

The Mentoring Relationship as a Complex Adaptive System: Finding a Model for Our Experience

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Mentoring theory and practice has evolved significantly during the past 40 years. Early mentoring models were characterized by the top-down flow of information and benefits to the protégé. This framework was reconceptualized as a reciprocal model when scholars realized mentoring was a mutually beneficial process. Recently, in response to rapidly changing organizational and social environments, scholars have explored other models of mentoring such as developmental networks. However, as we, the authors, reflect on our own experience of an informal mentoring process in an academic context we find existing models inadequately describe our experience. The model that best fits our story is a complex adaptive systems (CAS) perspective of the mentoring relationship, and we offer this lens to reconfigure current models.

Keywords: mentoring, complex adaptive systems, self-reflection, theory, mentoring models

Mentoring theory and practice has become important across a broad range of disciplines. Formal research into mentoring commenced in the mid-1970s with influential works by Kanter (1977) and Levinson, Darrow, Klein, Levinson and McKee (1978) bringing mentoring to the fore. Along with Kram's (1985) seminal piece on workplace mentoring, these contributions inspired a diverse and extensive body of research on the mentoring relationship. However, despite 40 years of research into mentoring, the field lacks a widely-accepted definition, single theoretical lens, and universally agreed-upon model. Jacobi (1991), for example, claimed that a "major concern [of the field] is the absence of a widely accepted operational definition of mentoring" (p. 505), while Crisp and Cruz (2009) noted that mentoring

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research is “largely atheoretical” (p. 526) and suffers from “severe underdevelopment” (p. 525). Harvey, McIntyre, Heames, and Moeller (2009) made a case for extending beyond traditional models of mentoring, arguing for the importance of reverse and reciprocal mentoring to ensure the development of competitive organizations.

After we, the authors, embarked on our own mentoring relationship within an academic context, we quickly noticed that we wrestled with these same issues at the level of application that the field itself was wrestling with at the meta-level. We struggled to find in the mentoring literature a definition, a theoretical lens, and, in particular, a model that fully captured our relationship. As a consequence, we spent some time reflecting on our experience of the mentoring process and considering how we could best describe it. Accordingly, we begin this paper by exploring existing conceptualizations of mentoring in the literature, and, subsequently, why we felt they did not adequately reflect our own experience. Next, we offer a complex adaptive systems (CAS) model of mentoring that for us comes closest to illustrating the process we went through. Finally, we consider the strengths of understanding mentoring through this theoretical lens and argue for its adoption in mainstream mentoring research.

Our Story

This paper is the outcome of our mentoring relationship, now over a year long, set in an academic context. In the discussion that follows, we intersperse our individual reflections on our mentoring relationship with our joint consideration of how effectively the existing literature captured our experience.

Dot was a student in Rachel’s tutorial for an undergraduate course, so we spent about an hour a week in a small group setting over a semester. Dot knew that Rachel was a tutor and postgraduate student and so had more academic experience than she had, even though she was younger than Dot. Dot approached Rachel after the tutoring relationship had ended and asked her if she would be interested in being her mentor. Dot explains her motivation.

Dot

Over several years as an undergraduate student, I had identified areas in my own learning which I felt needed to be refined. I tried various ways to improve such as using the student support services and discussed feedback from assignments with tutors and lecturers, all with degrees of frustration. I felt increasingly that having a mentor would be the most effective solution, so I approached Rachel as a result of having participated in one of her tutor groups on a previous paper.

I had already considered the “ideal” characteristics of the mentor I was looking for and so when I chose my mentor it was not for the value she

contributes to the university but rather for her gender, personality, knowledge and experience. I discovered later that this fits with research that shows women prefer female mentors (Kram, 1983; Smith, Smith, & Markham, 2000).

Dot had spent some time considering her learning needs so had a clear idea when she asked Rachel to be her mentor. For Rachel, the request was expected and required some consideration.

Rachel

When Dot approached me to be her mentor, neither of us knew much about mentoring. I was flattered to be asked to be her mentor, but did not have a clear idea of what would be involved. I knew that Dot was a first-year student, eager to participate in class and not afraid of asking questions. Having been her tutor and marked her work, I thought she was able to grasp the ideas presented in class but struggled to form her own opinions. I knew that she was interested in improving her writing. Because I had previously taught academic writing and had published, I felt confident that I could help her.

Though Dot had the idea of benefiting from the relationship in mind, making the approach, she was unsure how the actual mentoring process would unfold and those benefits be obtained. Rachel, in turn, while pleased to be asked, had a particularly busy year ahead and wanted to see some tangible benefit herself before agreeing to be involved. Because neither had been in a mentoring relationship before, and because we were not sure what to do, Rachel suggested that they investigate the mentoring literature with a possible view to collaborating on a paper about our experience with the process. The decision to make research on mentoring the focus of the tutoring relationship fulfilled both of our goals.

Dot

My primary aim of the mentoring was to receive practical advice and what I know is referred to as psychosocial support whilst completing my undergraduate degree. In addition, I was keen to gain skills and knowledge for the future whether it be in an academic, health-related, or other field.

Rachel

Dot told me she wanted advice and the ability to “pick my brains”, but noted it was more about process than product for her, in that she didn’t necessarily want me to help her directly with course content and assignments. I decided that the process of writing together on a topic that neither of us was familiar with presented a good opportunity for me to guide her through the writing process, while giving me a new string to my research bow and chance of a published paper.

Mentoring was the obvious choice of topic for me as I felt that by exploring the literature we would have a better idea about what mentoring "looked like". I thought working on a paper would give us a focus for our meetings and assist with Dot's stated goal of improving her writing. In addition, because I was positioning myself for full-time academic work, a published paper would give me a beneficial outcome.

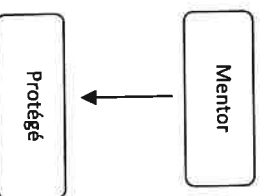
In other words, by studying the mentoring literature together we would both achieve our desired outcomes. The potential to co-author a paper if our experience was fruitful gave the relationship a tangible goal that was of benefit to both of us. Dot would experience one of the main tasks of academic life and Rachel would expand her research and enhance her academic career.

Conceptualizations of Mentoring

We began by exploring the mentoring literature looking for a model of the mentoring experience that we could follow. Our reading identified two dominant existing conceptualizations of mentoring: The traditional model and the reciprocal model. In the discussion that follows, we summarize what we see as the main features of each of these models based on the literature.

The Traditional Model

We see the traditional model (see Figure 1) as having emerged from mentoring research conducted in the 1970s and 1980s. In this conceptualization, the dyad typically forms an exclusive, closed relationship. Consequently, little early academic attention was paid to the influence of other people on the mentor, protégé, and the relationship itself, despite Kram's (1985) recognition that constellations of relationships were involved in mentoring (Higgins & Kram, 2001). Similarly the context within which the relationship functions was treated as largely insignificant to the effectiveness of the mentoring, with researchers often failing to differentiate between formal and informal programs, for example (Haggard, Dougherty, Turban, & Wilbanks, 2011).



The traditional model's transmission-based perspective of mentor built around the mentor imparting knowledge, information, or support the protégé receiving it. Accordingly, much early research focused on the protégé perspective and career outcomes for the protégé (Haggard 2011). Mentoring within this framework is understood as a relationship between an experienced, likely older and more powerful, mentor and protégé (Crisp & Cruz, 2009; Harvey et al., 2009; Higgins & Kram, 2001 difference in status between participants is typical of the traditional of mentoring. As Figure 1 shows, the relationship is hierarchical in and the flow of knowledge is downward from mentor to protégé. Dot and Eddy (2008), for example, defined mentoring as "individual advanced experience, knowledge, wisdom, skills and influence who provide support to and promote the career development of their protégés" (p. In the academic context, Ugrin, Odom, and Pearson (2008) observed mentoring "requires that a senior faculty member be willing to take the time to listen and provide direction to students" (p. 343) highlighting the role and status associated with the mentor.

Because the traditional model of mentoring relies on the downward transmission, within the traditional mentoring relationship, typically, the mentor is older and more experienced while the protégé is younger and less established within the organization. Lester and Johnson (1981) commented that mentoring is usually between an "older person and a younger person that is based on modeling behavior" (p. 50). It is not surprising then that Hill Michael (1983) claimed that mentors have an "important influence on organizational decisions" (p. 475) and are perceived as a gateway to future progress in the organization. Within the academic context specifically, Sorcinie Yun (2007) noted "an experienced faculty member guides and supports career development of a new or early-career faculty member" (p. 58).

Due to the imbalance in experience between mentor and protégé, mentor was also associated with holding the power within the traditional mentoring relationship (Bryant & Terborg, 2008; Mullen 2009). The of the personal power ensures the mentor is able to influence the development of the relationship, make decisions, and facilitate career progression ever, Hunt and Michael (1983) claimed the protégé also has some obtained by association with senior managers within an organization. son and Shore (2008) also believed the protégé has power in a mentoring relationship because of their ability to withdraw from the relationship incurred less personal cost, arguing the protégé invests less into the relationship. Whatever the balance of power in the traditional mentoring relationship, the benefits are thought mostly to accrue to the protégé. benefits, typically seen in the literature as career-outcome or psychological in nature, are well recognized (see Crisp & Cruz [2009] and Haggard [2011] for reviews), and are often the reason for the establishment of mentoring relationships in the first place.

The Reciprocal Model

The traditional mentoring model has been reconfigured in recent years as scholars and practitioners have increasingly come to recognize the top-down model oversimplifies the mentoring relationship (see Bryant & Terborg, 2008; Higgins & Kram, 2001; Ragins & Kram, 2007). In particular, the one-way flow of information, expertise, and benefits has been reconsidered (see Allen, 2007), and it is now far more common to conceptualize mentoring as an interdependent relationship. What we have identified as the reciprocal model (depicted in Figure 2) emphasizes the collaborative nature of the mentoring relationship, represented by the bi-directional arrow. Harris, Freeman and Aerni (2009) encapsulated the reciprocal model when they reflected on their own experience of mentoring in an academic context as “a highly democratic form of collaborative learning that depends upon mutual respect, rapport, inclusion of all stakeholders (regardless of differing expertise) and a multiplicity of participation opportunities for all” (p. 26). The notions of respect and rapport are important to the flatter structure of the reciprocal model as compared to the traditional model. The bond between mentor and protégé is emphasized, Langer (2010) going so far as to claim the benefits of mentoring “depend mostly on the creation of an emotional connection” (p. 24). Bell-Ellison and Dedrick (2008) argued in similar vein that an important aspect of mentoring is the “sharing of the aspects of oneself that are traditionally viewed as private” (p. 557).

The collaborative and intimate nature of the mentoring relationship in the reciprocal model has also led to a re-conceptualization of power. Pololi and Knight (2005) acknowledged the limitations of the traditional mentoring structure “to move beyond an initially hierarchical relationship to one that is more egalitarian and complementary” (p. 868). In the reciprocal model, the mentor is no longer perceived as the person holding the power—instead power is shared as the mentor demonstrates a willingness to concede authority and the protégé to develop it (Harvey et al., 2009; Ragins & Kram, 2007). The collaborative approach that is the defining feature of the reciprocal model ensures decision-making about time frames, direction of the dyad and topics discussed and so on is also shared. Furthermore, Harris et al. (2009) made a compelling argument for perceiving mentoring as a power relationship based in equity rather than equality. That is, by its very nature, based as it is on gaps in expertise, power relationships in mentoring are unequal. Yet, because both parties are stakeholders, they both have equity in the relationship. The flat structure of the reciprocal mentoring relationship in Figure 2 represents this significant change from the hierarchical, traditional model of Figure 1.



Finally, where previously career-outcome or psycho-social benefits of the mentoring relationship were thought to be obtained by the protégé, within the reciprocal model both participants in the relationship are understood to gain. Jacobi (1991), commenting on the reciprocity of the mentoring relationship, noted the benefits to the mentor may be either “emotional or tangible in nature” (p. 513). Kochan and Trimble (2000) identified benefits to both individuals from their own experience as they created a “collaborative work environment” in which they “expanded their sensitivity, reflective skills and communication skills” (p. 27). Benefits for both mentor and protégé also include the exchange, not just top-down flow, of information (Langer, 2010). As we undertook our own mentoring relationship, we tried to determine which model seemed to fit our experience best.

Traditional or Reciprocal? Our Reflective Process

Right from the start of our reading of the mentoring literature we struggled to match our mentoring relationship to the traditional model. Unlike typical mentoring relationships, for us the mentor was younger than the protégé. Furthermore, the relationship was initiated by the protégé. Few examples exist in the literature citing similar scenarios, although Anderson and Shore (2008) have noted with regard to first-year college students, “the more sophisticated among them inquire about mentoring opportunities with faculty” (p. 3).

Another problem we had in finding our own experience in the literature was the hierarchical nature of the traditional model did not really apply to our relationship. Within the organization (the university), Rachel as a limited-term contracted staff member and postgraduate student has very little power. Even though she has more expertise than Dot in academic writing and more knowledge about the workings of academia, Dot is not an inexperienced junior colleague in other senses. She has worked extensively and has a range of life experiences, and is studying to establish a career change.

Due to the flat structure of our relationship, the reciprocal model was a more likely fit. We certainly feel that power was shared in our relationship and we collaborated on all our decisions. Furthermore, we established an emotional connection at the outset of our relationship. We deliberately (even before we had read the literature) made an effort to exchange life stories and talk about who we were as people. We were conscious that becoming mentor and protégé would need us to change the level of intimacy from our previous relationship as tutor and student.

Dot

Our mentoring relationship emerged as more of a partnership in which we shared stories from beyond the mentoring experience. A blurred line therefore

existed between being a mentor or protégé and friend, between the psychosocial and emotional functions of mentoring and the support role of friends. We have both demonstrated a willingness to learn from each other as the relationship was based on dialogue from an early stage. A distinctive feature of our relationship has been the mutual willingness to share and contribute ensuring both of us have derived benefits from the mentoring, placing this firmly within the reciprocal model.

Due to the nature of our personal characteristics we also shared the power within our relationship in that we both had equal input into the aims, meeting times, topics discussed and outcomes. I felt we did not use power to influence each other, rather the mentoring was characterised by a collaborative and mutual relationship comprised of dialoguing, teaching, and supporting.

Dot's reflections also capture Rachel's feelings, so we jointly rejected the traditional model as reflective of our experience. Yet the reciprocal model did not quite capture our relationship either. While we were comfortable with the flattening of the hierarchical aspects of the traditional model and its emphasis on collaboration, we struggled to see our relationship in purely dyadic terms. The acknowledgement of external factors defined our mentoring relationship to be different from those in the traditional transmission or interdependent reciprocal models. For us, the context of our relationship had an enormous impact. First, the university setting imposed upon us, and, second, our commitments beyond the dyad impinged on our relationship.

In fact, for us the university setting had an unpredictable effect on our relationship. When Rachel spoke to her husband, a professor at the university, about the mentoring relationship that was unfolding he suggested that Dot look at getting official credit for the work she was doing. Both Rachel and Dot thought it was a great idea if her research on mentoring could translate into a course credit, given that she was doing the work anyway. However, because of Rachel's temporary employment status, she was unable to act as official supervisor. Suddenly, in the search for official sanctioning, our mentoring relationship became more formalized. Dot had to approach administrators and other academic staff to be approved to do independent research and to find someone willing to tacitly supervise her work. We spoke together about being careful not to let "the university" affect our productive and enjoyable relationship. Dot was even willing to sacrifice credit if the university requirements were going to be detrimental to the mentoring relationship. In the end, Rachel's husband became Dot's official supervisor for a for-credit independent research project, and Dot and Rachel continued to work together as before, though Dot did have to submit a document for grading. The processes required by the university and the establishment of a formal relationship between Dot and Rachel's husband as a representative of the university had a significant impact on the mentoring relationship between Dot and Rachel, particularly for Rachel.

Rachel

It was strange for me to move from having a very insular relationship with Dot where we were working together on a project to open that up to the "real world". I was pleased that in the end Dot was able to obtain credit for her work and that it was my husband who was her official supervisor. I think I might have lost interest in what we were doing if someone else I didn't know had become involved. However, it was also difficult to then negotiate the more complex relationships – how much should I talk about my work with Dot to my husband given he was grading her course? Should I act as an intermediary between Dot and my husband? Everything became more complicated for me because I felt like I had to think about the relationships before I spoke to either of them about the project.

Other commitments that affected our mentoring relationship were also important. Rachel had overseas travel planned during the year and was extremely busy with teaching new courses and completing a PhD thesis. In addition, Rachel's mother was diagnosed with a serious illness that affected her ability to commit time and energy to the relationship. Dot had a family to look after, part-time work commitments which increased during the year, and her own studies to finish. We had periods where we met face-to-face every two weeks, and other periods where we were only in touch via email sporadically. Our relationship had to shift and change to accommodate these elements of context, as Dot recalls.

Dot

In addition to working towards a clearly established goal from early in the relationship, we found we continually needed to respond to external factors. In the early stages of our relationship, my mentor had a busy schedule, which also involved extensive travel, and I needed to be responsive to these external factors. Towards the end of this project I accepted a position as tutor in another communication paper and, in response, my mentor adopted an additional function in our relationship by offering support for me in my new role. This required fluidity in our relationship to adapt to evolving factors from outside our relationship that impacted upon functions and roles within it.

Our mentoring relationship continued to evolve as I had an opportunity to formalize the literature search by using it to complete a paper towards my undergraduate degree. In order to take the paper my supervisor and university then became involved in our mentoring. To a certain extent this involvement changed the aim and nature of our mentoring and we discussed the impact this would have on us, finally agreeing for me to do the paper.

These experiences might seem minor, but, for us, they were an essential and influential part of the mentoring process and yet such details are not allowed for by the existing conceptualizations of the mentoring relationship. Neither the traditional model nor the reciprocal model captures the enormous influence of context on the dyad. We firmly believe, like Mavrinac (2005), that "limiting mentoring to the traditional mentoring model fails to acknowledge

other important work and life relationships” (p. 398). Nor does either of the models fully reflect the dynamic, flexible, and evolving nature of the mentoring relationship. We turned to the literature once again to explore alternative models.

Emergent Models

Though the traditional and the reciprocal models of mentoring, and their accompanying themes, have dominated the mentoring literature, new conceptualizations have emerged in response to the increasing complexity of mentoring environments. We briefly reviewed these to see if they better fit our own experience.

Reverse mentoring is a relatively recent model seen as appropriate for the current rapidly-changing and technologically-advancing social context (Harvey et al., 2009). Reverse mentoring turns the demographics of traditional mentoring on end, with the young and technologically adept mentoring older, more senior colleagues. While the younger mentored the older in our case, and we both benefited as in most reverse mentoring relationships, the levels of seniority did not reflect our experience. Rachel was younger but not lower ranking, and Dot was older but not senior in academic experience.

Another model that has received some attention in the literature is peer mentoring. Bryant and Terborg (2008) argued that lateral mentoring in organizations is “qualitatively different from traditional mentoring” and likely offers “unique advantages over traditional mentoring relationships” (p. 12). In some senses, we were peers—we were both students, and, later, Dot became a tutor and Rachel a part-time lecturer. However, Rachel’s exposure to and involvement in academic life far outweighed Dot’s.

A feature of peer mentoring is that it encourages protégés to use multiple mentors and take responsibility for their own learning (Mavrinac, 2005). Other conceptualizations of mentoring also draw on the idea of multiple mentors. Kram (1985) proposed understanding mentoring as “constellations of relationships” and Higgins and she (2001) extended this idea to mentoring as a developmental network by drawing on social networking research. They proposed individuals sought developmental assistance from a set of people rather than just one person, moving beyond the dyad focus of both traditional and reciprocal mentoring. Similar models have also been explored, such as multi-mentoring (Sorcinielli & Yun, 2007), community mentoring (Anderson & Shore, 2008), team mentoring (Bozeman & Feeney, 2007), and mosaic mentoring in which “peers interact around an area of shared interest” (Mullen, 2009, p. 11). Though Dot undoubtedly took responsibility for her learning, she did not engage multiple mentors. Clearly the emergent models of mentoring were not fully capturing our experience either.

A Complex Adaptive Systems (CAS) Approach to Mentoring

Ultimately, we looked outside the mentoring literature to find a lens that would better describe our relationship. We found that lens in complex adaptive systems (CAS). A CAS is defined by Palmberg (2009) as “a set of interdependent agents forming an integrated whole, where an agent may be a person or an organization” (p. 484). It is based on complexity thinking and systems theory and thus allows for complex, dynamic relationships within a perceived structure. To us, a CAS perspective represents both a chance to bring together many of the recently emergent findings in the mentoring literature and the opportunity to bring an exciting, fresh, and useful lens through which to see mentoring. In addition, a CAS perspective seems to best capture our own experience of the mentoring process.

There are many things that we like about CAS as a theoretical lens, not the least of which is the characteristics of CAS that the very name draws attention to. Accordingly, we look at each of these in turn, beginning with the notion of complexity. A CAS approach underscores the futility in theory attempting to be normative and prescriptive by highlighting the complexity of the social world. Indeed, complexity theory is the main underpinning for CAS. Cooke-Davies, Cicmil, Crawford, and Richardson (2007) defined complexity as “the study of how order, structure, pattern, and novelty arise from extremely complicated, apparently chaotic, systems and conversely, how complex behavior and structure emerges from simple underlying rules” (p. 52). Though first developed to describe physical systems, complexity theory has diffused through a range of other disciplines and, for over a decade, has been applied to social systems, where groups are seen to be characterized by diversity and emergence, and the interacting agents that make up the system are adaptive along with the system as a whole.

Complexity fundamentally questions many of the assumptions of the typical western worldview. Much scientific research is based on the idea that every observed effect has a similarly observable cause, every complicated whole can be understood by analysis of its parts, and understanding of past events can help to predict future events (Jones, 2003). We do not believe that scholars of mentoring have entirely subscribed to this view, aware as they are that where human relationships are concerned, simple cause and effect models and predictability are unattainable. However, the various acknowledgements in the literature of the difficulty in defining mentoring, measuring its success, and pinning down its key characteristics (see Langer, 2010; Crisp & Cruz, 2009; Ragins & Kram, 2007; Bennetts, 2002) point to the desire that scholars have to be able to fit mentoring into a stable, linear, Enlightenment-based view of the world. With CAS including key concepts from complexity science such as non-linearity, emergence, the edge of chaos, and unpredictability, we believe it offers a far more flexible and appropriate approach to mentoring.

Another attraction of the CAS approach is fueled by its stress on the adaptive quality of systems. It is foundational to the idea of social arrangements like organizations being complex adaptive systems that such systems are dynamic and in a constant state of flux. We believe mentoring, too, can be described in these terms. In other words, the mentoring relationship is never fixed—it is always responding and adapting to its own inputs as well as the inputs of the wider environment. Furthermore, this dynamic state of flux is crucial to the learning process. As Bokeno (2007) put it,

The nature of the learning in conventional mentoring practices is rarely examined for its own generative potential – that is, the learning is rarely designed to examine unexamined values and assumptions or ask unasked questions. If it were, it would be much more nonlinear: complex, “chaotic” or disordered. That is, it would become a relationship ready to learn systemically, for holistic development. (p. 19)

A CAS approach to mentoring not only allows for but actually encourages this disorder, as CAS explains that when systems are at the edge of chaos (or in a state of disequilibrium), they are more likely to be innovative and successful (Stacey, 2001). Koivunaho and Laihonen (2006), for example, adopted the term “sweet spot” to describe the place between excessive disorder and excessive order where a system is most able to be responsive to its environment yet maintain its integrity. The goal, then, for mentoring relationships is to operate effectively within a dynamic and emergent context, while balancing the predictable and unpredictable, the stable and the unstable. In other words, a CAS approach draws attention to the structural, but flexible, properties of dynamic organization.

The application of these notions of complexity and adaptability, however, are predicated on the conceptualization of mentoring in systemic terms. Our review of the mentoring literature found very little reference to systems in relation to mentoring to date. Bokeno’s (2007) discussion of efficient (linear) versus emergent (non-linear) mentoring and Keller’s (2005) exploration of youth mentoring through a systems theory lens were two notable exceptions. At one level this is not surprising, as most often mentoring is conceived in dyadic terms and the concept of systems is more readily associated with larger groups. However, it struck us that mentoring is in fact very much about systems. For one, we suggest that part of the overall purpose of a mentoring relationship is to educate and acculturate the protégé into a system—whether that be the workplace, the academy, or some other setting. That is, in the process of developing particular skills in the protégé, the mentoring relationship is also about guiding them in how to “be” within a particular social, typically organizational, setting. This is supported by the literature, which identifies the tradition of the mentor bearing responsibility to initiate the protégé into the wider world. Crisp and Cruz (2009), for example, noted “the mentor serves as an exemplar and a guide to a new social world” (p. 540).

However, we also argue that even though mentoring is typically dyadic, it is also systemic. We support our claim with two kinds of evidence. First, there is ample evidence in literature from other disciplines that a dyad itself can be considered a system. For example, infant research explicitly uses the systems concept to account for the interpersonal world of the infant (Beebe, Knoblauch, Rustin, & Sorter, 2003). Saarinen and Hämmäläinen (2010) also proposed the “dyadic system as a basic unit” (p. 13). They argued a dyad can be a co-created system because it influences both participants individually and the relationship as a whole. Additionally, the mentoring relationship is systemic because it “has features not detectable by the inspection” of the mentor and the protégé “separately as isolated individuals” (Saarinen & Hämmäläinen, 2010, p. 13). This is a point Palmberg (2009) also emphasized about CAS when noting that to understand a CAS we need knowledge of the systems and its relationships, not just knowledge of the individual agents.

The second type of evidence that points to the appropriateness of the systems concept to mentoring is, as we have already noted, the mentoring literature has begun to explore the mentoring relationship beyond the closed boundaries of the dyad. Even where researchers prefer the reciprocal model of mentoring to the emergent models, they have started to notice that “contextual factors illuminate the embedded nature of mentoring and offer important new insights for future research and practice” (Ragins & Kram, 2007, p. 675). In particular, they have focused on the impact of the setting of the mentoring process. For example, Chao, Walz, and Gardner (1992) looked at the differences being in a formal program and informal arrangement make, while others (Kram, 1985; Kram & Hall, 1996) explored the impact of organizational culture on mentoring. This attention to context, too, accords with a CAS perspective. Palmberg (2009) argued that “a CAS can only be understood in the context of its environment” (p. 485), because such a system evolves as agents act and react in cooperation and competition with other agents in their context. For us, it makes sense to visualize the mentoring relationship in these terms, as the mentoring dyad is never isolated from relationships to others external to that dyad as we found in our own experience.

Reflections on Our Story

We are comfortable that CAS theory helps explain our mentoring experiences to date. We feel that our relationship was, and continues to be, emergent. We have both learned and changed from the process, but we have not learned and changed in linear and controlled ways. Though there have been a basic pattern and structure to our interactions there have also been elements of chaos and unpredictability. We also have experienced feeling like we are a system. This was particularly evident when Dot was looking to

gain credit formally for our work. We suddenly began to speak as if our mentoring relationship was an entity itself, and we did not want the bigger system of the university to change the nature of our smaller system during this period.

Rachel

I was surprised by how we progressed in fits and starts. We tried to plan meetings and tasks to complete before those meetings, but we didn't always stick to our schedule. Sometimes things just kind of happened, but we adapted and still made headway towards our goal.

I was also surprised at how much I got out of the process of mentoring. Articulating what I do when I write, how I read articles, how I organise my thoughts and so on was a real eye-opener for me. I found I knew more than I thought and that helped my confidence, but I also found that by speaking my processes aloud I was able to hone them and see new possibilities.

The systemic nature of our relationship was brought home to me when we were talking about Dot gaining an external supervisor for her work. I noticed the change in our vocabulary from a "you and me" focus to a "them and us". It was as if being reminded of the bigger system we were operating within crystallised and firmed up the boundaries of our own system.

Dot

The mentoring process for me has been a dynamic learning experience over time. I have gradually understood the theory, not only from reading the literature, but also in our evolving practice which led to many moments of "so that's how it works" throughout the year. I was challenged to be open and responsive to the unpredictability of external events that impacted on our mentoring relationship. This required flexibility and, because the consequences of events were not always immediately apparent, further reflection to work through them, sometimes together and occasionally separately.

Being part of a bigger system brought frustrations, such as not collaborating with Rachel when I was working on my paper for credit and also knowing how to work with my supervisor and the university.

The impact of the systemic aspects of our experience led us to develop a model of our mentoring relationship based on CAS theory (see Figure 3). As Figure 3 shows, we believe one of the key features of seeing mentoring through a CAS lens is that it accounts for context in a much clearer and richer way than the existing mentoring models. This is because a systems-based lens sees CAS located in other CAS; that is, all systems are nested within other larger systems. Thus a CAS model of our relationship shows our system operates within a university system as well as the larger cultural setting. In addition, such a model can be adapted to include other features of the environments, such as illustrating that both of us were individually located within separate social systems (family, friends and so on) and thus while we had some of the same stresses on me we also had stresses unique to me as individuals.

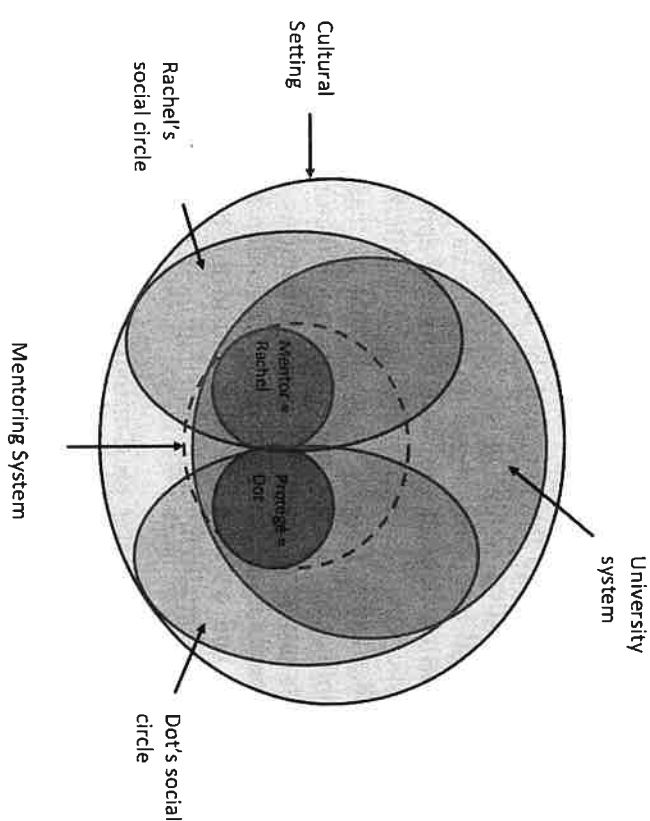


Figure 3. A CAS model of our mentoring relationship.

Conclusions

We began our personal experience of mentoring with little knowledge about how to "do" mentoring. The existing literature on mentoring enriched and enlightened us about this rewarding process. Early research on and practice of mentoring was based on the traditional model, which demonstrated a simple relationship between the mentor and protégé to the benefit of the latter. As the emphasis in the mentoring relationship changed, this model gradually evolved into the reciprocal model, which was characterized by mutual benefits. However, neither model satisfactorily conceptualized our relationship, and we struggled to find a way to describe our experience of mentoring until we adopted a systems perspective and explored mentoring as a CAS.

Viewing the mentoring relationship as a CAS incorporated experiences that did not fit comfortably within existing models. The traditional and reciprocal models fail to acknowledge the dynamic relationship between mentor and protégé and the impact of external factors on the dyad. A CAS model, on the other hand, allows for a complex, dynamic, unpredictable, and non-linear conceptualization of mentoring. It also is particularly useful because of its inclusion of context. Ragins and Kram (2007) are amongst scholars who have called for more attention to be given to context, asking scholars to "think beyond organizational context to the impact of societal-level systemic forces" (p. 678). Similarly, McCauley and Guthrie (2007) explicitly

mentoring. Seeing the mentoring dyad a system itself, nested within other systems, provides a fresh theoretical lens for the study of mentoring. To date, much mentoring research has focused exclusively on the mentor and protégé, the process they go through, and the personal attributes of the individuals, as Eby and Allen (2008) noted, "most research examines mentoring... at the individual level of analysis" (p. 2). To us, after reflecting on our own experience, this now seems too reductionist an approach.

We feel a holistic lens like CAS offers a better understanding of the mentoring process. Like Keller (2005), we argue that by teasing out the "multiple pathways of influence" and paying attention to "factors that contribute to the overall functioning of a system" (p. 183) mentoring may be more fully understood. This paper is the outcome of our reflection and personal experience of mentoring, and we offer it to the field in the hope it stimulates discussion about re-conceptualizing and modeling the mentoring relationship.

Notes on Contributors

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Dot Brown worked for 20 years as a radiation therapist in England and New Zealand. She is currently completing a bachelor of communication studies with honours at Waikato University, Hamilton, New Zealand.

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