonnumret va°
         °I think you should take (this) telephone number right°
    car  *leans over and puts the post-it note on Carro's
         keyboard*
    fig  figure #2, left
04 CAR:  ska jag ringa honom
         should I call him
    car  picks up the post-it note and looks at it as the
         secretary
         walks away from the desk
05 SEC:  ja
         yeah
    sec  walking away
    car  puts the note on the desk in front of her, looks at her
         screen,
         starts typing
06 MIA:  ((on the phone)) ja jättebra hej hej he::j (5.0) ((hangs
         up))
         ((on the phone)) yes very good bye bye by::e (5.0) ((hangs
         up))
    car  picks up the note and spins the chair over towards Mia
07 CAR:  *det här är Lars Björkman*
         this is Lars Björkman
         *rolls her chair over towards Mia*
08       han vill *tydligen* att
         he *apparently* wants
         *puts the note on the desk close to Mia*
    fig  figure #2, right
```

```
09        *nån ringer (.) >ska jag,<*
          *someone to call (.) >should I,<*
          *spins chair back towards her own desk and makes a
          quick glance over her shoulder towards Mia and the note*
10 MIA:   okej
          okay
     mia  glances sideways at the note
11 CAR:   du eller jag
          you or me
     car  resumes position at her computer
12 MIA:   jag kan ringa honom
          I can call him
          they both turn towards their own desks
```



Figure 2. Secretary placing a post-it note on Carro's keyboard (left, see line 03, Excerpt 4), and Carro handing over the note (right, see line 08, Excerpt 4)

A telephone call to the reception results in the receptionist jotting down a name and a telephone number on a post-it note. She then takes the note to Carro; being one of the editors, she is presumably suitable to take care of the matter. As the secretary hands over the note to Carro, she formulates the note's status as a work-task to be dealt with: 'I think you should take this telephone number right?' (line 03). Formulated as a question, the utterance is cast as a bit uncertain as to just how it is to be dealt with, and by whom. In fact, during this point in time, when the editor-in-chief works alongside the editor before handing over, it is sometimes unclear to the staff who is in charge. This uncertainty may also be at play in the negotiation between Mia and Carro about who should do this job.

Just what is to be done with this note is not clear then, and Carro asks the secretary for clarification (line 04). Getting confirmation on the task as calling back Lars Björkman, Carro puts the note on her desk and resumes work. Precisely after Mia has finished talking on the phone, Carro spins her chair over and puts the note next to Mia. In handing over the note, she formulates the note as 'being' Lars Björkman (the caller) who 'apparently wants someone to call' (line 07). Notable here are the verbal contributions that accompany the note at the points where it is handed over. Both the secretary and the editor-in-chief provide the note with formulations: 'this telephone number' (line 01) and 'here's Lars Björkman' (line 07).

In this kind of ad hoc transaction, where non-standardised documents are being produced and presented, the documents' status as relevant objects need to be *achieved* by verbal means.

When handing over the note to Mia, Carro's body is facing only very briefly towards Mia, and she quickly turns back and rolls the chair back into under her desk again, resuming her position at the keyboard. In fact, she begins rolling back her chair even before she has asked the question of who should make the call. In addition, her offering 'Should I' is delivered quickly and with a falling intonation, with the back towards Mia, all adding up to her offering being less likely to be taken as that. In this way, she is leaving the post-it note and the task of making the call behind her, even literally.

In terms of its use as an interactional resource, Carro's action of forwarding the note along with her saying 'he apparently wants someone to call' (line 08) and then 'you or me' (line 10) performs the work of an imperative. The post-it note and the ways in which it is manipulated can thus be said to provide Carro with "a modality for insisting" (Goodwin, 2000, p. 1499), which turns an utterance otherwise phrased as a question ('you or me') into part of a complex multimodal gesture for more or less imperatively delegating the work-task. It has been observed that sense of entitlement in proposal sequences is tied to institutional roles and encoded by verbal as well as embodied means, including orientations to material objects (Asmuss & Oshima, 2012). Here, verbal formulations displaying an equivocal ownership of the task ('he… wants someone to call', 'should I', 'you or me') is laminated with embodied orientations and manipulations of objects that strongly signal delegation, an action tied to a superior institutional position, and a high entitlement in proposing the action of the call.

The task, prompted by the initial call received by the secretary, moves from the reception, via the receptionist to Carro, and then on to Mia. Throughout these stages the post-it note serves as an information medium, retaining minimal information about the call (name and number). It also, however, serves as proxy for the task itself. It is an organisational 'hub' employed as a tool in coordination and division of labour (Hindmarsh & Heath, 2000, p. 554). That is, passing on documents can be a way of managing issues of accountability, delegating tasks in a very palpable sense (Hindmarsh & Heath, 2000; Sellen & Harper, 2002) so that possessing the post-it note implies responsibility for performing the task. In this analysis, the focus has not been on the way the post-it note affords the practices involved in inscribing information on it, nor on the ways in which that information is read (even though the inscribed telephone number is central for understanding why it is manipulated the way it is). Rather, its function as an interactional resource has been highlighted in order to show how a practice such as passing on a piece of paper can serve important interactional and work-relevant purposes.

Discussion

In this chapter, we have explored three different episodes of work where participants have used paper objects of different kinds as resources for interaction. As a gross categorisation of these uses, one could say that the three episodes represent instances where documents are involved in the structuring of conversation, collaboration and inter-organisational interaction, respectively. Thus, not only are the documents quite different from each other, but the uses to which they are put are diverse as well. This diversity can also be said to reflect the special status of paper documents in the ecology of objects in the workspace; paper is pervasive, recruited for many purposes and, as testified by the extensive efforts in design oriented research and technology development in the area, notoriously difficult to replace.

Another and related dimension along which to place the analysed episodes is that from *incidental* to *essential* involvements of objects in interaction. In Excerpt 3, the day-list is used as a means to conversational ends, to shift topic in the ongoing talk and steer the interaction towards the business at hand. The object as such is only peripherally attended to; the action of gazing at the document and moving it does not engender, and is not designed to invite, focused scrutiny of the contents of the document among the interlocutors. The talk, referencing yesterday's news, and the fact that the editor's gaze leaves the document shortly after the topic shift is achieved, instructs the interlocutors to see the manipulations of the document as just that, a way of reorienting the conversation to the work of the meeting rather than a prompt to examine the document. This example thus represents an *object-implicating* interaction, rather than an *object-focused* interaction; the use of the document, while contributing to this performance of an activity shift, is only *incidental* to the shift itself, meaning that the shift could have been achieved with other means. When the meeting moves on to a discussion of the work of the day, however, the mode of orientation to the object changes to more focused scrutiny; the document itself becomes essential to the activity of deciding which of the listed news items to cover.

In Excerpt 4, where a post-it note arrives from the front desk in the hand of the secretary, to be given to the editor-in-chief and then passed on to the editor, a collaborative use of paper can be said to take place. The note features in the flow of activity from the front desk, where information regarding a caller was noted, and comes to represent – by virtue of the inscription it carries – a task that has to be dealt with. Passing along the note implies passing along responsibility for the task and thus organises collaboration in the sense of defining ownership of a particular projected action. Whereas the extract from the morning meeting showed an incidental use of an object, this episode represents a higher degree of involvement with the object; the identity and significance of the object itself is central here, as is the information

recorded on it. The latter is read by the editor-in-chief and used in formulating the note as it is passed on to the editor. Formulation also features in the secretary's initial delivery of the note, further emphasising the character of the transaction as an object-focused interaction. The information on the note is not used, however, for the work it centrally enables, namely calling back to the initial caller. This task is suspended for now, awaiting a suitable slot in the editor's ongoing work.

The first example (Excerpts 1 and 2), where a task-sheet becomes implicated in negotiating access to a shooting location, also represents a set of object-focused interactions where the object is essentially involved. Initially, the reporter uses the sheet to confirm the location of the restrooms, thus extracting a piece of technical information from it. Subsequently, however, the document takes on a different significance as it is read by members of the staff at the restrooms in question. While the reporter's act of retrieving information from the press release is done against a background of familiarity with the document, the members of staff encounter the document for the first time. It is handed to them, and it is read with the aim of figuring out what it is about and how it is relevant to them. Here, too, the document is provided with formulations to establish a shared understanding of its significance and to argue for its status as a reason to allow filming at the restrooms. The second member of staff, furthermore, reads the text in order to explain the situation to superiors over the phone. On a continuum of incidentiality to essentiality in the interaction with objects, this inter-organisational use of a document represents a further step in the direction of greater involvement; the members of staff in particular engage in the work of figuring out the object's significance through reading, aided by the reporter's formulations, and subsequently relating information in the press release to superiors. That an inter-organisational use of a document also coincides with a more focused examination of the object is perhaps not a mere coincidence, as the movement of an object over organisational borders increases the likelihood that the object is unfamiliar to the receiving party.

Two points can be made on the basis of this discussion. First, the identified dimension from incidental to essential involvements points to the dual nature of documents: they are both material objects and carriers of inscribed information. The present analyses show that the relative situational relevance of these two facets is not given beforehand but established sequentially, moment by moment, in interaction. Second, interaction with objects can be done in very different ways, from appropriation of objects into communicative (conversational) projects where the object plays only a peripheral or incidental role, to focused and sometimes exploratory interactions, as in instances where unfamiliar or less standardised objects are encountered. Analytic treatments of instances of objects in interaction, then, may profitably take into consideration the distinction between incidental and essential involvements.

For all this discussion of differences and variability, one important commonality of course characterises all three episodes – they involve objects made of paper. Yet, as the analysed episodes illustrate, the material paper takes on many different shapes. It is fashioned into blank printer papers, for instance, and post-it notes. These kinds of *empty forms* can then be filled with various annotations and inscriptions. In the episodes analysed here, the first two involve documents of the former kind, printer papers inscribed with information. If viewed in isolation as printed documents (as a meeting agenda known as a day-list or a press release intended to function as a task-sheet), however, they are still 'docile records' (Garfinkel, Lynch, & Livingston, 1981) in a sense, not yet brought to life in interaction and use. It is only in examining sequences in which these records are involved, that we can begin to talk of them as objects in interaction. One could go further and say that their status as objects, in any practically relevant sense, is only acquired in use; it is as 'oriented objects' (Garfinkel, 2002) that they are encountered and employed in the workplace. As Rawls (2005) phrases this argument:

> '[t]hings' are made to appear as objects of a sort only when oriented toward in specifiable ways in the context of a practice. In the context of a different practice, objects will be made to appear differently and will have different developing horizons. (p. 166)

Analytically this means that a research interest in some form of object, such as an interest in the use of paper in the workplace, may be approached along a continuum of specification, from *material* (e.g. paper), to *empty forms*, to *docile records*, to *oriented objects*. Materials and forms are also specified in this way as a practical endeavour in each instance of paper-use. Forms are manufactured from materials; forms are inscribed with information; and then put to various uses in interaction. Each specification also constrains and builds potentialities for further specification. Printer papers differ from post-it notes in this regard, and a blank paper inscribed with a day-list proffers a different range of oriented objects in use than does a printed press release intended as a task-sheet. As we have seen, however, the openness to opportunistic appropriation is wide.

As noted in the introduction to this chapter, much of the previous work on paper in interaction has been driven by an interest in technological design. In light of the present discussion one could note that design work tends to approach the issue of paper at one of the sketched levels of specification. Theoretical work in the area has been devoted to the material paper and its affordances, while technological solutions have been geared towards particular records (e.g. electronic patient records, cf. Winman & Rystedt, 2011, and similar systems), or to the provision of flexible augmented surfaces and forms (such as the tabs and pads of the ubiquitous computing approach, see Weiser, 1999). Rarely, however, is a material offered out

of which different forms can be fashioned, and rarely are design efforts directed at the level of oriented objects.

In different ways, our examples point to ways in which paper documents take on significances not exhaustively accounted for by their physical properties or information content. They show how inscriptions and materiality become differentially salient over the course of interaction sequences; at points the former is foregrounded, whilst at others the document as a material 'thing' is manipulated with relative inattention to any inscriptions it may carry. Although the persistent presence of paper in organisations can, to a large extent, be explained by the ways in which the physical affordances of the material instrumentally support work-relevant tasks, there is a wider range of use practices that has yet to be explored further; the multifarious involvements of paper documents in vernacular organisations of interaction. Illustrating how "the concept of 'object' can… be exploded as a gloss for a huge number of participant distinctions and treatments" (Hindmarsh & Heath, 2000, p. 557), these involvements – ranging from the incidental to the essential – differently constitute otherwise docile records as oriented objects in interaction.

References

Asmuss, B., & Oshima, S. (2012). Negotiations of entitlement in proposal sequences. *Discourse Studies*, 14(1), 67–86. DOI: 10.1177/1461445611427215

Asmuss, B., & Svennevig, J. (2009). Meeting talk: An introduction. *Journal of Business Communication*, 46(1), 3–22. DOI: 10.1177/0021943608326761

Beach, W. A. (1993). Transitional regularities for casual 'okay' usages. *Journal of Pragmatics*, 19(4), 325–352. DOI: 10.1016/0378-2166(93)90092-4

Boden, D. (1994). *The business of talk: Organizations in action*. Cambridge: Polity Press/Basil Blackwell.

Deppermann, A., Schmitt, R., & Mondada, L. (2010). Agenda and emergence: Contingent and planned activities in a meeting. *Journal of Pragmatics*, 42(6), 1700–1718. DOI: 10.1016/j.pragma.2009.10.006

Drew, P. & Holt, E. (1998). Figures of speech: Figurative expressions and the management of topic transition in conversation. *Language in Society*, 27(4), 495–523. DOI: 10.1017/S0047404500020200

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkheim's aphorism*. Lanham, MD: Rowman & Littlefield.

Garfinkel, H., Lynch, M., & Livingston, E. (1981). The work of a discovering science construed with materials from the optically discovered pulsar. *Philosophy of the Social Sciences*, 11(2), 131–158.

Gaver, W. W. (1996). Affordances for interaction: The social is material for design. *Ecological Psychology*, 8(2), 111–129. DOI: 10.1207/s15326969eco0802_2

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of pragmatics*, 32(10), 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X

Hardstone, G., Hartswood, M., Procter, R., Slack, R., Voss, A., & Rees, G. (2004). Supporting informality: Team working and integrated care records. In *Proceedings of CSCW'04 Conference on Computer-Supported Cooperative Work 2004* (pp. 142–151). New York, NY: ACM Press.

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29(5), 523–562. DOI: 10.1177/089124100129023990

Jones, A. (2009). Creating history: Documents and patient participation in nurse–patient interviews. *Sociology of Health & Illness*, 31(6), 907–923. DOI: 10.1111/j.1467-9566.2009.01190.x

LeBaron, C., & Jones, S. (2002). Closing up closings: Showing the relevance of the social and material surround to the completion of interaction. *Journal of Communication*, 52(3), 542–565. DOI: 10.1111/j.1460-2466.2002.tb02561.x

Luff, P. K., Heath, C., & Greatbatch, D. L. (1992). Tasks-in-interaction: Paper and screen based activity in collaborative work. In *Proceedings of CSCW'92 Conference on Computer-Supported Cooperative Work 1992* (pp. 163–170). New York, NY: ACM Press.

Luff, P., Hindmarsh, J., & Heath, C. (Eds.) (2000). *Workplace studies: Recovering work practice and informing system design*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511628122

Lutters, W. G., & Ackerman, M. S. (2002). Achieving safety: A field study of boundary objects in aircraft technical support. In *Proceedings of CSCW'02 Conference on Computer-Supported Cooperative Work 2002* (pp. 266–275). New York, NY: ACM Press.

Mambrey, P., & Robinson, M. (1997). Understanding the role of documents in a hierarchical flow of work. In *Proceedings of GROUP '97* (pp. 119–127). New York, NY: ACM Press.

Mirivel, J. C., & Tracy, K. (2005). Premeeting talk: An organizationally crucial form of talk. *Research on Language and Social Interaction*, 38(1), 1–34. DOI: 10.1207/s15327973rlsi3801_1

Mondada, L. (2012). Video analysis and the temporality of inscriptions within social interaction: The case of architects at work. *Qualitative Research*, 12(3), 304–333. DOI: 10.1177/1468794112438149

Perry, M., O'Hara, K., Sellen, A., Brown, B., & Harper, R. (2001). Dealing with mobility: Understanding access anytime, anywhere. *ACM Transactions on Computer-Human Interaction*, 8(4), 323–347. DOI: 10.1145/504704.504707

Rawls, A. W. (2005). Garfinkel's conception of time. *Time & Society*, 14(2–3), 163–190. DOI: 10.1177/0961463X05055132

Sellen, A. J., & Harper, R. H. R. (1997). Paper as an analytic resource for the design of new technologies. In *Proceedings of CHI '97* (pp. 319–326). New York, NY: ACM Press.

Sellen, A. J., & Harper, R. H. R. (2002). *The myth of the paperless office*. Cambridge, MA: MIT Press.

Signer, B. (2006). Fundamental concepts for interactive paper and cross media information spaces. PhD Dissertation ETH No. 16218. Zurich, Switzerland.

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39. *Social Studies of Science*, 19(3), 387–420. DOI: 10.1177/030631289019003001

Stifelman, L., Aarons, B., & Schmandt, C. (2001). The audio notebook: Paper and pen interaction with structured speech. In *Proceedings of CHI '01* (pp. 182–189). New York, NY: ACM Press.

Svinhufvud, K., & Vehviläinen, S. (2013). Papers, documents, and the opening of academic supervision. *Text & Talk*, 33(1), 139–166.

Weiser, M. (1999). Some computer science issues in ubiquitous computing. *Mobile Computing and Communications Review*, 3(3), 12–21. DOI: 10.1145/329124.329127

Winman, T., & Rystedt, H. (2011). Electronic patient records in action: Transforming information into professionally relevant knowledge. *Health Informatics Journal*, 17(1), 51–62. DOI: 10.1177/1460458210396330

Yeh, R. B., Liao, C., Klemmer, S. R., Guimbretière, F., Lee, B., Kakaradov, B., Stamberger, J., & Paepcke, A. (2006). ButterflyNet: A mobile capture and access system for field biology research. *Proceedings of CHI '06* (pp. 571–580). New York, NY: ACM Press.

Envisioning the plan in interaction

Configuring pipes during a plumbers' meeting

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The central focus of this chapter is the methods of practical reasoning that accomplish a mutual understanding of relevant objects during the organisation and operation of a plumbing design. To execute successfully the task of coordinating disparate actions in the work, participants must achieve a shared and collective vision of the particular objects under discussion. We emphasise that for objects to be used as interactional *resources*, they must first be made recognisable and intelligible as interactional *accomplishments*, though we also suggest that these two analytical issues are inseparable for members when developing a course of practical activity. Objects in our study include tangible artefacts that have physical materiality as well as not-yet-existing abstractions, the designs.

Introduction

Planning is the realisation of daily organisational activities. Participants in an organisation make objects a means by which the organisation's activities become accountable and available in various ways. The central focus of this chapter is the methods of practical reasoning that accomplish a mutual understanding of relevant objects during the organising and working of a plumbing design. With this we contribute to an empirical understanding of the practices of coordinating disparate work based upon the division of labour within a firm and the ways in which participants establish various kinds of relevant objects for this purpose. Whilst objects in the workplace have been studied frequently with respect to how participants make use of available objects as interactional *resources*, we emphasise objects as interactional *accomplishments*. For objects to be used as interactional resources, they must first be made recognisable and intelligible. Additionally, we suggest that these two analytical issues are inseparable and thus non-exclusive for members when developing a course of practical activity.

Within a broad range of workplace studies, many investigations with diverse approaches and backgrounds have addressed the relationship between social actions and the material world in collaborative organisational settings (e.g. Heath & Luff, 2000). Our approach is consistent with ethnomethodology (Garfinkel, 1967), studies of work through ethnography and examinations of naturally occurring activities with video recordings (Llewellyn & Hindmarsh, 2009). As a starting point, we build upon a distinctive treatment of objects in ethnomethodology. Studies in ethnomethodology address empirical and observable materials of organised activities to explore the methods that constitute social order "whereby members produce and manage settings of organised everyday affairs" (Garfinkel, 1967, p. 1). In an early manuscript, Harold Garfinkel clearly argues this point: "the object is experienced as an object, through an order of specifications; this *order of specifications* being all of what is meant by the term 'object'" (Garfinkel, 2008, p. 133; original emphasis). People tend to assume that objects are already available, waiting for members to use them. However, objects have to be mutually oriented to and perceived as nothing but *this* particular object in order to be used and treated as the same object. As Ann Rawls (2008) put it:

> Garfinkel's point is that objects – things – of *any sort* must be "thingified" in the context of some shared practice in order to be rendered in mutually intelligible ways – recognisably and mutually coherent for more than one person at the same time – and thus become objects. (pp. 4–5, original emphasis)

It is for this reason that we strongly agree with the ethnomethodological direction of the 'sociology of the object' poised by Christian Heath and Jon Hindmarsh (2000): "the participants do not attribute meaning to a pre-existent environment or interpret the scene at hand (although this may indeed occur); rather, during their action and interaction, they reflexively produce their surrounding material world" (p. 101). With regard to our domain of investigation, their view also resonates with the work of diagramming, notably shown by Mondada (2012), who argued that "objects are not supposed to be already out there, but are emergent entities *in fieri*" (p. 329; original emphasis). Furthermore, in modern collaborative work environments, this can be a practical concern for members because the practices constitute shared and mutual perceptions of objects that underpin the organisation of collaborative work (e.g. Heath & Hindmarsh, 2000; Hindmarsh & Heath, 2000; Murphy, 2005; Nevile, 2004a; Streeck, 1996). The misapprehension of an identical object can even result in deadly consequences in circumstances that require a high level of coordination, as in the case of friendly fire (Nevile, 2009). From this ethnomethodological point of view, the object is not necessarily limited to tangible substances, but it can be addressed as objects-in-interaction such as information (Sakai, Awamura, & Ikeya, 2012). In this study, we focus our

empirical investigation on the establishment of relevant objects that participants in a meeting identified to grasp mutually the occasioned sense of a specific plumbing work under discussion. Objects in our study include tangible artefacts that have physical materiality (i.e. blueprints and graphical representations) as well as not-yet-existing abstractions (i.e. plumbing design that is planned and structured in the meeting).

Method, data and key concepts

The material for this chapter was derived from ethnographic observations of ordinary and routine work performed at a plumbing firm over a period of two years. We followed, observed, interviewed and conducted audio-visual recordings of employees' work, both at the office and at various work sites. At the start of our fieldwork, we were not competent in the work that constitutes plumbing in the way that plumbers are. We were not familiar with technical plumbing terminologies or their duties and we did not have an understanding of how plumbers organise their work. We therefore chose extensive fieldwork to become familiar with and to achieve a certain level of competency so that we would be able to document what the members of the firm were doing, seeing and achieving during the course of their daily work (cf. Crabtree, Rouncefield, & Tolmie, 2012). At times, we also 'got our feet wet' in plumbing duty. Indeed, a large number of the objects in this study became relevant to our understanding only after we had spent days at the firm and learned from the practitioners in this specific setting.

To examine the meeting closely and to assess the temporal features in this interaction, we recorded about sixty hours of video. The excerpts presented in this chapter are from video recordings of the meetings that the members of the firm held every morning. We discuss an episode from one of the morning meetings in which the plumber and the manager discussed and then agreed on reworking a plumbing plan for a renovation project. In order for us to examine closely the meeting and to assess the temporal features in this interaction, we recorded the meeting with three cameras. The disposition was set to access multiple angles to capture the embodied conduct of participants, including their body gestures and their activities that relate to the details of the documents (cf. Heath, Hindmarsh, & Luff, 2010; Mondada, 2012). In transcribing the conversations, we adopted Jeffersonian transcription conventions (Jefferson, 2004). We first conducted the analysis using the original Japanese transcription, and we later translated this transcription into English. Names were changed to maintain privacy and confidentiality.

At this point, it is worthwhile to revisit the ethnomethodological approach to the representation of practices as outlined by Michael Lynch because much of the focus of this chapter will be on the recognition of a range of representational artefacts in the design work. Lynch (1985) demonstrated that visual displays in scientific disciplines – documents that render objects for scientific scrutiny – are inseparable from the set practices of constructing scientific data. Lynch built upon the theme that scientific documents are "a rich repository of 'social' actions" (Lynch & Woolgar, 1988, p. 103). Lynch identified this claim as a member's practical concern. The approach that he raised is formulated in the research questions, such as "How do graphic properties *merge* with and come to embody the 'natural object?'" (Lynch, 1985, p. 43, original emphasis). Describing lizards by the number of amputated toes that they have, for example, transforms the lizards that inhabit a given area into a unique class of coded lizards. Through "a set of procedures for turning a 'natural' setting into a geometricized workplace" (Lynch, 1985, p. 41), scientists create various diagrams to structure the instructed reading of a map under a field study. "The resultant data", Lynch (1985) concluded, are "neither wholly constructed, nor simply a 'mirror of nature'" (p. 60). Furthermore, they are publicly visible and accessible (Lynch, 1988).

Representational practices are the focus of study amongst researchers in collaborative workplace investigations in which discussions address members' practices in structuring representational artefacts in relation to organisational conduct in the workplace environment (see also Mikkola & Lehtinen, this volume; Weilenmann & Lymer, this volume). In line with this research, many studies incorporate audio-visual recordings of normally occurring real-time activities as part of their analytical source. Research studies with computer-supported cooperative work, for example, have explored the use of electronic media that include face-to-face interactions as well as collocated and remote interactions (e.g. Heath & Luff, 2000; Nevile, 2004a). Closely related to our investigation is a group of recent studies on architectural designers, which is based on video-recorded materials (e.g. Lymer, Ivarsson, & Lindwall, 2009; Mondada, 2012; Mortensen & Lundsgaard, 2011; Murphy, 2005, 2011). Nevile (2004b) also discussed the arrangements of the material setting as a visual reference for collaborative preparation to achieve the critical task of landing a plane. These studies share a common thread in that representations are made meaningful by being embedded in practical activities.

Meeting as an organisational hub setting

The plumbing firm where our study was conducted is a private contracting business located in the northern part of the Japanese archipelago. Primarily, the firm performs non-commercial plumbing, new installations and maintenance work. The firm employs three plumbers and one manager, who all work full time. The three full-time plumbers all work on separate sites at a given time, and they engage in plumbing duties all day. Their manager, a semi-retired plumber, spends most of his working time in the office. He focuses on management and administrative duties such as the completing of paperwork, the arrangement of meetings with individuals from other contractors and setting a plumbing schedule and agenda. Every morning, members of the firm meet and the manager issues instructions and assigns tasks to plumbers for the day. This morning meeting is one of only a few opportunities for the workers to meet face to face because they mostly work at different sites. The meeting serves as a hub setting for the members and as a point from where physical work can be distributed, where information can be updated and where plans of actions can be discussed. As the plumbers gather around the table, the manager gives instructions regarding individual assignments, which he has prearranged. The manager compiles and finalises the plans – tasks, action items, schedules, documents (a list of pipe specifications, blueprints of the building, driving directions to the site, etc.) and all other details of the employees' plumbing activities – on the day prior to the meeting. Inscriptions and annotations that the manager makes on the blueprints serve as the formal and legitimate plumbing design instructions, which the plumbers must follow. However, there is an opportunity for changes to be made depending on other projects that are currently occupying the plumbers at that time. It is clear that with renovation projects the plans are prone to change. Individual items are sometimes raised for further discussion. This could result in the modification, expansion, delay or even cancellation of an entire plan.

We now focus on an episode that we witnessed during one of the morning meetings. One of the plumbers arrived at the meeting with a hand-drawn sketch. This sketch illustrated his findings that were based on the preliminary examination of the work site that the manager had assigned to him. The plumber, who had been working on the renovation project of the second-floor plumbing at this building for the past few days, reported that the floor plan did not correspond with the physical state of the building. Coming up with solutions to problems in unanticipated circumstances is expected in plumbing work, and the actual plumbing duties did not often proceed as initially planned or instructed. Nevertheless, with their skills and expertise, the plumbers came up with solutions on-site and then attended the meeting the next morning with a rather simple report stating that they had taken care of

everything without mentioning much about their troubles. The manager was well aware of this, as he told us one day that this was where 'the skill of an artisan' comes into play. Considering this ethnographic background, the specific report on this specific morning was noteworthy: the plumber found that the original plumbing design was physically intractable to implement and that the situation was beyond his control. With renovation projects, many of the plumbing duties are contingent upon events in the field, particularly by the fact that the buildings already exist. For instance, in contrast to persuading others with designs that "*might* come to pass" (Murphy, 2011; emphasis added) in the architectural design meetings whose discussions focused on buildings that did not yet exist, discussions in this meeting are negotiated as designs that will *definitely* come to pass. To achieve this, the manager needs to update and sometimes even to get information about the latest conditions of the work site using the issues recently discovered. Despite a lack of daily experience and knowledge of the work site, the manager has to make decisions with a considerable degree of certainty for the plumbers to implement in the near future, which could be as soon as the same day. Thus, in the case of renovation projects, a significant portion of the meeting is devoted to redesigning the plumbing plan with the plumber's observations from the site.

Reworking plumbing design

With regard to this specific meeting, discussions ensued between the manager and the plumber after the report, resulting in the newly designed drainage configuration. In this section, following several recognisable stages of their discussions, we analyse in detail how this revision unfolded. We address the practices that eventually arose to contribute to the new plumbing design, namely, activating the document, reporting and rendering an idea with the graphical representations and embodying the configuration of three-dimensionality.

Activating the document

One of the essential activities in this discussion was the establishment of a shared sense of the conditions and contingencies of work in the field between the plumber and the manager. From the manager's viewpoint, activities outside his office, those in the field in particular, are less noticeable, if at all. As stated previously, under the division of labour, the members of this firm work asynchronously at remote settings, and the manager, the executive decision maker, is unaware of the specifics and up-to-date conditions of the sites that his staff work at. To gain a better grasp of the situation on the ground and to keep up with the tasks that the plumbers are

engaged in, the manager needs reliable reports from the plumbers. A sketch is one salient source of information in this regard. Therefore, the first question we raise is this: how does the plumber turn a sketch into a recognisable and valid document of his observation for the manager who is unfamiliar with it? We start by examining the beginning of the redesign discussion. In considering Excerpts 1 and 2, notice that the plumber drew the manager's attention not only to a particular object but also to a particular way of looking at this object. To enhance legibility, we have reproduced the plumber's sketch in Figure 1.

Excerpt 1

```
PLM: Plumber, MNG: Manager
01 PLM:  de kinou, ano::
         so yesterday, um
02       (4.8)
         PLM places his sketch in front of MNG.
         MNG shifts his gaze from calendar to sketch.
03 PLM:  iroiro yukashita: shirabetandesu kedo,=
         I went to take a closer look under the floor
04 MNG:  =un.
         uh huh
```

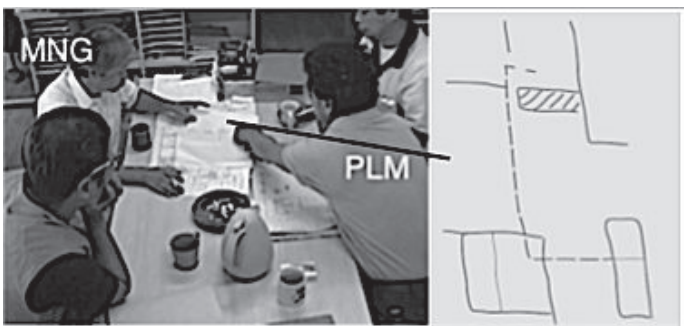


Figure 1. The plumber reports on the progress

The plumber reports on the progress of the renovation project in which he was involved at the time: a second-floor plumbing system. Before this excerpt, the manager was filling in a calendar with the action items that the plumber had agreed on with the client. As soon as the manager finishes marking the calendar with his pen, the plumber begins to report on his activities of the day before (line 01). However, the plumber stops the report and then picks up a stack of documents. He flips to the page on which he draws a sketch, and he places it in front of the manager. At this moment, the manager moves his gaze from the calendar to the sketch. The plumber then resumes by saying 'a closer look under the floor' (line 03), and he roughly (in contrast to motions specified later) moves his right

hand over the sketch. It is through this coordination that the plumber not only draws the manager's attention to the sketch but also is able to present the initial sense of what this sketch is meant to represent in a particular way. The presentation of the sketch first correlates with the retrospective actions he had taken in the field the day before; that is, his close examination beneath the floor (line 03). Furthermore, the plumber also establishes the particular area of the building – the space under the floorboards – as a relevant object worth mentioning to the manager. Prefacing and displaying the sketch as such could portend possible trouble for the plumbers of this firm, who regularly pass the work completion report to the manager without elaborating on what they have done in the field even when they have tackled unexpected circumstances, as we have already noted. The sketch is therefore considered a reported record of what the plumber had witnessed in the field and as possibly foreshadowing bad news.

Rendering an idea with graphical representations

Given the established sense of the sketch, the participants can use it as the basis for further elaboration. The manager responds 'uh huh' (line 04) and acknowledges the plumber to go ahead with his explanation without showing any trouble in recognising the meaning of the sketch presented to him. The plumber then reveals that there is something 'under the floor' that plays a crucial part in the plumbing work that is required in the renovation project. In Excerpt 2, the plumber identifies the geometric figures that he draws on the sketch. We have represented the plumber's motion with his index finger on the sketch with dotted lines (Figure 2).

Excerpt 2 (continued from Excerpt 1)

```
05 PLM:  kekkyoku ha koko ni oobari haitchatete
         after all a big joist has been installed here so
                    *points-------------------*
                    #Figure 2a
06 MNG:  un.
         uh huh
07 PLM:  nanmo naindesu yo.
         there is nothing
08 MNG:  un.
         uh huh
09 PLM:  de::: kotchigawa ni ukai shite?
         so we have to bypass it on this side
              *traces a line with finger*
              #Figure 2b
10       kouiu katachi de motte ikanaito
         it has to be brought in the design like this
         *traces--------*
         #Figure 2c
11       haisui motte ikenaindesu yone.
         otherwise the drainage cannot be discharged
```

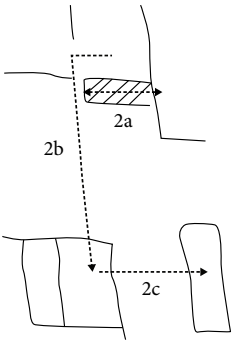


Figure 2. The plumber's motion with his index finger

In this excerpt, the obstacle underneath the floor that hindered the plumbing installation is further clarified along with its relevance to the pipes. The plumber then points at a shaded portion on the rectangular diagram, slides his index finger back and forth over the rectangular diagram and says 'a big joist has been installed here' (line 05; Figure 2a). With this situated pointing (Goodwin, 2003), the plumber narrows down the target of the domain of scrutiny from 'under the floor' in Excerpt 1, to highlight the relevant spatial locations of the plumbing problems. The problem that the plumber finds with 'a big joist' is delineated as 'there is nothing' (line 07). The plumber demonstrates his understanding that the problem he finds with 'a big joist' suggests the unanticipated presence of an obstacle in a given workspace as well as an obstacle to plumbing duties. The obstacle demands that the plumber take a different approach, as there is no space for the drainage pipe to go through because of the existence of the joist. The plumber suggests altering the original plan with a bypass, with the tracing gesture serving to identify the pipes and the actions taken with these pipes. The plumber traces his index finger over the streak of a line and says 'bypass it on this side' (line 09; Figure 2b). He then further extends this movement with a curb and says that 'a design like this' is necessary to get an adequate drainage (lines 10–11; Figure 2c). It is through coordinating talk and the tracing gesture that the plumber elaborates on how the line (Figures 2b and 2c) on the sketch is highlighted and disambiguated from the other geometric representations drawn on the sketch. That is to say, the line is provided to serve as the plumber's account of his alternative idea (yet to be created) in contrast to other geometric figures that he gave as his field observations (what may exist). In doing so, the plumber establishes the sketch for the purpose of demonstrating the observations and practical difficulties that he has faced under the floorboards.

Furthermore, the sketch was positioned with respect to the blueprint in a way that allowed the two to be compared and the conflict between the two to become

clear. Following Excerpt 2, the plumber correlates his sketch to the pipe design that the manager initially designed on the blueprint. The plumber therefore provides a way to recognise how these two should be viewed and managed. We have also reproduced the blueprint in a reduced form in Figure 3. The grey line represents the plumbing design that the manager had initially drawn, and the shaded rectangle represents the joist. However, the shaded rectangle is ours and it is nowhere to be found on the actual blueprint.

Excerpt 3 (continued from Excerpt 2)

```
12 PLM:  shacho kaita zumen dattara
         according to the plan you have drawn
         *PLM picks up the blueprint*
13       kono  rouka  no  bubun  de  mas  [sugu-
         at this corridor we go straight-
              *slides finger over original design*
         MNG's gaze shifts back and forth between sketch and
         blueprint.
14 MNG:                                     [iya betsuni.
                                             no not really
15       kora: omae tanjun ni kaiteru [dake dato omoundakedomo.
         I think I have just simplified drawing it
16 PLM:                               [iya, iya, iya.
                                       no, no, no
```

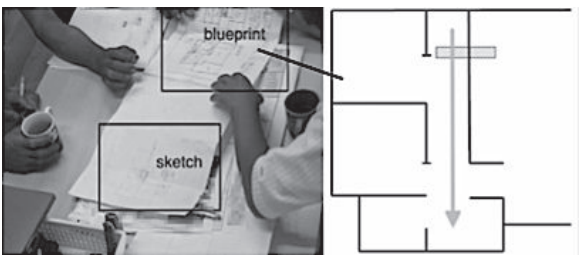


Figure 3. The sketch and the blueprint, juxtaposed

After offering his suggestion concerning the sketch, the plumber picks up the blueprint. The plumber slides his finger over a particular line on the blueprint that he identifies as 'the plan' that the manager had originally drawn (lines 12–13). Through this identification, the plumber draws attention to the two different types of drawings, namely the sketch and the blueprint.

The sketch that the plumber had drawn is similar to a direction map (Psathas, 1979), in the sense that it is occasioned for the sake of reporting this particular observation and suggested rework. The sketch in this context is a tentative and informal plan, whereas the blueprint and a range of inscriptions and annotations on the blueprint are the formal engineering plan that the plumbers are expected

to follow. Therefore, first, the sketch itself was not adequate as a reconstruction of the formal design. Second, the meaning and the purpose of this sketch in the redesign could be made sensible only by its juxtaposition to the blueprint (cf. Mondada, 2012 for a similar practice of juxtaposing), a conflict in particular. On the one hand, the manager apparently did not account for the joist in the original plan and thus designed the pipe to go straight. On the other hand, he saw a joist in the building and, as this obstacle was a hindrance to plumbing, he maintained that they had to redesign the plumbing work with a bypass so as to construct an adequate drainage system.

Whilst the plumber is speaking, the manager shifts his gaze back and forth between the sketch and the blueprint. It appears as if the manager has found these two drawings relevant to each other as targets for comparison. However, the manager does not seem to have realised the crux of the problem yet. The manager interrupts the plumber before the plumber completes his explanation, insisting that he had just simplified his drawing (lines 14–15). The plumber, however, strongly disagrees, saying 'no' a number of times (line 16). It appears that the problem the plumber brought to the table was not a matter of detail. As discussed in the next section, the problem was in fact rooted in the actual plumbing work.

Embodying the configuration of three-dimensional objects

In the previous section, we analysed how the plumber activated the sketch to be common ground for understanding. The plumber reported the architectural obstacles that hindered the installation of plumbing work, that there was no space to implement the initial plan and that it required redesigning. In this section, we analyse the elaboration between the plumber and the manager to rework the plumbing design and have it inscribed on the blueprint. During this elaboration, the shared recognition of objects underpins the collaborative design. Relevant objects in this section are rather abstract compared to those discussed in the previous section in that there are no representations that could index a referent of orientation. Because plumbing duties are performed in a three-dimensional building but the drawings are strictly two-dimensional, participants find practical ways of adapting two-dimensional drawings to render three-dimensionality (Kitazawa, 1999). In this case, it is realised through collaborative imagining (Murphy, 2005).

Consider Excerpt 4. The plumber stopped the manager when he was about to inscribe a redesigned pipe configuration, which indicated that the presence of an obstacle was not on the blueprint; this suggested rework. The exchanges in Excerpt 4 took place a little while after those in Excerpt 3. We have presented the

participants' actions on the reproduced blueprint (Figures 4 and 5). Continuous lines represent the manager's motion with his pencil and dotted lines represent the plumber's motion with his finger.

Excerpt 4 (continued from Excerpt 3)

```
20 MNG:  k  o  u  k  a?
         like this
         *draws a line*
         #Figure 4a
21 PLM:  ee.
         yes
22       (0.2)
         *MNG draws a curved line*
         #Figure 4b
23 PLM:  so-
         tha-
24       (0.4)
         *PLM reaches out his hand*
25 PLM:  sotchi mawashite kotchi ga:wa de ikanaito.
         turn it that way and go this way
         *slides finger--------------------------*
         #Figure 4c
26       kokomo.
         here too
         *points*
         #Figure 4d
27       shitano tenjo ga seriagatte kitendesuyo ichidan.=
         the ceiling underneath is elevated a step higher
28 MNG:  =a:, a:, a:, hai, hai, hai, ima no bunna.=
         oh oh oh yes yes yes the one above the living room
29 PLM:  =ee.
         yes.
30 MNG:  un, un, un, shitara ko::u kite kokkara kou wataru.=
         yeah yeah yeah then come this way and let it come
         from here like this.
                          *draws a line----------------*
                          #Figure 5
31 PLM:  =so::iu katachi ni torushika naitte iu.
         we need to handle it like that
```

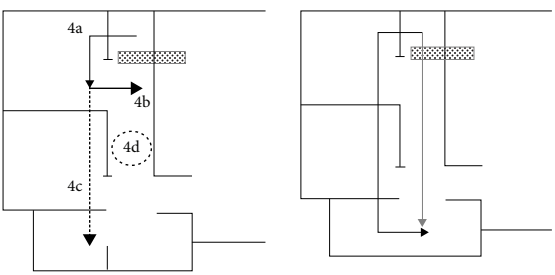


Figure 4. Participants' actions on the blueprint

The manager turns to the blueprint and begins to draw a line with his pencil (Figure 4a). In relation to this drawing, the manager asks the plumber about its accuracy (line 20). The plumber acknowledges this in return (line 21). At this moment, the plumber finds no trouble in the manager's inscription. The manager has displayed that he was on the right track to redesign a pipe configuration that would not interfere with the joist, the obstacle. This is also demonstrated in the shape of the line that the manager drew; it resembled that of the sketch the plumber provided in Figure 2.

However, as soon as the manager makes another curve in this line (Figure 4b), the plumber starts to speak (line 23), audible with the first syllable of 'that way', and reaches out his hand over the blueprint. The plumber slides his index finger partly on top of the line the manager has just drawn and says 'turn it that way and go this way' (line 25). The plumber slides his finger straight down even further, instead of following the curve that the manager has made (Figure 4c). Apparently, the plumber at that point disagrees with what the manager has just drawn in the redesign. The reason for his disagreement is explicitly demonstrated in lines 26 and 27: there is yet another obstacle under the floorboards of the building that are being renovated. The possible occurrence of miscommunication here involves two relevant types of architectural information, namely two-dimensionality and three-dimensionality, which have not yet been addressed in this meeting. This has to do with the contingencies of the nature of their work. In short, the types of information that each participant has in this meeting are asymmetrical, both in quantity and quality. On the one hand, the manager's understanding of the feasibility of plumbing is based on his experience as a plumber and the two-dimensionality of the architectural information on the blueprints. The manager has not seen the particular part of the building under discussion, in this case the interspace beneath the floor. On the other hand, the plumber's understanding is based on the three-dimensionality of the physical architecture of the building that he had actually observed. For this reason, a shared sense of three-dimensionality becomes relevant here in reconciling their versions of understanding. Whereas the accounts involved in Excerpt 2 dealt with information about where to pass in two-dimensional terms (the joist), three-dimensionality is a relevant concern here because the installation of a drainage pipe involves height (the slope).

The plumber initiates the correction. The plumber first locates the presence of another obstacle with his talking and situated pointing. With his utterance 'here too' (line 26), he points at a particular spot on the blueprint (Figure 4d) and articulates the relevant problem (line 27). In doing so, the plumber narrows down the domain of scrutiny the same way he did in Excerpt 2 with the sketch. Because the pipes for the second-floor plumbing are installed in the interspace between the ceiling downstairs, on the first floor, and the floor upstairs, on the second floor.

This implies that there is not enough space for the pipes to go through this area either. The plumber disagrees with the manager for yet another technical reason, and he maintains that the pipe had to be extended all the way and shall not be bent around the joist, as shown in Figure 4b.

Immediately after the plumber mentioned the ceiling (line 27), the manager responds with multiple sayings of 'oh' and 'yes' (line 28), indicating his realisation that he now also has a sense of what the plumber has been trying to convey. The manager then checks his candidate understanding that the ceiling in question is 'the one above the living room' (line 28). At that moment, the manager shows some understanding of the adequate picture of this object under discussion. The plumber subsequently confirms this (line 29). The manager further shows his understanding through talk (line 30) and his way of inscription (Figure 5, compared with the original design in grey). The plumber acknowledges it at that point in time (line 31).

In the exchanges shown in the final excerpt, three-dimensionality becomes relevant once again during the course of their elaboration, this time in relation to assessing the plumbing route as a definite plan. A few minutes after the discussion that took place in Excerpt 4, the manager returned his attention to the redesign that he drew in Figure 5 and questioned the technical feasibility of installing a downward slope for adequate drainage. This excerpt also verifies that the participants are concerned with creating a design that will *definitely* pass.

Excerpt 5 (continued from Excerpt 4)

```
43 MNG:  kondo kotchi he mo[tte  kite],
         now that you've brought it over this way
         *thickens a line------------*
         #Figure 5
44 PLM:                     [ee ano:::]
                             yes uh
45 MNG:  daijyoubu nanoka.
         are you sure you can do this
46 PLM:  kotchi no hou ha gyaku ni ichidan agattemasu kara?
         this side has been raised up a step higher by contrast
47       agegimini:, haisui tottekanaito,
         the drainage needs to be raised much higher
         *PLM raises his arm with a tilt*
         *MNG shifts his gaze from blueprint to PLM*
         #Figure 6
48       shitano ano tenjo agattekiteru mondesukara ne.
         because the ceiling downstairs is elevated.
         *PLM's arm still raised, MNG looking at PLM*
49       (0.8)
         *MNG takes a sip from coffee cup*
50 MNG:  a:: soka soka soka [wakat]ta wakatta wakatta=
         oh I see I see I see I got it I got it I got it
51 PLM:                      [ee.  ]
                              yes
```

```
52 MNG:  =itteru imi wakatta. Un un.
         I understand what you mean okay okay
53       (1.0)
         *MNG folds the blueprint and hands it to PLM*
54 MNG:  ryokai, ryokai.
         all right all right
```

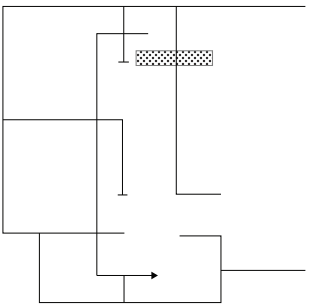


Figure 5. Design that will pass



Figure 6. Plumber raises his arm

The focus of this discussion is the vent of the alternative route they are redesigning. Before this excerpt, the manager had been asking questions on the technical feasibility of ensuring the slope of the alternative route that they are redesigning. Thickening a particular streak of line with concern (Figure 5), the manager highlights the particular spot in the redesign they had come to agree on in Excerpt 4, lines 43 and 45. The plumber replies that he could, but with a twist. With his arm stretched out and upward (Figure 6), the plumber describes how he would have to raise the drainage higher (line 47) because this installation is constrained by the finished elevated ceiling below which comes from the first floor (line 48). The use of the gesture is coordinated in relation to the blueprint, the actual plumbing work and the preceding discussion to build the spatial aspect of the building structure and making it accountable. The plumber's action is relevantly produced as a response to the manager's question on feasibility, 'are you sure you can do this' (line 45), as well as details regarding the relevant action that should be taken for drainage, that is, to increase the slope. His use of the gesture – the *situated* gesture – is therefore linked with the specifics of plumbing installation and renders the requirement to resolve one last doubt that the manager had concerning the redesign. The manager, on the other hand, raises his head, detaches his gaze from the blueprint and shifts his gaze to the plumber as the plumber raises his arm. The manager stares at the plumber for a moment, takes a sip of coffee and then responds with multiple utterances of 'I see' and 'I got it', followed by a strong claim that he now understands what the plumber is trying to tell him (line 52). The manager then begins to fold the blueprint and hands it to the plumber. The discussion draws to a close. The manager has agreed with the plumber's suggestion, and

the redesign that they have been elaborating on has come to shape the legitimate plan. The plumber can now take this plan back to the renovation field and work accordingly. Once the negotiation for a shared recognition comes to an end, the discussion draws to a close without any further arrangements or detailed instructions on how to implement it. For the participants of the firm, this is sufficient, as the manager leaves the actual plumbing duties to the individual plumbers.

Conclusion

In our data, we have presented planning in action; that is, envisioning the pipe configuration. This study shows that such envisioning requires not only technical knowledge of plumbing, but also the practices in which participants accomplish a shared recognition of objects during discussion, and how this shared recognition forms the basis of rendering spatiotemporally distant events and activities that can be envisioned in the meeting. We have conceptualised objects in two ways. First, objects in our study included tangible artefacts, those drawn on a sheet of paper that affords palpability, that can be touched and pointed at. They included the sketch, the blueprint and geometric representations inscribed and annotated on them, either by hand or in print. Second, we analysed an object that has no physical property, the redesign itself. The redesign was relatively abstract in the sense that it could not be found in full on the drawings because only some of its features could be depicted on the two-dimensional artefact. It was also nowhere to be found under the floorboards of the building that was under renovation because it was yet to be created. The redesign was built up as the discussion between the plumber and the manager unfolded through collaborative imagining.

Hindmarsh and Heath (2000) once made an intriguing remark about the constitution of the 'inter-individual object' in organisational settings: "[t]hese object-focused discussions 'knit together' disparate tasks and work in the organization, providing a momentary hub through which divisions of labor and courses of action are managed and coordinated" (p. 554). Our study resonates with their suggestion that "such objects can be seen as *organizational hubs*" (p. 554, original emphasis) that underpins the efficacy of division of labour. The constitution of organisational hubs in our study 'knit together' disparate work and different stages of work in disparate workplaces, namely, meeting places and work sites. This suggests that the organisation of objects forms the basis for further and/or subsequent actions and activities in the workplace. In our episode, the redesign itself was the relevant object in the redesigning activity for both the on-going activity and future work. The redesigning activity was a means of establishing instructions for the plumbers to follow and implement in the field. For this reason, the negotiation of

shared recognition became a practical point of issue at the meeting. To execute successfully the task of coordinating disparate actions in work that is based on the division of labour within a firm, both sides must achieve a shared and collective vision of the particular objects under discussion. For this reason, we argued at the outset that objects as interactional *resources* and objects as interactional *accomplishments* are interrelated issues for the members.

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References

Crabtree, A., Rouncefield, M., & Tolmie, P. (2012). *Doing design ethnography*. London: Springer. DOI: 10.1007/978-1-4471-2726-0

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.

Garfinkel, H. (2008). *Toward a sociological theory of information*. Boulder, CO: Paradigm.

Goodwin, C. (2003). Pointing as situated practice. In S. Kita (Ed.), *Pointing: Where language, culture and cognition meet* (pp. 217–241). Mahwah, NJ: Lawrence Erlbaum.

Heath, C., & Hindmarsh, J. (2000). Configuring action in objects: From mutual space to media space. *Mind, Culture, and Activity*, 7(1–2), 81–104.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research: Analysing social interaction in everyday life*. New York, NY: Sage.

Heath, C., & Luff, P. (2000). *Technology in action*. Cambridge: Cambridge University Press. DOI: 10.1017/CBO9780511489839

Hindmarsh, J., & Heath, C. (2000). Sharing the tools of the trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography*, 29(5), 523–562. DOI: 10.1177/089124100129023990

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Kitazawa, Y. (1999). The accountability of hand-drawn maps and rendering practices. *Human Studies*, 22(2–4), 299–314. DOI: 10.1023/A:1005448803455

Llewellyn, N., & Hindmarsh, J. (Eds.) (2010). *Organisation, interaction and practice: Studies in ethnomethodology and conversation analysis*. Cambridge: Cambridge University Press.

Lymer, G., Ivarsson, J., & Lindwall, O. (2009). Contrasting the use of tools for presentation and critique: Some cases from architectural education. *International Journal of Computer-Supported Collaborative Learning*, 4(4), 423–444. DOI: 10.1007/s11412-009-9073-9

Lynch, M. (1985). Discipline and the material form of images: An analysis of scientific visibility. *Social Studies of Science*, 15(1), 37–66. DOI: 10.1177/030631285015001002

Lynch, M. (1988). The externalized retina: Selection and mathematization in the visual documentation of objects in the life sciences. *Human Studies*, 11(2–3), 201–234.

Lynch, M., & Woolgar, S. (1988). Introduction: Sociological orientations to representational practice in science. *Human Studies*, 11(2–3), 99–116.

Mondada, L. (2012). Video analysis and the temporality of inscriptions within social interaction: The case of architects at work. *Qualitative Research*, 12(3), 304–333. DOI: 10.1177/1468794112438149

Mortensen, K., & Lundsgaard, C. (2011). Preliminary notes on 'grooming the object': The example of an architectural presentation. In J. Buur (Ed.), *Proceedings of the Participatory Innovation Conference* (pp. 99–104). Sønderborg: University of Southern Denmark.

Murphy, K. M. (2005). Collaborative imagining: The interactive use of gestures, talk, and graphic representation in architectural practice. *Semiotica*, 156(1), 113–145.

Murphy, K. M. (2011). Building stories: The embodied narration of what might come to pass. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), *Embodied interaction: Language and body in the material world* (pp. 243–253). Cambridge: Cambridge University Press.

Nevile, M. (2004a). *Beyond the black box: Talk-in-interaction in the airline cockpit*. Aldershot: Ashgate.

Nevile, M. (2004b). Integrity in the airline cockpit: Embodying claims about progress for the conduct of an approach briefing. *Research on Language and Social Interaction*, 37(4), 447–480. DOI: 10.1207/s15327973rlsi3704_3

Nevile, M. (2009). 'You are well clear of friendlies': Diagnostic error and cooperative work in an Iraq war friendly fire incident. *Computer Supported Cooperative Work*, 18(2–3), 147–173. DOI: 10.1007/s10606-008-9089-0

Psathas, G. (1979). Organizational features of direction maps. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 203–226). New York, NY: Irvington.

Rawls, A. W. (2008). Editor's introduction. In H. Garfinkel, *Toward a sociological theory of information* (pp. 1–100). Boulder, CO: Paradigm.

Sakai, S., Awamura, N., & Ikeya, N. (2012). The practical management of information in a task management meeting: Taking 'practice' seriously. *Information Research*, 17(4).

Streeck, J. (1996). How to do things with things. *Human Studies*, 19(4), 365–384. DOI: 10.1007/BF00188849

Instructed objects

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This chapter develops an ethnomethodologically-informed view regarding the sociality of objects, building upon Garfinkel's various descriptions of object constitution. We examine a particular case of diagnostic reasoning produced in the course of carrying out a surgical procedure at a teaching hospital. Our interest is in the methods employed by the surgeons in resolving certain incongruities in the case as it presents itself. Through an occasioned process of inquiry, the case at hand comes to be seen in a new light. This revised clinical picture is the oriented object under consideration here and it is produced as a discovered matter. We describe it as an *instructed object* to emphasise that recognition is a kind of action and too can be taught. For us, as for Garfinkel, instruction is a fundamental feature of how social order is created and shared understanding sustained. In the analysed example, the methods by which a new appreciation of the case is achieved are public and inspectable. Instructional settings are, in this way, 'perspicuous sites' for investigating how "a world of meant objects" is produced.

> This is the period that marks the suzerainty of the gaze, since in the same perceptual field, following the same continuities or the same breaks, experience reads at a glance the visible lesions of the organism and the coherence of the pathological forms, the illness is articulated exactly on the body, and its logical distribution is carried out at once in terms of anatomical masses.
> (Foucault, 1973, p. 4)

> It is therefore not enough for the sociologist to accept the world of his subject according to the terms of the subject's "definition," but he has a task beyond that of showing how the subject together with others, and including the sociologist, goes about building a world of meant objects.
> (Garfinkel, 1952, p. 85, fn 12)

Orders of specification, documentary evidences and the constitution of objects

Foucault (1973) describes modern medical practice as being dependent upon a standardised way of seeing, one in which the disease is read off the patient's presenting signs and symptoms. Foucault's clinical 'gaze' could be said to be a kind of "professional vision" (Goodwin, 1994) or, if you rather, "disciplined perception" (Stevens & Hall, 1993). Clinical cases, so appreciated, become profession-specific work objects. As our contribution to this volume on the sociality of objects we will develop two suggestions: one, that the process of medical perception described by Foucault represents a special case of a more generic process whereby all objects are recognised and constituted and, two, that this process can, in some circumstances at least, be instructed. Our analysis, therefore, will be concerned with the practical work in and through which recognition is done *in situ* and with how newcomers are introduced to it.

The topic of how society's members go about 'building a world of meant objects', was one revisited by Harold Garfinkel repeatedly in his writing. His interest in the constitution of objects, with how we go about "thingifying" (Garfinkel, 2008/1952, p. 133), was part of a larger project to provide an alternative solution to "sociology's identifying 'problem of social order'" (Garfinkel, 2002, p. 84). While still a graduate student, he developed what might be considered a phenomenologically-based theory of objects. Drawing on conceptualisations borrowed from Husserl, Gurwitsch and Schütz, Garfinkel discussed the perception of objects in terms of "noesis–noema structures" (2006/1948, p. 132) and inner- and outer-horizons (2008/1952, p. 140; 1952, p. 324). In his own terms, "[t]he object is experienced as an object, through an order of specifications; this *order of specifications* being all of what is meant by the term 'object'" (Garfinkel, 2008/1952, p. 133; original emphasis).

In later work Garfinkel (1962) was to use the expression "the documentary method of interpretation" (pp. 690–692), to describe this recognitional process. The expression was borrowed from Mannheim (1952) who had earlier developed a "phenomenological analysis of intentional acts directed towards cultural objects" (p. 42). Mannheim postulated that meaning can be appreciated at three levels: the objective, the expressive and the documentary. Focusing upon the third, Garfinkel (1962) suggested that recognition consisted of "treating an actual appearance as 'the document of', as 'pointing to', as 'standing on behalf of' a presumed underlying pattern" (p. 691). Garfinkel was able to build a processual model from Mannheim's framework. By this model, objects are recognised through a process of pattern matching with patterns defining objects, but objects also re-defining the patterns. They are, in this way, mutually-constituted and mutually-constitutive. Nonetheless, Garfinkel (2002) was to become dissatisfied with this formulation. He complained,

"[t]he documentary method was a way of calling attention to *in vivo* practices by speaking in generalities" (p. 203) and charged:

> [it] is a convenient gloss for the work of local, retrospective-prospective, proactively evolving ordered phenomenal details of seriality, sequence, repetition, comparison, generality, and other structures. The gloss is convenient and somehow convincing. It is also very powerful in its coverage; too powerful. It gets everything in the world for practitioner/analysts. Its shortcomings are notorious: In any actual case it is undiscriminating; and just in any actual case it is absurdly wrong.
> (Garfinkel, 2002, p. 113)

The trouble, to borrow a phrase from Dewey (Dewey & Bentley, 1991/1949), is that the documentary method puts a name in the place of the problem, the problem being that of explaining how, just how, acts of recognition/classification/categorisation are accomplished in the first place.

Still later Garfinkel (2002) was to offer "a theory of the achieved coherence of organizational objects" (p. 176) drawing on Gurwitsch's (2010/1964) notion of functional significations and their relation to Gestalt-contextures. Woven into this later writing were references to "the signed object" (p. 141), "phenomenal field" (p. 178), "accountable" (p. 227) and "oriented" (p. 245) objects. Gurwitsch in this way provided Garfinkel with yet another vocabulary for describing how objects are brought into relevance, but, as he concedes, "the coherence of figural contexture is just what escapes" (p. 279), escapes, that is, description in formal accounts of action. This is presumably why Garfinkel (2002) suggested that Gurwitsch must be "misread" (p. 177) in order to be useful.

Garfinkel's project was one of showing how the problem of social order is related to the deeper problem of how we collectively come to perceive the world around us in functionally congruent ways. In his dissertation and other reports completed about the same time, he sought to find a way to talk about objects that did not rely upon correspondence. By his alternative, which he termed "congruence theory" (Garfinkel, 1952, p. 92fn), it is *all* in the specifications and it is specifications all the way down. As time went on, he further elaborated his position. The documentary method of interpretation enabled him to discuss sense-making in wholly contingent and interactional terms. In turning to the Gestalt-influenced phenomenologists Gurwitsch and, later, Merleau-Ponty, Garfinkel was not pursuing philosophical questions, but rather seeking guidance in framing a sociological one. And the question, for him, was always an empirical one, its answer to be discovered in the details of social life.

To the rich variety of descriptors that Garfinkel applied to objects across his writings we offer one more, *instructed*, to emphasise that objects cannot only be intended/meant/oriented, but that the ways in which they are appreciated can also be taught. Though he never discussed instructed objects, Garfinkel had much to

say about instructed actions. That is, in fact, the focus of the second half of his last major work (Garfinkel, 2002). Shared perception of objects requires shared interpretational strategies and, somehow, newcomers to a practice must be introduced to these disciplined ways of seeing. We will seek to document in this chapter just how this is accomplished in one particular setting and, in so doing, hope to shed some light on how Foucault's 'gaze' is developed as a practical matter.



Figure 1. The arrangement of the operating room

Analysis

The setting

Our recording comes from the SIU Surgical Education Video Corpus, a collection of recordings gathered over a dozen years at multiple surgical training sites.[1] In the surgical procedure to be described here, an attending surgeon (ATT) and

1. Signed consent to record surgical procedures is sought from patients upon admission to the hospital. Advance consent is also secured from all other participants present (i.e. attending surgeons, residents, medical students, staff). The consent forms are associated with a collection protocol approved by the institutional review board (IRB). Cameras are not started until after the patient has been fully draped thereby concealing their identity. All proper references (e.g. patient names, names of practitioners and institutions) that come up during recording are edited out prior to study. All investigators seeking to work with materials within the collection must first file a use protocol with the local IRB.

a surgical resident (RES) are positioned on opposite sides of a surgical table (see Figure 1). The patient lies face down on the table. He is sedated, but is not under general anaesthesia. He is apparently unaware of the discussions that are taking place around him. A scrub nurse (NUR) works to the right of the attending. She retrieves instruments and supplies from a tool tray positioned over the foot of the surgical bed. An anaesthesiologist is stationed at the head of the table, but does not participate in the interaction to be described. The patient has contracted genital warts in the region surrounding his anus and the surgeon's task is to remove them. The warts, also known as condylomata, are to be removed using a process known as fulguration. Before proceeding, the team does a preliminary inspection of the work area. Our analysis focuses on their interaction during the course of this inspection, analysing it in three segments.

Excerpt 1 *This is all new* (#03-022)

```
01 00:35:18;24 ATT: And now jes don't move without warning me
02 00:35:20:10      (2.7)
03 00:35:22:29 ATT: ⌈Oh:::. (2.1) That's new:.
04 00:35:22:29      ⌊((ATT withdraws syringe))
05 00:35:26:11      (1.1)
06 00:35:27:15 RES: Ehm:. =
0700:35:28:06  ATT: = That's (all) new ⌈that's not good
08 00:35:28:18 RES:                    ⌊This?
09 00:35:28:18                         ⌊((RES swipes with handle
10                   of forceps in r. hand))
11 00:35:29:17      (0.8)
12 00:35:30:07 ATT: That's seriously not=
13 00:35:30:26 RES: =You're talking about ⌈this:: stuff right here?
14 00:35:31:15                            ⌊((RES sweeps region
15                   with tip of forceps in r. hand))
16 00:35:31:15 NUR:                       ⌊((nurse shakes head))
17 00:35:32:18 ATT: All ⌈this this is all new
18 00:35:32:26 ATT:     ⌊((ATT indicates area using needle of syringe))
19 00:35:33:28      (0.6)
20 00:35:34:13 RES: ⌈°Mhm°
21 00:35:34:13      ⌊((RES shakes head))
22 00:35:34:24      (0.9)
23 00:35:35:23 ATT: Seriously ⌈ba::d
24 00:35:36:12                ⌊((ATT commences injecting anesthetic))
25 00:35:37:00 RES: ⌈That makes his cure chances:
26 00:35:37:00      ⌊((RES raises eyes to ATT's face))
27 00:35:38:24 ATT: Hmm?
28 00:35:39:10 RES: That makes his cure chances almost nothing?
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00:35:39:10 RES:  That makes his cure chances almost nothing?
00:35:41:05       (0.9)
00:35:42:02 ATT:  Oh yeah.
00:35:42:14       (1.3)
00:35:43:20 ATT:  (°W'll°) (0.7) Let's see what't feels like but (0.3)
                  .hh yeah then that  all- that's- that's entirely-
                  that wasn't present when I saw him in the o:ffice
00:35:49:28       (1.7)
00:35:51:12 ATT:  Wo::w
00:35:51:26       (3.9)
00:35:55:20 ATT:  No::: it's not good at all.
```

A noticing in progress

The excerpts have been prepared using the standard transcription conventions of conversation analysis (CA).[2] As Excerpt 1 begins, the attending holds a loaded syringe in her right hand preparing to administer a local anaesthetic to the perianal region. The attending and resident jointly retract the patient's buttocks opening a new area to visual inspection. Upon viewing the newly-produced scene, the attending produces a surprise particle and withdraws the syringe. After a pause, she announces, *That's new::* (line 03). Schegoff (2007) wrote:

> Doing a noticing makes relevant some feature(s) of the setting which may not have been previously taken as relevant. It works by mobilizing attention on the features which it formulates or registers, but it treats *them* as its source, while projecting the relevance of some further action in response to the act of noticing. (p. 219; original emphasis)

The attending's exclamation performs precisely this kind of work, but leaves "evidently vague" (Garfinkel, Lynch, & Livingston, 1981) just what it is bringing into

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2. The full set of conventions is described in Jefferson (2004). In brief, special brackets are used to mark the onset of overlap or co-occurrence between transcribed elements. Standard punctuation marks such as periods and question marks are used to denote delivery with falling (or rising) intonation. Numbers enclosed in single parentheses represent periods of silence measured to a tenth of a second. Periods of silence reported at the end of a turn represent time elapsed to the next turn of talk. Colons are used to display sound stretching. Text enclosed between degree signs represents talk delivered at diminished volume. Annotations supplied by the transcriber are enclosed in double parentheses. These are most often used to describe visible action occurring in conjunction with the talk. The column appearing on the left side of the transcript presents the times, measured in hours, minutes, seconds and frames, at the which the actions, either talk or embodied conduct, were initiated. Line numbers are added on the far left to simplify reference in the text.

relevance. When *that* is employed as a demonstrative, it is usually coupled with a pointing gesture of some kind. In certain circumstances, however, the preceding introduction of a new scene (e.g. raising a curtain) can itself serve as a kind of deictic gesture. Though the indexical referent of *that* remains underspecified with regard to particular anatomy, the characterisation of it as 'new' identifies what is surprising and thus the basis for the attending's surprise token. This informs the resident that the scene presents something (exactly what remaining to be specified) that was not present before this inspection, alerting her to inspect the scene for what could be new.

Close inspection of the video reveals that upon receipt of the surprise particle, the resident leans in (during the 2.1 second pause) to get a closer look at the worksite. Following work by Stivers (2008) and others on stancetaking in conversational storytelling, the resident's uptake (line 06) could be seen as an alignment action. Recipients of stories often produce utterances such as *yeah*, *mm hmm*, etc., which represent an alignment with the speaker's doing of an extended telling. The resident's *Eh↓m:*, therefore, might be construed as performing that function, indicating an orientation to the attending's talk as not yet finished. In other words, she could be prompting for an elaboration of the problem.

The attending obliges by re-issuing the noticing (line 07). The change from *that's new* (line 03) to *that's (all) new* represents a shift from noticing to stancetaking on the part of the attending. Edwards (2000), building on Pomerantz's (1986) work with "extreme case formulations", argued that the use of quantifiers like *all*, *every, none*, etc. serve to develop a displayed stance with regard to some matter. By adding the assessment, *that's not good*, she further elaborates the stance being taken. When a speaker produces some matter as noticeably new, the presumption would be that that thing is subject to assessment and that the speaker will subsequently adopt a stance with regard to it as being either desirable or undesirable. Here, the attending displays a clear stance, though the 'that' to which she refers remains to be specified. Note that the 'that' in *That's (all) new*, and the 'that' in *that's not good* function in different ways and have different referents. The first 'that' comes without an affiliated manual demonstration and refers indirectly or anaphorically to whatever was indicated earlier. The second is more complicated. It could, like the first, refer indirectly to the thing previously indicated or it could reference the previous assertion (*That's (all) new*). Construed in the latter way, it takes a stance regarding the 'newness' itself. Either way a stance is being taken, an increasingly strong stance with regard to what the attending is seeing and reporting.

In overlap (line 08), the resident seeks to repair her understanding of exactly what has changed. The repair initiation appears at the earliest possible turn transition place: the completion of a more extreme formulation of the attending's initial account from line 03. If we hear the resident's continuer at line 6 as calling for

further elaboration, we, like the resident, are in a position to anticipate that the attending's next utterance could or perhaps should provide an identification of the referent of the deictic *that*. What we get instead (line 12) is an intensification, a movement toward an even more extreme formulation rather than a specification of that to which the deictic *that* refers. It is this that occasions the treatment of the term *that* as a trouble source standing in need of repair.

The resident's query (line 08) is tightly coordinated with a swiping gesture performed using the handle end of a forceps (line 09, see also Figure 2). The resident's use of the deictic *this* is a compliment to the attending's *that* and serves to distinguish her attempt to identify the relevant elements of the perceptual field as a candidate identification that requires confirmation from the attending. Only the attending had seen the patient prior to the morning of the procedure and only she, therefore, is in a position to appreciate whatever changes may have taken place in the patient's condition. Her silence in the place in which a response to the resident's repair initiation might be expected suggests that she may be still processing the scene before her, still engaged in a noticing in progress. The attending's *That's seriously not* [*good*] upgrades her previous assessment. Her escalation orients to the consequentiality of the "new" thing that she has noticed, but leaves the thing that is now both new and not good underspecified. Again, she takes a stance with regard to the noticing, but appears to be offering a commentary on her own developing sense of the 'object' of interest rather than instructing the resident in ways of seeing it. There appears to be a discord between the perception of the attending and resident, even though they are both focused on and are manipulating elements of the work space that constitutes their 'shared' perceptual field.

The resident re-initiates her repair in expanded form (line 13), highlighting an area again using her forceps but this time using the tips. As before, her repair initiation is latched to the attending's assessment at the earliest turn-transition point. There are two features of the resident's recycled repair initiation that are worth noting. First, there is the fact that the resident has made the attending's talk the explicit focus of the repair effort, shifting the problem from one of perception to an interactional one in which the talk is what needs repair. Second, by using the pointy-end of the forceps instead of the handle, the resident employs a more precise method of pointing that couples the problem of the attending's talk to the perceptual field at the worksite.

The attending's next utterance, *All this <u>this</u> is all new* (line 17), with its affiliated point (line 18) is hearable as a response to the resident's repair (re)initiation (line 12). It identifies the 'that' to which she had been referring and does so using the resident's deictic 'this', appropriating the resident's organisation of reference, to further achieve the sense that she is in fact responding with an identification, rather than making a repeat assessment. Bringing the syringe in close proximity to



Figure 2. The resident's (RES) proposed specification for the advancing growth



Figure 3. The attending's (ATT) indication of disease progression

the site of inspection, she uses it as a prosthetic pointing device. It is the concurrent talk that marks this action as a pointing and not, for instance, a resumption of the injection procedure (see Hindmarsh & Heath, 2000 on the tight coupling between deictic references and their associated manual actions). The attending's first *this* is accompanied by a circular movement of the needle tip implicating the full surrounding area (see Figure 3). It contrasts with the two gestures produced

earlier by the resident which indicated a much more restricted strip along one side of the worksite. The resident's alignment token *°Mhm°* (line 20), which accepts the repair as adequate, is followed by an affiliative move, a slow head shake (line 21), by which the resident displays acceptance of the attending's stance regarding the gesturally identified 'this' in the perceptual field.

The attending returns to assessment work in line 23 with a further upgraded formulation, *Seriously ba::d*. The problem for the resident, however, is what could 'bad' in this case mean? She proposes a candidate answer (line 28) that the attending subsequently endorses (line 30). It is here that we see Foucault's 'gaze' beginning to come into play. The clinical picture, the case as it is understood by the local parties, is undergoing revision. Treating the observed growth as a sign, the resident is seeking to work out its implications for treatment. In so doing, she displays a certain knowledgeability concerning the work in which they are engaged and what it can be expected to accomplish. Her question, in fact, is consequential, for if the disease process cannot be arrested through fulguration, there may be little or no point in continuing with the procedure.

Though she initially confirmed the resident's proposal, the attending now qualifies her position a bit (line 32). Mori (1999) described how speakers may insert 'self-qualifying' clauses and that these are often introduced with *well*. The resident has drawn an implication regarding their understanding of the case. This implication may eventually prove to be valid, but the attending is indicating that more data is needed before that conclusion can be reached. Her turn, therefore, operates as a gentle and artfully constructed correction. We see in this exchange instruction being offered in the correct and accountable ways of forming a judgement.

There is another aspect of accountability that comes into play in the latter half of the turn. The two halves are joined by a *but – let's see what it feels like, but* there is something else that needs to be clarified. The attending was the one who did the pre-operative examination. Her decision to treat the infection focally could conceivably be faulted on the grounds that the disease is too far advanced. But her decision was based on the patient's condition at the time of the previous clinic visit. Her decision is defensible, therefore, on the basis of what was known and knowable at that time. Her elaborated restatement of the previously noted growth, therefore, offers an *account,* in the technical sense developed by Antaki (1994) and others, for the circumstances in which they now find themselves. Moving forward, the attending returns to injecting the worksite with anaesthetic and the team readies itself to extend the evaluation into the interior of the patient's body.

Excerpt 2 An instructed examination (#03-022)

```
01 00:36:00:16 ATT:  Okay (.) have some Betadyne?
02 00:36:01:24       (2.8)
03 00:36:02:03       ((ATT shifts forceps toward tool table))
04 00:36:03:15       ((ATT lifts r. hand elevated with finger extended))
05 00:36:03:26       ((ATT withdraws hand and re-initiates inspection))
06 00:36:04:09       ((RES looks up toward tool table))
07 00:36:05:04 ATT:  That's not ⌈good.
08 00:36:05:12                  ⌊((RES  reaches toward nurse))
09 00:36:05:23       (5.3)
10 00:36:06:09       ((RES dips index finger of l. hand in Betadyne cup))
11 00:36:07:14       ((ATT reaches r. hand toward nurse))
12 00:36:08:16       ((RES initiates digital exam with l. hand))
13 00:36:08:22       ((ATT dips index finger in Betadyne cup))
14 00:36:10:22       ((ATT rests r. hand on patient's leg))
15 00:36:11:14 RES:  S'GENTLE RECTAL EXAM.

                     ((lines omitted))

16 00:36:21:29       ((ATT initiates digital exam))
17 00:36:28:23 ATT:  Well it's so::ft (0.4) that's good
18 00:36:30:12       (1.5)
19 00:36:31:27 RES:  ⌈°Alright°
20 00:36:31:27       ⌊((RES nods head))
21 00:36:32:05       (1.1)
22 00:36:33:07 ATT:  So hook your finger into the post anal space
23                   you actually feel the tip of the coccyx (0.6)
24                   .hh so::: (1.5) I don't know if there's some
25                   fullness here but I don't think he has an abscess
26                   (0.5) ⌈(°n'kay°)
27 00:36:43:24             ⌊((RES re-initiates digital exam))
28 00:36:44:04       (2.4)
29 00:36:46:24 RES:  ⌈Mm⌈m
30 00:36:46:24       ⌊((RES nods head))
31 00:36:46:25 ATT:     ⌊Get a Pratt bivalve speculum please?
32 00:36:48:19       (2.0)
```

An instructed examination

The attending's suggestion that they *see what't feels like* segues directly into their next activity, the digital exam. The pre-surgical examination has two principal parts, the external exam, now completed, and an internal exam. To enable an inspection of the rectum, a device named a bivalve speculum must be inserted into the patient's anus. As the attending surgeon explained in a post-recording interview, the insertion of the speculum must be done with great care to avoid injuring the patient. So, prior to the insertion of the speculum, the surgeons perform a preliminary digital exam. Though the digital exam is done as a safety check, it can, as we shall see, yield new information about the patient case.

As the second excerpt begins, the attending asks *Okay (.) have some Betadyne?* (line 01). Prior to performing a digital exam, surgeons dip the examining finger in Betadyne to serve as both a disinfectant and a lubricant. Her utterance does two kinds of work here. It serves as a directive to the scrub nurse to ready a cup of Betadyne, but also marks their transition into the new activity. No explicit guidance, however, has been given to the resident as to *how* the exam will be done or who will do it. Attending surgeons may delegate specific parts of a procedure to a resident, but reserve others to be done by themselves alone. This division of labour must be worked out on a procedure-by-procedure and resident-by-resident basis. The digital rectal exam is unusual in that can be done more than once, though only by one person at a time. If both are going do it, however, who is going to go first? This is an interactional problem and must be worked out in the moment; there being no governing policy.

In the case under discussion, the attending, after issuing the request for Betadyne, moves her right hand toward the scrub nurse (line 03). She holds it stationary with her index finger extended (line 04). This could be interpreted as a reach for the Betadyne cup. In other circumstances, however, the shape of her hand might suggest a point. Construed in this way, her action could represent guidance to the nurse regarding where the cup should be positioned or, perhaps, a prompt to the resident to get herself some Betadyne. We have no way of disambiguating her intent, nor do we have evidence of her gesture being taken up in one way or another by her interlocutors. What we can see is that the Betadyne was not yet available and that, after a moment, the attending withdraws her hand and resumes her inspection at the worksite (line 05). Moments later, however, the resident looks up and notices that the cup has just arrived (line 06). She reaches toward it (line 08) and swirls her finger in the antiseptic (line 10).

Without being explicitly bidden to do so, the resident then proceeds to carry out the first exam. She inserts her finger into the patient's anus approximately to the second joint (line 12), rotating her hand to explore the rim of the orifice. Following

standard procedure, she announces her action to the patient (line 15). As the resident moves her hand into position to perform her exam, the attending dips her own finger in the Betadyne cup (line 13) and then places her hand in a position ready to perform her own examination (line 14). When she does eventually conduct her own exam, the attending proceeds just as the resident had done, but in this case, providing an 'online commentary' (Heritage & Stivers, 1999), *it's soft*, with the associated assessment, *that's good* (line 17). She then introduces a component not present in the resident's exam – inverting her hand and plunging her finger deeper into the anal cavity. As she does so, she mentions an anatomical landmark and how it might be appreciated (line 22). It is a demonstration of something felt, but not seen (Nishizaka, 2011). Coming close after the resident's examination, the attending's exam, augmented with this additional element, represents another correction, artfully constructed and delivered. It shows how, with a small amount of extra effort, additional useful information pertaining to a case can be gathered. Given the other changes in this case noted earlier, this additional information could have special significance. Different modalities of knowing (seeing, touching, reasoning) are being placed on display here. The proliferation of condylomata discovered earlier suggest advancing disease, but other signs which might also be associated with a worsening condition (thick rindy tissue, possible *fullness*, abscesses) are noted to be not present. When it comes to signs, the absence of a feature can be just as important as its presence. In Garfinkelian terms, these signs stand on behalf of or serve as 'documents of' some underlying, but not yet articulated, pattern.

Tool requests, like the attending's call for a speculum in line 31, often perform a kind of 'procedure work' (Koschmann, LeBaron, Goodwin, & Feltovich, 2011). They mark for all parties that the subtask in which the participants are currently engaged is now complete and that it is time to move on to the next. Following on the heels of the resident's second digital exam, the attending's tool request also has instructional implications. Instructional sequences are very often organised as initiations by the teacher, responses by the student, followed by an evaluation by the teacher, often termed IRE sequences. As reported by McHoul (1978), the third turn can be displaced by a new initiation by the teacher, the absence of a correction serving as a tacit positive evaluation. So, in this case the movement to a new activity can be seen as a positive assessment of the resident's just completed performance.

Excerpt 3 *He's progressed* (#03-022)

```
01 00:36:50:19 RES:  (°Boy!°)
02 00:36:50:26       (1.9)
03 00:36:52:20 ATT:  Wo:w.
04 00:36:53:00       (8.3)
```

05 00:36:54:14 ((ATT inserts and operates speculum))
06 00:37:01:01 ATT: *Now see he's got* (0.4) *he's* ⌈*progressed*
07 00:37:02:14 RES: ⌊*Mm hm*
08 00:37:02:26 (1.0)
09 00:37:03:23 RES: *to* (.) *having*
10 00:37:04:23 ATT: *oh yeah* (.) ⌈*>you've got< in- in-*
11 00:37:05:18 RES: ⌊*internal >and some rectal< =*
12 00:37:07:13 ATT: *= and some in the rectal mucosa as well*
13 *see those guys up* ⌈*there?* (1.0) *>see em?<* (0.6)
14 00:37:09:24 ⌊((ATT indicates region with tip
15 of the suction tool))
16 00:37:12:09 RES: ⌈*Mm hm:* ⌈*up here?*
17 00:37:12:09 ⌊((RES points using forceps tips))
18 00:37:12:21 ATT: ⌊*He's not he's not gonna be curable.*
19 00:37:12:21 ⌊((ATT shakes head))
20 00:37:13:21 (1.0)
21 00:37:14:23 ATT: *As a matter of fact this kid* (2.7) *this* ⌈*kid needs*
22 *an HIV test(hhh)*
23 00:37:19:01 RES: ⌊*mm*
24 00:37:20:09 (2.5)
25 00:37:20:23 ((RES reorients head to see into the anal canal))
26 00:37:22:25 RES: *Because of the quick progression?* (0.2)
27 ⌈*or because of the 'sociation*
28 00:37:24:08 ATT: ⌊*Mm mhm*
39 00:37:25:21 ATT: *>Because< the progression.*

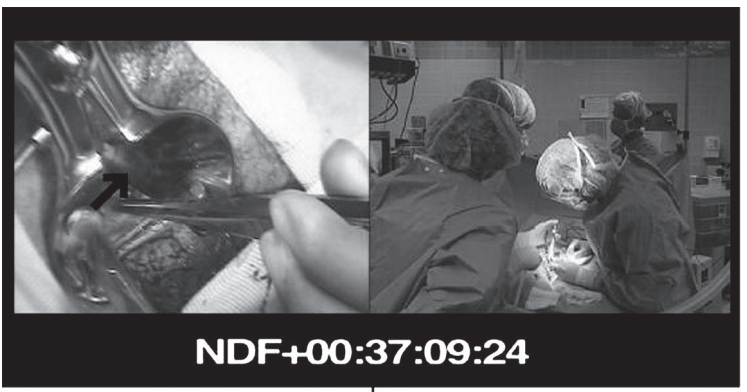


Figure 4. The attending's (ATT) demonstration of the rectal condylomata

Negotiating the upshot

As the final excerpt begins, the resident and the attending both produce surprise tokens (lines 01 and 03, respectively). Coming before visual access to the rectal canal has occurred, these represent commentaries on what has already been seen, as opposed to new noticings. As the attending opens the speculum, she announces *Now see he's got (0.4) he's progressed* (line 06). By prefacing her announcement with *now*, she signals that they are moving into a new phase of their examination. The utterance that follows is significant, both in terms of the instructing of objects and in terms of their emerging understanding of the case. Though she is just in the process of gaining her own first view of the interior space, the attending offers it as a demonstration – *this* is how we look. Not only is this *how* we look, but what we are seeing is *progression*. The demonstration is built upon the presumption that her recipient, the resident in this case, has visual access to what she is seeing and the capacity to recognise it for what it is. The attending starts her utterance as a simple noticing (*Now see he's got*), but then restarts and offers instead the assessment (*he's progressed*). Where she had previously been reticent to offer a judgement, she now marks their transition from simple data gathering to evaluation. The resident issues (line 07) what would appear to be a continuer rather than an avowal of recognition. It comes in overlap with the attending's assessment and before the object of the prior noticing has been established.

Both surgeons are offering their first impressions of the newly exposed space and their words fall upon each other. After a short lapse and building on the structure already supplied, the resident progressively constructs the next phrase: *to having* (line 09), *internal >and some rectal<* (line 11). This partially completed thought is embellished by the attending in various ways. First she affirms *to having* without yet specifying what the patient might have (line 10). Then she adds *you've got in- in-* which may be shut down because the resident has already supplied *internal*. She then self-corrects and completes the noticing (line 12). What results is a complex, almost choral constitution of the matter of attention, which we take to be the nature of the progression of the disease. The 'them' in *see em?*, of course, are condylomata, but they are never referenced as such. Since they are the *raison d'être* for their current work, presumably there is no need for more explicit labelling.

The attending goes on to produce an ostensive demonstration of *those guys* using the tip of suction tool as a pointer (line 14, see Figure 4). Once again, it is the attending's enunciation of *there*, that transforms her instrumental action with the tool into a deictic gesture. The resident responds with both an avowal and demonstration of recognition. The attending then delivers the upshot of the noticing for the present case, *he's not gonna be curable* (line 18). Or, actually, this is a first

upshot because she then supplies another, *this kid needs an HIV test* (line 21). The first affirms the candidate conclusion earlier advanced by the resident in Excerpt 1. In yet another repair initiation, the resident enquires into the reasoning behind the second, proposing two candidate answers (line 26). The attending endorses the first.

The attending's response is a little misleading. There is a rule of association here, but it is not the simple association of anal condylomata with HIV. As her response indicates, it is only when you see rapidly progressing condylomata that you need to be concerned about HIV. It is the rate at which the disease has advanced that is the critical issue here. As she explains toward the end of the procedure.

> When you have people who have perianal condylomata just on the skin, you have about a 65% chance of being able to cure the disease. When I saw him in the office he had just disease on the skin. Now he's got all that disease in the anal canal. When people start… getting disease in the anal canal and the rectum the chance of curing them is essentially nil. And the other issue there is… that when people start having disease in the anal canal… then you have to consider that the possibilit[y] of immunocompromise.

And immunocompromise, in turn, would suggest the possibility of HIV.

The identity of objects and methods

> Where others might see 'things', 'givens', or 'facts of life',
> the ethnomethodologist sees (or attempts to see) process:
> the process through which the perceivedly stable features of social
> organized environments are continually created and sustained.
> (Pollner, 1974, p. 27)

In a volume focusing on interacting with objects, it is worthwhile to ask what kind of objects are the participants in this episode interacting with and about? Obviously, the surgical procedure is directed to the patient's condylomata. Though never mentioned by name, they are central to both the ongoing activity and the participants' attention. But the recognition of condylomata never comes into question, they are seen and acted upon for what they are throughout. The surgeons speak of progression, curability and the potential for HIV infection. All of these are objects of sorts. But they are implicated in something else, something more abstract and elusive. It is the newly emerging clinical picture. This is the oriented object across these analysed excerpts and it can be considered to be a discovered matter.

We have written a good bit elsewhere about the interactional organisation of discovering work (e.g. Koschmann & Zemel, 2009, 2011; Zemel & Koschmann, 2013),[3] arguing that the work of discovering is one of recalibrating referential resources in the interest and pursuit of increased specificity. We can see this kind of recalibration work happening in the condylomata episode. Initially the changes in the case are described in general and in inherently-indexical terms (e.g. *That's new*, *that's not good*). As their investigation into the changing status of the case moves forward, however, the participants adopt a more precise and technical vocabulary – quick progression, incurable, potentially HIV-positive. Because our current interest is in the recognition of objects, we will not have much more to say about discovering work here except to note that the two phenomena never travel far apart. They are, in fact, different faces of the same coin or, perhaps better, different ways of glossing the same fundamental process.

When Garfinkel (2008/1952) writes that an object is experienced "through an order of specifications" (p. 133) and that the "definition of the situation is conceived as an order of objects" (p. 131), he is using *order* in an unconventional way. Certainly we can see that there is a serial order to the participants' "essentially situated inquiries" (Garfinkel et al., 1981, p. 135), but there is more. The situation, as it is appreciated, is built-up through an ordering that is temporal, spatial and referential. The important thing to bear in mind, however, is that this ordering is brought about in and through the concerted actions of the setting's members, not simply dictated by the circumstances within which they find themselves. The emerging clinical picture, then, is a "potter's object" (Garfinkel et al., 1981, p. 137), something formed and realised through their own occasioned sense-making work.

In Garfinkel's hands, the relation between evidences and underlying patterns is a totally reflexive one. He noted, "[e]ach is used to elaborate the other" (Garfinkel, 1962, p. 692). "Not only is the underlying pattern derived from its individual documentary evidences, but the individual documentary evidences, in their turn, are interpreted on the basis of 'what is known' about the underlying pattern" (pp. 691–692). As Woolgar (1981) explained:

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3. Another earlier report (Koschmann et al., 2011) deals with the relation between the execution of a formal procedure and object constitution. Though it does not discuss discovering work explicitly, it too describes a process of recalibrating referential resources – an object of evidently-vague status becomes, through a sustained process of inquiry, the-cystic-artery-for-the-purposes-of-*this*-surgery.

> Garfinkel speaks of the 'documentary method' to denote the process by which underlying patterns are 'discovered' on the basis of 'observed appearances'. He shows that neither the appearances nor the underlying pattern is fixed and independent of the other. Instead the sense and character of the appearance… is modified as its 'relationship' with the underlying pattern… is constructed. Identification of an underlying pattern thus involves a back-and-forth process whereby neither entity is ever independent of the other. (p. 382)

This is evident in the condylomata example. The relation of the documentary evidences (i.e. number, distribution, rate of change, tactile quality) is reflexively tied to recognised underlying patterns (e.g. progression, immunocompromise). But the recognitional process also has a *recursive* character. When the patient's case is seen to be untreatable, its incurability was presented as an implication of progression and progression was made visible through the noticing of new growth. At each stage we see a discernment of some underlying pattern within a given set of documentary evidences. The same method of recognition is applied at each juncture and the separate recognitions are nested like Russian dolls.[4] In exploring these various layers of embedded reasoning we place Foucault's (1973) clinical 'gaze' under dissection.

Instruction, as we all know, is a crucial feature of how social order is created and shared understanding is sustained in the world. Garfinkel (2002) defined an *instructed action* as a two-part assembly consisting of the formal instruction and the practical work of placing this instruction into action (pp. 197–199). The provided instruction, by this description, serves as an account of what needs to get done. Garfinkel labelled these duplexes "Lebenswelt pairs" (p. 269) employing a term of art from phenomenology.[5] Taken together the two components represent a description of occasioned instruction-following, of instruction-following in the nonce, as it were. If the means by which the intended object is made discoverable is treated as a form of instruction and if its perception is seen as a form of instructed action, then, the two considered together also represent a Lebenswelt pair. We could, in fact, speak of them as the *instructed object*. Instructed objects, we could say, are the building blocks from which "disciplined perception" (Stevens & Hall, 1993) and "professional vision" (Goodwin, 1994) are constructed.

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4. We offer thanks to Ilkka Arminen for this suggestion.

5. "In this world we are objects among objects in the sense of the life-world [*Lebenswelt*], namely, as being here and there, in the plain certainty of experience, before anything that is established scientifically, whether in physiology, psychology, or sociology" (Husserl, 1970, pp. 104–105).

In the analysed episode, we see the attending engaged in an activity that is, at the same time, both recognitional and instructional. She is offering instruction, not into how to recognise condylomata, but rather into what condylomata in certain patterns and circumstances can mean. In so doing she places on display the criteria she employs in forming such judgements. The 'learnable' (Zemel & Koschmann, 2014), then, pertains to how clinical judgements are to be professionally and accountably formulated. In putting her perceptual processing on display for the resident, the attending also makes it available to us as well. Settings of formal instruction are perspicuous, in just the way that Garfinkel utilises that term,[6] for studying how professional vision is done and instructed objects are produced.

Garfinkel appropriated his congruence theory of objects from Schütz and Gurwitsch, but his vital interests were never in phenomenology per se or even, for that matter, in objects. The constitution of objects was for him an instructive case of how all acts of meaning are performed. His substantive contribution was to show that their treatment of objects could be employed in formulating a radical challenge to the prevailing view of what sociological inquiry should be. This was a step down a path that had already been prepared by Schütz, but where he engaged it as a philosophical problem, Garfinkel took it up as a starting point for a program of sociological inquiry. Objects are not just concrete instantiations of mental categories, but are constituted within and for meaningful action. Garfinkel (1952) addressed this in his thesis when he wrote:

> Rather than there being a world of concrete objects which a theory cuts this way and that, the view holds that the cake is constituted in the very act of cutting. No cutting, no cake, there being no reality out there that is approximated since the world in this view is just as it appears. (pp. 95–96)

In later writing he was to conclude, "[t]he identity of objects and methods is key" (Garfinkel, 2002, p. 124). Ethnomethodology, in this way, seeks to give an account of object instantiation that is methodic and fundamentally processual. By systematically seeking to document how the cake-cutting gets done, it provides a means of addressing the foundational question of how a 'world of meant objects' is brought into being.

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6. "A perspicuous setting makes available, in that it consists of material disclosures of practices of local production and natural accountability in technical details with which to find, elucidate, learn of, show and teach the organizational object as an in vivo work site" (Garfinkel, 2002, p. 181).

References

Antaki, C. (1994). *Explaining and arguing: The social organization of accounts*. London: Sage.

Dewey, J., & Bentley, A. (1991/1949). Knowing and known. In J. A. Boydston (Ed.), *John Dewey: The later works, 1949–1952* (Vol. 16, pp. 1–294). Carbondale, IL: Southern Illinois University Press.

Edwards, D. (2000). Extreme case formulations: Softeners, investment and doing nonliteral. *Research on Language and Social Interaction*, 33, 347–373. DOI: 10.1207/S15327973RLSI3304_01

Foucault, M. (1973). *The birth of the clinic: An archaeology of medical perception* (A. M. S. Smith, Trans.). New York, NY: Vintage Books.

Garfinkel, H. (1952). *The perception of the other: A study in social order*. Unpublished dissertation. Harvard University, Cambridge, MA.

Garfinkel, H. (1962). Common-sense knowledge of social structures: The documentary method of interpretation. In J. M. Scher (Ed.), *Theories of the mind* (pp. 689–712). New York, NY: Free Press of Glencoe.

Garfinkel, H. (2002). *Ethnomethodology's program: Working out Durkheim's aphorism*. Lanham, MD: Rowman & Littlefield.

Garfinkel, H. (2006/1948). *Seeing sociologically: The routine grounds of social action*. Boulder, CO: Paradigm.

Garfinkel, H. (2008/1952). *Toward a sociological theory of information*. Boulder, CO: Paradigm.

Garfinkel, H., Lynch, M., & Livingston, E. (1981). The work of discovering science construed with materials from the optically discovered pulsar. *Philosophy of Social Science*, 11, 131–158.

Goodwin, C. (1994). Professional vision. *American Anthropologist*, 96, 606–633. DOI: 10.1525/aa.1994.96.3.02a00100

Gurwitsch, A. (2010/1964). The field of consciousness. In R. M. Zaner, & L. Embree (Eds.), *The collected works of Aron Gurwitsch (1901–1973)* (Vol. III, pp. 1–409). Dordrecht: Springer. DOI: 10.1007/978-90-481-3346-8_1

Heritage, J., & Stivers, T. (1999). Online commentary in acute medical visits: A method of shaping patient expectations. *Social Science & Medicine*, 49, 1501–1517. DOI: 10.1016/S0277-9536(99)00219-1

Hindmarsh, J., & Heath, C. (2000). Embodied reference: A study of deixis in workplace interaction. *Journal of Pragmatics*, 32, 1855–1878. DOI: 10.1016/S0378-2166(99)00122-8

Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology* (D. Carr, Trans.). Evanston, IL: Northwestern University Press.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation Analysis: Studies from the first generation* (pp. 13–31). Amsterdam/Philadelphia: John Benjamins. DOI: 10.1075/pbns.125.02jef

Koschmann, T., LeBaron, C., Goodwin, C., & Feltovich, P. (2011). "Can you see the cystic artery yet?": A simple matter of trust. *Journal of Pragmatics*, 43, 521–541. DOI: 10.1016/j.pragma.2009.09.009

Koschmann, T., & Zemel, A. (2009). Optical pulsars and black arrows: Discoveries as occasioned productions. *Journal of the Learning Sciences*, 18, 200–246. DOI: 10.1080/10508400902797966

Koschmann, T., & Zemel, A. (2011). "So that's the ureter": The informal logic of discovering work. *Ethnographic Studies*, No. 12, 31–46.

Mannheim, K. (1952). On the interpretation of Weltanschauung. In P. Kecskemeti (Ed.), *Essays on the sociology of knowledge: The collected works of Karl Mannheim* (Vol. V, pp. 33–83). London: Routledge & Kegan Paul.

McHoul, A. (1978). The organization of turns at formal talk in the classroom. *Language in Society*, 7, 183–213. DOI: 10.1017/S0047404500005522

Mori, J. (1999). Well, I may be exaggerating, but: Self-qualifying clauses in negotiation of opinions among Japanese speakers. *Human Studies*, 22, 447–473. DOI: 10.1023/A:1005440010221

Nishizaka, A. (2011). Touch without vision: Referential practice in a non-technological environment. *Journal of Pragmatics*, 43, 504–520. DOI: 10.1016/j.pragma.2009.07.015

Pollner, M. (1974). Sociological and common-sense models of the labeling process. In R. Turner (Ed.), *Ethnomethodology* (pp. 27–40). Middlesex: Penguin.

Pomerantz, A. (1986). Extreme case formulations: A way of legitimizing claims. *Human Studies*, 9, 219–229. DOI: 10.1007/BF00148128

Schegloff, E. (2007). *Sequence organization in interaction: A primer in conversation analysis*, vol. 1. New York, NY: Cambridge University Press. DOI: 10.1017/CBO9780511791208

Stevens, R., & Hall, R. (1998). Disciplined perception: Learning to see in technoscience. In M. Lampert, & M. L. Blunk (Eds.), *Talking mathematics in school: Studies of teaching and learning* (pp. 107–149). New York, NY: Cambridge University Press.

Stivers, T. (2008). Stance, alignment, and affiliation during storytelling: When nodding is a token of affiliation. *Research on Language and Social Interaction*, 41, 31–57. DOI: 10.1080/08351810701691123

Woolgar, S. (1981). Interests and explanation in the social study of science. *Social Studies of Science*, 11, 365–394. DOI: 10.1177/030631278101100304

Zemel, A., & Koschmann, T. (2013). Recalibrating reference within a dual-space interaction environment. *Computer-Supported Collaborative Learning*, 8, 65–87. DOI: 10.1007/s11412-013-9164-5

Zemel, A., & Koschmann, T. (2014). "Put your fingers right in there": Learnability and instructed experience". *Discourse Studies*, 16, 163–183. DOI: 10.1177/1461445613515359

EPILOGUE

Trajectories of the object in interaction

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How are objects consequential in our daily lives? How do we come to give artefacts the significance that we do? Why are we inclined to make a fundamental distinction between the material world and our social lives with one another? What is the basis of the material/social distinction anyway?

These are important questions for a range of disciplines that seriously consider our contemporary human condition. We are awash in a 'built' environment that is neither wholly natural nor artificial, partly (but only partly) of our own making. At the very least, anthropology, sociology, material culture, ecology, technology, design, the arts and crafts, are among the disciplines that have a very real stake in such questions. This volume provides original and vital material that offers these fields of study an opportunity to revisit these questions from their own unique and vested perspectives. Remarkably, such broad disciplinary reach is possible on account of just how closely readers are invited here to enter into some of our collective human practices, as these unfold – for example, shopping in a supermarket (De Stefani), visiting the doctor (Beck Nielsen), conducting interviews (Mikkola & Lehtinen), or performing surgery (Koschmann & Zemel). Each chapter examines the events and activities of real time interactions with and between people and objects. Any attempt to address questions about the meaning and importance of objects in our lives must deal with the emergent world-as-it-unfolds that is plainly evident in these studies.

Interestingly, while *Interacting with objects* has a great deal to say about interaction, it appears at first blush to have much less to say about objects *qua* objects, at least in the way that other disciplines dissect and analyse the physical and material world, for example by identifying their properties, their affordances, their composition, and subsequently explaining their nature, behaviour and uses in terms of 'objective' or 'intersubjective' features. One way of appreciating precisely how this volume can study social interaction as a way of 'getting at' objects is to revisit the very first sentence of Harold Garfinkel's *Studies in ethnomethodology*. It is fair to say that each of the contributors to this volume is an intellectual descendant of Garfinkel, who opens *Studies* with the startling assertion that "In doing

sociology, lay and professional, every reference to the real world, even where the reference is to physical or biological events, is a reference to the organized activities of everyday life" (Garfinkel, 1967, p. vii). Reference to the world is identified with reference to our everyday, socially organised practices.[1] When this idea is embraced, and when it is subsequently pursued in empirical investigations such as those exemplified in this volume, there can be little wonder that ethnomethodology has had a deep and unsettling influence on disciplines far beyond sociology. In this perspective there is nothing uniquely sociological about reference to the real world; or perhaps it is better to say everything is sociological (but only in *this* way) once reference itself is seen as a socially organised phenomenon. Hence *Interacting with objects* is able to present a range of original insights regarding the nature of objects *through* studying naturally organised social practices, rather than examining objects per se. What these authors share is a methodological (rather than a theoretical) orientation that invites us to see every 'object' anew through investigations of how, when and where objects mundanely feature in ordinary settings and activities. In view of this, there are many trajectories for research on offer; I will focus on three that strike me as having the greatest trans-disciplinary reach.

Reference and the relations between language and world

How do words refer to objects? Ordinary objects – corporeal, physically bounded by a surface and designated by a noun – seem to own the purest connection between language and the material world. A very natural idea is that objects are 'out there', and we have simply given them names in language. On this view, objects' names function much like labels on artefacts in a museum. There is a thing, and that thing has a linguistic sign that 'stands for' that thing. This is, however, not the view of language or reference demonstrated by the analyses here. We owe Wittgenstein much of the credit for complicating this picture of how language works to refer to things in the world. The 'life' of a name is a very different kind of thing than the life of its referent. When a thing ceases to exist, its name lives on, for instance. On account of these simple (and other more subtle) reflections on language, Wittgenstein suggested that "it is part of the grammar of the word "chair" that THIS is what we call "to sit on a chair"…" (Wittgenstein, 1960, p. 24; with the "THIS" being the demonstrative bodily position we assume when sitting down). Our languages and their peculiar evolutions are derived from and parasitic

1. Given the agenda that Garfinkel set for ethnomethodology, it is probably best to read this statement not as an ontological proclamation but rather as a methodological injunction, i.e. a way to treat the world specifically for the purposes of investigation.

upon our collective practices, to the extent that Wittgenstein ascribed to grammar (a concept traditionally reserved for the formal rules for the correct uses of language) the practices in which our ordinary concepts feature. Language is not layered on top of the physical/material world like labels on things, but is itself a practice – a way of acting in and on the world. Norman Malcolm explained this connection with the example that someone

> might utter a certain sound each time a cow appeared. But we need to ask, what makes the latter sound a word, and what makes it the word for cow? Is there no difficulty here? Is it sufficient that the sound is uttered when and only when a cow is present? Of course not. The sound might refer to anything or nothing. What is necessary is that it should play a part in various activities, in calling, fetching, counting cows, distinguishing cows from other things and pictures of cows from pictures of other things. If the sound has no fixed place in activities ("language-games") of this sort, then it isn't a word for cow. (Malcolm, 1954, p. 554)

This inverts a very natural (but perhaps naïve) idea of how language functions. Our names for objects, arguably the most direct connection between language and world, are themselves predicated on our practices. A thing might be 'out there', but our language for it, including the prospect of it bearing a name, is dependent on the nature of our shared activities with it.[2] Practices come first; objects, their names, their properties, their functions and their places in our lives, what they mean to us and for us, are derivative of what we do with them and around them, determining what we can (i.e. what it makes sense to) say about them, the kinds of existence and potentials they have, the kinds of phenomena that we take them to be. What we say about and around objects are themselves practices – actions we perform in language – and these actions are consequently definitive of the objects themselves. This is why it can make sense to ascribe to the grammar of the word chair that *this* is what it means to sit down on a chair. Language is not separable from our practices. Along with Garfinkel, reference to objects simply *is* reference to socially organised practices.

Although this general perspective on language is not especially new, it remains one that has rarely been pursued in empirical investigations of objects,

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2. This is the backdrop for Wittgenstein's extensive discussion of how the names of 'private' sensations, such as pain, gain their sense not from individual experience but again, from our common social practices. This general point is perhaps easiest to recognise with respect to the discovery and subsequent naming of new materials or objects. There are peculiar circumstances that arise in the conduct of certain practices that present an occasion for a name to be ascribed to a new material, and indeed that a material be considered 'new' and therefore 'nameable'. For one among innumerable examples, see Partington's (1942) prehistory of the discovery of strontium.

as the editors note in their introduction. This volume's chapters treat ordinary social practices – compare Malcolm's "calling, fetching, counting cows" to vacuuming (Rauniomaa & Heinemann), photo browsing (Aaltonen, Arminen, & Raudaskoski), ordering food (Richardson & Stokoe) or troubleshooting plumbing plans (Sakai, Korenaga, Mizukawa, & Igarashi) – as the necessary gateway to understanding objects, their meanings and their consequentiality. Understanding objects is not, in the first instance, a matter of being able to talk about them; rather it is appreciating the way in which whatever we can say about them is predicated on what is and can be done with them and around them. And so one of the most tantalising prospects of this volume is the contention that what counts as an object is just as much a contingent matter for interaction as is the organisation of interaction itself.

Ontological dimensions of interaction

If even the name-ability of objects is consequent on our social practices, then the properties of objects – whatever is observable, noticeable, describable, experiential about them – are as well. The properties we would assign to and discover in objects would be different if our practices were different. This gives our collective practices and social interactions an 'ontological' dimension that is very evident in several of the studies presented here. For example, it is one matter to appreciate that paper has multifarious uses in journalistic work. It is another to notice how paper becomes consequential in different ways – paper is not simply a means of inscribing and storing information, but is drawn into the flow of practices in which it *inter alia* stands as a bearer of formal legitimacy, a token of ownership, a tangible means of handing over an important task. This distinction is crucial. The 'affordances' of paper, and indeed any object in Gibson's (1979) original formulation of that concept, are organism-dependent but context-*in*dependent. Affordances are organism dependent, in that the affordances of a tumbleweed in an open pasture are very different for elephants than for dragonflies. Tumbleweeds are pick-up-able and carry-able and step-on-able for elephants, whereas they afford landing and sitting and hiding for dragonflies. Affordances are relational, dependent on the physical characteristics of the object, but only as those characteristics are paired with a particular organism's motoric and perceptual capabilities. Gibson's (1979) ecological theory of perception and the environment was an ingenious alternative to mentalistic explanations of human and other organisms' possibilities for perception and action. But while affordances are relational (and hence cannot be reduced to mental representations), they were formulated to be largely independent of context (subject, of course, to ordinary perceptual variations – day/night

etc. – of the environment). Weilenmann and Lymer's chapter shows instead how the possibilities for action (affordances) that are provided by paper and leveraged by participants in interaction are themselves contingent upon not just the generic work context (i.e. the kinds of tasks that make up journalistic work) but especially to the sequential place and concurrent actions including talk that accompany what can and does get done with paper. Sequential organisation is demonstrably determinative of the actions performed in interaction.

Here we can see the seeds of the limitations of the theory of affordances to account for the meaning and use of artefacts and to subsequently serve as a basis for design. The constitution and uses of objects are irreducible to their features and properties, even when those are taken in relational combination with the possibilities they provide for our perception and physical manipulation. This being the case, we cannot *determine* the use of an artefact by designing its physical, visual and interactive characteristics. Although design is one of the fields that first became enamoured with the concept of affordances for its potential to ultimately solve intransigent problems of the usability of products, design was also among the first to encounter its practical limitations. But it is only in studies such as these here that we are shown precisely *why it is* that affordances can offer no panacea for the difficulties of designing and shaping artefacts for human use. Understanding the use of artefacts necessitates an understanding of the sequential contingency of meaning in and for the on-going stream of action, and these are features of the world that are specifically omitted from Gibson's ecological approach. This is an enticing promise of the development of an "interactional ecology of objects" forecast in the editors' introduction (Nevile, Haddington, Heinemann, & Rauniomaa).

Material and immaterial objects in language and action

A cursory survey of what is taken to 'count' as an object in this volume nicely illustrates the breadth of reach of the studies, and the disparate 'things' that are included. An 'object' here has been a vacuum cleaner, car radio or digital camera; furniture or room interiors; cooking ingredients; a stitch in a fabric; the degree of severity of a medical case; an imaginary ball in a gestural pantomime. There are designed artefacts, environmental features, material creations, clinical abstractions and imaginary objects. Some objects are material, possessing (again in Gibson's terms) surface, texture, colour and shape; others are immaterial abstractions or imaginations generated using language within an ongoing stream of practical activity. On the strength of the analyses, however, there is ample justification for treating these various 'objects' equivalently. Indeed, given the idea of an interactional ecology of objects, it is imperative that material and immaterial objects are

given equal analytic status – there is in principle no difference between unpacking the meaning and consequence of objects on account of their perceptual and physical properties. This is not to say that there are no important differences of meaning or consequence between material and immaterial objects, only that their respective differences, whatever they may be, can be demonstrably 'got at' in much the same way, i.e. by looking in detail at how they are oriented to, and how they play out, in people's interactions with each other. And whatever differences or similarities there may be are, in the first instance, a participants' matter. Such distinctions are not beholden to a theorist's neat typology of properties, qualities, or functions of objects that can be taken to have any *a priori* relevance; they are only accountable to, and within, interaction.

This way of comprehending objects, as constituted in and achievements of social interaction, is more obvious with respect to 'immaterial' abstractions. We might expect, for instance, that surgeons who are attempting to ascertain the severity of the case at hand must engage in establishing the nature of an 'object' that is to some extent contingent, negotiable, subject to various perceptual and intersubjective incongruities, and one in which consensus must be actively worked at by the participants in interaction. This is plainly visible in Koschmann and Zemel's analysis. Yet it is often too easy to overlook that it is by and through the same kinds of interactional practices that material objects were once established for us in interaction, insisted upon, instructed, learned and only then able to be subsequently invoked. A chopping board is just as much a socially organised phenomenon and interactional achievement as is an aesthetic judgement of the sensorial qualities of an artwork.[3] Furthermore, it is clear that even the distinction I am drawing between material and immaterial objects is little more than a heuristic device. Indeed, within the volume, we can see how such a distinction is at best only a scenic gloss for the differences between the purposes and activities through which the character of objects is oriented to and established in interaction. For example, while vacuum cleaners and car radios may be very physical objects, what of their auditory qualities, which occupy the analyses presented in Rauniomaa and Heinemann? And what of their *potential* for making noise, which is perhaps the 'object' that the participants most orient to within the data analysed? A simple dichotomy between material and immaterial begins to have much less purchase owing to analyses that get at this level of detail. A similar assessment with respect to any strong distinction between material and linguistic "semiotic fields" (cf. Goodwin, 2000) is also warranted on these grounds. Thus, there remains a world

3. Dorothy Smith relates an exceptional example of the socially organised nature of 'bird' in recounting her 18 month old son being taught the meaning of, and being corrected using, the word (Smith, 1996, p. 186).

of analytic work to be done in this regard to re-cognise through careful empirical analyses the social and interactional foundations of our shared world of objects.

Such a program of research requires a particular focus on what has been termed here (and elsewhere) "perspicuous" settings (cf. Wittgenstein, 1958, §122) in which the specific relations between our practices, our concepts, and the world we inhabit, are revealed. The kinds of examples Wittgenstein assembled as "reminders" (1958, §127) included things like how we are taught a concept or the name of an object, how we are corrected when a mistake is made, what qualifies as understanding it, what functions as its explanation, and in what kinds of situations its use is ambiguous or otherwise problematic. Many of the settings analysed here are characteristically perspicuous in this sense: learning to cook (Mondada), dance (Keevallik), or craft (Ekström & Lindwall), achieving intersubjectivity with an aphasic speaker (Aaltonen, Arminen, & Raudaskoski), negotiating the form and function of the controls of an as-yet-non-existent cabin for a backhoe loader (Day & Wagner), getting help at a service desk (Hazel), giving guided tours through an art gallery to visually impaired persons (Kreplak & Mondémé). In such cases we expect, and are treated to, an abundance of interactional sequences that do corrections, advice, explanations, descriptions, formulations, and other perspicuous activities. Properties, objects, artefacts, skills, judgments, and assessments are tied together to, and within, the settings that make them recognisable. They are not separable from one another. And they are discoverable only as they are produced, managed, insisted upon and taken for granted by participants in the course of getting something collaboratively done. The settings and data here are rife with perspicuity in this respect.

I have only managed to gesture weakly at these trajectories that take up and continue this volume's empirical program of research into the mutual constitution of our social practices, real-time interactions, and the im/material objects and environments we live among. These trajectories anticipate a vast and fertile field that deserves close inspection by any discipline that is concerned with how the natural and artificial environments we inhabit come to have the significance and influence for us that they do. Objects are constituted *as* objects in interaction in the course of being drawn into the weave of our everyday lives, and interaction is where we must continue to look to rediscover the things around us.

References

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston: Houghton Mifflin.
Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32(10), 1489–1522. DOI: 10.1016/S0378-2166(99)00096-X
Malcolm, N. (1954). Wittgenstein's Philosophical Investigations. *The Philosophical Review*, 63(4), 530–559. DOI: 10.2307/2182289
Partington, J. R. (1942). The early history of strontium. *Annals of Science*, 5(2), 157–166. DOI: 10.1080/00033794200201411
Smith, D. E. (1996). Telling the truth after postmodernism. *Symbolic Interaction*, 19(3), 171–202. DOI: 10.1525/si.1996.19.3.171
Wittgenstein, L. (1958). *Philosophical investigations* (2nd edition). Oxford: Blackwell.
Wittgenstein, L. (1960). *The blue and brown books*. New York: Harper & Row.

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