

# Toward a Conceptualization of Mixed Methods Phenomenological Research

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## Abstract

Increasingly, researchers are recognizing the benefits of expanding research designs that are rooted in one tradition (i.e., monomethod design) into a design that incorporates or interfaces with the other tradition. The flexibility of phenomenologically driven methods provides one such example. Indeed, phenomenological research methods work extremely well as a component of mixed methods research approaches. However, to date, a mixed methods version of phenomenological research has not been formally conceptualized. Thus, the purpose of this article is twofold. First, we provide a philosophical justification for using what we call mixed methods phenomenological research (MMPR). Second, we provide examples of MMPR in practice to underline a number of potential models for MMPR that can practically be used in future research.

## Keywords

phenomenological research, mixed methods phenomenological research, descriptive phenomenology, interpretive phenomenology

Over the past three decades, undoubtedly the most innovative use of mixed methods research has been the expansion of research designs that are rooted in one tradition (i.e., monomethod design) into a design that incorporates or interfaces with the other tradition. Advocates of mixed methods research note the rationale for mixing methods broadly to be that neither method used in isolation would be sufficient to handle effectively the nature of the research problem (Ivankova, Creswell, & Stick, 2006). Although this argument provides a generic justification for the adoption of a mixed methods research approach, the breadth of mixed methods academic literature available demonstrates that the purposes of combining multiple methods within a single study are far more diverse (Greene, Caracelli, & Graham, 1989). Specifically, within their conceptual framework for mixed methods research designs, Greene et al. (1989) suggest five key motivations for combining multiple methods within a single study: triangulation, to increase the validity of data and minimize bias; complementarity, to enhance the strengths and minimize the weakness of individual methods; development, to help use the

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results of one method to enhance another; initiation, to allow for analysis of data from different perspectives; and expansion, to increase the overall scope of research. This conceptualization demonstrates that mixed methods research may be adopted for one or more of the aforementioned purposes, when a single method in isolation is unable to explore adequately a single phenomenon.

As mixed methods research has become more widely accepted, related scholarly inquiry has progressed from providing an overarching justification of mixed methods research, to focus on the philosophical justification of the inclusion of specific qualitative methods within a mixed methods research framework. Perhaps the best example of this is the seminal article by Johnson, McGowan, and Turner (2010), wherein the authors conceptualized a mixed methods version of grounded theory (i.e., which they labeled as “MM-GT”), demonstrating that

Grounded theory can be tailored to work well in any of the 3 major forms of mixed methods research (i.e., qualitative dominant, equal status, and quantitative dominant). In equal-status MM research, MM-GT works well in connecting theory generation with theory testing, linking theory and practice, and linking general/nomological description/explanation with idiographic understandings of the human world. (p. 65)

Another qualitative-based design with an even longer tradition is that of phenomenological research (cf. Giorgi, 1970)—which became conceptualized by Edmund Husserl more than 40 years before Glaser and Strauss’s (1967) grounded theory. However, to date, a mixed methods version of phenomenological research has not been formally conceptualized. Yet as we argue within this article, phenomenological research methods work extremely well as a component of mixed methods research approaches. Garza (2007) stated that “The flexibility of phenomenological research and the adaptability of its methods to ever widening arcs of inquiry is one of its greatest strengths” (p. 338). Therefore, despite its long philosophical tradition, the phenomenological method is one that is still malleable, and can be adapted to incorporate (or be incorporated within) emerging movements within the field of research methods, such as mixed methods research. To this end, the overarching aim of this article is to explore how descriptive, interpretive, and alternative forms of phenomenological methodology can be incorporated as a component in mixed methods research, in order to inform a future study. Specifically, the article has two key objectives. First, we provide a philosophical justification for what we have termed mixed methods phenomenological research (MMPR). Second, we provide examples of MMPR working in practice to underline a number of potential models for MMPR that can practically be used in future research.

## Theoretical Framework

### *Phenomenology*

Phenomenology as a philosophical research tradition emerged within the early part of the 20th century and was built on the work of earlier philosophers who discussed human experience as a starting point for philosophy (Todres & Holloway, 2006). The fundamental aim of phenomenological philosophy is to develop a greater understanding of individuals’ experiences through the consciousness of the experienter (Giorgi, 2009). By adopting this approach, the theory is that it will allow human beings to be understood from *inside* their subjective experiences (Todres & Holloway, 2006). Therefore, the main emphasis of phenomenological research is to describe or to interpret human experience as lived by the experienter in a way that can be used as a source of qualitative evidence. The preliminary concern for the researcher is to use qualitative data

collection techniques to obtain examples of everyday experiences. Due to its distinct strengths in terms of describing or interpreting the nature of lived experience, phenomenology is the ideal method for experiential work within an interpretive paradigm. However, despite its clear assets as a method, phenomenology fails to address the social context of lived experience (Langridge & Ahern, 2003); furthermore, although phenomenology can help generate structures of lived experience, it is not suitable for making generalizations about such structures. Finally, although one of phenomenology's key strengths is its focused nature that allows for the exploration of a specific experience, it provides no way of identifying which phenomenon is most relevant to an individual or group of individuals.

The academics that identify with phenomenological research approaches have diverse and often conflicting interests in terms of their interpretation and application of the underlying philosophy, as well as different views on the future of phenomenology (Moran, 2000). Broadly speaking, phenomenological inquiry can be separated into two main streams: descriptive (eidetic) phenomenology, which draws more heavily on the work of Edmund Husserl (1859-1938) and, more recently, Amadeo Giorgi; and interpretative (hermeneutic) phenomenology, drawing on the work of Martin Heidegger (1989-1976) and later Max Van Manen.

Phenomenology is a broad term relating to a philosophical movement as well as a range of practical research approaches. For the purposes of the current study, we will use the term *phenomenology* to refer to phenomenological research approaches, and the term *interpretive* to refer to the paradigm that traditionally informs this method; however, it is important to recognize that a number of other qualitative methods draw on phenomenological philosophy and the associated interpretive paradigm without actually being a phenomenological method such as ethnomethodology and action research. Although these methods are not the focus of the current article, there is a need for further academic inquiry that considers how researchers can use these approaches in combination with complementary research methods.

### *Mixing Phenomenology*

One of the key criticisms of mixed methods research is that it is often adopted uncritically by researchers, who pay little attention to the paradigmatic differences between methodological approaches (Sale, Lohfeld, & Brazil, 2002). Although it is widely acknowledged within the field of mixed methods research that paradigms do not always lead to particular research methods (Johnson & Onwuegbuzie, 2004), it is generally accepted that certain methods fit better within complementary paradigms; therefore, consideration of traditional paradigms should be made by researchers prior to them outlining their philosophical standpoint (Johnson et al., 2010). For that reason, a discussion of the underlying paradigmatic differences and compatibility for postpositivist and phenomenological work will be outlined.

Table 1 presents the ontological, epistemological, and methodological assumptions of postpositivist and phenomenological forms of inquiry, which draw on the interpretive paradigm. This table highlights a number of philosophical differences between postpositivist and phenomenology informed by interpretive inquiry that must be considered prior to a researcher's engagement with MMPR. Traditionally, methodological purists explicitly have advocated their chosen paradigm as superior for conducting research (Johnson & Onwuegbuzie, 2004), and have subsequently rejected the possibility that qualitative and quantitative research paradigms could coexist within a single research study. This belief is the underlying concept behind the incompatibility thesis (Howe, 1988), which centers on the idea that qualitative and quantitative methods are incommensurate. Put simply, the argument adopted by incompatibilists is that the philosophical distinctions are so great between qualitative and quantitative research and their associated paradigms that their respective methods cannot be combined within a single research

**Table 1.** The Philosophical Assumptions of Postpositivist and Phenomenological Forms of Inquiry.

|              | Postpositivism                                                                                                                         | Descriptive (eidetic) phenomenology                                                                                                                                                                                                                                                                               | Interpretive (hermeneutic) phenomenology                                                                                                                                                                                                                                                                                 |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ontology     | An objective reality or truth exists, but can never be interpreted fully                                                               | There are multiple constructions of reality. Objectivity relates to the extent to which description is true to a phenomenon<br><br>Although experience is subjective, there are features to any lived experience that are common to all persons who have the experience<br>Data are based on a subjective reality | Multiple constructions of reality. Reality is constructed in unique ways depending on context and personal frames of reference as individuals engage with the world                                                                                                                                                      |
| Epistemology | Data are an approximation of objective reality<br>The ideal of objectivity only can be approximated through taking a critical approach | The goal of the researcher is to achieve transcendental subjectivity                                                                                                                                                                                                                                              | Data are based on a subjective reality<br><br>These data are produced through the interaction between the participant and researcher, and the researcher's interpretations<br><br>Need for orienting framework<br>People cannot abstract themselves from the world<br>The researcher's values affect the object of study |
| Axiology     | Researcher attempts to remain value free (values must be excluded)                                                                     | Researcher acknowledges values and bias. The impact of the researcher on the inquiry is constantly assessed so that they do not influence the object of study                                                                                                                                                     | Expert knowledge on the part of the researcher is valuable<br>Interpretive methods that move beyond the description of core concepts and essences to look for meanings. Variations include <i>Interpretative Phenomenological Analysis</i> (Smith & Osborn, 2003)                                                        |
| Methodology  | Multiple approaches that may be triangulated                                                                                           | Methods that focus on obtaining participants' descriptions of experience. Variations include Giorgi's (1985, 2009) <i>Descriptive Phenomenological Method in Psychology</i>                                                                                                                                       |                                                                                                                                                                                                                                                                                                                          |

project. Most strikingly, the table illustrates that the proponents of the postpositivist paradigm advocate the existence of an objective reality, which is a direct contrast to the traditionally constructivist/interpretivist notion of multiple realities and the phenomenological notion of subjective experience. One way researchers conducting mixed methods research can negotiate these paradigmatic differences is by using multiple methods within a single overarching paradigm (Johnson et al., 2010). This approach is based on the notion widely acknowledged within the field of mixed methods research—that paradigms do not always lead to particular research methods (Johnson & Onwuegbuzie, 2004). Therefore, the proceeding argument within this article will adopt this viewpoint in order to demonstrate that despite the ontological and epistemological differences between the paradigms traditionally adopted by phenomenological and quantitative research, axiological and methodological parallels between phenomenological and quantitative methods allow for the combination of these methods within a single study with a single overarching paradigmatic framework, which is able to complement multiple methods adequately. This will help provide a specific tailored justification for the adoption of phenomenology in combination with alternative methods.

Despite having qualitative roots, phenomenology as a method often is referred to as a human science approach (Giorgi, 1970), which is perhaps less surprising when one considers that the fore founders, Edmund Husserl (1859-1938) and Martin Heidegger (1889-1976), were mathematicians with an appreciation for both object and subject. Therefore, we contend that despite their philosophical differences, the scientific nature of the phenomenological method offers areas of methodological compatibility with more deductive approaches that help justify the adoption of an MMPR approach by researchers. Because the different streams of phenomenology are grounded in diverse epistemological and ontological assumptions, a separate justification for paradigmatic complementarity will be offered.

### *Mixing Descriptive (Eidetic) Phenomenology*

Husserl is credited as being not only the forefather of descriptive phenomenology but also the founder of phenomenology generally in the modern sense of the term (Giorgi, 2009; Spiegelberg, 1994). The essential characteristic of descriptive or eidetic phenomenology is that it focuses on the descriptions of participants' individual experiences (Creswell, 2007). Husserl termed this universe of what is self-evident through experiences as the *life-world* (Todres & Holloway, 2004), which is also referred to by some phenomenologists as the *lived experience*. Subsequently, the life-world proceeded to become the subject matter of all phenomenological research for Husserl.

According to Giorgi (2009), who contributed significantly to the advancement of descriptive phenomenology as a method, there are four core characteristics of phenomenological inquiry, the first being intentionality, or the manner in which objects exist in an individual's own consciousness, and second being that the research is always initially descriptive. The third characteristic of phenomenological inquiry according to Giorgi is that it uses phenomenological reduction, which involves the researcher bracketing past knowledge and being sensitive to the implications of the data for the phenomenon being researched. This phenomenological element involves reducing elements that are intentionally related to consciousness, and focusing on the role of subjectivity (Giorgi, 2009). The fourth and final characteristic is that the *essence* or *bare bones* of what constitutes the phenomena is articulated as the structure (Holloway & Todres, 2003). It describes the common themes or essential parts from within the experience that identify the phenomenon and transcends the experiences of different individuals.

Husserl's descriptive phenomenology ultimately aims to make intelligible all objectivity, while also respecting the being-value of human subjectivity (Gadamer, 2004). This respectful

appreciation of both subject and object highlights the potential philosophical complementarity between phenomenology and more objective forms of inquiry, and helps justify the inclusion of more deductive methods within an overarching inductive phenomenological framework. Explicitly, there are two of the aforementioned key characteristics of descriptive phenomenological research that demonstrate epistemological and axiological parallels with postpositivist inquiry, the first being the development of a universal structure or essence of lived experience.

Descriptive phenomenologist researchers believe that each lived experience has a “descriptive emphasis” (Todres & Holloway, 2006, p. 181) or features that define a phenomenon most generally. Husserl used the term *essence* or *essential structure* to refer to these experiential commonalities. He contended that by focusing on a specific lived experience in a number of variations, it is possible to identify insights that are common throughout experiences in order to emphasize the universal themes held within the lived experiences. These commonalities are consistent within the experience and can be applied to multiple experiences from the same individual, or groups of individuals. The appreciation that the structure of lived experience may contain consistent concrete details as well as diverse elements reflects the role of the object within descriptive phenomenological methods and reflects the ontological assumptions of postpositivism that implies that an objective reality exists. Although descriptive phenomenology is concerned with divergence and unique interpretation of experience as well as commonalities, this acceptance of the objective provides a level of compatibility between this stream of phenomenological inquiry and methods operating within a more scientific paradigm, and provides a potential justification for the inclusion of quantitative methods within an interpretive framework for the purposes of underpinning a phenomenological methodology.

The second component of descriptive phenomenological inquiry that acts as an area of compatibility with postpositivist inquiry is the nature of the phenomenological reduction. The key axiological distinction between postpositivist and interpretive inquiry is that postpositivism requires the researcher to remain as objective as is possible so as not to have an impact on the data. Although postpositivists acknowledge that objectivity can merely be approximated, this estimation distinguishes it from other paradigms (Phillips & Burbules, 2000). Whereas traditionally, qualitative researchers view data as the product of interaction between research and participant, descriptive phenomenologists aim to make a conscious effort to minimize the role of the researcher on the data. This attitude of recognizing and reducing the role of the researcher is referred to as the scientific phenomenological reduction and is achieved by bracketing (i.e., epoché; Husserl, 1931) past knowledge and reducing aspects that are intentionally related to consciousness (Giorgi, 2009). These similarities arguably provide a justification for combining descriptive phenomenology with quantitative methods concurrently because the axiological parallels would allow for a single research goal to be identified: the identification of the common features of an experience. This would help justify the triangulation or cross-validation of equivalent quantitative and phenomenological data within a single study.

### *Mixing Interpretative (Hermeneutic) Phenomenology*

While Husserl's student Heidegger also professed to using the phenomenological method, his form of inquiry differed significantly from his eminent teacher's form. Unlike Husserl, for Heidegger (1962), “the meaning of phenomenological description as a method lies in interpretation” (p. 61). Heidegger also saw description in itself as a form of interpretation because it presupposes engagement with a phenomenon.

Table 1 demonstrates that whereas postpositivism and descriptive phenomenology share some ontological and axiological parallels, there are fewer apparent corresponding characteristics between postpositivism and interpretive phenomenology. For example, the interpretive

approach puts less emphasis on the phenomenological attitude and reduction and applies more focus to the jointly constructed interpretations of an individual's life world and the individual's natural orientation (Van Manen, 1990) to the phenomena. Therefore, this approach acknowledges the researchers' subjectivities and role in the interpretation of meaning as opposed to attempting to bracket them from the research (Gadamer, 1976; Koch, 1995). Subsequently, data are interpreted by the researcher through their own alternative streams of consciousness, drawing on their valuable expert knowledge. The competing axiological assumptions of these paradigms amplify the philosophical complexity of combination for cross-validation or triangulation. Moreover, there is one key quality of interpretive phenomenology that justifies its combination with quantitative methods sequentially for the purposes of development (Greene et al., 1989; Morgan, 1998). This feature of interpretive phenomenology is the phenomenological orientation.

In essence, interpretive phenomenological inquiry "seeks to elucidate or make explicit our understanding of human behaviours and actions" (Allen & Jensen, 1990, p. 244); therefore, there is a need to understand what these behaviors or experiences are in order to maximize the potential of this research approach. In order to identify experiences, Van Manen (1990) describes the process of orienting to the phenomenon prior to formulating the phenomenological question. This process depicts the researcher focusing carefully on the question of what possible human experience is to be made topical for phenomenological research. There is, therefore, a strong justification for the adoption of a quantitative preliminary phase in order to identify the most relevant phenomenological experience to be explored using interpretive phenomenological methods. Moreover, due to the discovery-orientated nature of both interpretive and descriptive phenomenological inquiry, there is also excellent rationalization for the implementation of an explanatory quantitative proceeding phase in order to test theories developed through phenomenological inquiry. That is, sequential designs are particularly applicable when mixing postpositivist and phenomenological approaches. However, despite these differences, descriptive and interpretive phenomenology are often referred to interchangeably, without questioning any distinction between them.

### *Mixing Alternative Phenomenological Methodologies*

While interpretive and descriptive methods continue to dominate the field, more recently conceptualized approaches to phenomenological inquiry also provide potential for mixing. For example, the dialogical phenomenological approach (Stawarska, 2009) views the participant as the co-researcher, and requires them to have a significant input in analysis and thematization—consistent with Onwuegbuzie and Frels's (2013) *critical dialectical pluralism*, wherein rather than the researcher presenting the findings (e.g., conferences, journal articles), the researcher adopts a research-facilitator role that empowers the participants to assume the role of participant-researchers, who, in turn, either present/perform the findings themselves or copresent/coperform the findings with the research-facilitator(s). Stawarska (2009) states that a dialogical approach can help eliminate the individualist bias that privileges subjectivity within descriptive and phenomenological methods. This approach offers further parallels and compatibility with the philosophical assumptions of postpositivism, by aiming to limit the subjective nature of the researcher within phenomenological research. It also highlights the argument that there is a need to reduce subjectivity within phenomenological inquiry, another justification for the mixing of these qualitative methods with more objective research techniques, yielding intersubjective reality (cf. Morgan, 2007). This justification can be made because despite the differences associated with the paradigms typically allied to these methods, the methods still

demonstrate some functional and philosophical parallels that allow for methodological combination under a single paradigm.

Further justification for the combination of all forms of phenomenology with complementary methods is provided by the fact that developments of the multiple phenomenological research approaches are constantly dynamic, mirroring the evolving world of qualitative research. As previously stated, one of the greatest strengths of phenomenological methodology is its flexibility and adaptability that allows for its incorporation within emerging movements (Garza, 2007). Ultimately, there is a clear logic of justification for the mixing of phenomenology as a qualitative method with methods typically associated with the postpositivist paradigm for multiple purposes. In line with the purposes of mixed methods research outlined by Greene et al. (1989), there is specifically a strong justification for MMPR that negotiates the aforementioned weaknesses of the phenomenological method by facilitating the orientation of phenomenological research (development), testing emergent phenomenological theories (expansion), and providing a social context for phenomenological findings (initiation).

### *Models for Mixed Methods Phenomenological Research*

Johnson, Onwuegbuzie, and Turner (2007) proposed that there are three major types of mixed methods studies: *Equal-status mixed research*, wherein equal prominence is given to both the qualitative and quantitative components; *qualitative dominant mixed research*, wherein priority is given to the qualitative element (in this case phenomenology); and *quantitative dominant mixed research*, wherein priority is given to the quantitative element (in this case the complementary method). This priority decision has a direct relationship to the sequencing of the methods (Morgan, 1998). Within qualitative and quantitative dominant mixed methods research, the researcher would begin with the predominant qualitative stage and continue with the complementary quantitative stage (QUAL  $\rightarrow$  quan or qual  $\rightarrow$  QUAN; Morse, 1991, 2003). The theory behind this more conventional ordering is that sequencing in this manner allows for theory generation through inductive qualitative research that then can be tested using deductive quantitative measures.

The following section will draw on examples from the existing body of research adopting MMPR and relevant methodological literature in order to present some potential models for MMPR research as opposed to mixed methods research generally. These models will be organized by the aforementioned sequencing decision; however, the priority decision also will be discussed within each subheading. It is important to note that in the subsequent philosophical and practical discussion, MMPR will be defined as *research that combines phenomenological methods with methods grounded in an alternative paradigm within a single study*.

**Quantitative–Phenomenology (QUAN  $\rightarrow$  phen or quan  $\rightarrow$  PHEN).** Despite the fact that research that moves from qualitative to quantitative is more common within mixed methods research generally, a review of the literature into MMPR specifically—as opposed to mixed methods in general—revealed that the reverse sequencing (i.e., quan  $\rightarrow$  PHEN) has been a more popular approach for qualitatively driven MMPR (Mayoh & Onwuegbuzie, 2013). This is perhaps due to formerly articulated justification that the essentially focused nature of phenomenological research requires the researcher to be orientated toward a specific experience prior to data collection taking place. Although this justification is relevant to phenomenological inquiry, it is less likely to apply to other forms of qualitative inquiry where the aim is to remain more open and exploratory when designing the qualitative data collection method.

Within these quan  $\rightarrow$  PHEN studies, preliminary quantitative findings are used to inform the phenomenological focus within the second phase of the research. Therefore, the quantitative

data provide orientation toward the phenomena that are uncovered within the preliminary quantitative phase, or alternatively help identify participants for the phenomenological phase who can provide information rich experiential accounts (Dean, Hudson, Hay-Smith, & Milosavljevic, 2011; Hamdan-Mansour et al., 2011; Mayoh, Bond, & Todres, 2012; Thornton, Baker, Johnson, & Kay-Lambkin, 2011). Therefore, in this instance, quantitative research methods can be included within the broader qualitative framework to meet the aims of the phenomenological tradition and provide orientation, broader reflecting the mixed methods purpose of development (Greene et al., 1989). Thornton et al. (2011) combined a preliminary stage consisting of a quantitative self-report assessment battery with a proceeding phase of phenomenological inquiry drawing on interpretive phenomenological analysis. However, their justification for adopting this approach was not orientation, instead they cited that their methodological design allowed them to identify a purposive sample for the second phase, and also gather a more holistic understanding of details and trends through joint discussion. Similarly, in their 2011 study of rural workers' experiences of back pain, Dean et al. used a preliminary questionnaire battery prior to a phase of interpretative phenomenological analysis. They surmised that in addition to providing Stage 2 sample identification, and allowing for a more holistic joint discussion, they were able to use Stage 1 findings to tailor the phenomenological research questions in Stage 2, arguably a form of phenomenological orientation. Conversely, Mayoh et al. (2012) used a preliminary quantitative phase to orientate a study with a dominant descriptive phenomenological second stage. They argued that all forms of phenomenology require an element of orientation to ensure that the most relevant and interesting phenomenon is selected for phenomenological research. They also cited that this approach allowed for a more comprehensive discussion of results. Within these *quan* → PHEN examples, methods are combined for the purpose of *development* as outlined by Greene et al. (1989), which seeks to use the results of one method to help inform another: "to increase the validity of constructs and inquiry results by capitalizing on inherent method strengths" (p. 259). In this case, the strength of quantitative research (identifying common aspects of a phenomenon) is used within a phenomenological framework to provide orientation and focus to a study where the phenomenological method is dominant.

Despite the relative wealth of studies adopting a *quan* → PHEN model that prioritizes the qualitative phase, there are fewer studies using this methodological sequence that prioritize the quantitative phase (QUAN → phen). Yet this prioritizing of the quantitative phase has merit because it can provide the research with a deductive theoretical thrust (Morse, 2003). The lack of QUAN → phen MMPR might be because of the complex and time-consuming nature of phenomenological inquiry putting time constraints on complementary quantitative work, relegating it to the inferior. Alternatively, while phenomenology naturally lends itself to the inclusion of quantitative orientation within an overarching inductive framework, it could be perceived as more challenging to conduct phenomenological research within a deductive framework, as the essence of phenomenological inquiry is consistently to explore lived experiences. However, from a pragmatic viewpoint this is still surprising as traditionally sequential mixed methods that begins with the quantitative data collection phase is termed *sequential explanatory work* (Creswell, Plano Clark, Gutmann, & Hanson, 2003) and priority is typically given to the quantitative data. Ultimately, quantitatively driven MMPR has much to offer, especially when unanticipated quantitative findings emerge that require unexpected further exploration (Morse, 2003) for the purpose of expansion (Greene et al., 1989).

*Phenomenology-Quantitative (PHEN → quan or phen → QUAN).* Although the benefits of using a quantitative stage prior to phenomenological data collection are clear in both qualitative and quantitative dominant mixed methods research, the more traditional model of quantitative research proceeding qualitative research also is present within MMPR. Mixed methods research

that moves sequentially between qualitative and quantitative methods carries great potential as qualitative methods naturally *set the stage* for quantitative research used in an explanatory manner to test theories developed through phenomenological inquiry (Robbins & Vandree, 2009). For instance, Robbins and Vandree (2009) described using a qualitatively driven sequential multistrand mixed methods research design (Teddle & Tashakkori, 2006) within their study of suppressed laughter (PHEN → quan). They used dialogical phenomenological findings from the initial phase of the research to inform an experimental study in order to test the hypotheses that had emerged from the earlier phenomenological data. Specifically, the first phase of Robbins and Vandree's study uncovered the social nature of the phenomenon of suppressed laughter, which led to the researchers including "the presence of a friend" as an experimental variable in the second phase of the study. This study provides an example of MMPR being conducted for the purpose of expansion (Greene et al., 1989). This model of MMPR allows for a level of breadth as well as depth of data to be achieved within a single study, and can help improve the utility and generalizability of phenomenological findings. It would also ensure that explanatory research is conducted with the appropriate level of contextual relevance by being located within the lived experiences of participants. This model fits with both the discovery-orientated nature of the phenomenological research traditions and the traditionally explanatory nature of postpositivist approaches.

Despite there being evidence of qualitatively driven PHEN → quan work in the literature, it is much more difficult to locate examples of quantitatively driven work adopting this sequencing (phen → QUAN). This is unsurprising because it is also an uncommon approach in mixed methods studies generally (Creswell et al., 2003). This is because traditionally qual → quan sequencing is justified because it provides a an additional quantitative component that allows researchers to confirm or to validate emergent qualitative findings; therefore, the qualitative phase remains central and dominant within the research. However, giving priority to the second quantitative phase as opposed to the preliminary phenomenological phase offers alternative benefits. While discussing mixed methods generally, Creswell et al. (2003) explained that "Such a design might be undertaken when a researcher intends to conduct a primarily quantitative study, but needs to begin with initial qualitative data collection so as to identify or narrow the focus of possible variables" (p. 228). Therefore, within qualitatively driven phen-quan MMPR, the preliminary phenomenological phase could be used to identify the essential structure of lived experience that can then be studied in more breadth quantitatively. This provides another model for MMPR conducted for the purpose of development (Greene et al., 1989).

*Phenomenology + Quantitative (PHEN + QUAN).* A further potential model for MMPR is one based on the concurrent nested approach to mixed methods research designs (Creswell & Plano Clark, 2010; Leech & Onwuegbuzie, 2009). Concurrent mixed methods research can prioritize the qualitative or quantitative method; however, it is common for these approaches to give equal priority methodologically (Morgan, 1998). A recent review of the MMPR literature revealed that the concurrent model is relatively popular within MMPR (Mayoh & Onwuegbuzie, 2013). Within this model, phenomenological and complementary data are collected concurrently in order to cross-validate or to confirm findings (Patton, McIlveen, & Hoare, 2008; Winston, Dunbar, Reed, & Francis-Connolly, 2010). For example, during their research into mothering occupations, Winston et al. (2010) collected data from mothers concurrently using the Parental Stress Scale (Berry & Jones, 1995), Life Satisfaction Index for Parents (Renwick & Reid, 1992), and phenomenological interviews. They adopted a descriptive phenomenological approach that used member checks, where participants' transcripts were reviewed by the participants themselves to ensure that they reflected their personal experiences, thereby increasing descriptive validity (Maxwell, 1992, 2005). The logic behind member checking is closely

related to that of dialogical phenomenology; however, this technique is used as more of an auditing process than the co-created dialogical research technique. Despite the differences, like the dialogical method, the aim of member checks is to help reduce the role of subjectivity, consistent with the epistemological assumptions of postpositivism. Their rationale for adopting a concurrent MMPR approach in this study was to mirror the complexity of the phenomenon being studied, and also to allow for confirmation and cross-validation (Creswell & Plano Clark, 2010). After the data were collected simultaneously and independently, the two data sets were compared through the development of matrices and joint discussion. They found that the concurrent approach allowed the qualitative data to illuminate further the qualitative findings by providing specific experiential examples as additional texture.

Although the development of matrices is a popular choice for merging qualitative and quantitative data within concurrent mixed methods studies (Creswell & Plano Clark, 2010; Onwuegbuzie & Combs, 2010; Onwuegbuzie & Teddlie, 2003), some researchers are adopting alternative approaches for combining phenomenological and quantitative data. For example, Gupta, Paterson, Lysaght, and von Zweck (2012) demonstrated the cohesion between the data within their concurrent embedded MMPR study of experiences of burnout by presenting a visual display to provide a clearer picture of practice issues and coping strategies.

These two studies show that concurrent approaches to MMPR allow for phenomenological and quantitative data to be analyzed and presented simultaneously using techniques such as matrices and visual displays. Although arguably these methods can help demonstrate greater cohesion between methodological components and create a more holistic picture of mixed findings than can sequential MMPR, attempts at cross-validation or confirmation of phenomenological with quantitative data may present greater criticism from incompatibilists and phenomenological purists. While discussing triangulation and cross-validation in mixed methods, Sale et al. (2002) posed the question, "How can the results be similar if the paradigms are supposedly looking at different phenomena?" (p. 47). They justified this by explaining that, philosophically, methods from different paradigms are unable to answer research questions in the same way due to the phenomenon under study failing to be consistent within qualitative and quantitative paradigms. For example, although a quantitative questionnaire may measure the prevalence of certain behaviors, a qualitative phenomenological approach would provide an in-depth description of lived experience. This argument is even more relevant when discussing MMPR as the objective of phenomenological inquiry is rigid. Ultimately, the aim and essence of all phenomenological work is to explore the nature of human experience; therefore, it is difficult to see how this can be cross-validated—for example, using the Parental Stress Scale, or Life Satisfaction Index for Parents, within Winston et al.'s (2010) study.

Despite the argument against combining quantitative and phenomenological inquiry concurrently, authors such as Howe (1988) would suggest that those conducting MMPR should move forward with whatever methods work, especially because authors using this approach report great benefits in terms of cohesion and holistic discussion (Gupta et al., 2012; Winston et al., 2010). This argument provides a compelling justification for this form of MMPR; however, although it considered the axiological and methodological issues with mixing methods, it fails adequately to provide an epistemological and ontological justification for the combination of methods.

*Phenomenology and Qualitative* (*PHEN* → *qual*, *phen* → *QUAL*, *PHEN* → *qual*, *QUAL* → *phen*, or *qual* + *phen*). Although over the past 20 years scholars have dedicated significant amounts of time to conceptualizing mixed methods research, there is still much debate regarding what represents mixed methods research. Specifically, although traditionally some authors have defined mixed methods as the "collection or analysis of both quantitative and qualitative data in a

single study” (Creswell et al., 2003, p. 212), more recently, several researchers have argued that mixed methods research may be used to describe work that uses two or more exclusively qualitative or quantitative approaches within a single study (e.g., Morse & Niehaus, 2009). This argument is based on the idea that data collection methods such as interviews, questionnaires, and observations can take on qualitative, quantitative, and mixed forms (Johnson & Turner, 2003), and that methods are not necessarily linked to paradigms (Johnson et al., 2010). Furthermore, it is important to consider that there is a range of paradigmatic approaches (Onwuegbuzie, Johnson, & Collins, 2009), as opposed to the often assumed binary conceptualization; therefore, if two or more qualitative approaches have different epistemological and ontological assumptions, should this research not be considered mixed? This raises the question of whether research studies that combine phenomenological methods with clinical interviews (Rizq & Target, 2010a, 2010b), discourse analysis (Langridge & Ahern, 2003), arts informed interpretation (Vandermause, 2012), or other traditionally qualitative methods should be considered as MMPR. Methods adopting this approach have demonstrated significant benefits; therefore, an overview of four such studies has been included below in order to start the conversation and to ensure that the discussion is inclusive. All four studies demonstrate how multiple qualitative methods that draw on different philosophical assumptions can be used within a single study for the purpose of initiation (Greene et al., 1989). Studies that combine methods for the purpose of initiation are able to analyze data from multiple viewpoints in order to explore contradictions as opposed to providing confirmations. This is particularly useful within phenomenological inquiry because it allows for typically interpretive work to be conceptualized within a more sociological context, providing a more holistic social–psychological perspective.

Rizq and Target (2010a, 2010b) described collecting qualitative data using a clinical interview tool, prior to a phase of interpretative phenomenological analysis. Although their study involved the mixing of phenomenological with standard interview data, the data from these generic qualitative interviews were coded using benchmark classification scores and, therefore, “falls firmly within the dominant conceptual paradigm of positivism” (Rizq & Target, 2010b, p. 462). Rizq and Target (2010b) contended that these preliminary standard qualitative data provided an additional step in the study’s overall analytic process, which invoked the *triple hermeneutic* that placed the researcher’s perspective of the participant’s experiences within a relevant theoretical framework. Within this research, these authors not only provided a sound justification for why research that mixes two traditionally qualitative methods should be considered as MMPR, but they also demonstrated the benefits of the analytic process for combining methods in this manner.

Langridge and Ahern (2003) also provided a description of how MMPR can be used to contextualize lived experiences. Specifically, they described the methodological approach taken in their study exploring advanced nurse specialization. They adopted both a Husserlian descriptive phenomenological and postmodern discourse approach to analyzing sequential interviews in order to contextualize the lived experience in the broader social culture. The researchers concluded that their new generation research study (Streubert & Carpenter, 1995) allowed them to explore a complex phenomenon that could not be adequately understood using a single qualitative method in isolation.

Finally, Vandermause (2012) provided an account of what she described as a transmethodological study, which combined Heideggerian Hermeneutic interpretation with various forms of arts-informed interpretation within a broader interpretive framework. In this study, interdisciplinary coresearchers analyzed transcripts from multiple interviews within a single case study using different methods while engaging continually with the research participant. Vandermause

identified the possibilities of analyzing and interpreting phenomenological data using various methods to provide more communicative and accessible research findings.

## A Conceptualization of Mixed Methods Phenomenological Research

As previously stated, MMPR can be defined as *research that combines phenomenological methods with methods grounded in an alternative paradigm within a single study*. Table 2 presents a framework for MMPR inquiry. This table provides five flexible models for MMPR research moving forward. Researchers are encouraged to select their MMPR model based on the aims and objectives of their research because each MMPR model has different strengths. Specifically, **QUAN**→**phen** can provide phenomenological work with a deductive theoretical thrust, **quan**→**PHEN** allows for orientation and development, **PHEN**→**quan** facilitates hypothesis testing, **phen**→**QUAN** can help narrow the focus for qualitative research, and **phen + quan** provides opportunities for triangulation. Finally the combination of phenomenological and alternative qualitative methods within a single study can help provide an analysis from multiple viewpoints, or provide a more in-depth analysis of qualitative data. Furthermore, researchers adopting an MMPR are encouraged to be explicit with regard to both the philosophical and technical justifications for mixing phenomenology with alternative methods, in addition to outlining clearly the procedural aspects of their chosen approach.

## Conclusions

This article fulfills its objectives of (a) providing a discussion of how phenomenology lends itself to inclusion within mixed methods designs and (b) outlining examples of MMPR in practice. However, the path to the fulfillment of these objectives has not been without obstacles. Although phenomenology is a widely adopted term in qualitative research, there remains disagreement with regard to its definition and conceptualization. Specifically, there is little consensus as to whether it should be regarded as a specific method as opposed to a broader movement or philosophy (Langridge & Ahern, 2003). Similarly, there is significant debate surrounding the conceptualization of mixed methods research, whether it should be constrained to the mixing of qualitative and quantitative methods within a single study (Creswell, 2003) or also should encompass studies that combine different forms of purely qualitative or quantitative methods (Morse & Niehaus, 2009). This article has aimed at being inclusive in nature by including examples of many forms of MMPR that consider both sides of this mixed methods argument. Ultimately, this article demonstrates a number of motivations for conducting MMPR, including experiential theory generation and testing, orientation toward phenomenological phenomena, exploration of unanticipated findings, improving utility and generalizability, and cross-validation or triangulation. We also propose a clear definition and conceptualization of MMPR for practical utilization. We recommend that future research should focus on a more systematic review of the current studies adopting MMPR to explore more closely this form of methodology. In any case, we contend that our article represents an important first step toward addressing Johnson et al.'s (2010) call for "researchers and methodologists [to] explicate how to transfer additional research methods situated in QUAL or QUAN into *MMPR versions*" (p. 75).

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**Table 2.** Models for Mixed Methods Phenomenological Research.

| Model                      | Description                                                                                                                                                           |  | Purposes                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phen → QUAN or phen → QUAL | Preliminary phenomenological method with priority given to the method from an alternative paradigm                                                                    |  | The preliminary phenomenological stage is used to generate theory about the nature of lived experience that can feed into a larger QUAN or QUAL study. This approach is especially useful when the study requires an overall more deductive thrust.                                                                          |
| Quan → PHEN or qual → PHEN | Preliminary method from an alternative paradigm with priority given to the phenomenology                                                                              |  | The preliminary quan/qual phase is used to orientate the predominant PHEN stage to the most relevant and interesting phenomenon. This model is very useful when the study requires an overall more inductive thrust.                                                                                                         |
| QUAN → phen or QUAL → phen | Preliminary method from an alternative paradigm which is also given priority                                                                                          |  | The secondary phen stage is used to explore unanticipated QUAN or QUAL findings. This model is especially useful when the study requires an overall more deductive thrust.                                                                                                                                                   |
| PHEN → quan or PHEN → qual | Preliminary phenomenology which is also given priority                                                                                                                |  | The secondary quan/qual phase is used to help improve the utility and generalizability of phenomenological findings.                                                                                                                                                                                                         |
| quan + phen or qual + phen | Concurrent approach. Normally methods have equal priority (however, it is possible to give priority to a single method depending on the overall thrust of the study). |  | This approach is very useful when the study requires an overall more inductive thrust.<br>Within this model, phenomenological and complementary data are collected concurrently in order to cross-validate or to confirm findings. This model is especially useful when the study requires an overall more abductive thrust. |

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