

The Signal



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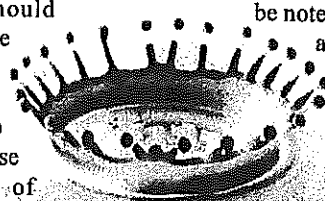
Chaos Science: Implications for the Care of Children in Hospitals

An influential movement occurring in the physical and biological sciences may have implications for health care systems in general and hospital-based family support services in particular. This movement, or paradigm shift, is a transformation in the basic set of values, beliefs, perceptions and practices defining what constitutes human reality. It is a shift from the linear to the dynamic, from the quantitative to the qualitative, from the mechanistic thinking of the Newtonian paradigm which has guided intellectual thought and scientific inquiry for the past three hundred years, to the dynamical thinking of chaos science which has emerged in the last 20 years.

by Karen Wayman

While Newtonian paradigm, paradigm shifts, and chaos science are concepts seemingly remote from clinical work with children and families, they became meaningful for a group of psychosocial professionals when their hospital reorganized in response to changes in the health care field. The resulting disorder in the hospital system provided an impetus to reevaluate the existing model of developmental and family support services. The purpose of this paper is to describe how chaos science guided the transformation of our developmental and family support services from a model consistent with the Newtonian paradigm to one consistent with chaos science. The tenets of the Newtonian paradigm and chaos science most meaningful to our work will be presented followed by a description of the process undertaken in transforming our philosophical framework. Finally, a description of the program that emerged from our new philosophy will be described.

It should be noted that neither the author of this paper nor members of the group lay claim to expertise in the complex of elements comprising mechanistic or chaos science. Nonetheless, the process of attempting to understand and apply these theoretical ideas to our work significantly changed the way we conceptualized our individual roles as well as our collective mission within the hospital.



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The Newtonian Paradigm and the Biomedical Field

The paradigm that has dominated western intellectual and scientific inquiry for the past three centuries is based on the laws of mechanics formulated by Isaac Newton in the 17th century (Boring, 1957). The Newtonian mechanistic paradigm is organized by a set of well defined beliefs: simple systems behave in simple ways; complex behavior implies complex causes; and, different systems behave differently (Hawking, 1988). The whole is then understood by understanding the components as logically and sequentially arranged with time and space flowing uniformly and continuously with all outside movement controlled by outside forces. This paradigm describes a reality in which causality, prediction, certainty and control all appear possible. It is characterized by quantification as the epistemological way to make valid knowledge claims with measuring and ranking as knowing. "Truth" is revealed in an additive fashion through the gathering of more and more data to "prove" the existence or non-existence of a particular hypothesis (Heshusius, 1989) (Capra, 1982).

The Newtonian paradigm with its mechanistic assumptions has significantly shaped the biomedical field. One assumption is captured by the metaphor of the machine, initially set forth by Descartes in his *De Homine* (Descartes, 1978). Descartes viewed man as a machine composed of discrete pieces operating in a spatial-temporal field. However, the aspect of the mechanistic view of man that has most influenced the biomedical field is the belief in the opposition between mind and body. This notion rests on the Cartesian dualism that separates mind from body, spirit from matter, and real from unreal (Scheper-Hughes & Lock, 1970). This artificial separation of mind and body freed science to pursue medicine in terms of the mechanistic conception of the

body with disease seen as the malfunctioning of biological mechanisms and with intervention best informed by cellular and molecular research. The influence of Cartesian theory on medical thought resulted in the biomedical model which constitutes the conceptual foundation of modern scientific medicine. Three centuries after Descartes, the science of medicine is still based on the notion of the body as a machine, of disease as the consequence of a breakdown of the machine, and on a belief that the doctor's task is repair of the machine (Engel, 1977).

Shifting Paradigms: From Mechanistic to Chaotic

In the past 20 years the dominance of the Newtonian paradigm has been questioned by scientists across disciplines (Gleick, 1987). They claim that science based on mechanistic thinking fails to adequately describe dynamic phenomena. Gleick, 1987, points out that under the Newtonian paradigm unexplained fluctuations or oscillations in experiments were ignored or discarded as "biased findings." But many scientists believed that these unexplained data might contain interesting information or shed light on their research questions. For these scientists, the emergence of chaos science offered an opportunity to reexamine previously ignored data and put forth new explanations and theories based on dynamical methodologies (Gleick, 1987).

However, the shift from mechanistic to dynamical thinking is more than a change in methodology to analyze scientific data, rather, it represents a shift in paradigms. Many researchers (Dickmeyer, 1989) Reichardt & Cook, 1982) (Smith, 1983)(Heshusius, 1989) adhere to paradigm-as-metaphor in which paradigm describes our values, beliefs, perceptions and practices that collectively constitute decisions we make about what counts as real. Lincoln

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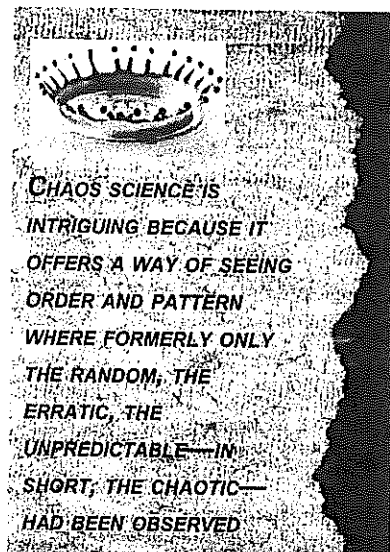
and Guba (1985) state that the operating paradigm is the ultimate benchmark against which everything else is tested, the distillation of what we think about the world but cannot prove. In short, the beliefs by which we ultimately think and act. The process of becoming self-conscious about these benchmarks occurs when the paradigm we unselfconsciously live by reaches its limitations. And, for many, the limits of the Newtonian paradigm have been reached, opening the way for a more dynamical perception of reality.

Emergence of Chaos Science

Chaos science is intriguing because it offers a way of seeing order and pattern where formerly only the random, the erratic, the unpredictable—in short, the chaotic—had been observed (Gleick, 1987). Chaos science describes a universe that is deterministic, obeying the fundamental physical laws, but with a predisposition for disorder, complexity and unpredictability (Coveney & Highfield, 1995). Scientists from many disciplines offer general definitions of chaos science. Hao Bai-Lin in the geological sciences (Gleick, 1987) thinks of chaos as a kind of order without periodicity. Shoner and Kelso (Shoner & Kelso, 1988), in “neurophysiology, refer to “nonlinear dynamical systems. Thelen (Thelen & Smith, 1994), a developmental psychologist, refers to “dynamical systems,” while Guess and Sailor (Guess & Sailor, 1993), in special education, suggests that chaos may be best understood as a dynamic view of phenomena that represents the behavior of systems as a mid-point between Newtonian strict determinism and total randomness. Others believe that “chaos provides a mechanism that allows for free will within a world governed by deterministic laws,” (Crutchfield et al, 1986, p.57). Similarly, Ford believes that chaos represents dynamics freed at last from

the shackles of order and predictability (Gleick, 1987).

The primary point of application for chaos science occurs when the condition of a system changes over time, although the term chaos is a misnomer. Conventional wisdom would associate the term with com-



plete randomness in the state of a system, without possibility of prediction and control. Chaos science, however, is based on a more complex set of assumptions. The “noise” or unexplained variance in a system can be shown to have a certain degree of predictability, particularly when the parameters of an open system are expanded. On the other hand, chaos implies that total prediction for many phenomena can never be achieved, no matter how precise the measurement systems (Guess & Sailor, 1993).

Three tenets of chaos science reverse the reductionistic position of the Newtonian paradigm. First, properties of the parts can only be understood from the dynamics of the whole. Second, simple systems can give rise to complex behavior while, conversely, complex systems can give rise to simple behavior. And third, the primary qualities of an object or interaction or person depend upon a particular frame of reference of which

there are as many as there are observers in the universe (Gleick, 1987).

Chaos science, then, is a model of scientific investigation that focuses on the dynamics of whole systems as opposed to the Newtonian paradigm that investigates isolated components of a larger system. If traditional component analysis approach can be likened to a “freeze frame” or micro analysis of a changing, dynamic system then the approach used by chaos science is a “moving picture” or macro analysis of a changing dynamic system (Guess & Sailor, 1993).

Two other concepts growing from the biological sciences and theoretical mathematics are important in describing events in terms of chaos science: sensitive dependence on initial conditions and strange attractors. These concepts were applicable, by analogy, in our work and will be described below.

Sensitive Dependence on Initial Conditions

Sensitive dependence on initial conditions refers to the concept that there will be times when an open system will be highly variable and, thus, critically sensitive to perturbations or external influences. This concept was originally referred to as the “butterfly effect” to make an exaggerated point that the flapping of a butterfly’s wings at one point, China for example, might set into play a chain of events that could so affect global weather patterns that accurate prediction at some other point, such as California, was rendered impossible (Gleick, 1987).

In chaos science, systems that are constantly changing are extremely sensitive to their initial state—position, velocity, structure, function and so forth. As the system evolves in time, minute changes amplify rapidly through feedback. So systems that start off with only slightly differing conditions may rapidly diverge in character at a later stage since they are sensitively dependent on their initial

conditions (Holden, 1985).

To illustrate this concept Gleick (1987) uses the snowflake model. In this model, snowflakes are created through a delicate balance between stability and instability. The stability comes from the ice crystal's natural built-in preference for six directions of growth, whereas, the instability is embedded along the boundaries of each direction of growth. As the growing snowflake falls to earth the changes in the branching tips at any instant depend sensitively on the initial conditions of such things as temperature, humidity and impurities interacting with turbulent air so that any pair of snowflakes will fall to the ground along different paths exposed to different sets of perturbations. These conditions create infinite combinations and, consequently, infinite patterns of snowflakes.

In comparison, water freezing in an ice tray is a much more stable process because all the variables are controlled. In this model, solidification proceeds from the outside to the inside with the boundary remaining stable and smooth, its speed controlled by the ability of the walls of the tray to draw away the heat, with temperature kept constant and air turbulence eliminated. In contrast to the expected variations in snowflakes, the ice cube that cools your next drink has a predetermined shape and consistency.

Strange Attractors

Another characteristic of chaos theory is the strange attractor. Shoner and Kelso (Shoner & Kelso, 1988) note that nonequilibrium systems generally reflect dissipative dynamics, meaning that many independent trajectories with a system examined under varying initial conditions will eventually approach each other in space. Independent trajectories within a system will converge on a certain limit set, an attractor, which may be a point, a cycle or a combination creating different patterns of move-

ment. A simple attractor is illustrated by the movement of a pendulum in space. When given a push the pendulum will swing back and forth. But, eventually, gravity will act as an attractor and exert influence on the movement of the pendulum until it finally comes to rest at a fixed point.

Another type of attractor is the cyclical or periodic attractor, which does not, over time, settle down to a single fixed point, but rather, oscillates through a sequence of states. Thelen's (Thelen & Smith, 1994) discussion on state conditions in infants is an example of a cyclical attractor. A child in a deep sleep is responding to the stable attractor of sleep. Any attempt to awaken the infant will result in only slight perturbations. When the boundaries of the sleep state become unstable the attraction of the alert state increases its influence. The infant then cycles through an unstable drowsy state to the more stable quiet-alert state. The attraction of the alert state is stable for a period of time, a stability well known to any parent who has tried to put an alert infant to sleep. Eventually, even the alert state becomes unstable as the attraction of sleep begins to exert enough influence to encourage state disintegration. Then, once again, the infant begins to cycle towards the attractor of sleep.

Application of Chaos Science

Underlying the Newtonian paradigm is the conviction that certainty, control and prediction are possible. This is exemplified by the belief that experiments can be constructed that control for unexpected or unwanted variables. Yet, in contrast, our personal lives are not orderly but punctuated by unexpected events that drastically disrupt our daily routine or alter our future actions. Sometimes

these events are momentous such as the birth of a child or a death in the family, while, at



other times, they appear inconsequential such as the chance meeting of an old friend or a missed airplane flight. In a life of unforeseen events the orderliness and pure predictability of traditional science lacks utility as a theoretical framework. That is why chaos science has caught the popular imagination as it appears to link our everyday experiences to the laws of nature by revealing the subtle relationships between orderliness and randomness and between simplicity and complexity (Hall, 1991).

Chaos science is a dynamic, macroanalytic approach to understanding interactive components of complex systems. Chaos science does not claim to predict, control or to provide certainty, rather, chaos science provides a framework in which to describe the dynamical reality of complex systems as well as the simple events that comprise our everyday life. The dynamical thinking of chaos science signals a dramatic change from the systematic ordering of the universe under the mechanistic paradigm. It is a reality in which the elements that influence system change may be unexpected or have diverse origins. Chaos science necessitates a flexibility of thinking, an opportunity to remain open to many possibilities or explanations. Operating according to the tenets of this paradigm allows one to seek meaning or analyze a situation in terms of many elements or attributes. Furthermore, it is an opportunity to understand how one's own beliefs, perceptions and actions contribute to an event. Rather than controlling for variables or seeking a "pure truth" chaos science is an acknowledgment of a "messy truth" an assertion of what each element, person, and interaction, brings to an event.

Chaos crosses the boundaries that separate scientific and behavioral disciplines because it is a science that explores the global nature of systems and the universal behavior of complexity (Hall, 1991). Although highly mathematical in origin, chaos is a



science of the everyday world and now that scientists are looking at

phenomena in a new way, chaos is appearing as a form of analysis across disciplines.

The behavioral sciences are reexamining human development in terms of dynamical models. Behavioral scientists maintain that linear models of development provide information that is context bound and unidimensional. In contrast, dynamical models permit a better understanding of human differences through the study of predictable events interacting in time with random influences (Thelen & Smith, 1994). The field of engineering is rethinking catastrophes such as capsized ships and earthquake damaged buildings in terms of "transient phenomenon," an expression of nonlinear dynamical models (McRobie & Thompson, 1991). Economists and commodity brokers are attempting to understand the complexity of the financial market by using aspects of chaos science, such as feedback and self-regulation, in an effort to predict future economic trends (Savit, 1991).

There also are signs that chaos science is beginning to influence the health care system. In fact, some commentaries contend that there is a forthright rebellion against the philosophical and clinical orientations of the medical model (Salmon & Berliner, 1980) (Capra, 1988). While such a radical statement is difficult to support, it is true that a growing number of patients are engaged in the use of alternative or holistic therapies rooted in integrative theories of the mind and body. Concomitantly, an increasing number of hospitals are providing care combining scientific medicine with holistic therapies so that it is not uncommon to find therapeutic touch, hypnosis, acupuncture and massage offered along with more traditional pain management interventions (Eisenberg et al., 1993).

There are also changes in pediatric health care reflective of the dynamic nature of chaos science. For example, some pediatric hospitals have adopted family-centered care, a model of service delivery concerned with the developmental and psychological aspects of chronic illness. Family-centered care acknowledges the contribution of the family to the healing process, promotes family-professional collaboration, and is flexible and responsive to family needs (Brewer et al., 1989). In general, family-centered care addresses the dynamical nature of caring for a child with chronic illness.

How Chaos Science Led the Way

So how could anything as abstract as chaos science be meaningful to a group of psychosocial professionals working with chronically ill children in a tertiary care setting? To answer in terms of the new thinking, chaos theory provided a powerful enough "attractor" within an unstable system. It provided an organizing framework strong enough to counter the dominant Newtonian paradigm around which hospitals are organized. Furthermore, chaos science provided a framework within which to discern the relevant issues and a theoretical foundation upon which to build a cohesive model of services.

The group that gathered to redefine family support services included professionals from child development, child life, social work, physical therapy, speech, nutrition, nursing and biofeedback. We worked together in a small tertiary care hospital specializing in pediatric liver and kidney transplantation. Our meetings extended over a two year period during which the hospital underwent several transformations in the name of health care reform; a merger, a corporate reorganization and, finally, relocation of the transplant teams to a university medical center. These substantial and rapid changes created an atmosphere of

disorder but also provided an opportunity to evaluate the existing model and to transform family support services in light of chaos science.

Prior to this effort the participating professionals operated within a "professionally-centered" model of care based on mechanistic science (Gilkerson, 1990). In this model the professional is the expert; the most qualified agent to define problems, make diagnoses, prescribe interventions and carry out treatment. The family's role is minimal, with professionals typically entering the case separately, conducting assessments, establishing discipline-specific treatment goals, then sharing clinical information through chart notes. While not an inefficient or even ineffective method of patient care it belies the systems or dynamical approach inherent in the training programs of the psychosocial professional. More significantly, the professional-centered model demands a hierarchical approach to the provision of care that often misses opportunities to discover sources of healing and strength within the patient and the family. A major challenge for our group, then, was to develop a process for transforming developmental and family support services in our hospital from a model based on the mechanistic science to a model reflective of dynamical systems theory.

Three tasks were identified as necessary to transform developmental and family support services. First, to develop a consensus around a working philosophy that was grounded in chaos science. Second, to develop specific activities or programs for the pediatric transplant population reflective of the agreed upon theoretical framework. And, third, to facilitate an hospital-wide expansion of the patient care program.

Because of the complex nature of these tasks, we decided to meet weekly and



adopt a reflective process in which a specific theoretical concept was presented for discussion and then analyzed in terms of current practices. Schon, (Schon, 1983) identifies the reflective process as critical to the development of the professional who continues to evolve over time. Gilkerson (Gilkerson & Als, 1995) points out a basic tenet within the mental health disciplines is that work with relationships requires time to be set aside on a regular basis to explore the "imperfect processes" of professional practice and one's responses to the work

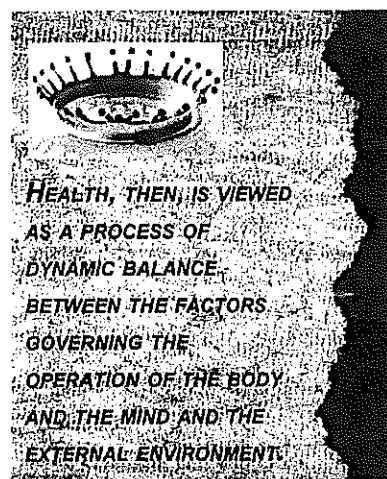
Development of a Philosophy Based on Chaos Science

A starting point in this transformation was an examination of family-centered care, a service model addressing the dynamical nature of providing services for chronically ill children and their families and emphasizing multidisciplinary coordination and family inclusive practices. A review of the literature (Johnson et al., 1992) (Brewer et al., 1989) (Koop, 1987) revealed considerable information on what constitutes family-centered care; personnel policies, care coordination and family involvement, but little information on the theoretical underpinnings of the model or the process of transforming people and institutions from a medical model to a family-centered model.

A next step in the development of our philosophy was to determine how the Newtonian paradigm affected current health care practices followed by an examination of chaos science and its applicability to family-centered care. Finally, we selected elements of each theory to form a working philosophy. This process included selected readings, analysis of current practice, case presentations, and parent meetings.

Our readings ranged from theoretical expositions of chaos science and the biomedical model to practical applications of family-

centered care and holistic healing in hospital settings. Over time each member of the team had an opportunity to select articles reflective of her personal philosophy thus permitting diverse philosophical perspectives to be presented. We then analyzed our family support services as well as the hospital system in light of the information in each reading. This process helped to sort out what was worth retaining and what deserved to be discarded. Through time, the team identified a mosaic of beliefs that



defined a dynamical model of developmental and family support services.

The philosophy that emerged from this process held that the primary purpose of developmental and family support services within a dynamical framework is to enable patients and their families to acknowledge and utilize phenomena that influence health and healing. Fundamental to this thinking is an affirmation of the interdependence of mind and body in health and illness and the contribution of the patient's interactions with family members and the hospital environment to the healing process. Health, then, is viewed as a process of dynamic balance between the factors governing the operation of the body and the mind and the external environment.

The testing ground for our emerging theoretical framework came through case presentation. Members of the team presented a situation or practice that was acceptable under the old "expert" model but considered unacceptable under the new family-centered model. In one case the role of the parent in care conferences was examined. Typically, care conferences are organized so that the medical and psychosocial staff meet to share information that is discipline-specific, discuss recommendations, then, agree on a care plan. The parent is then invited to join the conference and respond to the plan. In the case presented, the mother of a frequently hospitalized child was dissatisfied with this format and requested involvement at all levels of decision-making. In a linear or professional-centered model the parent is a recipient of decisions and information so that inclusion of the parent as a decision-maker is considered disruptive to the mechanistically-defined role of the professional as expert. Conversely, when operating according to chaos science, the family is considered an important member of their child's health care team with critical insights and resources that significantly contribute to the development of a care plan.

More than any other case presented, the issue of parent involvement at care conferences required us to acknowledge the blend of linear and dynamical practices that make up our professional lives. Members of the group varied in their response to this issue. Some were outraged that parents were not included while others believed it was inappropriate for parents to observe the indecisiveness of physicians critical to the well-being of the patient. The final solution was a compromise. The mother participated in care conferences concerned with decisions that would alter her child's care but she did not attend conferences in which medical information was exchanged between consulting physicians.

In another situation, a foster

mother, who is also a nurse, was allowed to assist with a procedure in the operating room. Some members of the team felt this action tested their definition of family-centered care and was an improper role for parents in the hospital. But their view was altered by further analysis in light of chaos science and the concept of sensitive dependence on initial conditions. The mother, who had previously been angry and depressed, felt empowered and useful because she was included in her son's care in a meaningful way. The mother's sense of usefulness was sensitively dependent on the initial condition of her identity as a nurse and interacted with the perturbation in the system with a positive change in outlook. The child appeared to sense this and responded by being more interactive with the staff and more compliant with invasive procedures.

Meetings with key parents provided another important "check" on our emerging philosophy. We met with parents active in our program to review issues raised during case presentations and to listen to their ideas regarding program changes. This represented another aspect of the shift from the professionally-centered model to a more dynamical model in that the family perspective was considered important to the success of our program.

Both case presentations and family meetings were critical to the emergence of the new model of family support services because it got under the surface rhetoric of "we are supportive of families" and required us to carefully reflect upon and articulate the strategies we used in support of children and families. Through this process we developed what Hannah Arndt calls a "stop and think" attitude as we moved through our day. Faced with situations we asked ourselves: "Is this action or decision consistent with the emerging philosophy of family-centered care?" "Am I recognizing the multiple perspectives in this situation?" And if

there was doubt, as there often was, then that doubt could be held until the next meeting and analyzed with other supportive team members.

Throughout this transformation, the principles of chaos science provided guidance for reflecting on our emerging philosophy. Where it was most important was in the realization that there was no specific set of practices that constituted family-centered care, rather, it was a decision-making process that took into account past experience of the professional, the family's experience with the medical community, cultural beliefs and practices, family goals and the child's medical status.

Family-Centered Care Program

The second goal was the development of a Family-Centered Care program reflective of our emerging philosophy. To do this the program needed to shift from being "service driven" to providing opportunities for families to reflect upon personal beliefs about illness, health and healing and to come to understand and utilize the phenomena most important to their own sense of well-being. The program that emerged included parent-to-parent support, support groups, family focus groups and developmental intervention.

The parent-to-parent program provided support to families entering the transplant program from veteran parents. This program allowed families to become aware of the ways in which their family would be affected by the transplant process as well as information regarding resources and support systems.

Another program component was a weekly support group for parents of children undergoing liver transplantation. This group was facilitated by a social worker and allowed participants to articulate their concerns, fears, and problems related to parenting a child with chronic illness. Moreover, they identified strategies and personal strengths to meet these challenges.

During these sessions parents also identified specific topics for the family focus group.

The family focus group conducted a series of meetings in which parents explored, in-depth, specific topics related to the hospital experience. The goal of these meetings was to develop a position paper that described the family perspective in regard to a critical issue followed by suggested changes in clinical practices. Thereafter, the position paper was presented to the relevant medical or psychosocial staff who discussed it from their perspective. Then, in consideration of the multiple perspectives, program changes would be implemented.

The issue of the parent's role during painful procedures illustrates this process. Parents questioned the nursing practice of requesting that parents leave the bedside during painful procedures. A position paper was generated in which parents identified their feelings of conflict with the medical staff over this issue and their sense of obligation to their child. This position paper was shared with the nursing staff and they expressed concerns regarding the time required to provide support to parents during invasive procedures. Furthermore they were concerned that the child equated the parent with the painful procedure. Taking these multiple perspectives into account it was decided that a single policy would not be appropriate, rather, parents and nursing staff should discuss what was most appropriate for a particular child and note the decision in the chart. Other family focus group topics included parenting a child in the hospital and becoming a parent advocate.

Another component of the family-centered care program was a weekly "Baby Hour" for the patients under the age of 3 and their families. The purpose of this program was to give children an opportunity to interact with family members in a non-medical way. During this time, no procedures

were allowed and medical staff were requested to defer discussion of the child's medical status.

Our program also changed in ways that were less visible. For example, we modified the tenet of chaos science that "there are as many perspectives of reality as there are people" into "there are as many perspectives on health and healing as there are patients." To this end we provided more opportunities for families to express and explore their own views of health, healing and western medicine. One simple way was to ask parents at intake about their previous experiences with the medical community, current feelings about this hospitalization and view of their relationship with the medical community based on their culture. While not seemingly innovative, it was not uncommon for parents to be surprised that we asked such questions and it was noteworthy that many families with chronically ill children had a dual view of health and healing, one that included acceptance of the biomedical model as well as belief in alternative therapies, such as chiropractic medicine, therapeutic touch or dietary changes. Another program change was the involvement of community groups in the hospital setting who were supportive of alternative paths to healing.

Foremost in the program that evolved was the emergence of a parent voice. These programs represented a shift from the expert model in which information flowed from the hospital staff to the family to a dynamical model in which parents shared their ideas and perspectives regarding parenting a chronically ill child. If we begin with the premise that health and healing is a process dependent upon diverse elements then the surest way to help families support their children is make them partners in the effort.

Development of a Hospital-Wide Model of Family-Centered Care

Since every aspect of the first goal and every program component developed in the second goal were in conflict with the prevailing philosophy and organization of the hospital any hope for long-term success was dependent on a third goal: the development of a hospital-wide model of family-centered care services. A systems change goal entails a considerable commitment in both time and key personnel. Nevertheless, some small progress was made in terms of activities and goal development. The activities included presentation at ground rounds and representation on a hospital sponsored philosophy committee. Goals included development of a parent advisory board and changes in the hospital mission statement to reflect family-centered care. However, in systems-change time, two years is too short for any real change to occur.

Conclusion

Up to now, the health debate in North America has centered on large-scale policy questions. But I wish to argue that questions about the small-scale clinical nature of our health care system must also become the focus of debate if real medical reform is to occur.

Just as scientists have become aware of the limitations of the Newtonian paradigm, so too, have health care practitioners and patients become aware of the limitations of the health care system. Modern medicine continues to make tremendous advances, but in the face of these advances comes a growing awareness that health and healing is not solely dependent upon medical technology. Rather, it is a dynamical process that balances high tech medical intervention with the various elements that constitute one's life. While this belief system appears consistent with the

"new" thinking of chaos science, it is, in fact, a return to one of the fundamental beliefs put forth by Hippocrates:

"Health depends on a state of equilibrium among the various factors that govern the operation of the body and the mind; the equilibrium in turn is reached only when man lives in harmony with his external environment."

—Hippocrates (460-377 BC)
The Heart of Healing
Institute for Noetic Science

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Editor's Note:

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Stephen's Corner

Stephen Bennett

SOUTH PASS

In this column I will explore some concepts of development. I say this straight off because it will take a few paragraphs to describe how I got there. This developmental concern came not from the top of a mountain but literally right next to one, and then led to reflections on trails and life paths. Last October, I followed up on one of my many minor obsessions. For a long time I have been preoccupied with a place called South Pass. This was the major thoroughway over the mountains in western Wyoming along the Oregon Trail, a traverse that avoided the impassible Windriver Range of mountains to the north and the arid prairie to the south.

Along the latter route you can speed in comfort along U.S. Highway 80, which once was route 30, but 150 years ago you would not have made it. The way west then meant following water, which brought also game and grass for the livestock. You followed the Platte River to what is now Casper Wyoming. One of my ancestors who had worked on the Erie Canal stayed here for awhile and supervised floating the wagons across. From there the wagons followed the Sweetwater River. There would have been weeks of level ground and plentiful game — even now antelope can be seen. The urgency for the settlers came from passing Independence Rock on time, so named because, if you reached it by the 4th of July you would make it over the Rockies before the bitter snows hit. An hour from there by car the terrain of these high plains roughens and

there is a steady incline leading to South Pass. The jagged snow-frozen peaks to the north are a snarl of vicious teeth and only faith in the trailblazers that had crossed before would allow belief that there is a way through.

South Pass is no narrow defile but a saddle 29 miles wide that rises so gently you barely realize you are climbing. On top, at 7500 feet on that immense prairie close to the sky, I felt I could see all that mattered of the world. Out of the car and walking along the trail there was a sense of aloneness and isolation cut through by a razor cold wind so that the treachery of October and its sudden snows was remembered even if not yet visible. In fact, just one week later two feet of snow were reported in the valley, and I shuddered at the thought of being caught up there.

My thoughts from the crest of the pass were that the navigation back in the mid-part of the last century would, in a concrete sense, be like managing any major life event—not much choice about getting through it—but from the perspective and exhilaration of the traverse, imagining you can see forever. The danger of such thoughts is seen from Francis Parkman's classic book *The Oregon Trail*.

Historians point out that Parkman was in exactly the right place and time to witness momentous historical events, but except for writing a colorful travelogue, he didn't have a clue as to what he was witnessing. The concern that plagues me is whether I am really ever in the right place to know what the hell is going on, and, if there, would I really catch on?

Nevertheless, all I can do is immerse myself in this trail metaphor, trudge along and hope I'll make it over the next pass.

I found myself from these heights thinking of life courses. Stirring this up was the main purpose of this visit west: to say farewell to a brother who was taking off for a two-year stay in Ulaanbaatar, Mongolia. I wondered if this journey would get him what he wanted, and where it would lead from there.

So, such thoughts rattling around my head led me to seek out Arnold Sameroff at the Society for Research in Child Development meeting in Indianapolis in the spring of 1995. I counted on him to tell me what was really going on. Why Sameroff? It is because his and Chandler's classic 1975 article on the transactional model of development had such a powerful effect on how the wanderings and ways of development are now considered. Nevertheless, let me immediately qualify this by saying that the effect depends on whether ideas of development are thought about at all. For the most part they are blithely ignored, although infant people are somewhat more likely to be bothered by such things. The impact of these ideas have been largely picked up by the research world, but within the larger clinical arena there has been only vague acceptance. I for one have used the Sameroff and Chandler article in teaching for many years to challenge the usual unidirectional, one-shot trauma view which is still what you hear at most clinical conferences. For all I know maybe this one-cylinder approach is good enough unless you are doing some fancy research. Still, one motive for my present consideration was to be clear about my own developmental view.

What I did was take a straight developmental approach in questioning Sameroff, one stage leading to another. He is a large, bluff man who conveys a bulk of the spirit, and with

his tonsured head and garrulous presence, he seemed a worldly friar as he moved about the meeting giving blessings and admonitions. It was hard to find a quiet corner in the hotel lobby because he was so sought after.

His early years were spent in Queens, as were mine, but his family later moved to Detroit. He attended Clark University, where the great developmentalist, Heinz Werner, resided. I find the people schooled in Werner's ideas, mostly knocked into them by a few psychology departments, often possess a virtuoso ability to consider development, especially its twists and reorganizations. Sameroff was also impressed by Father Pinard who came from Montreal and led Piagetian studies. The appeal of Piaget was that he designed clear experiments. This was a heady developmental brew for a college freshman. Sameroff always had been fascinated by children's thinking, such as the belief that dreams were under their bed or that change in appearance changed the nature of things. After a year at Clark, he transferred to the University of Michigan because it was larger and cheaper. His interests were in mathematics and psychology. I wondered about this early interest in psychology. He thought it came from high school and his readings in biology, but more so the appeal of processes of change. This grew out of a fascination with Marxist literature and the "solid left-wing tradition" of his parents who came from Russia. I could respond to this because many of my friends in Queens came from union and socialist families, a tradition that is now fading away. The doctrine taught that there were stages to society and that it evolved according to laws. These rules of the dialectic are explicit in Piaget. Assimilation and accommodation are a dialectic process, as is the transactional approach that came later. For Sameroff, it is common sense that process is part of development. Our current stage of capitalism is just a stage from which we will move on.

For him, child development is an apolitical spin-off of the dialectic process. This vision gives Sameroff's ideas both a dynamism and a turbulence.

He started Yale Graduate School in 1961. There was a theoretical excitement there which had not been present at Michigan, where the training was quite traditional. Because of his math background, he was picked to work with Carl Hovland, who was studying the computer simulation of cognitive processes. Hovland died the spring before Sameroff arrived, so he was assigned to William Kessen, who was just getting into Piaget. Kessen, over many years, has engaged in creative infancy research and has provided vivid insights into the development of children. In other words, Sameroff was pretty lucky here in this sponsorship. He ended up spending nine years studying sucking in the newborn, although reading between the lines of his comments, he seems to have mixed feelings about how fortunate that was. I had not realized how involved he had been in infancy. His chance encounter with it, really his blundering into it—with a wry laugh he agreed with the word blunder—is similar to the experience of many infant workers. Infancy is not often a field you go into deliberately. Let me say that I had sought out Sameroff for his ideas on development and so the bonus of his long commitment to infancy work confirmed my prejudice that infant people are best placed to consider processes of change.

Kessen had started with standard learning theory with its reasoning that sucking was quieting because of the association of the nipple with food, a secondary reinforcement. Kessen gave a nipple before food was ever provided and found there was a soothing before learning that the nipple meant food. This undercut learning theory and led to the idea that the infant possessed organized responses from the beginning. Piaget

had felt that the sucking response was wired in. From these ideas, Sameroff concentrated on the conditioning literature, with a focus on the infant's capacity to learn. This was the time of Sputnik and the great push to catch up with the Russians in space, which led America to an increased emphasis in graduate education. The issue became whether babies could learn anything, whereas before, a hug and a kiss was enough.

Sameroff's dissertation was on conditioned sucking. He contrasted the learning theory concept of small changes over time with the Piagetian position that the rules were already coded in the head. This was similar to Chomsky's modular ideas: it's all there. The study of infant development became the scrutiny of universal laws of development. Looking back, Sameroff can see the restriction placed on this work. At that time researchers didn't go into the home and also the length of the hospital stay for a delivery dropped from 3 to 2 days of infant life. Sameroff voiced the strangeness of spending all of your creative life concentrating on the first several days.

The wish to expand beyond these early days led him to Prague in 1965 and 1966 to study with Heinz Papousek, who had expanded his horizons to a longitudinal study of the first six months of life. Upon his return, Sameroff got himself a real job in Rochester which was half in pediatrics studying the Brazelton Neonatal Assessment Exam, and half in psychology. The focus in the latter department was on primary prevention in mental health. The project leader was Melvin Zax, who had just returned from a sabbatical in Denmark, where he had looked at the children of parents with schizophrenia. The ages of the children chosen to start the project in Denmark were 10 to 15. The idea was to follow them for 20 years—something that could be done within a research lifetime—until they were 35 which was when the

onset of schizophrenia peaked. The routine in the past had been to compare schizophrenics and non-schizophrenics and then to assess them for differences. Zax's argument was that it made no sense to study people after they received the label of schizophrenia because many of the differences could be a consequence of their treatment, including the effects of medication and institutionalization. His goal was to find people who were likely to become schizophrenic, but to get them before they did so. These ideas were greatly influenced by Sarnoff Mednick from the University of Michigan who had invented the high risk technique.

Another pioneer in this area was Barbara Fish, who did

longitudinal studies from infancy of children likely to develop schizophrenia. I was fortunate to hear her speak several times while I was a child psychiatry fellow. The basic idea in these studies is that you can't study the development of schizophrenia once the individual gets the disorder, but even now, many professionals don't believe this at all.

When Sameroff arrived at the University of Rochester, Zax said to him, "Hey, you know something about babies, we'll get you a grant to study schizophrenia." This was Sameroff's first look at a high-risk group. It was hard to separate biology from environment at ages 10 to 15, so the idea was to start with babies. This was the beginning of the Rochester Longitudinal Study. The subjects of this investigation are now 25 years old, but Sameroff and his associates are no longer studying schizophrenia. As a good developmental psychologist, Sameroff insisted originally on including a lot of control groups, and thus he looked at other mental disorders with a consideration of chronicity and lower socio-economic

groups. Indeed, in the first four years, this Rochester group did not find anything unique to the children born to parents with schizophrenia. Poor and chronically ill women with severe emotional illness, with no husband, who were enduring many stressful life events, had children who did not do well, but this did not lead to schizophrenia. Even the children of schizophrenic parents without these risk factors did all right.

Sameroff is still directing this Rochester Longitudinal Study, but the focus is no longer the impact of maternal mental illness. Instead, it has been converted to an examination of

development of child was seen as transactional, a product of the continuous dynamic interaction of the child, family and society. The emphasis stressed was the effect of the child on the environment and of the effect of the environment on the child, so that the experiences provided by the environment were not separable nor independent from the child.

Let us not get so far gone into theory that what most of us really believe gets lost. To touch base with dominant models let me invoke the computer game, *The Oregon Trail*. It is advertised as having sold over a million copies. I was particularly

struck by the fact that a fifth grade reading comprehension was required, which means some infant people should be able to deal with its concepts.

This game catches a dynamic interactional list approach that relies on personal decisions. You choose certain equipment and decide your pace. Rushing ahead can lead to sickness and accidents, while caution can lead to the danger of being caught in the snow. The environment throws at you the dangers of thirst, starvation, death and accident, but, as well, the rewards of water, game, and getting to Oregon. Progress is not entirely under your control but depends largely on how you play the hand dealt you. This is an all-American attitude towards development: some risk and excitement but always under your control. As the song goes, "You've got to know when to hold them, know when to fold them...."

Are fifth graders and clinicians capable of more sophisticated views of development? I think so. Right now the kids I see are enamored of the video game, *Judge Dredd*. What caught my attention was that they talk, as in many of the games, of progressing along levels. Stages of development are something that they could encompass. I think that upping the

It is the environment over time that sets the direction of development no matter what the starting point. If we really believe what Sameroff and others are telling us then we have a powerful and persuasive means to influence clinical practice.

the risk factors that can that effect a family and child, such as poverty and life supports.

In what Sameroff describes as a serendipitous event, he was then asked to write a chapter on the long-term effects of birth complications. There were few data about this then available in the literature. Many people had studied the effects of birth complications but with unclear results. In his study with Michael Chandler, Sameroff found that only some children showed a poor outcome, and that over time this consequence was mainly attributable to the environment.

Abused children posed another puzzle. Certain children, such as those born prematurely, were more likely to be abused. One characteristic of these children was that they elicited an abusive response from the environment, actually transforming the world around them. It was out of this idea that the transactional model of development arose. This goes beyond the conventional combining and adding up of genetic endowment and environmental experience. Rather, the

ante to a transactional game is within their ability, in that the responses of the bad guys would not be random but would depend very much on the actions of the player and the player in turn would change.

Let us return now to the life course of Sameroff. He began to feel claustrophobic in Rochester, which is known as the rain capital of the country. In 1986, he moved to Chicago and the Illinois Institute for Developmental Disabilities where he was director of research. Here, he had access to severely impaired children, and he could study them over time.

One favorite idea at that time was that a difficult temperament in a young child led to parental rejection and so the kid came to a bad end. One concern of his was measuring temperament by parental reports. His judgment was that the reports from the parents may be biased. During his observations of these children with major disabilities, the transactions between children and their parents could be observed. The discovery was that some parents of terribly difficult children could provide great caregiving. These parents had found a way to deal with the problems by seeing the child as special and by feeling that they had a special mission to care for and raise the child. Also seen, were some parents who were inept with fairly reasonable (temperamentally easy) children. The insight was that the child's contribution was not as powerful as they had thought. Sameroff's belief was that you can't change the infant directly and so the responsibility for change rests primarily with the caregiver. At this time, he finally got out of infancy and devoted himself full-time to longitudinal research. One problem was that in these studies as soon as he was familiar with one stage the growth of the child forced them to move onto the next, and so he kept finding himself in new stages where, as in the Peter Principle, he had risen to the level of his incompetence.

In 1984, Sameroff spent a year at the Stanford Center for Advanced Studies and wrote with Robert Emde the book *Relationship Disturbances in Early Childhood*. In 1986, Tom Anders, the new Chief of Child Psychiatry at Brown University, who is known for his studies on infant sleep, recruited Sameroff to join him as Chief of Research in Child Psychiatry. As soon as he got there, of course, he obtained funding for a new longitudinal study which concerned the impact on children of a mother with an affective disorder or another chronic mental illness. I remember that Providence group, which included Daniel Stern and Charley Zeanah, as one of the most vital and creative about. I visited them once and was wildly envious of the intellectual atmosphere there. Nevertheless, in the 1990's there was a financial crunch which led to the dissolution of academic medicine all over, and some of this group scattered. In 1992, Sameroff moved on to the University of Michigan where he still plays with his old longitudinal studies and has initiated another one. This is a McArthur Foundation study of successful children which looks at 2000 adolescents and considers risk and protective factors.

With the transactional model as a core, Sameroff has expanded into a dynamic systems theory. Suffice it to say the world is complex, but systems and chaos theory fired by a dialectic tension attempts to make some sense out of it.

A good question is why bother with complex ideas of development when the interest is clinical practice? All of this developmental stuff may make you smarter, but does it make a difference? Sameroff believes it does. By identifying the salient issues for intervention—placing your bets—you can most effectively direct development to a productive direction. Anyone in charge of a clinical program—large or small—must make choices about the allocation of

resources. An understanding of our developmental knowledge is crucial for setting that direction. If we don't do it, the managed care people will.

Let me give a specific example. The Early Intervention Program is a federally mandated approach to early childhood developmental problems. Each state must come up with a plan but it is left to a wide sweep of politicians and clinicians to implement it. Perhaps my own experience is morosely unique, but what I see in my area is that in spite of a good try by infant mental health people, their influence appears to be minimal. That there should be early identification of perceptual, cognitive, and neuromuscular problems and solid pediatric care early on there is no doubt. But to leave it at that misses what the past 20 years of longitudinal research has told us. It is the environment over time that sets the direction of development no matter what the starting point. If we really believe what Sameroff and others are telling us then we have a powerful and persuasive means to influence clinical practice.

There is another dimension to Sameroff's life, and that is his wife, Susan McDonough. Infant mental health has not that long a history to have many couples sharing the same interest. What I can see is that there is a vivid transaction of ideas between them. Susan and her work on Interaction Guidance deserves a column in her own right.

So now—we leave Sameroff to push along his own trail. In my imagination I can see him dart, grope and circle, get lost and regroup, then force his own unique way through. So it is with us all if we are fortunate.

Editor's Note:

This is the last Signal column that Steven Bennett wrote before his death last year. In the next issue, we will publish some remembrances of him. Anyone who would like to send a note about Steven should send it directly to the Editor.



President's Perspective

Joy D. Osofsky

In writing for this issue, I find myself preoccupied with our upcoming 6th World Congress in Finland. I hope that all of you are also thinking of it. We will have many opportunities to meet and share ideas both scientific and informal.

In this column, I want to discuss (and, as always, would welcome feedback) the importance of our growing affiliate groups. We are planning occasions at the Congress, both business and social, for meeting with affiliate groups to share concerns and experiences and to discuss possible directions for the future.

In my columns over the past few years, I have described my travels and the experiences of learning about infant mental health activities in particular regions of the world. Some places I visited had an established affiliate group in the region; in others, there was an informal group of people interested in infant mental health issues. Hi Fitzgerald, working with Melanie Smith at the central WAIMH office in East Lansing, Michigan, has been very conscientious in organizing and advising individuals and groups on the procedures for becoming an affiliate. A document entitled "Guidelines for Affiliate Development" provides guidance and direction for the process and is available from the Central Office to anyone interested.

I want to take this opportunity now to review where we are with forming affiliate groups around the world, the progress that has been made since 1992, and the prospects for future growth of affiliates.

In 1992, when the World Association for Infant Psychiatry and Allied Disciplines merged with the International Association for Infant Mental Health to form the World Association for Infant Mental Health (WAIMH), there were several international affiliate groups in place including Australia, Canada, Mexico, and the Nordic Region. In addition, there were nine groups in the United States (Michigan, Texas, Illinois, Delaware, Maine, Minnesota, New Jersey, Oklahoma, Virginia). In 1993, another group formed in the US in Louisiana. In 1994, with the careful guidance of Hi Fitzgerald, the Greek Association for Infant Mental Health came into being. At the same time, an ongoing study group in France became an official affiliate group (Groupe Francophone d'Études et de Recherches en Matière de Santé Mentale de L'Enfant de la Conception Jusqu'à Trente Mois) with the encouragement and guidance of Serge Lebovici, Bernard Golse, and Antoine Guedeney. In 1995, after attending our Regional Meeting in Riga, Latvia and with encouragement from me and others, the St. Petersburg (Russia) Association for Infant Mental Health was formed under the leadership of Rivkat Mukhamedrakhimov and Elena Kozhevnikova. And in the US, a new affiliate was recognized in Kansas. In 1996, under the able leadership of Peter de Chateau, the Netherlands Association for Infant Mental Health was created.

The process of forming new affiliates continues. In some places, such as Portugal and Turkey, an

interest in forming an affiliate is just dawning, while in others like Germany, Belgium-Luxembourg, Italy and England, there are active efforts to develop affiliate groups. There has been ongoing discussion about forming an affiliate group in South America comprised of people from Argentina, Brazil, and Uruguay. WAIMH members from these three countries have already held several joint regional meetings. And in the Baltic Region, including the countries of Latvia, Estonia and Lithuania, some efforts have been made toward establishing an affiliate. Perhaps the process of forming affiliates could be facilitated by the assistance of an already established group that exists in proximity to an emerging group of individuals with mutual interests. For example, the well-established Nordic Affiliate could mentor the Baltic group.

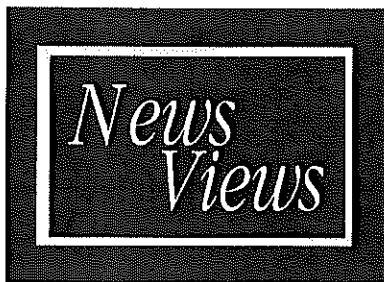
What are the benefits of forming an affiliate group? The answer, to some extent, may depend upon the region of the world being considered. Becoming a formal affiliate of WAIMH affords a level of networking and sharing among individuals not usually done without a formal structure. As Hi Fitzgerald wrote to a group organizing to form an affiliate, "The major benefit is that local Affiliates serve as magnets to attract individuals from multiple disciplines who desire continued professional contacts with individuals working with infants and their caregivers in a wide variety of settings." Affiliate associations are best able to deal with local, regional, or national issues related to infant mental health. Depending on the region, an affiliate may lend a level of credibility to the group's work in infant mental health allowing the group to address issues directly related to local concerns.

What has become clear in our work with ongoing and newly initiated affiliate groups in the past four years since WAIMH was formed is that many people around the world believe

they will benefit from regular meetings with their colleagues to address infant mental health issues of importance to them.

During our meetings of the Executive Committee in Tampere, Finland, we will begin discussion about the role of affiliates in the governing structure of WAIMH. Issues have been raised about better ways to obtain more formalized input from affiliate groups regarding future goals and objectives. It is likely that the role of affiliate groups in WAIMH's overall organization will become even more important in future years. I would very much like to hear your ideas on this issue. You can reach me by mail (Department of Psychiatry, LSU Medical Center, 1542 Tulane Avenue, New Orleans, LA 70112), fax (504) 568-6246, or e-mail JDOPS@UNO.EDU.

I am looking forward very much to greeting each one of you personally in Tampere in July.



Pre-World Congress Workshop

For those interested in diagnostic classification, a special pre-Congress Workshop will be held in Tampere, Finland, on Wednesday, July 23, 1996, the day before the Congress begins. We are not anticipating a special registration charge for this meeting since its purpose will be to exchange experiences with diagnostic classification. One of the incentives for the meeting is the publication of DC: 0-3 which will be reviewed. Even more important, individuals in Europe and elsewhere who have adapted the diagnostic classification system or extended it, will present and discuss their studies and clinical experience. The Workshop will begin at 9:00 a.m. and conclude at 16:30. More than a dozen brief presentations are already planned and there will be lots of time for discussion. If you plan to attend, please let Maria or Bob know by June 15.

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Training Opportunity

The Office of Continuing Medical Education of the University of Michigan Medical School is sponsoring a 3 day summer session entitled: *Advances in Office Psychiatry: Mood and Anxiety Disorders*. July 19-21, The Towsley Center, Ann Arbor, MI. For information contact Vivian Woods at 313 763-1400.

Conferences

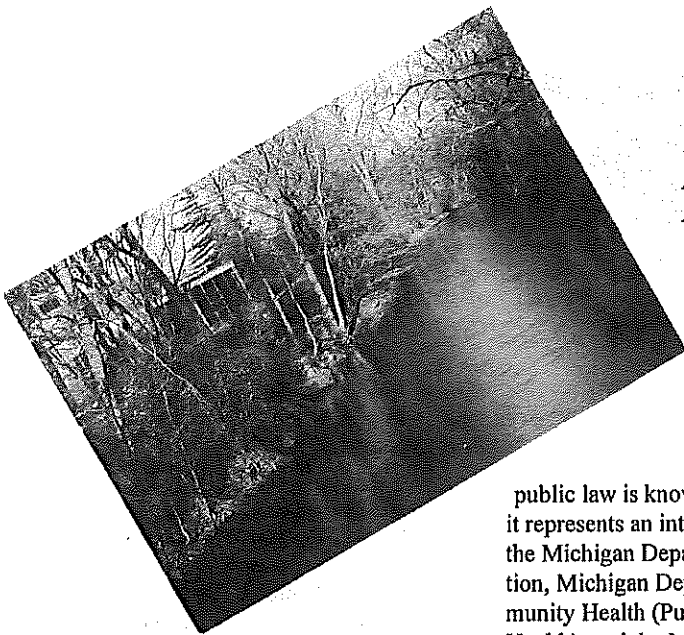
The *Maine Association for Infant Mental Health* is sponsoring its ninth annual conference Friday, May 17th in South Portland, Maine. Conference theme is *Preventing Violence—Preserving Attachments*. For information call Edward Hinckley, 207-293-2051.

The Child with Special Needs; The National Conference Addressing Issues in Early Development: Birth to Five Years. Washington DC, May 16-18, 1996. Sponsored by Contemporary Forums. For information call 510 828-7100, ext. 3.

Bank Street College Infancy Institute is sponsoring a conference, *Infants, Toddlers, Parents: Supporting Their Growth*, June 26-28, 1996, Bank Street College of Education, New York City. For information call: (212) 875-4728.

More training programs

Parent/Infant Therapeutic Program
Contact: Barbara D. Munk, Ph.D.
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**Parent-Professional
Partnerships: Systems of care
for infants and families with
special needs**

During the past year I served on a state-wide committee responsible for planning a training program for faculty from each of the 15 state-supported universities in the state of Michigan. On March 29-30 the first Michigan Interdisciplinary Faculty Institute for Early Intervention was sponsored by the Michigan Department of Education Office of Special Education Services, and organized by Dr. Rita Benn and her colleagues from the Merrill Palmer Institute at Wayne State University. More than 100 people attended the conference. Who attended the conference and what was its purpose? To answer this two-part question requires some background commentary, especially for readers from outside of the United States.

Federal legislation in the United States, known as Part H of the Individual Disabilities Education Act (IDEA), requires each state to provide intervention services for families of infants and toddlers with developmental delays or with conditions that are likely to lead to a developmental delay. In Michigan this aspect of the

public law is known as *Early On* and it represents an interagency effort of the Michigan Department of Education, Michigan Department of Community Health (Public and Mental Health), and the Michigan Family Independence Agency (Social Services). Part H mandates services for children with *established conditions*, from birth to age two who have a diagnosed physical or mental condition that has a high probability of leading to developmental delay. There are 9 identified established conditions: Chromosomal anomaly/genetic disorders, Neurological disorder, Congenital malformation, Inborn error of metabolism, Sensory disorder, Atypical developmental disorder, Severe toxic exposure, Chronic illness, and Severe infectious disease. Part H also mandates services for children with *developmental delay*, a condition that is determined by the judgment of a multidisciplinary clinical team which includes parents. Children who are *at-risk of developmental delay* comprise an optional category that Michigan currently does not include in its definition of eligibility.

During the 1994-95 fiscal year, slightly more than 6500 families with infants received services as a result of this public law. Historically, systems of care for families and their children have been embedded in bureaucratic systems that are slow, unresponsive to family needs, and that often generated barriers to cross-agency services. As a result, many families who sought help

From the Red Cedar

Hiram E. Fitzgerald
Executive Director

often found a system that merely added to their frustration and stress as they attempted to gain resources known to be available, but in practice difficult to access. Michigan has implemented a system reform plan that is family centered, focused on family empowerment, strength based rather than deficit based with a comprehensive, seamless system of care.

In addition to defining who is eligible for services, the legislation also requires each state to develop a Comprehensive Plan for Personnel Development (CSPD) for individuals from each of 10 disciplines that have been identified as service providers. These disciplines are speech and language pathology, audiology, physical therapy, occupational therapy, nutrition, medicine, nursing, psychology, social work, special and/or early childhood education.

The purpose of the conference was to stimulate thinking among university faculty about the university's role in educating the next generation of professionals who will be working with families with special needs infants and toddlers. The conference featured the usual menu of plenary speakers, workshops, and planning sessions and each of these components reflected well on the care taken by the planning committee to assure a productive and meaningful learning environment.

One part of the program, however, was especially provocative and, frankly, inspirational. I refer here to the plenary sessions and workshops led by parents of special needs infants, and of these I was especially informed and moved by Janice Fialka. Ms. Fialka is the mother of a now 10-year-old developmentally disabled son. She discussed a number of the emotional challenges resulting from her interactions with professionals and with parents of special needs children.

In her plenary message, "Dance of Partnership (or Why Do my Feet Hurt?)" Janice provided ten ways in which professionals can make a difference in the lives of parents of children with special needs and I quote from her article in *Early On Michigan* (abstracted from pps 6,7,11).

1. You have the opportunity not to be frightened by our anger.
2. You have the opportunity to decrease our profound sense of loneliness.
3. You have the opportunity to anticipate and normalize our feelings.
4. You have the opportunity to help us re-enter back to the "world of normal families."
5. You have the opportunity to help us know our child.
6. You have the opportunity to share books, pamphlets and resources.
7. You have the opportunity to recognize and celebrate our victories.
8. You have the opportunity to remind us how far we have come and how much we have accomplished.
9. You have the opportunity to allow us those moments when our souls fall into deep despair.
10. If at times you can do some of these nine suggested activities, some of the time, then you will have the opportunity to help us feel hope.

From Fialka's point of view, professionals can help make a difference but they cannot make THE difference. From my point of view, she made a profound difference in how I will teach my graduate courses in infant development and infant mental health in the years to come. For example, I will incorporate more information about raising special needs infants from a parents' point of view. Perhaps the following poem by Janice Fialka will help you to understand her impact on me.

Advice to Professionals Who Must Conference Cases

Before the case conference,
I would look at my almost five-year-old son
And see a golden hair boy
Who giggled at his new baby sister's attempts to clap her hands,
Who charmed adults by his spontaneous hugs and hello's,
Who captured his parents with his rapture with music and his care for white-haired people who walked a walk a bit slower than younger folks,
Who often became a legend in places visited because of his exquisite ability to befriend a few special souls,
Who often wanted to play "peace marches,"
And who, at the age of four, went to the Detroit Public Library requesting a book on Martin Luther King.

After the case conference
I looked at my almost five-year-old son.
He seemed to have lost his golden hair.
I saw only words plastered on his face.
Words that drowned us in fear and revolting nausea.
Words like:
Primary expressive speech and language disorder
severe visual motor delay
sensory integration dysfunction
fine and gross motor delay
developmental dyspraxia and RITALIN now.

I want my son back. That's all.
I want him back now. Then I'll get on with my life.
If you could see the depth of this wrenching pain,
If you could see the depth of our sadness
then you would be moved to return
our almost five-year-old son
who sparkles in the sunlight despite his faulty neurons.

Please give me back my son
undamaged and untouched by your labels, test results,
descriptions and categories.
If you can't, If you truly cannot give us back our son
then just be with us quietly,
gently and compassionately as we feel.
Just sit patiently and attentively as we grieve and feel powerless.
Sit with us and create a stillness
known only in small, empty chapels at sundown.
Be there with us
As our witness and as our friend.

Please do not give us advice, suggestions, comparisons or another appointment.
(That's for later.)
We want only a quiet shoulder upon which to rest our too-heavy heads.
If you can't give us back our sweet dream
then comfort us through this nightmare.
Hold us. Rock us until morning light creeps in.
Then we will rise and begin the work of a new day.

(Reprinted with permission from Janice Fialka)

Relationship-Centered™ Child Day Care

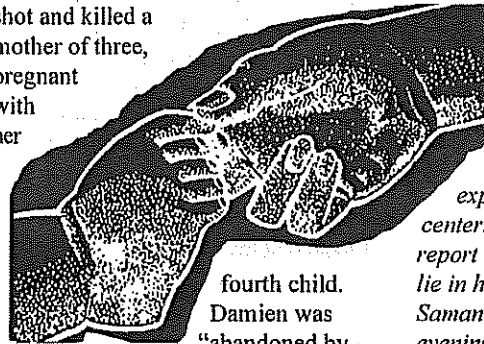
The following is the text of a presentation by Sonya Bemporad to the National Association for the Education of Young Children at their annual conference in December 1995.

I want to be as clear as possible from the outset. The violence in young children addressed in this presentation is not the violent personality that emerges from experiences in brutal environments. We are not addressing issues related to a child's identification with the violent parent's way of dealing with his or her anger, not the socialization of children into violent patterns of behaving and of solving problems. Rather we are addressing the new face of conscienceless violence that may have its roots in a new kind of early care. This care is characterized by changing relationships with multiple caregivers, none of whom have sufficient meaning for the child for him to learn to manage his aggressive impulses in the service of developing and maintaining the relationship, none of whom has sufficient meaning for the child to have experienced empathic care so that she, too, can develop the capacity for empathy and conscience.

A flood of anecdotal evidence is accumulating from kindergarten and primary grade teachers about children whose early years have been spent in poor child care. Teachers report that such children are different. They are inappropriately aggressive, even hostile, and it is more difficult, if not impossible, to build relationships with them through which they can become part of the learning community of the classroom. They hurt other children, wander aimlessly, and have short attention spans.

A May 16, 1994 *New York Times* article describes Damien Dorris, a

Detroit fourteen year old, who shot and killed a mother of three, pregnant with her



fourth child. Damien was "abandoned by his father, beaten by his mother, and was essentially rearing himself . . . Damien is now fifteen and serving time in a maximum security juvenile center. Described by social workers and a probation officer as emotionless, Damien has been visited once by his mother.

Even in this brief newspaper account, Damien's early experience demonstrates a dramatic lack of continuous, caring interaction with a parent. Stanley Greenspan, clinical professor of psychiatry and pediatrics at the George Washington University Medical School, depicting "The Kids Who Will Be Killers," in a *Washington Post* article (July 15, 1993) could have been describing Damien: "They can't care for others because no one has consistently cared for them. Without loving contact in infancy and early childhood, a sense of human connectedness may never materialize and other people can soon become viewed as things to be kicked or destroyed when they stand in the way."

According to a subsequent *New York Times* story (May 17, 1994), half of juveniles who kill are not the "stereotypical children of a welfare-dependent, drug-abusing underclass. Half have parents or guardians who work."

More children than ever before are being cared for in their earliest years by someone other than their parents. Most spend their days in a child care system that, by its very

nature, results in non-caring conditions similar to those that Damien Dorris experienced during his early years.

Samantha dissolves into tears as she talks about her 11 month-old daughter's experiences at the child care center. The caregivers at the center report that all the baby does all day is lie in her crib and sleep. When Samantha brings her home each evening, the baby is listless and withdrawn for about an hour and then gradually begins to respond to her mother. By bedtime, she becomes active again. The cycle repeats itself each work day.

One day, Samantha visited the center unannounced. She saw immediately that her baby was withdrawing from a small, dark, noisy room, crowded with over 20 infants and toddlers in the care of two very young and obviously untrained women. Now Samantha is distraught. There is simply no place else in the community to leave her child that she can afford, and she does not have the option of quitting work to care for her child.

Samantha's experience is not unique. The child care system on which she and other working parents must rely is, at best, primitive. Services are fragmented. Regulations often are minimal. Continuity of care—so essential to healthy development—is, for the most part, nonexistent, nor is it understood to be important. Caregivers in child care centers are usually poorly trained, if trained at all, and woefully underpaid . . . Even in the "best" child care centers which charge premium fees, there is no guarantee that a young child's need for close, on-going relationships will be met.

The practices in child care centers that make care for babies marketable are the same ones that deny them the long-term nurturing relationships that are essential to becoming healthy human beings. These industry practices, widespread throughout the country, include caring for the maximum number of babies allowed by state or local licensing standards; employing the fewest staff permitted by regulation; using part-time staff instead of full-time staff; full-time staff who *could* be with the babies for the full day to provide the opportunity for relationship development; and grouping children according to age increments addressed by regulation. Grouping children by age is pervasive in the child care industry, and it is especially harmful to children under age three. In order to keep costs down, child care centers routinely transfer babies from one group to a larger group and a different caregiver when they reach the ages at which child: staff ratios and group sizes are permitted by regulation to increase.

It is not uncommon, for example, for an infant to be in one group until the age of six months; move to another group until the age of 12 months; change caregivers again at age 18 months, and finally arrive in a new group at age two. The child might stay in that group until age three when the shift then becomes an annual event.

Even in states where licensing regulations permit slightly broader age spans for each group, the young child and his or her parents can expect to have at least three different caregivers by the child's third birthday, not including the inevitable staff turnover. Despite this "disruption by design," child care programs for infants and toddlers are almost always full, and waiting lists are the norm—there is simply not enough care to meet the demand.

Babies cannot thrive in environments in which relationships are

transitory. At best, they will emerge with diminished capacity for learning and for close relationships. At worst, these children will grow up without the capacity for conscience, without the capacity to learn and without the capacity for empathy—the qualities that make us human.

It doesn't have to be this way. Decades of research and study have identified the essential ingredients needed for normal, healthy development. The work of John Bowlby (1988), Mary Ainsworth (1978), Margaret Mahler (1975), Selma Fraiberg (1987), and others have paved the way for thinking about the importance of early relationships. Whether coming from a theoretical predisposition for drive theory, attachment theory, object relations theory, or self psychology, researchers and clinicians agree that one's earliest experiences lay the ground for the future possibilities of the self.

Primary among these experiences is the experience of the self in relation to others. To paraphrase D.W. Winnicott (1977), *there is no such thing as a baby, only a baby in a relationship with others. A baby alone cannot survive.* The development and growing up of the baby is always inexorably tied to those who care for her. Whether we are talking about channeling and harnessing aggression; or the development of trust through a secure attachment, or the internalization of a strong sense of self; or the ability to regulate self-esteem in healthy, non destructive ways; or the ability to appreciate the world of the other—all of these conceptualizations of psychological development include the baby and the parenting person. It is the special meaning that the baby has for her parents and other significant adults which provides the depth of experience out of which attachments and the full scope of intrapsychic development proceeds.

Although it is quite clear that being parented by one's own psycho-

logical parents (biological, adoptive, or other long-term parenting relationships) does not guarantee healthy development, the risk of poor developmental outcomes is increased when babies are in care with changing caregivers for whom they have no special meaning. We can be assured that with the current poor quality and high staff turnover in child care, as babies experience changing caregivers with little investment in them, they are in danger of becoming empty selves, of becoming non-attached, non-caring, unrestrainedly aggressive humans who have trouble valuing themselves or anyone else. It is the latter that concerns us more and more as a society—children who manifest what Selma Fraiberg called the *diseases of non-attachment*.

For a baby to develop a sense of the importance of close relationships, she must experience them. A baby must learn to love. She must differentiate *this* face and *this* voice from other faces and voices so that this particular relationship can be valued.

Because more and more parents are in the work force with babies at younger and younger ages, we must find child care responses that meet basic developmental challenges, responses that will help babies and young children channel aggression and develop empathy. We must create *ecologies of meaningful human relationships*. Meeting this challenge is the basis of what we at The Child Care Group have named *relationship-centered child care*.¹⁰⁰

Relationship-centered child care is a philosophy and methodology that focuses special attention on relationship building and the emotional well-being of very young children. This model of child care incorporates the basic parameters of all good child care—low child-staff ratios, small group sizes, caregivers trained in child development, curriculum based on individual assessments of children's developmental levels, and a stimulating environment—but it goes much

further. The program is primarily and painstakingly organized around the development and maintenance of the relationships of babies, toddlers and preschoolers with primary caregivers.

Basic human relationships are the central focus of *relationship-centered child care*. The three-way relationship between the child, the parents, and the caregiver provides the context in which care is provided.

Relationship-centered child care is "operationalized" through family grouping. Family grouping means that each child and caregiver can remain together for the years a child is in the infant/toddler or in the preschool group. At the Child Care Group family grouping means children six weeks to three, and then three to five [are placed] in mixed aged groups with a primary caregiver, and a highly individualized curriculum. Just as a child in a family does not move to a new home

with a new set of parents when he or she has a birthday or when the school term starts in the fall, children in family groups are with the same caregiver long enough to experience the depth of relationship needed to assure the affective achievements which are so at risk in care outside the family.

Family grouping will not work in settings with high caregiver turnover. High turnover invades the heart of family grouping, which depends on reliable, continuous relationships. Just as a child in a family does not live in the same home with a changing set of parents, neither should children in centers experience a passing parade of caregivers. It is the continuity of relationships which assures the depth of emotional investment and attachment required for healthy development.

Stanley Greenspan, in his Washington Post article, advocates the family grouping approach: "*Increase the continuity of the relationships between adult caretakers and children—*

especially when the children are at risk. For example, day care staff should stay on with the same children throughout their infancy and early childhood, instead of changing each year for administrative ease."

Decades of research and study of child development clearly show that children who fail to acquire the basic building blocks of emotional and psychological health are at high risk of becoming a danger to themselves and others in later years. Conversely, children who do experience positive, meaningful relationships are more likely to become successful adults.

If we wish to prevent an increase in conscienceless violence perpetuated by younger and younger children, we must assure that every child has the opportunity, early on, to develop and maintain close, committed and ongoing relationships.

Editor's Note: Ms. Bemporad chairs the Social and Public Policy Study Group of WAIMH.

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