

A Review of Group Systems Theory

Joanie V. Connors
Fayetteville, Arkansas

Richard B. Caple
University of Missouri

The ability to see interpersonal and group processes beyond the individual level is an essential skill for group therapists (Crouch, Bloch & Wanlass, 1994; Dies, 1994; Fuhriman & Burlingame, 1994). In addition to interpersonal therapy models (e.g., Sullivan and Yalom), there are a number of systems theory models that offer a broad array of possibilities for developing group practitioner perspectives beyond individual dynamics. This paper will outline the background and conceptual bases for a number of models that now comprise a category called group systems theory. Group systems theory can provide a variety of directions for innovations in group research and practice.

Keywords: *systems theory; group theories; group systems theory*

Systemic approaches to group work appear to be gradually receiving more attention among group practitioners as reflected in the scholarly literature on groups. There are now four group counseling and therapy books that are systemic in focus (Agazarian, 1997; Donigian & Malnati, 1997; Durkin, J. E., 1981c; McClure, 1998). There are also a growing number of academic fields considering systems theory, including communication studies (Tubbs, 2003) and sociology (Mingers, 1995). Three group counseling and therapy textbooks now have chapters on systems theory or their applications (Donigian & Hulse-Killacky, 1999; Kline, 2003; Napier & Gershenfeld, 2004), and three other group texts discuss systems in their historical overviews (Forsyth, 1999; Gladding, 1995; Toseland & Rivas, 2001). There have also been a number of scholarly articles on groups as systems (e.g., Caple, 1985; 1987a; 1987b; Durkin, 1989; Hines, 1988b; Matthews, 1992; Trotzer, 1988).

Systems thinking is an important way to expand and strengthen the supra-individual theory base of group practitioners beyond

Joanie V. Connors is a consultant in private practice in Fayetteville, Ark. Richard B. Caple is a professor emeritus from the Department of Counseling Psychology, University of Missouri, in Columbia, Mis. Correspondence concerning the article should be addressed to: Joanie V. Connors, 885 North Fritz Drive, Fayetteville, AR 72701; phone: (479) 582-0074; e-mail: jconnors@highstream.net

interpersonal theories. While interpersonal analysis enlightens us about interpersonal exchanges in the past and present, systems analyses add a focus on the whole group with its multileveled process and address how groups evolve over time. In our therapeutic roles with groups, it is important to understand group systems thinking because a systems perspective adds qualities such as boundary conditions; communication inflow, outflow, and between-flow; and group change management to our consideration. Understanding group systems qualities such as these adds more depth and power to our work with groups.

While the majority of group specialists are knowledgeable about interpersonal and systemic psychotherapy, many counselors and therapists who work with groups are not, continuing to conduct individual therapy in group settings. Greater awareness of group systems theory models would give those practitioners a way to understand and work with groups that allows them to move beyond theory and practice based solely upon individual models.

This paper presents a summary of systems theory and group systems theory models by past and present authors. The basic concepts of group systems theory will be explained and then applied to established group concepts.

BACKGROUND

General System Theory

General System Theory (GST) was first elaborated by a biologist, Ludwig von Bertalanffy, in the 1940s (von Bertalanffy 1968). von Bertalanffy called his theory "a general science of wholeness" (p. 37), and his basic point was that there is a similarity of structure across biological organisms that extends from the micro level to the macro level, including cells, human beings, human social groups and organizations, and whole societies (von Bertalanffy, 1951; 1968). His interdisciplinary theory also included views of how systemic structures and boundaries function, as well as the need to consider the whole as greater than the sum of its parts (Holism). von Bertalanffy proposed a number of ideas about how systems work (including their dynamic, ever-changing nature), their evolution to greater complexity through a process known as self-organization, and their self-stabilizing energy dynamics, similar to that which later became known as homeostasis.

Field Theory

Kurt Lewin's field theory of social functioning was developed at the same time von Bertalanffy was working on systems theory and

appears to have had more influence on social and group psychology literature (Hall & Lindsay, 1978; MacKenzie, 1994). Lewin's field theory emphasizes that an individual or group studied in isolation loses the importance of its context and emphasized the idea of understanding an individual's 'life space' (Hall & Lindsay, 1978). Lewin's theory established a number of ideas that are parallel to systems thinking (such as the holistic nature of group functioning, boundaries, the interdependence of elements and the whole) and the hierarchy of groups (Hall & Lindsay, 1978).

Systems Theory in the 21st Century

von Bertalanffy's General System Theory (1951; 1968) created a stir in the sciences, leading to what has become known as "Systems Theory," an interdisciplinary approach that has generated applications in a growing number of fields, including philosophy, mathematics, engineering, ecological sciences, management, and family therapy (Heylighen & Joslyn, 2000). There are a number of systems theory associations, including the International Society for the Systems Sciences (<http://www.iss.org>), the International Institute for Advanced Studies in Systems Research & Cybernetics (<http://www.iias.edu>) and the System Dynamics Society (<http://www.albany.edu/cpr/sds/index.html>). Among the many systemic journals are the *International Journal of General Systems* (<http://www.tandf.co.uk/journals/titles/03081079.asp>), the *International Journal of Systems Science* (<http://www.tandf.co.uk/journals/titles/00207721.aspa>), and the *Journal of Systemic Therapies* (<http://www.guilford.com/periodicals/jnst.htm>).

Systems theory is now considered to be part of a third wave of scientific theories that enlarge our view beyond linear, cause-and-effect thinking (Banathy, 2004; McClure, 1998). Similar or parallel theories that have also evolved since Systems Theory include Cybernetics (Heylighen & Joslyn, 2000), and Chaos Theory (McClure, 1998). There have also been systems-offspring theories such as Autopoiesis (Mingers, 1995), Living Systems Theory, Systems Design, Critical Systems Thinking (Banathy, 2004), and a number of theories that fit under the category of Family Systems Theory.

Family Systems Theory

Gregory Bateson used many general system theory concepts in developing his early theory of family systems (Cox & Paley, 1997). Bateson saw the family group as greater than the sum of its individual members; he posited that it was the family system that needed to change, not

the individual deemed “sick” who is brought in for therapy. Family systems theory has since been developed by a number of theorists over the last 50 years, including Salvador Minuchin, Jay Haley, and many others, and it has dominated the practice of family treatment throughout much of the developed world (Cox & Paley, 1997).

Patterns that are often explored in family systems therapy include alliances, rituals, enmeshment, disengagement, the creation of the identified patient or scapegoat, and the leadership patterns of parents or parentified children. Child development specialists employ additional concepts from systems theory that are commonly examined and worked on in family treatment, including positive attention, communication skills, and developmentally appropriate power dynamics (Nelsen, Lott, & Glenn, 1999). Researchers Kantor and Lehr (1975) developed a highly systemic method for analyzing family use of time, space, energy, affect, power, and meaning that is seldom cited but holds much value for systems thinkers.

Family systems theories were promoted by strong personalities from their 1950s beginning, and their early proponents audaciously rejected individual theories of personality for family treatment. Due in part to these pioneers’ persistence, family systems thinking became the controversy of the therapy world; it was read and talked about and gradually became accepted by many academics and practitioners. This widespread knowledge and acceptance in the therapeutic community led to the formation of family therapy professional organizations and licensure processes that require systemic knowledge and training.

In contrast, promoters of group systems thinking have been generally less dogmatic and more moderate, which may account for the lack of awareness of it among the public and, unfortunately, many psychotherapists. Hopefully, the widespread understanding of families as systems can become the groundwork for understanding groups as systems.

Applications of Systems Theory to Groups

Group Communications. In 1978, Tubbs published *A Systems Approach to Small Group Interactions* for use as a textbook in communications classes in which he outlined a systemic view of communication processes, internal influences, and conflict resolution in groups and organizations. Tubbs notes that his book was the only one to address general system theory in the communications field, although he reports systems have been more influential in organizational psychology. It appears that Tubbs’ approach to group communications has a steady place in that field since his book was re-released in 2003 in its eighth edition.

Group Therapy. In 1981, after 10 years of work, the American Group Psychotherapy Association's General System Theory Committee produced the book *Living Groups: Group Psychotherapy and General System Theory*, which was the first major application of general system theory to therapy groups (Durkin, J. E., 1981a; 1981c; Durkin, H. E., 1981). The GST committee's theory of "living groups" is consistent with its roots in von Bertalanffy's system theory. Their book observed that groups are autonomous because their structure creates the capacity to be self-defining, self-organizing, and self-regulating by exchanging energy and information with the environment and by making choices. The GST committee wrote about group systems roles, boundarying, energy and dynamics, and gave examples of therapeutic applications of general system theory to groups.

The GST committee included a glossary of terms to describe the basic concepts of GST used by the various authors in the book (Durkin, J. E., 1981b). This undoubtedly was due at least in part to anticipating that few in the field of group work would have knowledge of these very technical terms and knowing that adaptation of GST to human behavior requires its own definitions.

In 1982, the Association for Specialists in Group Work created a Commission on Family Counseling that worked to promote family and systems theory awareness in the group counseling field (Hines, 1988a). This committee's work culminated in the 1988 special issue of the *Journal for Specialists in Group Work*, called "The Interface of Group and Family Therapy: Implications," which was guest edited by Max Hines. Articles in that issue explored the process similarities and differences between group and family therapy and proposed a need for continuing dialogue between the two perspectives (Hines, 1988b). One of the articles proposed some family system based group techniques (Trotzer, 1988) for group therapists to explore.

In the mid-1980s, Caple took general system theory and elaborated on the concept of self-organization as it applies to counseling practices (Caple, 1985; 1987a; 1987b). Caple discussed the need to make fundamental structural changes and to evolve to higher levels of complexity over time in order to avoid stagnation. He applies this need to change to both individual and group counseling, as well as to student affairs.

In 1992, Matthews examined general system theory and described his vision of systems thinking to group work, including a method for applying systems thinking via Tuckman's group developmental stages. He viewed systemic group leadership as needing to simultaneously attend to three levels of process: individual, interpersonal, and whole group, while also focusing on boundary dynamics and needs.

More recently, in 1997, Agazarian wrote an intriguing application of general system theory to therapy groups called Systems Centered

Therapy for Groups. Agazarian's "system-centered" model applies GST to therapy groups, with techniques that focus on subgroups, which she says are the basic unit of the group. She credits the concept of subsystems as being "relatively new to systems thinking and not central for most systems practitioners" (Agazarian & Janoff, 1993, p. 33). Agazarian's model of group systems therapy employs an innovative method called "functional subgrouping," the forcing of subgroups around issues that arise in the course of group, making members express their reactions explicitly so they can be processed. She also brings in an element of analytic therapy by examining defense mechanisms involved in subgrouping behaviors (Agazarian, 1997).

Also in 1997, Donigian and Malnati published a systemic book on groups called *Systemic Group Therapy* (1997). Their systemic group therapy model addresses group processes, communication systems, stages and interventions in terms of the triad of member, group as a whole and leader issues. Their brief book is rich in systemic thinking, bringing a systems analysis to group history, anxiety, conflict, and blocks.

McClure's 1998 book *Putting a New Spin on Groups: The Science of Chaos* is a fascinating description of the manner in which physical processes are reflected in group and social processes. His book relates systems thinking to chaos theory and presents insights about the systemic and chaotic nature of group process. McClure describes a seven-stage theory of group development that is based on evolutionary process and forms an arc with descending forming stages that turn on the point of the conflict stage and then ascends as members join and work. While he notes that all systemic leadership interventions come down to either containing or perturbing the group, he describes a wide variety of systemic interventions, such as boundary management, pattern recognition, process commentary, validation, and saying "enough."

GROUP SYSTEMS THEORY

As family systems theory is the greater label applied to numerous applications of systemic thinking to families, group systems theory can be seen as the umbrella term for several models, past, present and future, which apply systems concepts to group work. Scholarly works with diverse views of groups as systems (Agazarian, 1997; Caple, 1987a; 1987b; Donigian & Malnati, 1997; Durkin, J. E., 1981c; Matthews, 1992) continue to expand in influence and attention. It appears that models of group systems therapy have become a distinct category of their own, with the potential to become an influential movement in the field of group work.

Group systems models use systems concepts to clarify and enlighten group processes and to identify interventions to move group dynamics in more healthy directions. Systems language enhances our ability to describe the states and processes seen in group work. The following is a list and description of the most salient group systems concepts.

Holism

Systems theory emphasizes the holistic nature of organisms and their functioning: that no individual operates in isolation, that members are dynamically interdependent, and that the whole is greater than the sum of its parts (von Bertalanffy, 1951; 1968). In group systems thinking, a whole group view is more important than the deepest understanding of individual members. Group systems models would say that, at any given moment, all groups are unique phenomena depending on their membership, social and historical context, group history, and other group properties both defined and undefined. A group can never be replicated, nor can its environment.

Holism is a concept that gained apparent acceptance among humanistic therapists in the past five decades, but many practicing group therapists remain unaware of its power in the group room. Most therapists are still embedded in Western culture's idealization of the individual and do not sufficiently focus on the needs, dynamics, or development of the whole group, organization, community, or society in psychosocial analyses or psychotherapeutic interventions.

Group systems theory holds that the first consideration in examining any group or organization is the good of the whole group, while always bearing in mind the good of its members and the environment; the larger system or systems that sustain it. In short, group systems practitioners focus on "big picture" thinking.

Group systems practitioners routinely energize group members to think of the whole group atmosphere and process through asking questions such as, "How well is the group working in the present interaction?" or "How does the group feel right now?" Once activated to think in terms of the whole group dynamic, group members can eventually learn to question, probe, and respond to holistic conditions and to play a more active role in what the group does and becomes. Holism has now gained significant consideration in the group therapy literature as a research construct (Dies, 1994; Fuhriman & Burlingame, 1994).

Interdependence

Systems thinking holds that system elements are interdependent and that systems at all levels are interdependent on each other.

A solid body of research establishes the critical connection between the personality and functioning of individuals and their past and present relationships (Cox & Paley, 1997). The importance of interdependence is also born out by 50 years of group research, which have established the effectiveness of interpersonal group therapy for helping individual members with mental health issues (Fuhriman & Burlingame, 1994; Stockton, 2003). Also, decades of social and psychological research establish the importance of family, group, and community membership to the well being of individual members (Vander Zanden, 2003).

Interdependence in group systems theory is the assumption that all members of a group are interdependent with each other and that all groups are interdependent within and between system levels (from the individual members to the greater world of concern). Each member of a group plays an essential part in group dynamics and health, and what happens with one member affects them all. There must be a balance of energy and a relative equality between members of a group for optimal functioning. Group experts are keenly aware of the importance of every member and how silent or nonparticipating members often affect the group as a whole. Dominating members or unequal power dynamics must be addressed or groups will tend to fall into destructive interpersonal patterns and create negative outcomes.

Complimentarity. Complimentarity means that the differences in perspectives and goals that members have within a group will be complementary and that all views provide important information about the system and should be considered. These diverse perspectives will be neither completely compatible nor completely different, and there will always be some common ground and some conflict (Durkin, H. E., 1981). Joining perspectives together will reveal more truths than any one perspective or any group perspective that does not include the views of relevant members or systems.

Structure

Structure is defined in general system theory as the arrangement of elements within an entity that directs its functioning and boundarying from the environment. Systems theory maintains that there is an "isomorphy" or similarity of structure across systems, from the cell to the greater social organism of the world. This common structure includes a boundary and a power structure that control or guide administrative decisions about boundary conditions and the input and output of energy, nutrients, and waste (von Bertalanffy, 1951; 1968).

Systemic structure is conceptualized as every system being a member of another system, and every member of a system as a system in itself. Systems characteristics apply at every level, from the intracellular level to the individual, to groups, communities, nations and ultimately to the universe.

Group inquiry has long studied various aspects of group structure, and group system theory defines group structure as it has become understood through those decades of group research and practice. Group structure includes leader directiveness, pretreatment screening and preparation, group rules and guidelines, and structured exercises (Kaul & Bednar, 1994; McClure, 1998; Stockton, 2003). Structural elements within groups include norms, goals, and implicit or explicit decisions about what may be talked about and what may be done or not done.

Boundaries. Boundaries are the limits that define an entity or group, and they are dynamically opened or closed to allow, or not allow, input from and export to the environment. Systems theory describes the purpose of boundaries as maintaining integrity of the group (Caple, 1985) and maintains that separation helps focus group energy to ensure the survival of the group entity. GST maintains that boundaries of living systems must be permeable and flexible to allow in new information, which naturally leads to changes in the structure and dynamics.

Family systems theory describes boundaries also as defining, focusing, and limiting members' access and relationship to the environment. This ideally includes limits that must be set within families for safety and well-being, such as curfews and controls for children's safety, and money-spending limits to control for resource attainment and survival.

In group systems theory, group boundaries include membership criteria, concepts, and ideals that define the group or draw members together, or whatever boundaries contain the group. Group facilitators must be concerned with member safety and well-being, like family practitioners, so they must establish limits and structure for protection against harm.

Boundaries of a group may be very loose, as in the membership criteria for open self-help groups, or they may be strict and inflexible, like the membership screening for some advanced psychoanalytic training groups. There has been much discussion of the merits of open versus closed groups in the group literature, but even the most liberal group boundaries are not totally open. For example, members of open 12-step groups must not be self- or other-abusive when onsite and must have some acceptance of 12-step guidelines. Also, closed groups

still inevitably suffer attrition due to mobility and health changes, so they must have some mechanism for admitting new members or their longevity will be limited.

Control and Power Structure. Systems theory defines control as the process for making the many boundary decisions that influence the functioning and survival of an entity such as when to be open, when to block, and when to expand or contract. Power structure is seen as the arrangement of elements that exert that control.

Family systems theory assumes there is a hierarchical power structure in which parents must be the locus of major decisions for the family group, though consideration is made for how extended family members can play powerful roles. Family and parenting research has found that strict authoritarian power structures seldom work well to raise healthy, functioning children, and that a more democratic style of power sharing, giving votes, and earned freedom works better with children (Baumrind, 1994; Vander Zanden, 2003). Also, family researchers have noted that parents must balance their power with concern for empowering children through giving them the chance to try out their own abilities and make their own mistakes in a developmentally appropriate way (Cox & Paley, 1997).

In group systems theory, control and the power structure of a group can be observed through discerning how, and by whom, decisions are made and how group dynamics are directed or influenced. Group power structures can include linear power hierarchies, unclear or dishonest power figures, an organization of group roles, or some combination of these. Research on group structure finds that some structural control is needed, especially in the early stages of a group, but overall it appears that less controlling leaders help facilitate more positive outcomes (Dies, 1994; Stockton, 2003).

Group Interactions

Systems theory maintains that systems have dynamic interactions between their elements, that they must interact with their environment in an open energy exchange, and that communication is the process for transferring that energy (von Bertalanffy, 1968). Living organisms have open boundaries through which there is a continuous flow of energy into the system and out to the environment, and this energy flow creates fluctuations that must be dealt with (von Bertalanffy; Caple, 1985). Every moment systems monitor internal and external environments to make decisions about opening or closing to outside influences (Mathews, 1992). This energy flow is a circular process that feeds back and “re-creates the system” (Caple, p. 175).

Patterned Interactions. Stable systems engage in a great deal of repetition of patterns that provide safety and regularity. Stable systems tend to stay relatively more closed in order to be able to avoid too much challenging information that would destabilize their balance. Stability cannot be maintained forever, however, because change is ongoing within group members and in the environment that sustains the group, and either or both will eventually change enough to demand that boundary choices be readjusted.

Systems that are more creative and less pattern-oriented tend to receive more challenges to their stability and are more vulnerable. In the long run though, creative systems that survive benefit from the adaptability that they develop to the complex demands of the environment around them, which helps them become stronger against future disruptions.

Positive and Negative Feedback. The system receives input from the environment that is both positive and negative in character. Negative feedback is seen as energy or information that supports the current system balance, or homeostasis, while positive feedback is that which stresses or challenges the system, causing it to adapt and possibly develop greater complexity, or change to a higher order (Caple, 1985).

Change Stimulation. Many systems practitioners have trouble with the language of positive and negative feedback and focus only on first- and second-order change, and not on the characteristics of the feedback and dynamics that induce change. This may be because in systems language positive and negative are somewhat the opposite of what is meant in general usage, which can be seen in the group literature. Positive feedback means feedback that provokes change in the receiver in GST, but it means constructive and supportive language toward another in most discussions of feedback, such as in the group field (Stockton, 2003). Negative feedback means change-resistant feedback in GST terms, while it means destructive or hurtful feedback in general contexts.

The meanings of “positive” and “negative” are value-laden and depend on their contexts. Systems theory is more value-neutral and focused on adaptation for survival, while general and therapeutic discussions clearly value the connotations of nurturing and support. It appears that new language is needed to bring understanding to these concepts so that more may take advantage of the perspective that they bring to understanding systems dynamics. Systems thinkers can then replace or augment positive and negative feedback labels with “*change-provoking*” and “*change-resisting feedback*.”

Change-provoking feedback can be used to describe feedback that intentionally or unintentionally challenges or pushes the recipient to

move toward change. The label "change-provoking feedback," would be value-neutral and would not imply that the sender had bad intentions or positive intentions. "Change-provoking feedback" would not have to be verbal and would include behaviors and gestures that communicate the need to change or that show that the current situation does not work in some ways.

"Change-resisting feedback" can describe any verbal or nonverbal feedback that communicates that there is no need to change or that change should be avoided. The message to avoid or resist change could be intentional or unintentional on the part of the sender, and it could come from supportive ("Don't change because you are perfect the way you are.") or destructive sender motives ("Don't change because I need you to keep supporting my drug use."). Change-resisting feedback could also include behaviors and nonverbal messages that make the receiver more likely to avoid change; e.g., a third party distracting attention from the issue.

Groups can be hotbeds of feedback about change, and change-provoking feedback seldom occurs without bringing some controversy or conflict. Bringing group awareness to examine attitudes about change and change messages could do much to raise the level of discussion in these groups. Neither kind of feedback need be devalued or universally accepted, since both have a valuable role in group dynamics. Supportive feedback is also important in group discussions to provide feelings of safety, but what is the effect of that support on the individual's need to change? Therapy groups must understand and demystify interpersonal responses to promote growth, and they must have healthy feedback from within and without in order to function well.

Group Growth Cycles and Stages

According to systems thinking, systems are more dynamic and unstable early in development and gradually become more stable as they develop patterns for efficiency. Systems are believed to be unstable until they progress through a kind of adolescence in which power structures and boundaries are tested and accepted, along with internal and external dynamics and connections. Over time, patterns tend to dominate functioning, and these patterns often become ruts which lack creative inquiry and become more rigid over time (von Bertalanffy, 1968). Systems are seen as having a natural life span and are believed to decline, collapse, or dissipate when the environment or members no longer need them.

Group scholars have long believed that groups progress through a series of stages of development and that practitioners need to adapt their

interventions to the stage dynamics of the moment (Gladding, 1995; Stockton, 2003; Tuckman, 1965; Tuckman & Jensen, 1977). Stage models of groups are seen as either sequential (e.g., progressive) or cyclical with repeating themes (Donigian & Malnati, 1997; Toseland & Rivas, 2001).

Tuckman's five-stage sequential theory of group development (Tuckman, 1965; Tuckman & Jensen, 1977) appears to be the most accepted sequential theory and has the strongest base in research, resulting from a review of 20 years of small group research (McClure, 1998). Although much of that research is now 50 years old, no subsequent research has come close to challenging the relevance of Tuckman's stages. Tuckman's stages are 1) forming (beginning); 2) storming (conflict); 3) norming (establishing norms); 4) performing (work); and 5) adjourning (termination). Other sequential or progressive stage models in the group literature have as few as three stages (Toseland & Rivas, 2001) or as many as seven stages (McClure).

The cyclical theories of group development maintain that there are themes that are raised and addressed repeatedly within groups and that each repetition leads to a new level of development (Donigian & Malnati, 1997; Toseland & Rivas, 2001). Examples of cyclical issues include belongingness, defensiveness, and task investment (Toseland & Rivas, p. 89). McClure's stage theory is both cyclical and progressive, and it posits that there are the same set of stages within each stage, substage and interaction (1998).

All the major models of group development, from Tuckman's to the cyclical theories, are consistent with systemic notions of development. All the sequential theories include a vulnerable and tentative beginning, a conflict stage, the establishment of norms (structure and boundaries), a working stage, and an ending stage. Systems theory views the establishment of norms as occurring through the process of testing and conflict, but at least one group scholar has combined the conflict and norming stages into the "transition stage" (Gladding, 1995, p. 103). Fitting group stages with the systemic model may help group practitioners to have a deeper understanding of the processes at work as groups progress through their stages.

Perturbation. Perturbation refers to the increase in energy fluctuations that occurs when a great deal of new information is acquired, or when the information is challenging or disturbing to the stability of the entity. Often this friction is the result of the struggle between autonomy and dependency (Matthews, 1992). This surge of energy is stressful and sometimes emotionally powerful, but it serves to push the organism into chaos and toward structural change and growth, unless system dynamics choose to dampen such challenges and are able to preserve the current structure.

Chaos. According to Caple, environments naturally contain dissipative structures that constantly “break up and disorder the system” (1985, p. 175), leading to chaos, a state where logical, linear order breaks down. Chaos places tremendous pressure on systems to make decisions about how to control their boundaries, and groups are often highly uncomfortable at this stage of development. It is at the point where a system approaches chaos but does not become fully chaotic that the most change is possible.

When fearful of chaos and change, groups can achieve a state of rigidity and insularity to the extent that, in time, they dissolve from their own weight. Group facilitators can help groups to see their own closedness and reconsider their opposition to change. Challenges to that rigidity evolve out of the natural interactions of participants, so group leaders can help members hear those challenges as they arise. Leaders should be wary about attempting to force disequilibrium artificially, because they can risk alienation and an overwhelming level of chaos. Groups that allow order to emerge naturally after chaos, with a minimum of leader control, produce stronger individuals and a stronger group structure guided by the process of self-organization.

One of the most rewarding insights from working with groups is seeing how much chaos a group can create and still remain intact, creating “order out of chaos” and making positive change in the process. Without chaos, there would be little progress.

Bifurcation Point. When energy fluctuations and chaos become overwhelming to the organism and threaten system balance and structure, they reach a point of change called a bifurcation point (Caple, 1985). At that point, the boundary structure starts to loosen and a surge of energy occurs. Systems make decisions about their boundaries at that point, whether to retract them, expand them, or totally collapse under the pressure. When systems expand their boundaries to cope with more complex demands, through changing their structure to a higher order, that is evolution. Unfortunately, change, innovation, and growth require risk, sometimes great risk.

Self-Organizing. General system theory holds that nature is self-organizing, that systems naturally organize themselves to pursue goals in order to survive in their environment (von Bertalanffy, 1951). According to von Bertalanffy, open systems organize in the active, natural progression towards “higher order, heterogeneity, and organization” (1968, p. 41).

The greater environments upon which organisms depend also are continually evolving and changing their demands, so there is a constant need for development and change to deal with that increasingly

complex feedback. There is an inevitable struggle between independence and dependence, connecting and boundarying, in the relationship between systems and their elements that correlates with the struggle between group needs and individual needs (Matthews, 1992). Each influences and modifies the other constantly. Ideally there is enough balance between stability and change to maintain the integrity of the system and keep it healthily connecting to the environment.

Four properties of system organization have been proposed by von Bertalanffy—progressive mechanization, differentiation, equifinality, and negative entropy (1968). Progressive mechanization means that as they develop, systems establish structural patterns to channel their dynamics and achieve greater stability. Differentiation means that as entities evolve, they become more specialized, heterogeneous, and complex. Equifinality means that organisms can take many paths towards their goals of survival, autonomy, and growth; they will not be blocked. Negative entropy means that systems borrow energy (e.g., eat, take in information) to avoid becoming degraded over time (entropy) (von Bertalanffy; Durkin, J. E., 1981b).

Self-Stabilizing. Systems are affected by the other systems that exist in their internal and external environments, so as those other systems change, their changes exert pressure on the system to change also. The self-stabilizing nature of systems means that they try to maintain equilibrium (homeostasis), by preventing change and making information that systems receive fit within their present structure (von Bertalanffy, 1968), as in first-order change.

Caring, Warmth, and Positive Attention

Family and parenting practitioners added another interpersonal dynamic to family functioning that did not come from general system theory—that of the degree of caring, support, and warmth present in the family. Other labels for this dynamic include love, acceptance, engagement, emotional closeness, and nurturance. Emotional nurturance is especially necessary for helping vulnerable organisms like children deal with the stresses and strains of growing. Absence of caring and support in a family, whether with hostility or without it, has been linked to several negative outcomes for children, especially aggression (Baumrind, 1994; Hemphill & Sanson, 2001; Maccoby, 2000; Vander Zanden, 2003).

Group practitioners have long been concerned with facilitating group cohesion, a supportive and a caring group climate, because cohesion consistently emerges in group research as a condition necessary for positive group outcome (Crouch, Bloch, & Wanlass, 1994; Dies, 1994; Fuhriman & Burlingame, 1994; Lieberman, Yalom, &

Miles, 1973; Yalom, 1995). Supportive feedback is seen as more necessary in early stages of groups and is optimally paired with challenging feedback in the middle stages (Stockton, 2003). Warmth of the leader has been found to be an important predictor of cohesion in groups (Stockton).

A related concept is the dynamic of positive attention. Attention is naturally reinforcing to human beings and, in families, misapplied positive or negative attention is often the cause of child misbehaviors. Such families are taught by behavior therapists to apply positive attention to desired, prosocial behaviors and to withdraw attention from children's undesired behaviors. Group facilitators also have to learn how to use their attention to reinforce member progress (Dies, 1994) and to direct group discussions as they find that the issues to which leaders respond are often the focus of group time.

The systems perspective helps us to understand how change and growth are naturally interconnected. The stresses, crises, conflicts, pain, and other perturbations that are part of the dynamic between human beings are part of the developmental process that helps people transition to higher levels of functioning.

CONCLUSION

The Durkin group, Donigian and Malnati, Agazarian, McClure, and others have applied systems theory to groups in significant works that together comprise a category of group systems theory. As the group practice world is growing more aware of systems thinking, especially Agazarian's model of it, it is important for group workers to attend to this evolution of the systems perspectives in the field.

Our greatest concern is the lack of current research testing systems theory with ongoing groups. It is hoped that through more research and examination, group systems theory can have a significant impact upon the conceptualization and practice of group work and group therapy (Schermer, 2000).

REFERENCES

- Agazarian, Y. (1997). *Systems centered therapy for groups*. NY: The Guilford Press.
- Agazarian, Y. & Janoff, S. (1993). Systems theory and small groups. In I. Kaplan & B. Sadock (Eds.), *Comprehensive textbook of group psychotherapy* (3rd ed.). Baltimore: Williams & Wilkins.
- Banathy, B. (n.d.). The evolution of systems inquiry. Retrieved Feb. 15, 2004, from the International Society for the Systems Sciences Web site: <http://www.iss.org/primer/data/003evsys.htm>.

- Baumrind, D. (1994). The social context of child maltreatment. *Family Relations*, 43, 360–369.
- von Bertalanffy, L. (1951). Theoretical models in biology and psychology, *Journal of Personality*, 20, 24–38; Electronic version: <http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=0022-3506>.
- von Bertalanffy, L. (1968). *General system theory: Foundations, development, applications*. New York: George Braziller.
- Caple, R. B. (1985). Counseling and the self-organization paradigm, *Journal of Counseling and Development*, 46, 173–178.
- Caple, R. B. (1987a). The change process in developmental theory: A self-organization paradigm, Part 1, *Journal of College Student Personnel*, 28, 4–11.
- Caple, R. B. (1987b). The change process in developmental theory: A self-organization paradigm, Part 2, *Journal of College Student Personnel*, 28, 100–104.
- Cox, M. & Paley, B. (1997). Families as systems, *Annual Review of Psychology*, 48, 243–267; Electronic version.
- Crouch, E., Bloch, S., & Wanlass, J. (1994). Therapeutic factors: Interpersonal and intrapersonal mechanisms. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical and clinical synthesis*. New York: John Wiley & Sons.
- Dies, R. R. (1994). Therapist variables in group psychotherapy research. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical and clinical synthesis*. New York: John Wiley & Sons.
- Donigian, J. & Hulse-Killacky, D. (1999). *Critical incidents in group therapy* (2nd ed.). New York: Wadsworth.
- Donigian, J. & Malnati, R. (1997). *Systemic group therapy: A triadic model*. Pacific Grove, CA: Brooks/Cole.
- Durkin, H. E. (1981). The group therapies and general system theory as an integrative structure. In J. E. Durkin (Ed.), *Living groups: Group psychotherapy and general system theory*. NY: Brunner/Mazel.
- Durkin, J. E. (1981a). Foundations of autonomous living structure. In J. E. Durkin (Ed.), *Living groups: Group psychotherapy and general system theory*. NY: Brunner/Mazel.
- Durkin, J. E. (1981b). Glossary of living structure terms. In J. E. Durkin (Ed.), *Living groups: Group psychotherapy and general system theory*. NY: Brunner/Mazel.
- Durkin, J. E. (Ed.) (1981c). *Living groups: Group psychotherapy and general system theory*. NY: Brunner/Mazel.
- Durkin, J. E. (1989). Mothergroup as a whole formation and systemic boundarying events, *Group*, 13, 198–211.
- Forsyth, D. (1999). *Group dynamics* (3rd ed.). New York: Brooks/Cole-Wadsworth.
- Fuhriman, A. & Burlingame, G. M. (1994). Group psychotherapy: Research and practice. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical and clinical synthesis*. New York: John Wiley & Sons.
- Gladding, S. (1995). *Group work: A counseling specialty* (2nd ed.). Englewood Cliffs, NJ: Merrill.
- Hall, C. & Lindsay, G. (1978). *Theories of personality*. New York: John Wiley & Sons.
- Hemphill, S. & Sanson, A. (2001). Matching parenting to child temperament: Influences on early childhood behavioural problems, *Family Matters*, 59, 42–47.
- Heylighen, F. & Joslyn, C. (2000). What is systems theory? In F. Heylighen, C. Joslyn, and V. Turchin (Eds.): *Principia Cybernetica Web*. Retrieved Feb. 15, 2004, from <http://pespmc1.vub.ac.be/REFERPCP.html>.
- Hines, M. (1988a). Editorial: Introduction to the special issue, *Journal for Specialists in Group Work*, 13, 171–172.

- Hines, M. (1988b). Similarities and differences in group and family therapy, *Journal for Specialists in Group Work*, 13, 173–179.
- Kantor, D. & Lehr, W. (1975). *Inside the family: Toward a theory of family process*. San Francisco: Jossey-Bass.
- Kaul, T. J. & Bednar, R. L. (1994). Pretraining and structure: Parallel lines yet to meet. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical and clinical synthesis*. New York: John Wiley & Sons.
- Kline, W. (2003). *Interactive group counseling and therapy*. Columbus, OH: Merrill.
- Lieberman, M., Yalom, I., & Miles, M. (1973). *Encounter groups: First facts*. New York: Basic Books.
- McCoby, E. E. (2000). Parenting and its effect on children, *Annual Review of Psychology*, 51, 1–27; Electronic version.
- MacKenzie, K. R. (1994). Group development. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical and clinical synthesis*. New York: John Wiley & Sons.
- Matthews, C. (1992). An application of general system theory to group therapy, *Journal for Specialists in Group Work*, 17, 161–169.
- McClure, B. (1998). *Putting a new spin on groups: The science of chaos*. Mahwah, NJ: Lawrence Erlbaum.
- Mingers, J. (1995). *Self-producing systems: Implications and applications of autopoiesis*. New York: Plenum.
- Napier, R. & Gershenfeld, M. (2004). *Groups: Theory and experience*. Boston: Houghton Mifflin.
- Nelsen, J., Lott, L., & Glenn, H. S. (1999). *Positive discipline A-Z: From toddlers to teens, 1001 solutions to everyday parenting problems* (2nd ed.). Rocklin, CA: Prima.
- Schermer, V. L. (2000). On the future of group therapy theory, *Group*, 24, 13–21.
- Stockton, R. (2003). *Group process and leadership*. Paper presented at the Annual Convention of the American Psychological Association, 2003, Toronto, Canada.
- Toseland, R. & Rivas, R. (2001). *An introduction to group work practice* (4th ed.). Boston: Allyn & Bacon.
- Trotzer, J. P. (1988). Family theory as a group resource, *Journal for Specialists in Group Work*, 13, 180–185.
- Tubbs, S. L. (1978). *A systems approach to small group interaction*. New York: Random House.
- Tubbs, S. L. (2003). *A systems approach to small group interaction* (8th ed.). New York: McGraw-Hill.
- Tuckman, B. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63, 384–399.
- Tuckman, B. & Jensen, M. (1977). Stages of small group development revisited. *Group and Organizational Studies*, 2, 419–427.
- Vander Zanden, J. W. (2003). *Human development* (7th ed.). New York: McGraw-Hill.
- Yalom, I. (1995). *The theory and practice of group psychotherapy*. New York: Basic Books.

Copyright of Journal for Specialists in Group Work is the property of Brunner / Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.