

Chapter 2

Toward a Developmental Psychology of the Family*

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Family psychology has to be more than a *part* of the study of human development. It will be viewed here as a conceptual *revolution* in developmental psychology, demanding the overthrow of some cherished traditional assumptions. The problem addressed in this chapter is how to begin replacing the old, inadequate concepts—about knowledge, about action, about motivation—with concepts at the level of the social system instead of the individual, without the new concepts turning out to be even less adequate than the old.

The principal question to be wrestled with will be referred to as the Locus question: How can knowledge, action, and other psychological constructs be located in an entity larger and more diffuse than an individual nervous system? Part of the answer will be hinted at in two ideas: the incompleteness, or “dove-tailing,” of all human skills and the externality rather than internality of one’s sense of self. Before we can make any attempt at answers, however, we need to explore the kinds of phenomena that a psychology of the family should be expected to explain.

The worst fate that could befall the movement toward a psychology of the family would be for that phrase to mean different things to all its proponents, hence to have no real meaning. To some, it would mean nothing more than the study of how family members interact with each other. To others, it might mean nothing more than acknowledging that children are not the only people in families who develop;

so do their parents, grandparents, aunts, and uncles. Or it might mean nothing more than a certain ideological stance with respect to psychological theorizing—for example, the attitude that explanations should be bidirectional, circular, or “systemic” rather than linear or “cause-and-effect.” Carried to extremes, it might mean the abandonment of science in favor of epistemological obfuscations.

All of those views are bound to be represented in a book of this scope at this primitive stage (notwithstanding about 30 years of work) in the development of our science. At the outset, therefore, I must state my own view: *A psychology of the family means a science whose unit of study is no longer the individual mind/body/person but a developing social system of physically separate people.* Studying a fundamentally different kind of creature—the social system—will require a revolution in the way psychologists think. Many of the investigators who have been responsible for the birth and infancy of family psychology have recognized the difficulty of the required conceptual shift, but the field still remains at a preconceptual stage in this respect: We know a few things about the “behavior” of family systems, but have yet to explain how it is that a system of organisms can “behave” in an organized fashion.

For reasons to be discussed in this chapter, a systems psychology must be a different enterprise from the study of individuals. It is not the same as studying interaction among people, where the individuals are still the units of analysis. A family psychology means that the family becomes the subject unit, with its own character and own course of development. If families were merely the algebraic sums of their members, we would not need a special analysis at this level. Hence, to view the family as an entity with its own psychology is to assume that it is different from the sum of its parts.

Yet a science that is still psychology, not sociology, must concern itself with explaining the actual processes of communication, decision making, learning, and development. To explain such processes at the family level instead of at the individual level amounts to a new paradigm because traditional psychology is based on the assumption that knowledge, action, and motivation are properties of individual *organisms*. Those concepts cannot simply be shifted out to refer to social systems.

A psychology of the family must be a *developmental* psychology, because the concept of adaptation is essential to our very definition of a social system. Conversely, developmental psychology is always implicitly, and should be explicitly, a psychology of the family. The mildest argument for that proposition is that human beings develop in the context of their families; the stronger and more interesting argument is that families themselves are the entities whose development

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really has to be explained. Hopefully, the latter view will soon be more widely held. The family approach will invade, dominate, and irreversibly alter developmental psychology, rather than being an ancillary field of study.

Traditional developmental psychology takes the individual as its unit of analysis; the child's parents and other family members are conceptualized as potential influences upon the child's development. Instead, we can see that each family member's individual development is an aspect of larger processes of change in their system. This is an idea to which most of us developmental psychologists are willing to give lip service; yet until now, it has really been the individual in whose development we were interested. And it will continue to be so, unless we either cease to be psychologists or address the problem of how knowledge, action, and motivation exist in the interfaces between organisms.

To illustrate the questions that await investigation in this virtual *terra incognita* beyond the conceptually safe Old World of individual psychology, this chapter will make use of excerpts from a contemporary novel about a family.¹ I quote the comments of a fictional narrator, partly in order to offset the unabashedly theoretical contents of this chapter and partly because the novelist achieves greater coherence, clarity, and truth-to-life than any anecdotal case study could offer. For example, his protagonist contemplates the impossibility of separating his existence and self from his roles as son, husband, and father:

Excerpt 1: I have this unfading picture in my mind . . . of this festive, family birthday celebration in honor of my little girl at which my old mother and my infant daughter are joyful together for perhaps the very last time. And there I am between them, sturdy, youthful, prospering, virile (fossilized and immobilized between them as though between bookends, without knowing how I got there, without knowing how I will ever get out), saddled already with the grinding responsibility of making them, and others, happy, when it has been all I can do from my beginning to hold my own head up straight enough to look existence squarely in the eye without making guileful wisecracks about it or sobbing out loud for help. (Heller, 1974, pp. 194–195)

The chapter is in three parts. The first part argues that the mystery about how it is possible for several distinct individuals to comprise a developing system is the most important problem psychology can now address. Psychologists, sociologists, and anthropologists understand the functioning of interpersonal systems about as well as biologists under-

¹The excerpts throughout the chapter are from *Something Happened* by Joseph Heller, 1974. New York: Alfred A. Knopf, Inc. Copyright 1974 by Alfred A. Knopf, Inc. Reprinted by permission.

stood the functioning of the organism before Harvey traced the circulation of the blood, nearly four centuries ago. Theories about how systems operate are as primitive, vague, and mystical as were the medieval theories based on blood, phlegm, lymph, and bile.

The second part of the chapter discusses some conceptual and methodological obstacles in the way of the revolution many of us would like to see. The foremost problem is that the notion of a social system, seen as having a life of its own like an organism, is merely a metaphor. It is not a theory. It does not explain anything, and it is not testable. It has been around for at least 150 years without answering the most essential questions about the interaction and concerted action of people in social systems.

The third part of the chapter presents 10 essential questions, all beginning with the word *how*. All 10 questions have to do with processes of behavior, not just with structural descriptions of the family, and with causal mechanisms, not just with correlations. In other words, they are questions that can only be answered by psychology—not sociology, not anthropology, not epistemology. The questions and my tentative gropings toward answers will be restricted to *families: units of two or more persons related by kinship or marriage and by the economics of sharing a household over a significant period of their lives*. However, at a broader level, the questions apply to all social systems.

SOCIAL SYSTEMS AND THE SOCIAL SCIENCES

It could be argued that government should stop supporting research in every field *except* the psychology of social systems. Science and industry are well equipped to accomplish any constructive purpose that people can manage to agree upon. It is the process of settling upon common purposes and collaborating in common endeavors that still eludes mankind. Dimly we realize that failures in social relations can now at any time trigger destruction beyond comprehension. Our challenge—to explore the interpersonal mysteries and bring our understanding of social systems to a par with our understanding of the physical universe and of biological organisms—has an 11th-hour urgency.

The ignorance of social scientists—our ignorance—is comparable to that of physiologists four centuries ago. It was known that air was somehow necessary to animal life and that blood moved through veins, but not that blood is pumped by the heart in a continuous loop carrying oxygen from the lungs out to every cell and returning to the lungs. Sixteenth-century physicians were as helpless in the face of physiological problems as we are today in the face of social problems. After Harvey presented a model of the circulatory system, everything fell into place for physicians and biologists. They could begin to trace which

organs put things into the blood and which took things out; within a few scientific generations, they could fight infection and disease, anesthetize against pain, transplant organs.

When we theorize about social systems, we sound more like physicians before Harvey, with their vague notions about the four "humours." Consider the following state-of-the-art account of family therapy:

People are always functioning with a portion of their possibilities. There are many possibilities, only some of which are elicited or constrained by the contextual structure. Therefore, breaking or expanding contexts can allow new possibilities to emerge. The therapist, an expander of contexts, creates a context in which exploration of the unfamiliar is possible. She confirms family members and encourages them to experiment with behavior that has previously been constrained by the family system. As new possibilities emerge, the family organism becomes more complex and develops more acceptable alternatives for problem solving. (Minuchin & Fishman, 1981, pp. 15-16)

Does this not make therapy, and the family's development itself, sound like magic? Indeed, there are those who use that very word; not a promising basis for research.

Within this century, we ought to be capable of seeing the essential processes of social interaction—including human development and group dynamics—with clarity, certainty, and revolutionary impact comparable to Harvey's discovery.

An emerging view of interaction. The potentially apocalyptic consequence of our continued ignorance about social systems is only one argument for pushing beyond metaphors to a serious science of interpersonal dynamics. A second argument comes from the field of developmental psychology itself. Two trends have made our individually oriented theories seem less and less adequate in the past decade or two.

One trend is toward a lifespan conception of human development. We no longer think of development as something that happens to children and ceases at the end of adolescence. The other trend is toward the study of interaction—between parent and child, among children, between parents, between child and teacher. Obviously, these two trends are closely related. Criticizing the research up to 1972 on parent-child attachment behavior, Hartup and Lempers concluded that "an interactional phenomenon has been reduced to a set of individual differences and attachment characterized as an appendage of the organism rather than as a dimension of the social intercourse in which the organism is engaged" (1973, p. 238).

Once one stops thinking of development as the effect of adults upon children and sees the adults too as continuing to develop through the

course of parenthood, one necessarily finds parent-child interaction a more interesting and complex affair. For example, a decade of intensive work by students of parent-infant interaction has erased the model of an infant who consisted partly of an autonomously maturing intelligence and partly of attachment bonds responding to maternal nurturance. We now see the infant as eliciting certain kinds of parental behavior that are preadapted to pull him through a kind of universal curriculum, or "apprenticeship" (Kaye, 1982). Thus human infants and human parents are designed for a joint function. Their function is to ensure that infants are transformed, over the first year of life, from mere organisms into members of family systems: self-conscious, language-using persons.

Now we can look at adolescence the same way. Instead of just asking what goes on inside the minds and bodies of children from the time they reach puberty until they (hopefully) leave their parents' homes, we can ask how parents and children normally collaborate in the development of a less-dependent relationship.

Excerpt 2: I do not talk to my daughter as I should to a child, or would if she were somebody else's. I'm not nice to her. If my little boy misbehaves, I respond to him dotingly as a careless, mischievous, or overtired little boy who needs a kiss and a hug and the mildest of reprimands; it is a normal, predictable, endearing mistake, and I correct him tolerantly in an almost deferential way. If my teen-age daughter does something wrong, it is something *wrong*: it is an insulting, intentional, inexcusable attack against me that requires swift and severe retribution. (I do not treat them the same.) I wonder why. Is it because she's a daughter? Or a first child, for whom my aspirations were too high, and in whom I am now therefore disappointed? Or is it that she is already in her teens, growing up and away from me, slipping free from my authority, already preparing to live without me, to challenge frontally my wisdom, morality, and ability, and threatening to dislodge me, if she can, from my shaky stronghold of dictatorial self-esteem? (Heller, 1974, p. 178)

The first step is to see parent-child interaction (and all interpersonal interaction) as bidirectional, and the next step is to realize that it is *more* than bidirectional: It is a relationship organized to achieve certain goals that the members could not achieve singly. This is one of the criteria for calling a group or organization a social system: Its members demonstrate *shared purpose*. Furthermore, they could not come together ad hoc to function in this way; the relationship depends upon a *shared history*. In other words, the system undergoes its own development, over and above (but somehow entailing) the development of its members, each of whom is also, separately, an open system.

The concept of *open systems* requires some background. System

theory originated in the late 19th-century revolt against reductionist, molecular, mechanistic theories in physics. The science of cybernetics grew out of that movement. Later, when general systems theory (von Bertalanffy, 1968) emphasized the distinction between closed and open systems, it was part of another revolt: a revolt within cybernetics against using physical theories as models of the mind and of human society. A system is open, as opposed to closed, if it functions as a unit so as to exchange energy and information with its environment. The functioning of the parts is subordinated (organized) to a goal or direction of the whole. By virtue of this organization, the second law of thermodynamics (entropy) is violated. Over the lifetime of the system, there is an increasing organization. Energy is brought into the system to counteract entropy, and information is created in the system. An important part of the theory is that this occurs at a decreasing cost: The system develops so as to function more efficiently vis-à-vis the outside world. An automobile engine, which tends toward entropy, is a closed system. As the interacting parts wear down and lose precision, the performance of the whole declines. A horse, over the same period of time, grows internally more complex—i.e., gains information—and performs more efficiently. It is an open system.

The concept of system in developmental psychology. The word *system* means organization and adaptation; but of course *individual development* also means organization and adaptation. The criteria of shared purpose and shared development, in adaptation to the outside world, are inherent in the concept of a social system. But the same criteria are also inherent in the concept of *organism* as an open system or in the concept of an organized intelligence or an organized self. Hence it would appear easy for developmental psychologists, used to thinking about those types of organization, to think in terms of the family system. In fact, developmental psychologists would recognize as important all of the “how” questions to be discussed later in this paper:

- How does a family adapt over time while retaining its identity?
- How do differences among families come about?
- How is the development of a family constrained by the community and culture, and vice versa?
- How does the need for the family to develop affect individual development, and vice versa?
- How do families create, recruit, and indoctrinate new members?
- How do families mediate between the community (or society at large) and their individual members?

- How do families act through their individual members' encounters with the world?
- How does an individual bring about changes in other individual members and in the family as a whole?
- How does the individual mind internalize the workings of the whole family system?
- How do families equip their members for participation in other systems?

Yet developmental psychologists have barely addressed these questions. Nor have they addressed many other questions that require thinking in terms of families as opposed to individuals. A survey of three different volumes of *Developmental Psychology* (1972, 1977, and 1982) revealed that fewer than 10 per cent of the studies published had anything to do with interaction. In more than 9 out of 10 studies, the subjects were individuals (for example, 25 four-year-old children), and the measures were of individual behavior (for example, a learning task). The remaining 9 to 10 per cent of the studies also nearly always involved individual subjects as the unit of analysis. Although social interaction was measured, it was measured as an independent or dependent variable on each subject, in order to test hypotheses about, for example, differences in some aspect of social behavior according to age, gender, or socioeconomic status.

About 1 study in 100 published in *Developmental Psychology* actually studies interaction between people (*behavioral* interaction rather than statistical interaction between variables). I made this survey originally to document an increase in studies of parent-child interaction (my view of the field having been distorted by several edited volumes, especially on mothers and infants), but in fact there was no such increase.

What *has* increased is the use of systems rhetoric to describe interactions within the family. Now we have to progress beyond that rhetoric to operational concepts and methods. Indeed, a few investigators have recently laid the groundwork for doing so. As we shall see when the questions listed above are discussed later in this paper, the notion of family systems is a heuristic device for helping us to formulate good questions. At the same time, it may be one of the obstacles in the way of answering them.

OBSTACLES TO A PSYCHOLOGY OF THE FAMILY

We know remarkably little about the actual processes of family life. We know *what* happens in families, at a general level, but we really know nothing about *how* it happens. Perhaps our situation is like that

of the proverbial fish who, it is said, has no concept of water. We are so thoroughly immersed in these processes that we cannot see them. However, we may think we understand them better than we do. In the next section, examples of routine interactions will be used to illustrate the kinds of questions that have to be asked. This section prepares the way for that by discussing some obstacles to the investigation of those topics.

Metaphors are not theories. One such obstacle is confusion between metaphors and theories. The idea that a social system is like an organism, for example, is only a metaphor. A metaphor is not testable; it cannot be disproved. It becomes a theory only when stated in a form that generates hypotheses. Consider the following seminal statement, one of the first suggestions that the concept of homeostasis could be applied to social systems:

It seems not impossible that the means employed by more highly evolved animals for preserving uniform and stable their economy (i.e., for preserving homeostasis) may present some general principles for the establishment, regulation, and control of steady states that would be suggestive of other organizations, even social and industrial, which suffer from distressing perturbations. (Cannon, 1938, p. 305)

This conjecture was not a theory, it was a suggestion that there might be a useful analogy between the ways organisms regulate themselves in response to perturbations and the ways “organizations,” or (as we would now say) social systems, do so. Why *should* there be general principles that apply to both levels of organization? Structuralists like Piaget (1967) argue that there must be similarity across all forms of adaptation, because adaptation is an inherent principle of biology. (Piaget goes even further, finding the ultimate laws not in biology but in mathematics.) But there is no reason to assume such broad generality of explanatory principles, other than to simplify man’s quest for order in the universe. It is perfectly plausible that family systems arise and function through processes uniquely their own. Any similarities to other forms of organization—human intelligence, group behavior, international relations—may come about in several ways:

1. Human intelligence reflects the discourse frame in which it is acquired during infants’ apprenticeship to adults.
2. Decision-making processes, by groups as well as by individuals, reflect the basic organization of human intelligence.
3. Skills learned within the family transfer to people’s behavior as members of other systems.
4. Similarities may also be due to coincidence.

5. Apparent similarities can result from distorted perceptions of phenomena by social scientists, in their quest for order.

There are reasons to believe that the similarities are due to the first three causes more than to the last two. The important point here, however, is that there is no scientific basis for considering the similarities to be due to guiding principles of the universe—structuralist, systems-ist, or otherwise. Furthermore, as Cannon made clear, whatever general principles we can find are merely the starting point for research. If we use a metaphor—for example, “a family is like an organism”—it is only so as to be able to proceed toward an understanding of all the ways the metaphor is inadequate. “A family is like an organism, except that its parts all have separate lives; how can that be?” (We shall return to this question several times.)

Two kinds of description are necessary to psychological theory building: P-models and C-models (Kaye, 1977, 1982). Both are perpetually incomplete. A P-model (P for *process*) has the virtue of describing how a system seems to work in real time; for example, one possible P-model of the situation Heller captured in Excerpt 2 would be “adolescents’ questioning of parents’ values leads the parents to feel rejected and frustrated, which makes them impatient and defensively deprecating, which elicits a defensive reaction from the adolescent.” A psychologist would then push toward a more detailed P-model by investigating each of those actions and reactions in further detail. The aim of explanatory theories is to be as specific as possible about actual mechanisms while still remaining simple and general enough to be useful.

C-models (C for *competence*, in Chomsky’s, 1965, sense) describe the results a system is capable of producing, without attempting to specify the causal chain by which those results come about. A C-model of the parent-child relationship during adolescence might be “mutual alienation plus mutual defensiveness.” This refers to the same phenomenon as the P-model, again from a systems perspective, but it makes no attempt to specify what causes what. Like metaphors, C-models are a necessary step in labeling the processes that are most worth understanding, but only P-models express those as processes and articulate them schematically.

Unfortunately, P-models are complicated, often inelegant, usually boring. C-models, by virtue of their reductionism, tend to be elegant and impressive. Also unfortunately, P-models often suggest a linear causal sequence, especially in developmental psychology, where until recently the parent was seen as cause and the child as effect. Hence, the lack of causal sequence in C-models may make them more attractive to theorists who try to go beyond simplistic linear causation models. But the sample P-model presented above is *not* linear; it is, in fact,

systemic. It is a fallacy to regard causal models and systems approaches as antithetical. One can (and should) still seek theories about how things work in real time (L'Abate, 1976), about what leads to what, even when one knows that the direction of effects in open systems is not linear.

A family is not an organism. The organic analogy, as a scientific heuristic device, dates back at least as far as Comte, who christened sociology 150 years ago. The metaphor itself is as ancient as literature (someone is head of the family, or is his father's right arm, or relaxes in the bosom of his family, etc.). Although, as suggested above, the similarities between social systems and organisms are probably not coincidental, it may be more useful now to emphasize the *differences* between social systems and organism systems. Because of those differences, the statement "families are systems" does not explain anything.

An organism is a physical entity, its parts all mechanically connected and all with fixed specialized functions. Its memory resides in an identifiable organ, its actions are directed by that same organ, and communication among the organs is conducted through fixed pathways. We are still ignorant about much of that organization, particularly within the brain, which apparently does not reflect the "fixed pathway" structure found in the organism as a whole. Nonetheless, we have a physical basis upon which to map the processes of perception, memory, emotion, action. We have no such physical basis for an analogous discussion of *family* processes. Where is the family's memory? What does it mean to say a family "has energy," "is motivated to change," "struggles to maintain its identity," "acts to restore its equilibrium"? This is the Locus question. In reality, it is not families that perceive, act, remember, or possess energy, motivation, or identity; it is people who do so. Yet they do so in a concerted way. And they "read each other's minds." What does that mean? It is the only way we can express the fact that family members correctly predict one another's reactions, know what each other is feeling at various times. Yet it is hardly an explanation.

Family members are *each* intact organisms. They are practically identical to one another in structure—compared with, say, the differences between a heart and a liver. The members replicate, rather than being differentially assigned, the capacities for perception, memory, emotion, action, and communication. Their specialized roles are learned, not fixed. This needs no more evidence than the fact that those roles vary across families and even more so across cultures.

Not only are the members of the system physically detached from one another, they are also detached in time. All parts of an organism begin and end their life together. All family members enter the system

and leave it at different times. Children move into adult roles and form new families, yet also perpetuate their old family identity; so long as offspring continue to be produced and to identify with the family name, we can speak of a family existing for many generations: the Adamses, the Batesons, or the Hatfields and McCoys. Continuity of identity requires the young to be able to read and internalize the previous generation's minds, find mates compatible with the family patterns they have acquired, and produce a new generation in their turn.

All these mysterious processes are ignored if we interpret the organic analogy too narrowly. Certainly, a family is a biological phenomenon. It does have certain structural similarities to other levels of biological organization. It has the properties of goal directedness, coordination, feedback, adaptation. But those properties are not necessarily achieved through the same processes that account for them at the organism level. And the analogy does not necessarily generate any sensible hypotheses about family functioning.

Sociology is not psychology; family therapy is not family psychology. A third potential obstacle to a psychology of the family is the fact that developmental psychologists are relative latecomers to the field. Concepts and issues already seem to have been staked out by sociologists, anthropologists, and clinicians, often on territory that we psychologists must also share. This would not be a problem, since the same ground can be mined for different minerals, except that the first explorers of a field tend to chart roads through it that inevitably affect the way later explorers see it.

Sociology obviously has much to teach us; but it cannot answer our questions, because it *assumes* a social entity. In that science, C-models pass for explanation. Never having had the possibility of tracing real-time processes as psychology can (sometimes) do, sociology has depended upon the very structural/descriptive/metaphorical models we hope to go beyond. Sociology, like systems theory, provides some C-models of the family; psychology has yet to provide the corresponding P-models.

Furthermore, the methods of statistical regression, which (besides anecdote) are sociologists' chief methods of research, may not be sufficient for the psychologists who would embrace the questions to be discussed below. We do, of course, use correlation coefficients, factor analysis, and path analysis to test hypotheses. Ultimately, however, we may also have to use experimental designs. In the same way that individuals can be observed under laboratory conditions, assigned to intervention versus control groups or to pretest-training-posttest designs, so can dyads and whole families. The sociologist may be more

concerned with what actually happens, in all its complexity, under real-world conditions; whereas our contribution to an understanding of the processes involved under those conditions may require us to control, standardize, and simplify the conditions under which we make our observations (see, for example, Gottman, 1979; Reiss, 1981; Strodbeck, 1954; Wynne & Singer, 1963).

If the relation between psychology and sociology is complementary in this respect, the relation between developmental psychology and the clinicians (psychologists, psychiatrists, social workers, and others) to whom we owe most of our current literature on the family may be more problematic. Clinicians have different goals: to develop better methods of intervention, to improve diagnosis so as to know when a given type of intervention is indicated, and to waste as little time as possible probing any family processes more deeply than necessary to meet those first two goals. Family therapists focus directly on dysfunctional processes in the types of families who seek professional help. In principle, we know that an understanding of the specieswide and culturewide processes through which all families develop would be of approximately the same value to the study of dysfunctional families as the knowledge of human physiology is to the study of disease. In practice, however, the basic questions are harder to get funded. Research money and time are invested directly on applications of inadequate theories, on ways of intervening with dysfunctional families before we understand family processes in general. (Should cancer research funds be spent testing every combination of chemotherapy and radiation therapy, or should they be spent on basic cell biology, immunology, genetics?)

At this point, we do not even know what dysfunctional families represent in terms of universal family processes. Are their problems due to the absence of normal functions? Are they due to normal processes being carried to extremes, without adequate regulation or counterbalancing actions? Or do functional and dysfunctional families simply differ in goals, using substantially the same interaction and developmental processes to achieve them? The question is not whether families with serious problems are normal (they are) or whether normal families have problems (they do). The question is whether families seen clinically provide an adequate data base for investigating normal family processes. We might spend 100 years studying what goes on in the types of families we come into contact with as therapists, without learning much about the processes that are missing or impaired in those families. The latter may be what we most need to know in order to help them. So the observation of well-functioning (effective, adaptive) families is a crucial part of developmental psychology's task (Kan-

tor & Lehr, 1975), and the vision of family interaction that one gets from a clinical sample may be as much an obstacle as an aid.

Finally, the family therapy literature happens to have distorted several of the most important concepts pertaining to systems. Two examples will suffice. One is the concept of open versus closed systems. As explained above, all organic systems are open, which means that they exchange resources with their environments without dissipating their energy and organization. In fact, they continually adapt so as to avoid such dissipation. Closed systems, such as river systems and solar systems, lack the ability to adapt so as to preserve their relationship to their surroundings. They may survive for millions of years, but their inexorable course is one of decay (entropy). Open systems may be seen as brief anomalies along that course, when complex organization and coordination processes stave off the decay.

The words *open* and *closed* are not the best ones to convey this important distinction, but they are the words we must use if we are to profit from what general systems theory can teach us about open systems. *All* families are open systems, including those that appear "closed" in the sense of rigid, insular, and enmeshed (Kantor & Lehr, 1975; Olson, Sprenkle, & Russell, 1979). In fact, the latter type of family displays the characteristics of an open system (coordination of the parts to stave off entropy) more intensely than the looser, disengaged type of family. Dysfunctional families *do* adapt constantly to outside perturbations; the problem is that they adapt only so as to perpetuate their rules of interaction rather than to survive and thrive in a changed environment. These adaptations are *maladaptive* for the members as individuals. Either they must sacrifice themselves, or the family structure as a whole must eventually collapse.

The words *open* and *closed* are frequently applied intuitively by clinicians, suggesting that some families are closed systems. This confounding of the metaphor only makes it more difficult to ask the most important theoretical questions about families, for the idea of systems changing from closed to open and vice versa has no meaning in terms of the broader theory of social systems.

A second misunderstood concept is homeostasis, which in systems theory means the ability to restore a steady state—in an open system, by a purposive organized direction. For example, our metabolic rate increases if our body temperature falls below 98.6°F. It decreases whenever our temperature rises above that level. By analogy, families are usually described in the clinical literature as trying to restore homeostasis when they resist therapeutic change. (Like the metabolic system, they slow down when things get too hot.) The therapist's lament, that identified patients' families frequently strive to maintain

them in the “sick” role, is encountered by the student of family therapy as the essence of “systems thinking.” Yet, as Ackerman pointed out long ago: “It is a misconception to consider as ‘homeostatic’ the strivings toward a state of static equilibrium that we observe clinically in certain patients. This is not homeostasis; this is psychopathology” (Ackerman, 1958, p. 71).

The semantic problem is that homeostatic does not mean static. It means adapting, as when a family successfully launches its adolescents and develops new forms of communication, affection, interdependence, and autonomy. (*Equilibration* is a better word than *homeostasis* because it does not imply that the end state will be the same as the old state. Technically, homeostasis means the continual restoration of a steady state, such as an optimal body temperature, whereas *equilibration* means achieving a balance between opposing forces, not necessarily returning to any given state.) Specific patterns are adjusted, new patterns are evolved, so that the social system’s identity and broader functions are preserved. However, giving the process a name does not constitute an explanation. It is merely the first step toward asking good “how” questions.

TEN GOOD QUESTIONS FOR A PSYCHOLOGY OF THE FAMILY

The following list of unanswered questions is an attempt to lay the foundation for a developmental psychology that takes the family system as its subject. All 10 questions begin with the word *how*, to emphasize that we need to investigate the actual processes, working toward more adequate P-models. In each case, important work has already been done; but progress will be limited until we confront the Locus question—the problem of where a family’s knowledge, beliefs, values, goals, actions, and patterns of interaction actually reside.

How does a family adapt over time, while retaining its identity? Precisely what adapts? Consider the major adaptation that must occur when parents learn, for example, that something is wrong with one of their children. Is it a matter of adaptation in the two people? Or does the narrator here speak for “we” in a more complicated sense?

Excerpt 3: By now, my wife and I have had our fill—are sick and glutted to the teeth—of psychologists, psychiatrists, neurologists, neurosurgeons, speech therapists, psychiatric social workers, and any of all the others we’ve been to that I may have left out, with their inability to help and their lofty, patronizing platitudes that we are not to blame, ought not to let ourselves feel guilty, and have nothing to be ashamed of. . . . Why can’t the simpleminded fools understand that we *want* to feel guilty, *must* feel guilty if we’re to do the things we have to? . . .

We hate them all, the ones who were wrong and the ones who were right. After awhile, that made no difference. The cause didn’t matter. The prognosis was absolute. . . .

“If only we hadn’t had him,” my wife used to lament. “He’d be so much better off if he’d never been born.”

“Let’s kill the kid,” I used to joke jauntily when I thought he was just innately fractious (I used to carry color snapshots of all three of my children in my wallet. Now I carry none), before I began to guess there might be something drastically wrong.

I don’t say that anymore. (Heller, 1974, pp. 497–499)

The couple has to adjust, but they have to do so in a way that allows them to remain the same “we.” By analogy with other kinds of open systems, we say that a family must constantly reorganize and differentiate new specialized subsystems—in this case, the doctor-hating subsystem—if it is to go on functioning as a unit. Differentiation, which means creating the new patterns from within the old repertoire, is what ensures the continuity in the family’s sense of identity—as opposed to having the solution tacked on by an external authority. But when we call it *differentiation*, we are merely drawing an analogy to embryogenesis without explaining anything: How does it really occur, in the action schemas of individuals and in such a coordinated way that their whole family can be said to have adapted yet remain the same family?

Suppose that one were to attempt a P-model of family adaptation in response to the severe trauma alluded to in Excerpt 3: cerebral palsy in one of the children. Assuming such a task were undertaken by investigators who had observed many such families over a period of years, what would their task involve? How would it be different from the kind of systems analysis we are already familiar with? It would be specific enough to be tested against new cases, which means specifying operationally the observable events that would confirm or disconfirm the model. If we were to hypothesize, for example, that both parents’ guilt provides their motivation for coping (as Heller’s protagonist claims), then families against whom the model is tested had better display first guilt and then coping—but not the latter without the former, or the P-model must be revised.

To use a more everyday example, when mother takes a new job, it requires every other member of the family to adapt, both in their relations with mother and in their relations with each other. Without this mutual adaptation and consequent development of the family as a whole, individual transactions with the environment would lead toward dissolution of the family (entropy). The function of adaptation is to preserve the family’s identity despite those individual transactions. (Identity means the members’ sense of belonging to an enduring, dis-

tinct unit.) But we need to go beyond this broad level of generalization to models of the specific communication processes that occur in response to such events. Can we predict the flow of effects from mother through the other family members? Does it depend upon certain aspects of the structure of that particular family? Upon their history? Is there a set of adaptations that might occur prior to the new job, to prepare the members to cope with its later consequences? How does the system as a whole, through each member, place limits on the extent of deviation from family patterns that will be tolerated? (Obviously, all of the questions to be discussed in the remainder of this chapter overlap with one another.)

Central to the problem of adaptation with continuity, and essential to the definition of open systems, is the notion of homeostasis or self-regulation. Observers of families, regardless of theoretical persuasion—from Freud (1920/1963) to Bateson (1949) to Haley (1976) and Bronfenbrenner (1979)—discuss the regulating sequences by which systems resist significant change. In therapy, this resistance means one has to convince the patient system (whether an individual or a family) that giving up its symptoms will be a relatively minor adjustment for the sake of preserving its ego or its family integrity. In well-functioning families, when a particular member appropriately ceases to perform some function (for example, by growing up and moving out of the home), that role will have to be taken over by someone else or compensated for in other ways.

We know what homeostasis means at the level of the individual organism. We can spell out some homeostatic mechanisms in specific terms. Thermoregulation is the classic example; oxygenation of the blood is another. In these cases, P-models indicate what leads to what, in a time sequence and in actual physical pathways. Although the models are inevitably incomplete at many points, they correspond to real mechanisms, and they are subject to revision the more those mechanisms are understood in detail.

When homeostasis is invoked to account for a *family's* behavior, there is no such model of pathways and step-by-step mechanisms. To predict that “something will happen to restore the parental hierarchy (or the absence of a hierarchy),” for example, is like saying “the body's temperature will return to 98.6°” without having the vaguest notion of how that regulation occurs. Family therapists are interested in filling in the steps of homeostasis in each particular family with which they work, but this field has not progressed to the point where anyone has undertaken a general P-model of homeostasis in all families, or even in all families of a particular type.

How do differences among families come about? This question is inseparable from the previous question. If we say, “although they

have changed, they are still the same family,” we do not simply mean that the same people are still living together. We mean that they continue to be different, in certain ways, from other types of families: more religious, perhaps, or more competitive or more intellectual or more affectionate.

A subset of all the characteristics that make a family unique, only those characteristics the members are aware of, are included in their identity as a family. In fact, their identity may also include *false* beliefs about being different. More important than any objective comparison that might be made between this family and others is the family's own *consciousness* of being different. Their beliefs about what makes their family unique are, in fact, part of each one's individual identity. “We are . . .” is inevitably defined in terms of “others are not.”

Excerpt 4: Some melting pot. If all of us in this vast, fabulous land of ours could come together and take time to exchange a few words with our neighbors and fellow countrymen, those words would be *Bas-tard! Wop! Nigger! Whitey! Kike! Spic!* (Heller, 1974, p. 284)

The beliefs that family members hold about their family's merits, deficiencies, values, and rules partially determine how they behave. How does that work? And where does that consciousness reside? It can only be in the minds of the individual family members, yet it is somehow shared. Reiss (1981) expresses the Locus question when he considers how a family can be said to have an idea: “Despite the charms of the concept of shared construct, however, it is immediately apparent that there are problems with it. The first problem is the concept of ‘shared.’ Constructs or beliefs or conceptions are entities ordinarily residing in the heads of single individuals” (Reiss, 1981, p. 66).

Do shared concepts come about through verbal instruction, through conscious discussion of family traits, or by each member analyzing patterns of interaction, comparing them with those observed outside the family, and translating them into a set of generalizations about their family? It is reasonable to assume that the sense of identity is based on some real characteristics of the family; but at the same time, the members' beliefs about their family identity affect their behavior and thus create many of those differentiating characteristics.

When we ask about the origins of differences among families—differences of either kind, externally validated or internally believed—we are asking about causal processes. It is not a question of estimating the relative importance of nature (heritability plus assortative mating) versus nurture (learning), or even of how much of each. It is a question of *how* all the variance develops over the life cycles of all the individuals who become parts of the family. If we were to be satisfied with correlations (e.g., less-educated parents tend to be more authoritarian) or with generalizations (e.g., Italian-American families tend to be more

enmeshed than Anglo-American families), we would be retreating at least one scientific generation. What we need are P-models of the *processes* by which a family becomes uniquely itself.

How is the development of a family constrained by the community and culture, and vice versa?

Excerpt 5: And I sometimes feel that I would not spend so much time and money and energy chasing around after girls and other women if I were not so frequently in the company of other men who do, or talk as though they wanted to. (Heller, 1974, p. 65)

Excerpt 6: "Listen," I exclaim to my children frantically, "you don't have to do what everybody else does. You can be whatever you want to be. I'll help. You don't have to join the Cub Scouts or play baseball or go to Sunday school or even to college. What do you want to do?"

"Join the Cub Scouts and play baseball," says my boy.

"Go into my room and play my records now," says my daughter. (Heller, 1974, p. 165)

It is clear that a developmental psychology of the family must be a cross-cultural enterprise in the same way that an individual psychology must be at least a cross-family enterprise. We need to understand the extent and limits of cultural effects upon family development. That means the effect of cultural and subcultural *differences* upon differences among families in their adaptation. For example, why and how do Anglo-Saxon Protestant families typically develop much more interpersonal differentiation and intergenerational autonomy than do Chinese-American families?

We can think of the family as the middle level of three basic levels addressed by the social sciences: the individual, the family, and the tribe. When speculating about the evolution of man, scientists have paid too little attention to this middle level. For other species, it may be appropriate to jump, as modern genetics has, from the organism to the population (tribe) level. For human genotypes, however, evolutionary adaptation has probably depended less on the success of phenotypes—individual carriers of the genotype, each of whom is either more or less fit to survive—than on the success of their families in equipping them for survival. For example, a newborn infant's "innate" endowment includes not only intrinsic behavioral processes but behavioral processes built into parents as well (Kaye, 1982). In fact, it is not only the human organism or the human mind that has evolved in our species; family *processes* had to be specially adapted for the transformation of human offspring into full-fledged family members.

At the macro, or cultural level, it is also true that cultural evolution has depended to a large degree upon the abilities of families to pass

down skills and traditions from each generation to the next. And just as the evolution of our species has depended on the evolution of family processes, so have different cultures required their own cultural adaptations in family structure and dynamics.

However, we should not assume, as traditional models of the family and society do, that the effects are all in the direction

SOCIETY → FAMILY.

An evolutionary perspective suggests that the nature of human families has constrained the development of societies more than the other way around. Laws, religions, languages were not free to evolve in any direction that might have been adaptive for a particular population. They were constrained by the fact that they had to be transmissible from adults to children. Every natural language reflects constraints of the human brain, its cognitive capacity and its learning capacity, but also constraints of interpersonal interaction processes that have evolved for parents and children (demonstration and imitation, for example), without which any linguistic invention would have expired within a generation.

Those family processes are therefore more than just a missing level of analysis in the social sciences. They are what we must understand if we are to progress any further in explaining development at either the individual level or the societal level.

Let us hypothesize that there are certain features of family process that are indispensable to individual development and certain features that are indispensable to the adaptation and survival of any larger community. As evidence for this general proposition, one can cite the radical attempts to disrupt family bonds that followed both the French and the Russian revolutions. In both cases, these attempts failed utterly and were soon reversed. However, we know relatively little of what the specific psychological processes within the family are upon which the nature of man and society depend—not to mention how those processes evolved or how they are rediscovered by every family.

How does the need for the family to develop affect individual development, and vice versa? We say that both the individual and the family are open systems and that all open systems adapt to their environments in order to survive. Yet the individual and the family each constitute part of the environment to which the other must adapt; that is, individuals' development necessitates adaptations in their families, but the development of the family system as a whole depends upon—indeed, consists of—adaptations in its individual members.

It might be the case empirically that one of these levels of development is prior to the other: for example, that the only reason family

systems develop is because they consist of members who are changing over time.² A family of *closed* systems (a network of computers, for example) would not develop; and the reason is to be found not in its structure but in the fact that its constituent hardware cannot adapt. (Software can adapt, but only to the extent that it is programmed to do so—by humans.) One could postulate that any system of closed systems must be a closed system (with the miraculous exception of the amino acid molecules that compose life itself) and any system of open systems must be an open system. Therefore, families undergo development simply because their individual members do.

On the other hand, we could entertain the opposite hypothesis. Family development could be the dominant process, and individual development mainly a consequence. Perhaps the idea of an intrinsic (within the individual person) motive to develop is a myth. It could be that the tendency of individuals is to remain the same, as much as possible, and that any long-term course of psychological development is actually in the service of the continual adaptation of the family. This would explain why individuals have to die and be replaced by new individuals; the organism is too conservative to go on changing and changing.

Excerpt 7: I suppose it is just about impossible for someone like me to rebel anymore and produce any kind of lasting effect. I have lost the power to upset things that I had as a child; I can no longer change my environment or even disturb it seriously. They would simply fire and forget me as soon as I tried. They would file me away. (Heller, 1974, p. 15)

Excerpt 8: I know at last what I want to be when I grow up. When I grow up I want to be a little boy. (Heller, 1974, p. 319)

In terms of Hofstadter's (1979) generalization of Gödel's Proof, the family is the higher frame that gives meaning to the individual developing within. Yet such a recourse to mathematics remains a "metaphorical fugue," in Hofstadter's words.³ To what sort of plausible causal model might it lead? What does it mean to say that families have an intrinsic need to develop?

What it might mean is that equilibration is inevitable wherever organisms are required to interact with one another. In other words, perhaps a relationship between people can never just *be*; it must always

² We can reject the idea that families develop *because* they are open systems. In reality, we describe families as systems because we find that they do develop; what motivates them to do so is neither their "nature," as Aristotle would have it, nor the definition of an open system, but some mechanisms as yet unspecified.

³ We need feel no hesitation about inverting the fugue, so far as the relation between family and society is concerned. We need not see society as a higher, or outer, frame. As suggested in the preceding section, families are the internal frame that give meaning to the cultures developing around them.

become and continue to become. Looked at in this way, the very existence of a family (or any social system) would be conceived of as dynamics rather than as structure. Just as atoms are really motion and energy rather than particles, perhaps families have to be defined as continuously changing relationships rather than as sets of people. If permanent equilibrium among the members were ever achieved, the family would vanish.

At the individual level, Piaget (1967) refers to equilibration between assimilation and accommodation. (Assimilation means responding to new events by imposing one's familiar skills and perceptual categories upon them; accommodation means modifying one's skills and perceptual categories as new conditions require.) Criticisms of his general theory (Haroutunian, 1983; Kaye, 1982) center on its being a metaphor rather than an explanation. However, a similar theory can be applied to the equilibrium between individuals and their families in a way that is neither circular nor untestable. The individual has to adapt to a changing system without changing himself so much as to lose his identity. This, too, leads to deeper questions—for example, how does the person know how much change is too much? Nonetheless, this approach, seeing the individual as driven by the family's development (and by other systems' development), would come closer to being a testable causal theory of human development than Piaget's, which reduces equilibration to a universal (structuralist) property of all biological systems.

How do families create, recruit, and indoctrinate new members?

If we think of schemas (skills or pieces of knowledge) as programs complete unto themselves and as having to be somehow inserted into the brains of new system members so that they can perform their roles properly, then it is extremely difficult to imagine how such learning ever takes place. The action schemas about which people receive direct instruction are a relatively small proportion of all the things they learn how to do—and even those actions are composed of hundreds of subroutines, few of which are ever discussed explicitly with instructors or receive any direct reinforcement. The analogy between skills and computer programs (e.g., Kaye, 1977) falls flat when we realize that older family members do not behave like programmers, in the sense of writing and debugging.

Instead, suppose we focus on the fact that most human skills are incomplete. They consist of links which only form a chain when linked to the actions of others.⁴ Even so solitary an act as walking along the

⁴ This idea could easily be expressed within the programming metaphor in terms of READ or INPUT statements, but that might be misleading. The way programs are written has nothing to do with the way skills develop.

sidewalk depends upon unconscious expectations about the behavior of other people—for example, knowing that you will avoid bumping into one another by each stepping to the right. A recently arrived visitor to England causes a few collisions or near-collisions until he realizes that the other pedestrians expect him to step to his left, as they do. The more uniquely human the skill, the more its execution is a matter of anticipating the responses of someone else. There could not be writing without reading, selling without buying, decorating without admiring. This fact will be referred to as the dovetailed nature of human skills. (Yes, this too is merely a metaphor, but it may lead to a theory.)

Sears (1951), in a neglected paper worth resurrecting today, emphasized the importance of this dovetailing of action schemas: “These anticipatory reactions to [another’s] behavior are the *expectancies* that make the behavior of the two people truly interdependent” (p. 480; italics in the original). The most promising lead we have toward an answer to the Locus question remains his still-untested theory that mutual expectations are the behavioral mechanism maintaining cohesion and stability in groups of two or more individuals.

To account for the fact that possessors of skills are able to entrain novices into their patterns of interaction—hook them onto the chain—we must add a second concept. Some forms of interaction seem to have the special function of socializing new members of systems. I refer to these forms of behavior as *parental frames*, because they are most obviously manifested in parent-child interaction. They appear to be species-universal in their general forms, culturally institutionalized in particular forms. Ubiquitous frames include: demonstration, discourse turn-taking, feedback, completing a learner’s apparent intentions (including the intention to speak), and serving as an extension or backup memory (Kaye, 1982). These and other parental frames make it possible for individuals who are less skilled (in the rules of a particular family and, often, in general) to extend their competence step by step. The system members who provide frames tend to fill in the missing links in a learner’s current competence, which makes it possible for the system to function despite the learner’s inadequacies while at the same time it presents repeated demonstrations and feedback to guide the learning process.

Many of the same framing processes are used throughout life, when a new member enters any system.

Excerpt 9: There is this wretched habit I have of acquiring the characteristics of other people. I acquire these characteristics indiscriminately, even from people I don’t like. If I am with someone who talks loud and fast and assertively, I will begin talking loud and fast right along with him (but by no means always assertively). If I am with someone

who draws lazily and is from the South or West, I will draw lazily too and begin speaking almost as though I were from the South or West, employing authentic regional idioms as though they were part of my own upbringing and not of someone else’s. (Heller, 1974, p. 64)

Imitation is a special genius possessed by our species, from which all of our “higher” cognitive processes are derived. It remains a great mystery to which this chapter cannot do justice.⁵ But theories of imitation are at least beginning to be couched in terms of interaction between learner and demonstrator. Someday perhaps all forms of socialization will be seen thus.

There are at least three fundamentally different routes through which people enter families: birth, marriage, and adoption. These three cases differ primarily in terms of how much the new member knows about the rules of the system at the outset. The way the old members socialize the new depends on that initial knowledge.

Newborns are the only ones who do not have to unlearn any prior interaction patterns as they learn to be members of the family; but they do not have the benefit of all the transferable skills, including language, that an older recruit brings to the learning task. The process of creating a system member—in fact, a person—out of the raw material offered by a human infant is a process of apprenticeship, during which adults and older children co-opt the infant’s limited skills. They create frames within which a very little bit of competence can make the infant appear, to himself as well as to them, to perform cognitive and social actions of which he is not yet really capable on his own. Performing those actions within the parental frames guarantees the infant optimal feedback to use in developing his skills. Little by little, the adults loosen the frames, expecting more links from the infant as his skills increase. The process is simultaneously cognitive (sensorimotor development), linguistic, and affective (individuation of the self). At all three levels, it is a dialectical process.

When a family incorporates an older child (older than nine months or so) through adoption or fostering, the child’s prior experiences are bound to make a difference in the kind of substrate they provide for socialization into the new system. This fact suggests that research on the process of adoption should consider the problem of transferring into the new system social interaction patterns learned in prior systems, not merely the effects of traumatic early experiences or of the fact of adoption itself. (Almost all the research to date deals with apparent effects of the fact of adoption, or of knowledge of the fact, rather than with adoption as a developmental process over time.) Of course,

⁵ For a discussion of the large literature on infants’ imitation of adults’ acts, gestures, and language, see Kaye (1982).

when infants are adopted at birth, their cognitive status is like any other newborn. But their apprenticeship may be affected by their parents' expectations, hopes, and fears (Kaye, 1982).

When a new member enters by marriage, imitation of the family patterns certainly plays a large role; but the process does not have to start from scratch as with an infant. Nor does it have the benefit of the child's flexibility and genius for imitation. Joining a family would be difficult indeed if mates were assigned at random. Fortunately, people usually select mates on the basis of a commonality in their assumptions about family roles, goals, and patterns of interaction. In societies where marriage choices are made by the heads of the young adults' families rather than by the prospective spouses themselves, these arranged marriages are probably even more culturally endogamous than romantic ones are. So the mutual socialization of the new partners normally takes place on a foundation of experience in similar families. The process is bound to go more smoothly the better the new spouses fit into the joints and seams of social schemas developed with the partners' original others—their families of origin. This is a familiar truth about mutual expectations in the course of interaction sequences; but it is also true at the intrapsychic level of object relations (Ackerman, 1958; Boszormenyi-Nagy, 1965).

At this point, a third new concept must be introduced along with dovetailed skills and parental frames. It is the idea that the whole self is dovetailed. The self is not a constituent of a given individual, but one of those "shared" constructs to which we have been alluding. This means only that Person A's self is constructed, at least in part, of elements that appear in B's, C's, and D's (for example, his parents', siblings', or spouse's) constructs of who A is. The self is constructed and internalized, but not by the individual alone. It is a matter of mutual projection and introjection between significant others (Boszormenyi-Nagy, 1965). When we speak of validating the self within one's family, we are referring to interactions akin to those in more mundane forms of social behavior—for example, in constructing a sentence or a meal. Perhaps the links have a broader time frame and a more abstract expression, but the process is no less a social one.

We can represent the self in a P-model as a real-time process: "a special kind of loop or detour taken by consciousness in the course of action, whenever our attention falls upon some aspect of our situation to which we anticipate a social response" (Kaye, 1982, p. 209). For example, a toddler manifests self-consciousness when, after falling down, he looks around to see if anyone was watching. This is where Gödelian conceptualizations become relevant (Hofstadter, 1979): The self can only be referred to in the context of a larger frame. "This behavior I am experiencing is observable by some *other* experiencer/

behavior, which is not-I"—and that awareness is what, recursively, defines "I." I am aware (i.e., the person who wrote the sentence you are reading was aware, when he wrote it, that you might be aware) that the definition of self quoted in the first sentence of this paragraph is inadequate. It does not deal with "thinking about the self" as a form of action, nor at the other extreme does it suggest how the self can affect one's actions unconsciously. If the definition has any heuristic value, it is to remind us that the self is behavior, rather than a thing somewhere, and that our selves derive from the fact that so much of what we do requires us to anticipate how the responses of others will coordinate with our own.

This chapter is not the place for an extended discussion of selves and family systems, but there is one more point to be made. It is a mistake to consider an individual person (whether one means by that the person's self or simply the sum total of the person's skills, values, goals, etc.) as a "subsystem" of the family. Perhaps the marital dyad or the mother-child dyad is a subsystem, but the individual person is *more* than a member of the family. While the family is making the infant one of its members, it is also making him a member of the community. He will share its language and culture, soon acquiring teachers and other significant investors in his self outside the family. An adult who marries into the family also remains a member of other systems, and the new family only dovetails into a part of that person's self. As the self is not entirely within the person, so the person is not entirely within the family—nor is it the function of parental frames to try to swallow the person up.

How do families mediate between the community (or society at large) and their individual members? Consider, for example, the effects of communities upon child development. Obviously, the family enters the picture as an intervening variable—but how? Bronfenbrenner (1983) has recently reviewed the research on community effects upon childrearing. He found two serious flaws in the research to date. One flaw was the tendency to conclude that differences in childrearing in different kinds of communities (e.g., urban or rural) were *results* of living in those communities rather than, equally plausibly, part of the reason different families choose to live where they do. The second problem, central to our present discussion, was "the now-familiar failure to distinguish between immediate and direct effects—those community features that influence children directly versus those that operate through the family" (Bronfenbrenner, 1983, p. 45).

The family system, with its rules, its shared knowledge, and its shared purposes, is a buffer between the individual and the wider world. One way in which families serve as buffers is that information is literally

filtered through family members—for example, the child's knowledge about the world of work or the parent's knowledge about the adolescent drug culture. Reiss (1981) describes an extreme example of a family whose mother was the sole source of news. But actually, in every family, *all* shared constructs are products of the information-gathering and cognitive processing of individuals. Then the shared constructs come into play in each individual's subsequent cognitive activity and in their communication with one another.

Even more important than the filtering of facts may be the muting or intensifying of the emotional impact of outside events. For example, the personal significance of a war, an assassination, an economic depression, or a sporting event is a function of how the event is perceived and reacted to by one's family.

Another sense in which families mediate between the world and their individual members is through shared perceptions and assumptions that each member internalizes and hence carries into his or her life outside the home. We are familiar with some of the ways language (Whorf, 1956) and other aspects of culture (Berger & Luckmann, 1966) bias perception, thought, and action in members of one society as compared to another. We can hypothesize that family systems have their own microcultures, determining what their members see and believe.

Excerpt 10: I don't want my wife ever to find out she drinks too much at parties and sometimes behaves very badly with other people and makes an extremely poor impression when she thinks she is making a very good one! . . . As neatly and promptly as I can, before much damage is done, I will move in to rescue her, to guide her away smoothly with a quip and a smile. I never rebuke her (although I am often furious and ashamed); I humor her, praise her, flatter. I want her to feel pleased with herself. (I don't know why.) (Heller, 1974, pp. 98–99)

Excerpt 11: One of my children—I forget which one—had a bad dream years ago about snapping fishes swimming in the bed, and I remembered instantly I had suffered those too.

"There were fishes in my bed," I sobbed, shivering. "Swimming around on the blankets."

"They aren't there now," my brother comforted me patiently. "Keep looking and you'll see." (Heller, 1974, p. 514)

Although we can point to instances of family members shaping one another's world views both consciously (Excerpt 10) and unconsciously (Excerpt 11), we have no idea what cognitive processes are involved, to what extent they are different from those due to the larger culture or pave the way for the latter, at what ages and through what interactive mechanisms they operate.

How do families act through their individual members' encounters with the world? This turns the previous question inside out. There we asked about the family as mediator between the individual and the world; here we acknowledge that individuals are the mediators between social systems.

Reiss (1981) offers a P-model called the cycle hypothesis to explain how families form links (through individual members) to their communities while being selective about which of the community's subsystems they choose to link with. Like any model, it needs to be filled in. One part in particular cries to be filled in, for this model begs the Locus question: Where are the decisions about selectivity made? It is fine to conceive of the family as a unit, but the fact remains that it is *individuals* who do the acting, speaking, observing, and thinking.

A sociologist who analyzes the relations between family and community makes the simplifying assumption that the whole family's interests are involved whenever one member spends money, disseminates information, or obtains resources or information for the family as a whole. Yet such processes obviously require a flow of information, within the family to a liaison member who interacts with the external system, back through one or more liaisons, and among the family members again. It is up to psychologists to characterize those intersystem transactions in terms of intrasystem, intermember communication patterns.

Excerpt 12: "Will you have to travel more than you have to travel now?"

"No. Probably less."

"Will you make more money?" my daughter asks.

"Yes. Maybe a lot more."

"Will we be rich?"

"No." . . .

"I don't want you to be a salesman," my daughter exclaims with unexpected emotion, almost in tears. "I don't want you to have to go around to other people's fathers and beg them to buy things from you." (Heller, 1974, pp. 106–107)

We can see such intrasystem communication processes at work on any particular occasion; but we know virtually nothing about what sort of regular patterns occur across occasions and/or across families.

How does an individual bring about changes in other individual members and in the family as a whole? Because the individual is only one member of a larger system, it is easier to think of him or her as subject to being changed by the family than as having a significant influence upon it. Systems are extremely powerful. On the other hand, since they consist of nothing other than their members, their memory (that is, their stable identity) consists only in the memories

of the individual members. Whatever a family is like, its individual members make it that way, each in varying degrees. What makes some husbands, fathers, mothers, or siblings more significantly influential than others?

Excerpt 13: Someday soon someone may be dropping bombs on us. I will scream:

"The sky is falling! They are dropping bombs! People are on fire! The world is over! It's coming to an end!"

And my wife will reply:

"You don't have to raise your voice to me." (Heller, 1974, p. 109)

Under the heading of parents' influence upon children falls what Piaget called "the American question": How can parents motivate and facilitate the optimum development of their children? Rejecting its implicit linear-effects assumption should not lead us to dismiss the question itself. It can be expressed systemically: How do parents' expectations translate into patterns of family interaction? How does each different child come away from those interactions with his or her own set of skills, values, goals, expectations—with a distinct self—and in turn maintain or modify the parents' expectations? The theory toward which this chapter is groping would answer the question in terms of the dovetailed nature of skills: Parental frames entrain children's skills when the latter are still quite rudimentary. The parents and older siblings therefore do not have to teach the child to do things their way; for the most part, they just have to do so themselves.

These ideas lead directly to our last two questions: how individuals internalize family routines and how families equip their members to join other systems. The adequacy of children's cognitive and social skills (there is really no difference) depends upon the children having learned to anticipate how their significant others will interact with them. And it also depends upon how well all that they have learned with those "others of origin" generalizes to the community in which they find themselves.

How does the individual mind internalize the workings of the whole family system? This question can be asked about any social system: Any systemic process that psychologists can identify must be known, at some level, by the members of the system.

Excerpt 14: My mother . . . had merely lifted a glass to her lips and drained it of some strawberry punch. But my daughter was watching her. And when my daughter, who was herself being trained then by my wife and me to drink from a glass and faithfully rewarded with handclaps of delight and cries of "Good girl!" whenever she succeeded,

saw my mother drink from a glass, she banged her own hands down with delight and approval and called out:

"Good girl, grandma!" (Heller, 1974, p. 193)

At least, all must know how to perform their own roles and must possess enough understanding of other members' roles to be able to anticipate the others' significant behavior and fit their own behavior into it properly. Every actor in a play needs to know his own lines plus all his cues in the other players' lines. In fact, he comes to know the whole of any scene in which he appears. What form does that knowledge take in the case of a family member, who acts in a repertory company that never plays the same scene exactly the same way, yet follows its own unique and binding set of rules?

This question is complicated further. Some but not all of the individual's internalized knowledge of how the family works will be conscious. Some will be common to every member, some unique to each. Some will be learnable by any person who joins the system; some will vary with age, sex, biological relationship, and previous history.

Perhaps some of the members' knowledge about intrafamily transactions is preadapted in the nature of individual human skills and in universal social processes. However, to the extent each family has its own rules, these have to be learned by the individual members. Furthermore, since we know that new members retain their individuality, we need to explain not only how they accommodate to the family's patterns but also how they assimilate those patterns to their own individual skills and styles.

Part of the explanation of our ability to internalize social scripts and rules is the fact that so much of our so-called individual behavior is inherently designed to fit together with someone else's action. Most of what we do would be impossible, pointless, or delusional if we did it in isolation. The same can be said about a good deal of the behavior of lower organisms, including human infants, but in those cases it is a matter of dovetailed evolution rather than of learning. The simplest and most universal example is the way an organism's sexual behavior fits the behavior of members of the opposite sex of its own species. The behavioral fit is as critical to reproduction as is the anatomical fit, and equally a product of evolution. Another illustration, restricted to mammals, involves the fit between lactation and sucking. But there is no species to compare with our own, in which dependence upon others transcends so many domains of behavior, including acquired, not just innate, patterns.

For example, our ability to imitate, without which we would be able to learn none of the skills that distinguish us from lower species,

depends upon the way other people provide models for us. We do not simply observe how human skills are performed and then privately imitate them; from early infancy, we engage in a complex interaction through which our parents and other elders analyze what parts of their demonstrations need to be made salient to us, while we analyze what parts of our existing schemas need to be modified (Kaye, 1982).

Given that kind of active apprenticeship, which normally begins within the family, there is ample opportunity for individual members to learn to give and receive signals about taking turns and sharing intentions, two processes essential to the dovetailed nature of human action. In fact, that is the first agenda for infants and their parents. It begins at birth, is "second nature," and is rarely accessible to conscious description. (All three of these facts suggest that the way the system's rules are internalized by members must be quite different from the logical, complete, and schematic way they are likely to appear in our P-models. But P-models can at least express, as C-models cannot, the extent to which we understand the psychological processes involved.)

How do families equip their members for participation in other systems? The family is the only social system that creates some of its members from scratch (infants). Every other system's members come in with prior training in how to be a member of at least one system, their family of origin. This original training in how to participate in a social system must be one of the family's most important functions for our species. It is also the principal means by which the family ensures its own ability to adapt and survive; for, as pointed out above, its transactions with other systems are nothing other than the successful simultaneous membership of its own members in other systems.

The most obvious family training for participation in the community is training in the community's language. Language has been and will continue to be an active field of research. Studies of language learning only began to multiply when Bellugi and Brown (1964) and others made use of Chomsky's (1965) transformational grammar to characterize the levels of language ability demonstrated by young children. These were C-models, not P-models, but they were the kind of descriptive tool that students of other developing skills still lack. Hence we know far less about the acquisition of those skills.

Nonetheless, we can make a few general observations about parental frames and the process of socialization. Families seem to do little or no direct training in the interaction rules of other systems. So it must be in learning how to be members of the family itself—with its own processes, some of which are fairly universal and some of which are

idiosyncratic—that children learn how to accommodate themselves to social systems in general. The rules themselves need not be universal; but it may be that the processes for co-opting new members and the processes for learning how to become a new member are common across systems.

We have recently had a great deal of research on how parents initiate infants in the communication skills and other expectations of the family. This, however, is only the preliminary step in making the child a member of the community. What about adolescence—the period of preparation for leaving home? Our theories about development in that stage still largely ignore the parents' role. They focus either psychoanalytically on the adolescent's inner emotional turmoil or sociologically on the peer group. Parents themselves are often blind to their own role. They sometimes experience sadness or frustration at the healthy outcome of normal family processes, their children's entry into other systems.

Excerpt 15: She is trying to establish some position with us or provoke some reaction, but my wife and I don't know what or why. She wants to become a part, too, I guess, of what she sees is her environment, and she is, I fear, already merging with, dissolving into, her surroundings right before my eyes. She wants to be like other people her age. I cannot stop her; I cannot save her. (Heller, 1974, p. 66)

As suggested earlier in this chapter, it is reasonable to assume that family developmental processes in every society include parental prods for separation at puberty. It is even possible that this prodding may occur within interactive frames derived from those the parents used for their infants' socialization into the family in the first place. This area of inquiry may be the next frontier for a developmental psychology of the family.

SUMMARY: THE END OF AN ILLUSION

We have touched upon many of the same questions that developmental psychology has traditionally addressed. A psychology of the family need not look beyond those questions for its substantive focus. It should be an attempt to reformulate those traditional questions in terms of a social system, yet in a way that allows them to be answered with scientific explanations, not merely with metaphors.

The concepts of dovetailed skills, parental frames, the locus of self outside the individual, and family as a dynamic rather than structural entity are not necessarily the concepts of greatest importance to the reader's own work. Growing out of this author's research on parent-infant interaction, they were used here as illustrations of a way of

thinking. They were also suggested as possible beginnings of a solution to the problem of how knowledge, action, and motivation can reside in a social system.

The questions discussed above are more than theoretically intriguing. Although it may seem grandiose to hope that a better understanding of family processes can prevent a nuclear holocaust, the arms race is, after all, a problem of social interaction. The foregoing questions about how one learns what to expect of one's fellow system members, about the dovetailing of many of our action patterns into the anticipated actions of other people, and about the boundaries and differences between families, can be translated into parallel questions about trust and distrust at the global level of interaction. We cannot expect to solve our most urgent social problems, either at the level of families or at the level of nations, without an adequate theory of social systems.

The principal obstacle is the very metaphor that provides our starting point: the idea that a family is an organic (open) system. If that truth is taken as an explanation, then it is a primitive, almost mystic one. In reality, it should merely be taken as a statement of our ignorance. P-models, theories about processes, are what we must work toward if we are to understand how it is possible for families and other social systems to function as if they were unified creatures.

The questions discussed in this chapter all involve how individual human beings perform as agents for a larger system. The locus of a family's *memory*—the knowledge it possesses, including its sense of identity and awareness of its own interaction rules—is nowhere other than in the memories of its individual members. Similarly, the family's *actions* are nothing but the actions of its individual members. Hence, family processes are communication processes. Psychologists know a good deal about communication at the level of how one person encodes a message and another decodes it—that is, about language, its development, and its relation to thought. Yet we know virtually nothing about what determines the pattern of messages from the moment certain kinds of events impinge upon the family until various members have been informed, decisions reached, actions taken. If that pattern were nothing but the summation of individual messages, then we would have no need to talk about the system. We use the systems metaphor because we believe that these communication patterns are organized and coordinated at the level of the family as a whole.

The questions that have been raised also involve family *development*. This does not mean listing the obvious stages that families pass through as their members grow older. It means investigating the causal relations between the development of individual members and the development of the family system. It is possible that one level of development (individual or family) may account for the other. It is also possible that both levels of development depend upon one another. In any case,

the problems to be investigated include how families create and indoctrinate new members, then give them autonomy while retaining them as members who need not live under the same roof. (The power of families is even more remarkable when we see it operating across vast distances, even transcending death.)

Individual persons are not simply building blocks out of which social organizations are composed. Social processes are fundamental and are the building blocks out of which persons are composed. Our subjective sense of individual autonomy is an illusion.

Excerpt 16: "If it doesn't work out," I kept assuring myself right up to the day of the ceremony, "I can always get a divorce."

I *can't* always get a divorce.

I don't know how it's done.

Maybe I attach too much importance to a shirt.

I'll have undershorts at the laundry. Will she let me come for them? Or will she burn them, hide them? Will she tell me my little boy is upset when he isn't? That she cannot live without me when she can? I know she'll tell me she's thinking of killing herself. The obstacles appear insurmountable. In the summer my winter clothes are in mothballs; in the winter, my summer suits are hanging somewhere else and my sneakers are packed away. How will I ever get them all together? I'd need weeks. I don't have time to get a divorce. There's so much packing to be done (she won't help). (Heller, 1974, p. 484)

Perhaps psychology, "the science of the mind," had to begin with the illusion of an autonomous mind and person inhabiting each individual body. To get started on a scientific basis, psychologists needed a clear unit of analysis. (Even social psychology drifted away from its original subject, group behavior and the "group mind," and became the experimental study of social feelings and social behavior in individuals.) Now, however, it is time to go beyond that illusion, to attempt psychological analyses of sociological processes. Although we are benefiting from a surge of clinical attention to the family, our scientific progress will not be easy.

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