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Introduction

Systems theory and its offspring family systems theory have evolved and matured over the course of some 4 decades. The developmental history of family systems theory has been rich. If a theory is judged by its utility, or as Kuhn (1962) proposed, by the number of adherents it wins in the scientific community, then family systems theory has accomplished much. It has informed theorists, researchers, educators, and clinical practitioners from a variety of disciplines including education (Eppler & Weir, 2009), nursing (Bell, 2009), social work (Dunst & Trivette, 2009), psychiatry (Schweitzer, Zwack, Weber, Nicolai, & Hirschenberger, 2007), medicine (Steinglass, 2006), public health (Novilla, Barnes, De La Cruz, Williams, & Rogers, 2006), religion

(Richardson, 2005), and marriage and family therapy (Bartle-Haring & Slesnick, 2012).

Family systems theory has been widely accepted within the family social sciences because it has provided insight into the unique patterns and processes found within and between families. Additionally, family systems theory has highlighted the importance of understanding each family as being embedded within a unique historical, social, ethnic, and cultural context. However, in our view, the value of context extends beyond consideration of the contextual factors that influence a given family's organization and functioning. Context also is critical to understanding the theory itself and how it has evolved over time. Much like families are said to be self-organizing and tending towards greater and greater levels of complexity (Bertalanffy, 1975), so too family systems theory can be viewed as evolving towards greater levels of complexity and becoming more comprehensive in the process.

In this chapter, we offer an overview of some of the basic concepts, historical developments, and contemporary advances in our understanding of family systems. We think it is useful to apply the concept of *punctuation* to an analysis of how systems theorizing has evolved over time. This concept was introduced by Watzlawick, Beavin, and Jackson (1967) to describe differences in how partners explain a sequence of events that occurs between them. According to Watzlawick et al., each behavior can be thought of as both a cause (of subsequent actions) and reaction (to previous

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actions). However, each person will interpret the resulting interaction in a unique way, often attributing the cause to the other (“You started it by being in a bad mood” says the wife. “I wasn’t in a bad mood until you came in and provoked me” replies the husband). These punctuations are in essence a way of constructing meaning.

So what does this have to do with systems theory, you ask? It is our contention that over the years various systems-oriented theorists have applied their own punctuations to the theory. This has resulted in certain aspects of systems being made the focus of the theory with other systemic properties being de-emphasized. One example of this is theorists attempting to understand patterns of interaction that occur within the family while not attending to important contextual influences that are external to the family.

Throughout our discussion of systems thinking, we will focus on how context influences the patterns of interaction found within families. We contend that an understanding and application of systems theory is as much dependent upon the punctuation applied by the theorist, researcher, or practitioner as the specific concepts that have come to define the theory. Further, these punctuations change in response to changes in the broader culture and developments in other areas of the physical and social sciences. We acknowledge, too, that the depiction of family systems theory we offer in this chapter is based upon our own collective punctuation. For us, context spans the spectrum from biological processes within the individual to the individual, family subsystems, family unit, extended family, community, society, and culture.

Overview of Family Systems

System thinking is grounded in the simple but elegant notion that what makes a system unique are not the parts comprising the system, but the relationships among the parts. A simple illustration is an engineered system like a bridge. Knowing the components that go into building the bridge can never provide sufficient insight into what allows the bridge to withstand the

stresses of weather, temperature, or weight, or understand the purpose the bridge serves. To understand the bridge as a system requires an awareness of how all of the component parts and subsystems that go into it are connected to one another. It further requires an appreciation of its holistic quality in that the bridge, like the family system, is more than the sum of its individual parts (Buckley, 1967; Whitchurch & Constantine, 1993).

Although the family is not an engineered system, the application of systems thinking to the family transforms our thinking as to what contributes to the uniqueness of each family. When conceived of as a system, it becomes clear that the interrelationships among family members, more so than the individuals who comprise the family, are central to our understanding of the family. Knowing that a single mother heads a family, for example, does not tell us anything about what goes on inside the family. To know what makes this single mother-headed family unique (unique from all other single parent-headed families and unique from all other family structures) requires an understanding of how the members of this family interact with one another. That is, the unit of analysis is the relationships that occur among family members.

Additionally, family systems theory posits that the relationships among family members are governed by recurring, predictable, and purposive constellations of relationship rules (Anderson & Sabatelli, 2007; Kantor & Lehr, 1975; Watzlawick et al., 1967). Interactions among family members are not random acts. They are purposive and goal-directed. That is, families are organized in ways that allow them to execute a broad constellation of tasks to meet the internal needs and demands of their members and the requirements of external agencies in society (Hill, 1971).

The family’s organization also is said to be structurally complex because it is comprised of various units including individuals and subsystems (e.g., marital, parental, sibling) that may be organized hierarchically by generation, gender, or function. That is, some subsystems may hold greater power or influence than others. Together these units comprise the larger family system

(Minuchin, 1974). Relationships among individual family members and subsystems are also viewed as being organized by a system of rules that govern how the family's common purposes or tasks are executed (Broderick, 1993).

Family systems are said to be interdependent because changes in any part of the system will reverberate throughout the entire system prompting changes in other parts as well (Bertalanffy, 1975; Whitchurch & Constantine, 1993). This point is important because, as we will see later on in this chapter, not all levels of change are easily discerned and the changes that reverberate throughout the family system can originate within an individual member or outside of the family unit altogether in the broader environment (Bateson, 2000; Whitchurch & Constantine, 1993).

The family system is maintained by the establishment of internal and external boundaries that define the system and mark the interface between one element of the system and another. Internal boundaries regulate the flow of information between and within family subsystems. They also regulate the degree of autonomy and individuality permitted among members within the family. External boundaries delineate the family from other systems and determine family membership by delineating who is in, and out, of the family. External boundaries also regulate the flow of information between the family and other social systems (Anderson & Sabatelli, 2007). The concept of boundaries, much like other family systems concepts such as holism, is largely metaphorical because information about family boundaries is not directly observable. Rather it is derived from the observer's punctuation, or subjective impressions, of how the systems and subsystems relate to one another (Steinglass, 1987).

Family systems are considered to be open systems because they have some degree of exchange between and among levels of the system, although they differ in the degree to which they are open or closed (Minuchin, 1974; Olson, Sprenkle, & Russell, 1979). Because they are considered to be open, information-processing systems, families must continually monitor information, or feedback both from within the system and from the external environment, to determine when change

or reorganization is required (Bertalanffy, 1975). The family's adaptation depends upon its capacity to reorganize or change in response to new sources of information. Sources of information may be internal, such as family members' maturation, additions or departures from the family, or external, encompassing various alterations in the family's circumstances. Examples of internal family events are the birth of a child, the transition from childhood to adolescence, or the death of a family member. External events could include moving to a new community or mother obtaining a new job. These changes place stress upon established strategies and rules, and this stress can ultimately lead to a reorganization of strategies and rules such that a better fit is achieved within the family's present circumstances. At all times, there exists within a system a dynamic tension between morphostatic (change-resisting feedback) and morphogenetic (change-promoting feedback) processes. Unless the need for reorganization within a system goes beyond some critical threshold, the system resists changing its existing strategies. When the need for reorganization exceeds some critical threshold, adaptation or reorganization of the family system will occur.

Some have suggested that families may sometimes fail to make adaptations when they are required. These systems have been referred to as "closed," or "rigid." Other systems are thought to make adaptations when none are required. These systems have been referred to as "chaotic," "random," "disorganized," or "unstable" (Olson et al., 1979). In both instances, families, as open systems, are reacting to information and making adaptations. However, the adaptations made by these systems are not optimal, because they may fail to perform critical systems tasks. One such task is meeting the physical needs of family members for food, shelter, and clothing. Another is fostering a clear sense of identity for both individual family members and the family as a whole. A third critical task is maintaining clear boundaries. This includes clear boundaries between individual members, subsystems, or the family and the external environment. For individual family members, this entails a balance between family connection and individuality. At the level

of subsystem, families must determine what responsibilities are to be carried out by the couple (intimacy, sexual relationship), parents (child discipline, education), and siblings (support, socialization). Boundaries with the external environment define who is in the family and who is not. A fourth critical task is managing the family emotional climate with respect to members' needs for closeness, acceptance, and nurturance (Anderson & Sabatelli, 2007; Hess & Handel, 1985; Kantor & Lehr, 1975).

However, it must be noted that decisions about whether a family's adaptation is "optimal" or "less-than optimal" are derived from an observer's subjective impressions. An alternative punctuation is offered by scholars such as Dell (1982) who suggested that family systems always operate in a manner that is congruent with their context. That is, if we were able to discern all contextual factors operating at all levels of the system at a given point in time, the family system would be shown to be operating in an optimal manner. We return to this issue later. In the next section, we review early efforts to develop family system concepts into an organized theory of family social science.

Early Efforts to Formulate a Theory of Family Systems

One critical issue addressed by early theorists was whether or not family systems theory was indeed a theory. Some criticized it for being overly general and ambiguous. Aldous (1978) concluded that its core concepts were conceptually defined but difficult to operationalize. Further, a framework of hypotheses linking the core concepts together was largely lacking (Aldous, 1970). Some suggested that systems theory was really not a theory at all but rather a philosophical perspective (Whitchurch & Constantine, 1993). One early review of the theory concluded that, at the then current stage of development, it was best considered a "conceptual perspective, a sensitizer to critical issues rather than a set of interrelated propositions" (Broderick & Smith, 1979, p. 126). These authors

went on to suggest that the chief problem was not with the theory but with the application,

The fact is, we know very little about the family as a system. Its system parameters have certainly not been specified and calibrated (let alone measured) in a degree to even approximate the level of precision required by much of the systems literature (p. 128).

However, a year later, Holman and Burr (1980) concluded that,

At the beginning of the decade, debates existed about whether the systems approach was an analytic approach or a bone fide theory. These debates no longer occur. It is clearly both (p. 732).

They went on to say that, "Nevertheless, systems theory has not matured as quickly as many had hoped" (p. 732).

Underlying much of the early debate regarding whether systems theory was or was not a theory was the predominance of a modernistic, positivistic paradigm to understand theory development in particular and family social science in general. The focus was on the scientific method which involves observation of phenomena, formulation of hypotheses concerning these phenomena, experimentation to demonstrate the truth or falseness of the hypothesis, and arriving at conclusions that validate or modify the hypothesis. Such a position is evident in some early assessments of family systems theory that concluded it had not yet achieved the status of theory because even though its key concepts made us aware of certain properties of families and aspects of family members' behaviors, they had not been joined into sets of related propositions that had been verified empirically (Aldous, 1978; Hill, 1966; Rodman, 1980). According to Holman and Burr (1980), the main factor that determines the quality of a theory is where it is in the process of being gradually tested and revised. Based upon their review of theory development in the family field in 1980, they concluded that "the progress that has been made up till now is little more than a beginning" (p. 734). They called for future theory development to include identifying the logical connections between parts of the theory. This included specifying the nature of the relationships among the theory's propositions and clearly

identifying how various factors interrelate to influence the operation of the family system (e.g., specification of intervening variables, direct and indirect effects, and the role of various processes in the dynamics of family functioning).

A more pragmatic stance was taken by Sprey (1988) who suggested that the relevance and credibility of a theory ultimately rests with its potential to guide effective social policy, improve the quality of marriages and families, and help emancipate those whose lives are locked into unfair or oppressive structures (p. 879). A similar conclusion was reached more recently by Doherty and Baptiste (1993) who suggested that theory needs to be evaluated in relationship to its “contribution to the discourse.” Clearly, systems thinking has found its way into the mainstream of family social sciences. It has influenced the discourse in the social sciences, informed research and practice, and guided social policy.

Much has changed in the ensuing decades that have added to, and changed, the utility and scope of family systems theory. In the following sections, we identify several of these developments. We next discuss the shift from grand theorizing to the development of middle-range theories. Then in the following section, we examine contemporary developments that influenced the evolution of family systems theory.

A Shift from Grand-Scale Theorizing to Development of Middle-Range Theories

The shift from grand-scale theorizing to middle-range theories was envisioned by some of the earlier grand-scale family theorists. The purpose of developing middle-range theories is to promote further research and theoretical revision (Broderick, 1971). Middle-range theories are modest in scope and generality, relatively close to the data, easily tested and revised (Holman & Burr, 1980). It was anticipated that the propositions derived from these efforts would be eventually integrated into a more comprehensive theoretical framework (Hill, 1966).

There have been numerous efforts to apply family systems concepts to smaller, middle-range theories or models of family functioning (cf. Bateson, Jackson, Haley, & Weakland, 1956; Kantor & Lehr, 1975). The goal of these middle-range theories was to predict and explain the levels of functioning found within and between families. Many of these theories were developed by family therapists whose primary interest was to devise intervention strategies that facilitate positive change. The decades of the 1970s and 1980s included the development and empirical testing of several influential middle-range theories. We focus our attention here on several models that have developed a coherent conceptual framework and received empirical support. Each of these models developed instruments to operationalize key concepts (Beavers & Hampson, 1990; Craddock, 2001; Epstein, Baldwin, Bishop, & Keitner, 1983; Franklin, Streeter, & Springer, 2001) and accumulated a strong body of empirical evidence to support its major hypotheses. We offer an overview of the key constructs and hypotheses specific to each model below, but we will not offer a comprehensive review of supportive empirical findings because they are extensive and readily available in previously published works (Beavers & Hampson, 1990, 2000, 2003; Epstein, Ryan, Bishop, Miller, & Keitner, 2003; Miller, Ryan, Keitner, Bishop, & Epstein, 2000; Olson, 2000; Olson & Gorall, 2003).

Circumplex Model of Marital and Family Systems

The Circumplex Model (Olson et al., 1979), one of the most widely researched middle-range theories, posits two primary dimensions, cohesion (emotional bonds between family members) and adaptability (capacity to change), with a third dimension, communication, serving an important facilitating function (Olson, 2000; Olson et al., 1979). Four levels of cohesion (disengaged, separated, connected, enmeshed) when combined with four levels of adaptability (rigid, structured, flexible, chaotic) produce a typology of 16 family types that are used to explain the degree to which

the system is effective in fostering the health and well-being of its individual members and the family as a whole. Families that fall in the central (balanced) regions on both dimensions have been found to be the most functional in meeting members' developmental needs and allowing them to achieve appropriate levels of individuality and closeness at each developmental stage. There is also recognition that a family's placement on the two dimensions will vary according to the family's developmental stage, environmental changes (loss of employment, life-threatening illness), and other contextual factors such as ethnic and cultural norms.

Beavers Systems Model

The Beavers Systems Model also identifies two primary dimensions along which families are presumed to vary—competence and style (Beavers & Hampson, 1993, 2003). *Competence* refers to the health of the system as defined by factors such as egalitarian leadership, strong parental coalitions, clearly established generational boundaries, support for the autonomy of family members, promotion of intimacy and trust, and the capacity to accept and resolve differences (Beavers & Hampson, 1993). The *style* dimension refers to the degree of closeness or separateness in the family as evidenced by degree of centripetal (binding) or centrifugal (expelling) forces. Functional families are able to maintain both a sense of separateness and involvement in the outside world and a sense of connection to the family. The model identifies ten family types based upon the family's level of competence and predominant style.

McMaster Model

The McMaster model posits that healthy family systems must be able to deal effectively with three sets of tasks—maintenance (food, money, transportation, shelter), developmental, and hazardous (handling crises). Healthy functioning is dependent upon the family managing all three

sets of tasks by using effective strategies for problem-solving, communication, clearly defining roles (task assignment), affective responsiveness (emotional expressiveness), affective involvement (disengaged, empathic involvement, over-involved), and behavior control (rigid, flexible, laissez-faire, chaotic). The flexible style has been found to be the most optimal and the chaotic style the most dysfunctional (Epstein et al., 2003; Miller et al., 2000).

Although each of these mid-range models offers a unique perspective on the elements of healthy family functioning, they also share many of the same systems theory assumptions. They all address the critical task of establishing interaction patterns or strategies for managing the family's emotional environment. Whether this is referred to as forming alliances, cohesion, family style, or family involvement, a sense of connectedness, caring, and mutual support is seen as critical to healthy family functioning.

All models address the systems concept of adaptation. Families are viewed as being able to alter their structure and organization in response to changes in family life. The concepts of adaptation, adaptability, rigidity, and behavior control all address the important notion of system change.

All models address the regulation of the family's internal and external boundaries. Internally, functional families develop patterns of interaction that demonstrate respect for individual differences and account for the differing needs of family members at various stages of development. The concepts of hierarchy, clear subsystem boundaries, enmeshment, disengagement, autonomy, and empathic involvement all speak to this task. The family must also develop clear boundaries and strategies for dealing with the external environment. The emphasis on the broader social context, external stressors, establishing a positive view of humanity and the outside world, developing the capacity to balance centripetal and centrifugal styles, and the management of hazardous tasks and crises all point to the need for the family to move freely beyond the boundary of the family to elicit needed information, resources, and support.

A fourth feature is the importance of effective communication or rules for relating. The Circumplex model suggests that effective communication is characteristic of families that function in the balanced regions of cohesion and adaptability. Both the Beavers Systems model and the McMaster models view clear and direct communication as characteristic of competent and healthy families.

Finally, these models address the systems concept that families are purposive (problem-solving), goal-directed, and task performing. The McMaster model highlights the importance of the family fulfilling essential tasks (and implementing strategies such as problem-solving) to insure its own survival. The Circumplex Model posits that the family system is organized so as to address the developmental needs of its individual members. The Beavers Systems Model's concept of competence refers to how well the family performs the necessary tasks of organizing and managing itself in such a way as to support the health and well-being of its members.

One of the major advancements that resulted from the shift from grand-scale theorizing to middle-range models is that it benefited those who must conduct assessments that differentiate functional from dysfunctional family systems or intervene in these systems to promote positive change. A social worker, for example, observes parents during a home visit and determines whether the parents are effective or not by examining how well they execute the tasks of parenting. This determination requires a comparison of the parenting behaviors observed to the parenting behaviors thought to be appropriate by the social service community. Similarly, researchers determine whether a family is effective or not by using questionnaires to assess how families execute their tasks. The items comprising the questionnaires are thought to tap into compelling and meaningful aspects of family life. The responses to the questions are judged against what the research community believes should be found within effective families.

All judgments of functioning, whether they be observations made by a social worker during a home visit or observations collected by a

researcher employing a measure of family functioning, are grounded in values. These values are emergent—they evolve and change over time in response to the ongoing “dialogue” that exists among social service providers, family researchers, policy makers, and others. It is through this ongoing dialogue that we clarify and refine our thinking about the processes involved in making judgments about family functioning. In this regard, it is also important to note that the middle-range models discussed here require a particular punctuation of the central features of family systems. They focus primarily on the essential intra-family qualities of effective functioning and attend less to the influence of the family's external context on its overall functioning.

In our view, judgments about family systems functioning will always be approximations at best. It is impossible to predict the sheer scope and variety of random events, unexpected occurrences, and contextual influences that shape family experience. Nor can we anticipate fully how individual family members' traits, abilities, biological predispositions, and developmental pathways will affect the family system over time. On the other hand, the empirical replication of core family systems constructs across multiple samples, using varied methodologies, and encompassing diverse cultures and contexts lends credibility to the view that some family system processes may indeed be nonrandom and reliably explained and predicted (cf. Cummings & Keller, 2007; Gottman & Notarius, 2002; Rohner & Britner, 2002; Sabatelli & Bartle-Haring, 2003).

In summary, the development of a grand theory of family systems with a set of well-defined, empirically validated propositions has never been achieved. The careful documenting of the causal interrelationships among theoretical propositions that was advocated for by family studies scholars has not been accomplished and may likely never be. The axiomatic form of theory building based upon a positivist, modernistic search for axioms, and propositions seems to have reached a plateau several decades ago. However, this is not to suggest that the primacy of empirical research in advancing family systems theories has changed. Many scholars

continue to rely upon systems concepts as a theoretical basis for their research. Nor do we wish to suggest that the development and evolution of family systems theory has ended. In fact, family systems theory has seen many developments and advances in the last 30 years. In the next section, we will summarize some of these contemporary developments and illustrate how the richness and breadth of family systems theories has expanded.

Contemporary Developments in Family Systems Theories

Postmodernism

Most theoretical developments in the area of family systems theory have been derived from a positivistic or modern perspective. As we have noted earlier, the primary method used to develop theory is through the process of concept development and clarification, formulation of propositions that link key concepts together, and researching the direction of influence of the relationships among key concepts. The engine for this process is the linkage of conceptual work (proposition and hypothesis formation) with accepted research methodologies and the accumulation of empirical results which are then used to refine key propositions of the theory. Variables logically related to a concept in the theory are portrayed in a causal matrix (Hill, 1966).

As Sprey (1988) has noted, theory building is a human endeavor in which questions and answers are shaped by cultural influences and the social milieu within which theorists operate. Theory development is a recursive process that links the theory with prevailing cultural beliefs and attitudes, language, world views, and frames of reference of theorists and scholars of the times. The evolution of family systems theory parallels developments in broader arenas of culture, philosophy, and the physical and social sciences. Most notable is the contribution of postmodernism. According to Doherty (1999), postmodernism is the principal force shaping emerging theories.

Postmodernism has been defined as a cluster of concepts that critically challenges the existence of objective knowledge and absolute truth (Kvale, 1992). It assumes that all “reality” is inevitably subjective. It calls into question the search for universal laws, conventions, or structures. Postmodernism does not make exclusive claims. Rather it is viewed as one perspective among many competing perspectives. It is self-reflexive in that it invites and demands continued analysis (deconstruction) of its premises and applications. Social constructionism, which is considered one of several postmodern perspectives, places emphasis on truth, reality, and knowledge as being socially embedded and products of the language used to describe them (Gergen, 2001).

Chief among the premises of postmodernism of interest to us here is the notion that the creation and interpretation of any theory, family systems theory included, is a subjective exercise and cannot be separated from the prevailing cultural milieu (Sprey, 1988). Further, the theory is dependent upon the constraints of the language used to describe it. From this vantage point, the search for objective, empirically derived propositions that lead to the development of a grand-scale theory of how families operate is unattainable. This is because the context in which families operate is continually changing, and descriptions and explanations applied to the family by different observers are always subjective. We are all born into a socio-cultural context within which we learn the language of our group and internalize its norms, values, and ideology. We speak in the conventions, metaphors, and symbols by which our community is characterized (Becvar & Becvar, 1999). During each encounter we select what we will see and hear and what we will ignore and these choices are more often than not governed by the interpretations and meanings we have established before. Rather than inhabiting a universe, postmodernism proposes that we live in a multiverse, or a context of multiple perspectives. Each participant in the relevant social context operates by his or her own observations, interpretations, and use of language.

Another important implication of postmodernism for systems theory is the location of the researcher or theorist in relation to the family system. A modern or positivist perspective places the researcher or theorist outside of the system that is to be observed. Whether the level of observation is the individual, subsystem, family system, or larger context, the observer remains outside (and “objective”) of the system. In contrast, the postmodern perspective locates the observer inside of the system. From this vantage point, “reality” is seen as self-referential. That is, the act of observation influences what we are attempting to understand. Everything observed by the theorist or researcher is filtered through one’s personal frame of reference and one’s very presence alters the context under study. In this regard, one does not discover behavior, one creates it (Becvar & Becvar, 1999). The behaviors we observe and the meaning we assign to them are our own constructions.

Another implication is that family systems are neither functional nor nonfunctional, overstructured or understructured, overly open or overly rigid. The system is what it is (Dell, 1982). It always operates to maintain itself. The appearance of change or instability at one level is understood as system maintenance or stability at another level. For example, environment does not determine family structure. Rather family and environment reciprocally affect one another and the potential for reciprocal interactions is a function of the structure created through earlier reciprocal interactions. Family and environment are parts of a broader system. The family affects and is affected by environment and environment affects and is affected by family. A change at any level must be accommodated by the system at another level.

Similarly, family and boundary require each other, but do not cause one another. That is, in order to recognize the family as a level of system distinct from other levels, there must be a boundary. At the same time, in order for a boundary to be present, there must be ongoing recursive interactions among family members by which we can identify the family system (Becvar & Becvar, 1999).

Dell (1982) introduced the concept of coherence to denote this process. In his view, the

description of any part of the system as separate and distinct from other parts (e.g., family-environment) requires a dualistic (cause-effect, subject-object, independent-dependent variable) form of thinking rather than a systemic (post-modern) orientation since a system is a coherent whole. Differentiating the system into parts (including observer-observed) is to mistake the parts for the whole, or what Bateson (2000) referred to as “chopping up the ecology.”

The implications for family systems theories, and all other grand-scale theories, are profound and may very well explain the plateau that was reached in the development of a grand-scale family systems theory several decades ago (Doherty, 1999). From the postmodern perspective, there are no truths out there waiting to be discovered (Anderson, 2003). There are no cause-and-effect relationships among dependent variables, no sets of empirically derived propositions to be applied to all families, and no universal properties that can be used to explain all families. In fact, every effort to observe and explain a family phenomenon will be changed by the very act of observing and explaining. Every family system will be comprised of individual members who observe, explain, and use language from a different vantage point. So, too, will every member of the broader social and cultural context who attempts to ascribe certain properties to a given family system, including theorists and researchers, operate from a different vantage point. All explanations will be limited by the selective perceptions of the individual observer and by the structure and limitations imposed by the prevailing cultural norms and language system.

We chose to begin this section on contemporary influences on the development of systems theory with this overview of the postmodern influence. However, we also acknowledge that the punctuation on family systems offered by postmodernism is not a new development. Bertalanffy (1969) suggested some 4 decades ago that,

perception is not a reflection of ‘real things’ (whatever their metaphysical status), and knowledge not a simple approximation to ‘truth’ or ‘reality.’ It is an interaction between knower and known,

this dependent on a multiplicity of factors of a biological, psychological, cultural, linguistic, etc., nature (p. xxii).

It perhaps required a different time and cultural context in order for this perspective on family systems to gain broader recognition. Other significant influences on the development of family systems theory that also emerged in a particular social and cultural milieu were feminism and multiculturalism.

Feminism and Multiculturalism

The contributions of feminist perspectives to family systems theory started with critiques of the theory in the late 1970s and early 1980s. These critiques centered on the failure of family systems theory to consider key features of the family's broader context. One overlooked element was the patriarchal social system of beliefs that was thought to marginalize women's experiences and minimize their voice both in the family and the broader society. From the feminist perspective, the dominant social and cultural ideology defines family members' roles, identities, and rule for relating with one another (Allen, 2001; White & Klein, 2008). This becomes manifest in the way resources in the family and society are distributed and how power and influence is acquired and maintained. Men by virtue of their privileged position in the family and society have greater access to resources than women and this gender imbalance shapes family relationships by extending greater power and privilege to men in areas such as division of household labor, child rearing, and financial decision-making (Chafetz, 2004).

An especially critical interaction pattern involving gender concerns couple violence. According to feminist scholars, family systems theory did not hold perpetrators responsible for their abuse because attention was focused exclusively on the couple's interaction patterns (Bograd, 1984). These theorists argued that such a conceptualization diffused responsibility for violence across all involved parties and implicitly blamed the victim for the abuse. According to Avis (1992), "the abusive act disappears in systemic

formulations, this time seen as but one step in a recursive loop, the loop itself a sign of family dysfunction, where the abused is perceived as equally (or more) responsible with the abuser for the maintenance of the dysfunctional pattern" (p. 229).

The feminist perspective has played an important role in expanding the range of family system theory by calling attention to the interface between broader social forces and internal family dynamics and the need to clarify the role of individual responsibility in family systems. Current systems formulations no longer absolve abusers of responsibility for their violence nor do they blame the victim. However, they do take into account the complex set of factors that define each interaction and hold each partner responsible for actions that may contribute to abuse. This includes identifying who uses violence, the direction of violence (batterer-to-victim, reciprocal), established couple communication patterns (conflict-avoidant, conflict escalating, intimacy-enhancing), availability of social supports, degree of openness of the family's boundary with the broader community, community enforcement of laws against domestic violence, victims' decisions to stay or leave the relationship, and other individual factors such as affective and personality disorders, alcohol abuse, gender attitudes, and a family history of being victimized by, or witnessing, violence (Anderson, 2001; Anderson & Schlossberg, 1999; Johnson, 1995; 2006).

Whereas the feminist critique of family systems theory started with an emphasis on gender, the multicultural critique started with a focus on how ethnic and cultural differences inform family interactions (McGoldrick, 2003). Over time, both perspectives have broadened to include an array of social categories such as gender, race, class, ethnicity, ability, and sexual orientation (Burman, 2005). More recently, integrated feminist and multicultural perspectives such as feminist-informed critical multiculturalism have emerged. According to McDowell and Fang (2007), this approach acknowledges the politics of cultural differences and the "historical disparities and dissimilarities in lived experiences of women across racial and/or cultural and

socioeconomic groups” (p. 551). This approach further underscores the idea that various markers of social identity—gender, ethnicity, race, class, and sexual orientation intersect to position each individual along multiple continuums of power that can vary by time, place, and relationship (McDowell & Fang, 2007).

A major contribution of these perspectives has been a thickening of the description of the social and cultural contexts, within which family systems must operate. As we have noted earlier, family systems are open systems that must continually manage information that originates outside its boundary. Feminist and multicultural perspectives call attention to the legal, social, and political “systems” with which families must interact and point to the need for families to manage the powerful socially constructed influences of privilege and oppression in their daily lives (Fields, 2008).

Ecological/Contextual Perspectives

Early family theorists envisioned that contemporary theories would evolve through a process of borrowing concepts from other theories and integration of existing conceptual schemas into broader, more flexible ones (Aldous, 1970; Sprey, 1988). Hill (1966) called for the building of “interpretive bridges” which would link theoretical frameworks in such a way that concepts developed in one could be translated into the concepts and language of other theoretical frameworks. The integration of family systems theories with ecological/contextual theories is one excellent example of this kind of integration.

In the same article noted above, Hill (1966) noted,

We lack group terms for family transactions with external agencies, where the internal system of the family is left residual and one concentrates on the network of relationships external to the family. What vocabulary of terms can characterize these exchanges, reciprocities, and interdependencies? None of the conceptual frameworks identified to date provides such a vocabulary for whole families (p. 13).

In the ensuing 4 decades, ecological perspectives have clearly addressed this shortcoming.

Bronfenbrenner’s bioecological model provides the language and the mapping of connections between family systems and “external agencies” (Bronfenbrenner, 1977). The focal point in the bioecological model is not the larger social system but, instead, the individual human being. Human beings are active, evolving biopsychological organisms that develop through complex, reciprocal interactions with their immediate settings which are referred to as microsystems. The family is one microsystem among others such as a social clubs, groups of friends, or school. The interactions that take place between microsystems and the individual are referred to as proximal processes because of their proximity to the individual. And because of their proximity to the developing individual, proximal processes are thought to exert greater influence than settings that do not come in direct contact with the individual.

The mesosystem describes connections among elements of the person’s microsystems (teacher–parents, parents–neighbors). The exosystem encompasses the larger social system in which the individual does not function directly. This level of context affects development by interacting with one or more structures in the person’s microsystem. A mother’s work setting is an example of an exosystem that affects a child indirectly. The child does not interact directly with the mother’s work setting and yet the work setting influences the child by affecting mother’s emotional state, her behavior, and her ability to provide for her family. The macrosystem is the outermost level of context which contains cultural values, customs, and laws (Bronfenbrenner, 1977). The effects of these macrosystem influences have a cascading influence throughout the interactions of all other layers. For example, if the prevailing cultural belief is that parents should be solely responsible for raising their children, the culture is less likely to provide resources to help parents.

The last element identified by Bronfenbrenner (1977) is the chronosystem. The chronosystem refers to the dimension of time as it relates to individual development. Time can be external such as the timing of a parent’s death, or internal, such as the physiological changes a child

undergoes with age. As children age, they are likely to react differently to their environment.

Bronfenbrenner's bioecological model has provided a language and framework for describing the multiple levels of context within which family systems operate. However, rather than conceptualizing family as an open system embedded in a reciprocal relationship between family and environment, as was the case with earlier family systems formulations, the bioecological model positions the family system as one element among many that interact with other levels of systems to constitute a larger, holistic, social system. By locating the unit of analysis as the individual, the model has been able to differentiate the level of influence exerted by various contexts or settings according to their proximity to the developing person. A good deal of empirical evidence supports Bronfenbrenner's formulations (Bronfenbrenner, 2005; Bronfenbrenner & Evans, 2000). They have been used extensively in family research to identify the relative influence of various contextual settings on individual and family development (cf. Anderson, Sabatelli, & Kosutic, 2007; Meyers, Varkey, & Aguirre, 2002).

Attachment Theory

Another noteworthy theoretical integration that has received a great deal of recent attention is the bridge between systems and attachment theories (Crittenden & Dallos, 2009; Hill, Fonagy, Safier, & Sargent, 2003; Ng & Smith, 2006). Developed by Bowlby (1973), attachment theory draws attention to three critical dimensions relevant to family systems theory. These are the unique qualities of the attachment subsystem, the interface between individuals' internal working models (cognitions, images, affective states) and patterns of interaction, and the intergenerational transmission of attachment strategies over succeeding generations.

According to Bowlby (1988), attachment is an innate motivating force that motivates infants (and all human beings) to seek proximity to others during times of distress. A secure infant attachment is formed through reciprocal interactions between

infant and caregivers. The caregiver responding to cues from the infant responds with soothing and reassurance thereby providing a fundamental sense of warmth and security. The infant's responsiveness (calming, smiling) to these overtures, in turn, reinforces the caregiver's motivation to attend to the infant's needs. Securely attached infants are able to use the caregiver as a secure base for exploration. Insecurely attached infants are not confident that their caretakers will be available to them when needed and so develop various strategies (avoidant, ambivalent, disorganized) to maintain physical proximity and psychological closeness (Byng-Hall, 2002). However, all attachment styles are thought to be protective and adaptive (Bowlby, 1973). They develop in response to the child's unique attachment system and their underlying goal is to protect the child from danger and maintain a sense of safety (Bowlby, 1973, 1980).

Based upon the individual's early attachment experiences with primary caregivers, the child internalizes a mental representation or working model of the attachment figure and the self (Bowlby, 1973). This model becomes the standard by which the self is organized and relationships with others are judged and acted upon. Internal working models provide individuals with a framework for maintaining a sense of personal well-being, forming emotion-regulation strategies, and engaging in exploration, affiliation, and caregiving towards others (Mikulincer, Florian, Cowan, & Cowan, 2002). Securely attached individuals react to stressful experiences with less anxiety and avoidance, and greater support-seeking. They hold more positive views of the self and expectations for their relationship partners, and they are more responsive to the needs of others than are insecurely attached individuals (Mikulincer et al., 2002). Some insecurely attached individuals (avoidant, dismissing) deny negative aspects of their childhoods, exhibit a restricted range of emotional expressiveness, withdraw from negative affect, and cutoff from attachment experiences. Others (ambivalent, preoccupied) exhibit confusion, anxiety, passivity, anger, fear, and a preoccupation with past attachment experiences (Sloman, Atkinson, Milligan, & Liotti, 2002).

Over time, patterns of interaction with attachment figures become organized into generalized interactional styles, or attachment strategies, that are dependent upon the person's internal working model (Hooper, 2007). Attachment strategies developed during childhood are generally thought to be stable patterns that once learned or reinforced throughout infancy and childhood become further reinforced in one's adult relationships. This is because working models direct attention to information consistent with one's representations, influence interpretations in directions consistent with those representations, and thus lead the individual to behave in ways that elicit responses from others consistent with established expectations (Mikulincer et al., 2002). However, consistent with family systems theory concepts of morphogenesis and adaptation, attachment strategies are capable of revision over the life span as a result of maturation, neurological development, and new experiences (Crittenden & Dallos, 2009). An extensive body of research has emerged that supports the replication of attachment styles developed in childhood in adult parent-child, dating, and intimate couple relationships (Hill et al., 2003; Hooper, 2007; Kretchmar & Jacobvitz, 2002; Mikulincer et al., 2002; Solomon & George, 1999; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).

Both family systems theory and attachment theory share the view that family patterns of interaction are adaptive within, and congruent with, the family's context. However, attachment theory's specification of the dynamics operating within the attachment subsystem and its focus on the boundary between individual inner experience (internal working models) and external relationship patterns have broadened the lens through which systems theory can be viewed. In fact, recent research has now extended attachment theory's attention to smaller internal systems. The advent of brain imaging technology has allowed examination of the interface between attachment behaviors and neurobiology. Attachment relationships are now being linked to the activation of specific neuronal circuits in the brain (Kendrick, 2004; Stein & Vythilingum, 2009). These findings add further support to the linkage between systems

theory and biopsychosocial models which will be addressed in the next section.

Finally, attachment theory has been the basis for extensive empirical work that has traced the transmission of attachment relationship patterns over time through successive generations of the family system. This broadening of the lens of systems theory has reinforced earlier research and theory-building efforts in the family therapy field that traced the intergenerational transmission of anxiety, self-differentiation, intimacy, and distance-regulation strategies such as fusion, triangulation, and emotional-cutoff from one generation to another (Bowen, 1978; Crittenden & Dallos, 2009; Lawson & Brossart, 2001; Miller, Anderson, & Keala, 2004; van Ecke, Chope, & Emmelkamp, 2006).

Biopsychosocial Model

The biopsychosocial model was first introduced originally by George Engel (1977) as an alternative to the traditional medical model's primary emphasis on the biology of illness. Engel (1977) challenged the dualistic nature of the biomedical model, with its separation of body and mind. Instead, he offered a patient-centered approach to treatment based on the systems notion that one cannot ignore the influence of the observer on the observed. He understood that one cannot understand a system from the inside without disturbing it in some way and in so doing he provided a rationale for including the relationship between physician and patient as a legitimate focus for scientific study (Borrell-Carrio, Suchman, & Epstein, 2004). His model also considered the multiple levels of systems affecting the course of illness and disease processes. The biopsychosocial model offers yet another example of the ever-expanding range of internal and external contextual factors affecting, and being affected by, the family system.

For example, it has been used to interpret findings from genomics research which studies interactions among all of the genes in the human genome and their relationship to environmental influences since genetic factors alone seldom determine disease expression or human development

(Collins, Green, Guttmacher, & Guyer, 2003). It has informed research, noted earlier, on the reciprocal relationship between neurological processes and behavior. Not only does brain function produce learning, but learning produces alterations in brain function and this occurs through the reciprocal interaction between emotional experience and neurological pathways (Shuttleworth, 2002). It has addressed the level of couple and family systems, finding that supportive couple and family interactions can affect the course and outcomes of a variety of medical conditions (Rolland & Williams, 2005). The model has been used to highlight the importance of supportive, open, and information-sharing interactions between patients, family members, physicians, and the broader health care system (Adler, 2007). The biopsychosocial model also calls attention to the influence of the broader social context on family adaptation and management of individual members' health and illness needs. This includes the effects of health care policy, cultural differences in definitions of disease and illness, differences in health care utilization, and choices of treatment (Borrell-Carrio et al., 2004; Vetere, 2007). According to Hepworth and Cushman (2005), the power of the biopsychosocial model is its attention to the uniqueness of disease expression due to the uniqueness of each patient in context. They question the possibility of bypassing that with simple syndrome classifications. This admittedly brief overview of the biopsychosocial model is intended to offer one of many examples of how systems theory has evolved over time and how family system processes are embedded within (affecting and being affected by) ever-expanding levels of complexity.

Conclusions

We have argued here that the development of family systems theory has much in common with the way the theory has been used to study families. Developments, interpretations, and applications of family systems theory, much like the families to which the theory has been applied, can be seen as operating in an ever-changing context. How we

understand family systems theory is dependent upon numerous factors such as significant historical events, changes in societal and cultural mores and values, paradigmatic shifts in how knowledge and truth is defined, developments in the broader fields of the physical and social sciences, and the unique perspective of the individual researcher or practitioner. Early efforts by family studies scholars to establish a grand theory of family systems with an established set of universal laws and propositions occurred in a time when a modernistic, objective, positivistic paradigm was dominant. Eventually, attention shifted to the development of middle-range theories of family systems and later to a search for "interpretive bridges" that could link the concepts and language in one theory with those in other theoretical frameworks. A paradigm shift from modernism to postmodernism brought recognition of the subjectivity of "reality" and the important role of the observer in both interpreting and altering that which is observed. The current research climate now recognizes the importance of both a modernistic, empirical perspective and a postmodern influence that recognizes the existence of multiple realities and the need for reanalysis and deconstruction of dominant premises and applications.

Our presentation has emphasized the importance of interaction patterns and context as core features of family systems and ecological theories. Further we have emphasized how family systems are comprised of multiple levels of systems and subsystems, all interacting in reciprocal fashion to affect and be affected by other levels of systems. Advances in empirical research and parallel theories continue to inform our understanding of these reciprocal processes and to expand the levels of systems to which we must attend. At this stage of family systems theory development, levels of systems range broadly from internal biological systems to social and political systems. The challenge for family systems theorists is to identify the myriad ways by which these levels of systems affect the family and its members, and in reciprocal fashion, the role the family plays in affecting these other levels of systems.

We have identified a number of contemporary theoretical perspectives that have informed

family systems theory. Feminism and multiculturalism expanded awareness of social and political contexts and called attention to limitations in family systems theory formulations. Ecological/contextual perspectives have identified the multiple levels of context within which family systems interact and the levels of influence of each on development. Attachment theory has added to our understanding of interaction dynamics within the caretaker-child subsystem, how these attachment patterns affect the individual's sense of self (internal working models), and further, the neurological processes with the brain. Attachment theory also has informed our understanding of how attachment patterns can become replicated intergenerationally within couple relationship and parent-child relationship systems. Biopsychosocial models further explain the interactions among biology (genes), individual cognition and behavior, family dynamics, social and cultural influences, and disease and illness processes.

However, we must acknowledge that, by highlighting the contributions of these theories to family systems theory, we punctuate what is decidedly a reciprocal process in a subjective, unidirectional manner. We have focused more on the influence of these parallel theories on the development of family systems theory. It is equally true that core concepts from family system theory have informed the development of these and other theories as well. Yet, in so doing we have attempted to illustrate how family systems theory is a vibrant and evolving framework. Our understanding of family systems has become ever more complex and yet better informed as a result of these elaborations on interaction and context as provided by these other theoretical models.

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