

A Piagetian View of Family Therapy: Selvini-Palazzoli and the Invariant Approach

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The Invariant Approach of Mara Selvini-Palazzoli is a new development in the Milan approach to family therapy. In order to distinguish and explain it, an overview of the Invariant Approach is given. Jean Piaget's theory of cognitive development is used to provide a framework for explaining how Selvini-Palazzo-li's therapy alters the family's epistemology and facilitates change in the "family game." It is suggested that family members in therapy tend to think about their problems in a style that resembles Piaget's preoperational period. The process of therapy can be seen as geared to facilitate a shift from a preoperational to an operational style of cognitive functioning. This shift gives family members access to more adaptive ways of thinking about their problem-solving strategies.

To understand is to invent.

—Piaget 1973

Selvini-Palazzoli, Boscolo, Cecchin, and Prata (32) observe that the power to maintain pathology resides in the rules of the game. These rules dictate a general level of functioning that moves directly and without any processing from attitudes and beliefs to behaviors and feelings. The therapist attempts to discover the fundamental rule that functions to maintain a level of pathological behavior in the family. By directing interventions so as to affect this nodal point, Selvini-Palazzoli *et al.* contend that the presenting problem rapidly disappears.

Just as there is a general debate concerning how (and if) certain therapeutic methods lead to change (16), there is debate concerning how the Milan interventions effect change (15, 19). Stanton (36) and Pirotta (27) classify the Invariant Approach as strategic. They point to the use of positive connotation and prescriptions as "tactics" used to break family behavior patterns. Others, including Pirotta, have suggested that by working with the parental unit alone, Selvini-Palazzoli and Prata use a structural technique. Holding constant one part of the system pushes the rest of the system to self-correct or restructure itself (43).

We agree that the Invariant Approach shares qualities with both strategic and structural family therapies. Selvini-Palazzoli, however, emphasizes that information affecting the family's epistemology or myth is the primary instrument for change. By focusing on epistemology,¹ her approach encourages family members to work reciprocally along the dimensions of restructuring, cooperation, generating new actions (behavior), developing understanding of the system in which they function (insight), and acquiring new experiences and awareness.

Several authors have commented upon the methods by which the Milan approach, predecessor of the Invariant Approach, alters family epistemology through the use of hypothesis, circularity, and neutrality (15, 19, 29, 31, 39, 40). Penn (20) discusses what kind of information is introduced and the manner in which the family is asked to think about this information. These authors discuss change from the therapist's point of view.

Little has been written on how this epistemological evolution occurs from within the family. We will address this fundamental issue by using certain aspects of Jean Piaget's theories about the cognitive development to further an understanding of how the Invariant Approach effects change in the family.

At first glance, Piaget's theories seem far afield from family therapy and the Invariant Approach. Selvini-Palazzoli and Piaget never worked with or were influenced by each other. In addition, there are clearly some critical differences between them. Most prominently, Piaget focused primarily on the psychology of children in the process of maturation. He described how a child's developing cognitive structures may prevent him or her from performing specific operations at a certain young age. He went on to demonstrate how, sooner or later, children move on to bigger and better things. Selvini-Palazzoli, on the other hand, works with families. Families are both quantitatively and qualitatively different from children. For example, families have adult members who can generally be expected to have fully developed cognitive structures at their disposal.

In 1979, Gelcer began to recognize that applying Piagetian concepts helped to understand both the way in which the

Milan team arrived at their prescriptions as well as how the family was operating in response to this treatment. Subsequently, when she encountered Selvini-Palazzoli's Invariant Approach in 1981, she noted how, in accord with Piagetian principles, this method addressed both cognitive and behavioral components of family systems—what Piaget calls "understanding" and "success" (24). She came to recognize the close connections between Piaget's theory and Selvini-Palazzoli's practice (14), beginning with the basic assumptions that (a) there are different levels of knowing the same experience and (b) the higher the level of abstraction, the more flexible is the approach toward problem solving. Their common views regarding the origins of knowledge can be summarized in Viaro's (41) proposition that each organism creatively constructs its world within the limits of whatever biological or environmental contexts it encounters.²

Selvini-Palazzoli drew her primary inspiration from Bateson's theories. However, when she heard about the Piagetian explanation of her own and the team's work, she found it very compatible (1). It is also relevant to note that Piaget and Bateson communicated with each other and were in agreement on many basic concepts (38). In our opinion, Piaget's theory of epistemology is more amenable to providing explanatory principles for the Invariant Approach to family therapy because both are comprehensive attempts to address the course of development. We also recognize that many others have already discussed some aspects of this issue in various other forms. To take two well-known examples, Bateson referred to imagination and rigor along the same lines as Piaget's Success and Understanding (24). Watzlawick, Weakland, and Fisch's (45) discussion of the importance of the meta-level of experiences is similar to Piaget's level of concrete operations (see also 11).

Since family therapists are generally less familiar with Piaget's theory than with Selvini-Palazzoli's work, and given that the former may have applications to other forms of family therapy as well as to the Invariant Approach, we will present a brief account of selected, key Piagetian concepts related to the process of change and of operations involved in problem resolution. This will be followed by an overview of the Invariant Approach, the example we selected for this article.

Piaget's Theory: A Brief Overview

The term "mental structure" is Piaget's metaphor for the intellectual mechanisms that are used to organize our knowledge of the world and ourselves. The way we understand the environment is greatly affected by the way we think and by the complexity of our mental structures. However, the influence of these structures are not restricted to purely cognitive tasks. They are also part and parcel of our feelings, value systems, attitudes, and social behavior.

According to Piaget, there are four major levels of cognitive development, each preparing and becoming the content for the next stage and, conversely, becoming a meta-level to the preceding one.³ In order of progression, these are: sensorimotor, pre-operational, concrete operational, and formal operational levels.

Although the Invariant Approach addresses and redevelops elements from the sensorimotor stage, the most crucial changes seem to occur in the process of evolution, or equilibration, from the preoperational to the concrete operational levels. Therefore, we shall focus our discussion on these two levels.

The preoperational stage is characterized by the development of semiotic functions, that is, language, modeling, imaging, memory. According to Piaget, these different internal representations of objects enable us to carry abstract notions in our mind. Further, these abstract reflections of reality allow us to do things with objects that we cannot do physically, or that can be far removed from what is realistically possible (26). Problem solving may be at best intuitive at this level. Most commonly, thinking is egocentric in nature and perception-bound, not logical. These characteristics are manifest when one is so engrossed in one's own immediate experience or mythical beliefs as to be unable to incorporate the perspectives of other people into a logical synthesis. Centration in thinking is also evident in the tendency to classify objects by a single, salient feature, that is, to attend to only one dimension of an object when several must be considered.

The stage of concrete operations is characterized by the ability to operate on internal representations of things in a logical manner. We can simultaneously consider more than one dimension of an object and more than one state of things, as well as relationships between objects and interactions. Although these operations relate to the concrete aspect of things, they enable the conservation of such abstractions as mass, area, time, and so on. For example, we can conceive of the area occupied by a 2×4 rectangle by mentally performing an operation of multiplication. We can add, subtract, and divide, or imagine doing and undoing various actions, all in an associative or reversible manner.

Thus, on the concrete operational level, we are able to view things in relative and relational terms (decentration). Being able to decenter involves the operations of reversibility—the ability to imagine the process of transformation from an action (pouring a glass of water) to its result and its undoing (pouring the water back)—and associativity—scanning and connecting related issues. Decentring is particularly important in being able to assume the roles or perspectives of others.

Operational thinking is also characterized by functions rooted in the preoperational stage: for example, classification (organization of objects into hierarchies or classes—John is more active than Sarah), seriation (organizing objects into one ordered series such as increasing size), and the ability to understand relational terms (John loves Sarah).

It should be noted that preoperational children may exhibit complex and abstract notions in their play. However, they

cannot marshal these faculties in order to solve problems or to think about rules of a game. In contrast, the operational person can use these abstractions to solve both present and immediate problems as well as problems beyond his or her reach. It is also misleading to assume that all adults reach or consistently operate at operational levels. Indeed, daily life draws on abilities rooted in the full range of stages described by Piaget.

Piaget's theory of development is particularly important in our understanding of how the Invariant Approach effects change in family members' epistemology. The epistemologic system is geared toward accomplishing a balance between adaptation and organization as well as maturation and environment. Piaget uses the term "schemata" to refer to the underlying cognitive structures that we use in order to organize and respond to experiences. As a constructivist, Piaget (22) sees mental structures as being built through an "interplay of reflective abstraction, which furnishes increasingly complex materials for construction, and of equilibration (self-regulation) mechanisms which make for internal reversibility" (p. 62). These structures are "not derived from things but from our ways of acting on things, the operations we perform on them; perhaps, rather, from the various fundamental ways of coordinating such acts or operations" (p. 19). We construct schemata through our interactions with the environment. The process is circular or spiral-like. Abstractions arise out of content. Upon reflection, these abstractions become content for higher levels of abstraction.

According to Piaget, information processing involves assimilation and accommodation. Assimilation is a process by which we perceive data and fit it into or enlarge whatever existing schemata are at our disposal. For example, if we were unaware of the existence of airplanes, we might assimilate a sighting of a large, metal, winged object in flight into the schema of birds. But since not all flying things may "fit" into our birds-schema, there is a need to accommodate our structures. Accommodation is a process by which our schemata, or cognitive structures, are modified to adjust to the demands of our environment, for example, by creating new or more complex cognitive structures to allow for the existence of mechanical flying objects—airplanes. Borrowing from Prigogine (28), Piaget claims that through continuous reciprocal process of assimilations and accommodations, one eventually reaches a point at which one must move altogether to another logical level in order to accommodate new information or to build new schemata. This revolution, which we labeled "equilibration," results in the restoration of a new equilibrium—but one on a higher structural level (44).

OVERVIEW OF THE INVARIANT APPROACH

To the extent that Selvini-Palazzoli's work has its roots in the work of the original Milan team, many aspects of their "variant" method continue to appear in her Invariant Approach. These include the tactics through which Selvini-Palazzoli learns about the family system's epistemology, for example, hypothesizing, circularity, and neutrality, the use of positive connotation, gossip in the presence, long intervals between sessions, and the therapist working as part of a team. In addition, the telephone interview as well as the general structure of each session—pre-session, hypothesis formation, interview-observations, post-session discussion, and prescription—remain relatively unaltered (42). Some of the following discussion may thus apply to both approaches.

The Invariant Approach of Selvini-Palazzoli is, like the previous Milan therapy, "long brief" therapy. The duration is up to 10 sessions spaced at intervals of 1 to 2 months. Therapy commences with a three-stage assessment period, which corresponds with the first three sessions. Following a telephone call by a family member to the team, the assessment begins with a telephone response from a member of the team to the family (7). On the basis of information gathered, the team members develop an initial hypothesis regarding the "family game," its main protagonists, and directions for treatment. They then decide whom to invite to the first session.

In the first session, an external perspective on the family game and its history is obtained primarily from the standpoint of the system's most peripheral members or members of the extended family. Only the nuclear family is invited to the second session. A view of the system is obtained mainly from the children's perspective. The family's motivation for change is tested as well. This enables the therapy team to assess the group's readiness to assimilate new information and to accommodate its existing structures. Upon an affirmative decision by both team and family, the children are thanked for their contribution and the parents are invited for family therapy beginning with the third session.

Although the first two sessions are geared toward assessment of the family system, they often have a therapeutic effect by challenging family members' perception of their problems and shaking up the whole system. For example, egocentric viewpoints are perturbed as family members are exposed to different viewpoints about their family and to the contrasts and comparisons between these—from the visitors in the first session and the children in the second. Even in the exercise of testing each family member's motivation for change, there are opportunities for family members to recognize individual differences with regard to the family's future direction and its present needs. In addition, already by the second session, the therapist begins to use each session's process as content for the next session, thus connecting and contrasting actions with viewpoints, behaviors, and attitudes.

The third session continues to integrate additional views of the family, but this time as obtained exclusively from the perspectives of the parents. Drawing on a synthesis of these different perspectives of and about the family, the first prescription is given to the parents. They are instructed to announce jointly that they have "a secret." They must keep this

secret with respect to all family members. The parents are also instructed to attend to immediate and delayed reactions of all family members to the prescription. These observations are to be recorded by each of them in his or her own, private diaries.

The process of family therapy continues through the fourth session onward in a similar fashion, each session concluding by prescribing different "doses" of disappearances for the couple. That is, the parents are instructed to go on various outings without prearrangements with another family member. They have to continue recording all reactions to the disappearances in their individual diaries. These records, or journals, become the focal point of discussion between therapist and parents, comparing differences and similarities in the parental observations as well as in behaviors of various family members. In addition, each diary reveals reactions and counterreactions in the family to these therapeutically induced changes in the (so far stale) family routine.

The criteria for termination include a change in the presenting symptom. What is usually most evident, however, is increased parental cooperation and/or individual autonomy in various family members. More obvious signs of behavioral changes reflect the demarcation of clearer intergenerational boundaries, and also evidence an expanded range of affect, both reported and expressed during sessions. We add the following criterion: the parents consistently demonstrate the ability to consider their family dynamics at the Piagetian level of concrete operations. We add this because, in our view, a shift to considerations of family life on the operational level in a relatively consistent manner would be expected to yield all of the above criteria for success, and perhaps even more, for example, some added understanding of why and how things evolve in the family.

APPLICATIONS OF PIAGET'S THEORY TO THE INVARIANT APPROACH

Within the scope of this article, it is impossible for us to present all the details connecting Piaget's theory and the Invariant Approach, as we see them. We shall focus our presentation on some of the basic Piagetian principles as they apply to, or explain, some of the more familiar or key aspects of the Invariant Approach that lay the groundwork for family members' epistemological shifts. In so doing, both elements that stimulate a shift to concrete operations and elements that challenge the content of the family's epistemology will be elucidated. As stated earlier, we believe that Piaget's theoretical principles explain systemic shifts in all other modes of family therapy. Our choice of the Invariant Approach as our example was stimulated by the way this approach is built and by the punctuating prescriptions that render it amenable to such an analysis.

At the root of our analysis of the Invariant Approach is the assumption that this method of treatment facilitates a family's move from preoperational thinking about their problems toward concrete operational thinking. However, at this point we must stop and ask: If we assume our clients to be capable of operational functions, why are these not evidenced in performance? Our underlying supposition—that one may possess operative structures but either fail to use them, lack the skill to use them properly, or employ them selectively in certain areas of one's life and not in others—has also been described by other family therapists working with different theoretical models. For example, Skynner (35) observes:

A mother lacking mothering herself, or a father lacking a firm but kindly fathering experience, will be likely to behave inappropriately when required to play these roles to which they have not been exposed, and for which they have not internalized an adequate model. Thus, families are seen as suffering from characteristic developmental failures over generations, in similar fashion to the idea of "fixation" at, or "regression" to, developmental levels in the Freudian schema. [p. 41]

Although Piaget is not committed to explanatory principles for inhibited cognitive growth such as regression or fixation, he clearly states that cognition, feelings, and social behavior develop reciprocally along parallel lines (25). Thus, powerful social or emotional reactions (love, jealousy, fear, and so on) may function to inhibit cognitive growth, if not curtail intellectual freedom. This phenomenon is, according to Piaget, normal and quite useful because centering has many advantages (creativity is only one example), unless one's only objectives are to think sensibly or to accomplish. In addition, extreme or prolonged preoperational functioning bear indications of an imbalance between assimilation and accommodation. Such imbalances hamper the process of adaptation. An example from yet another theoretical perspective is that of Ferreira (10) who argues that the family's perceptual system may be altered in order to sustain the family myth. Thus, when certain phases of the life cycle are reached or when problems arise, the mother's and/or father's family history, rules, and myths, or the pain surrounding their inability to resolve their problems, can swiftly become barriers for clear and objective conceptualizations. Myth, superstition, gossip, and "private language" are all examples of preoperational, egocentric functions. Although people usually evidence these functions in a variety of daily circumstances, they are normally able to shift in and out of such modes of functioning relatively well, if not quite automatically. Not so for those of us who are feeling "bogged down" by a problem, especially if it is of a personal or interpersonal nature. How does the shift occur then?

There is some evidence that various types of clinical families differ from nonclinical families in other ways. For example,

mothers and daughters in families with anorexic patients differ from normal controls in Task Accomplishment, Role Performance, Communication, and Affective Expression (13). Chemically dependent families tend to function at extremes of the dimensions of cohesion and adaptability (17). Delinquent families were less balanced when compared with families having adolescents with no arrest records (30). There is also evidence that clinical families think differently about their problems than do nonclinical families (3-6, 18).

Child psychologists also provide some empirical evidence supporting our hypothesis (34, 37). In a sample of institutionalized children, Gelcer (13) found that clinical subjects who functioned at the concrete operational level in academic and nonpersonal fields of interest reverted to egocentric thinking in reference to personal problem areas. Using Piagetian principles of change, she successfully helped them to extend and to generalize concrete operational structures into the personal and social realms.

In addition, in our clinical experience with families (especially prior to therapeutic intervention), they commonly display the following behaviors: a tendency to focus on the identified patient (IP), failure to regard the role of family interactions, rigid insistence on seeing the problem in the same way, and excessive dwelling on certain factors at the expense of distorting or eclipsing other important elements. In examining the epistemology of family members coming for treatment, we became aware that, regardless of how they state their problem, their thinking can usually be characterized by irreversibility, centration, ego-centricity, and other semiotic functions (mythical beliefs, unrealistic wishes, and so on) that Piaget associates with preoperational thinking. We have generally assumed that, in these families, at least the parents are consistently able to think operationally. However, these cognitive functions seem to be more readily applied to other areas of life (for example, work, friendships). When it came to their family problem, family members tended to overlook the relationship between, say, various interpersonal conflicts in their family and the symptom. This may represent either a failure to attend to readily accessible information—in Piagetian terms, a tendency to center, to focus so much on one aspect of a situation or an object as to see it out of context in an exaggerated fashion—or a failure to classify information. For example, neither parent may be cognizant that the mother is more concerned than the father about their child's aggressive behavior and, hence, the differences that may be reflected therein.⁴

The following transcriptions illustrate the application of some of the aforementioned Piagetian constructs to the analysis of a family interview. The first excerpt is drawn from a consultation occurring after a number of family therapy sessions. The family consists of a mother, father, and an adult son who has been diagnosed as psychotic and also presents with drinking problems. Mother centers on the drinking problem, which is later revealed to have been a chronic problem for her and her husband. Her thinking about the family problem reflects an example of egocentric thinking associated with preoperational thinking.

[The therapist neutrally asks about the problem.]

T: We start by asking you what you see is the problem now for your family. What problem do you see, if you see a problem?

[Mother, assuming the role of family spokesperson, requests further guidance.]

M: Uhh, do we speak about ourselves or a problem in the family?

T: Yes, now.

[Mother centers on a problem in the IP. Centration is evident in her classifying the family problem by a single salient feature, Mark's drinking.]

M: I thought I wasn't supposed to talk about Mark (laughs).

T: Well, any problem.

M: Well, Mark, I ... well, I find Mark's drinking problem upsets me. I, I don't know about the rest of the family. I suppose, yes. Uhh, we communicate better now but his drinking still upsets me.

[The therapist refocuses discussion about family interaction—an operation requiring conservation of various elements.]

T: So before there was a problem with communication.

M: Yes.

T: And drinking.

M: Yes.

T: Now the communication has improved.

M: It, yes, it could be better.

T: The communication between you and Mark or your family?

[Mother is so engrossed in her own immediate experience or beliefs about Mark as to be unable to conserve or synthesize views of other family members. The problem resides in the IP alone. This egocentricism reflects preoperational thinking regarding the family problem.]

M: Well, in Mark's communication with the whole family. He was, uhh, very withdrawn and very angry.

T: Mmhmm.

M: But he doesn't ... he seems to have lost that anger now that, uh, he isn't getting in trouble that I know of when he drinks. But his drinking habit bothers me.

A second excerpt is drawn from an initial assessment in which the therapist interacts with the ex-lover of the family's mother. For an extensive period, the ex-lover functioned as father for one of her children. After breaking up, she remarried her first husband. She then found that she was pregnant by her ex-lover. Her present husband has been parenting both children. The mother, husband, ex-lover, and two children were present at the interview. This excerpt especially illustrates the insistent, rigid thinking, and centration on a few points to the exclusion of other relevant information.

[The therapist invites discussion of Anna's (the mother) behavior in constructing her family.]

T: How is it that the design, [regarding the reconstruction family] came out so balanced, so symmetrical?

M: Not brilliant engineering, believe me.

[The ex-lover presents his point of view about the mother's behavior.]

Ex: I believe that she went ahead to try to settle down with a man and then, for some reason, things didn't work out—broke apart—and she decided her purpose in life was being lost. So she turned around and decided to go and have a kid.

T: So being a mother gives Anna a purpose in life.

Ex: Oh, yeah.

[The therapist gently challenges the ex-lover's logic specifically regarding his own continued role in Anna's family life.]

T: How is it that you have to be here, today, to tell us that this is a family; that she's the mother, he's the father, and these are the two children? Being a mother is important. Having a family is important, too. Or has that changed?

[The ex-lover insists on his version of events.]

Ex: No that's not important to her. Being a mother is one thing. Like I said, she just went ahead and decided to have a baby to fulfill her need, her role in life.

[The therapist presents the "facts" in a manner that invites the ex-lover to scan relevant facts and use the operational processes of associativity and reversibility.]

T: Just to create. How do you understand, Juan, that she would go to all that trouble—go back to Europe, try to remarry Michel, come back and think about it even after she was pregnant with your child, go back remarry him—just because she wanted a father in her home after you left? How do you explain that she would go to so much trouble to bring a man—a father—in her family if she could just be a mother on her own. It was so important for her that even your child should have a father.

[The ex-lover is unable to assimilate the data.]

Ex: I don't know how to explain that. It's new to me.

T: You mean that you've not seen it that way before?

[The ex-lover insists on his own egocentric explanation.]

Ex: No. I don't think it's important at all.

T: How do you explain that they have remarried? From your point of view, what was the reason?

[Because the ex-lover is so emotionally involved in the problem, he is thoroughly stymied in offering a logical synthesis of Anna's behavior.]

Ex: I wouldn't know.

An operational structure represents the categories or classifications of one's abstract understanding of a situation, of the discrete, discernible, and concrete behaviors observed under such categories. For example, labels such as schizophrenic, underachiever, or delinquent represent abstractions derived from observing some concrete, daily behaviors. These abstractions clearly have an impact—on the "labeler" and the "labeled"—that extends far beyond the parameters that can be observed. They are often intertwined in the family problem so as to produce a rigid system of rules and presuppositions. Thus, whereas family members may be concerned with concrete and observable behaviors, the family therapist may wrestle at times with the definition of the system that describes or guides these.

BASIC TACTICS

Part of the therapist's task is to facilitate family members' ability to distinguish discrete actions and facts from each person's abstract understanding of a situation. This represents a substantial change in the content as well as the process of their thinking. Another aspect of the therapist's task is to generate a process by which the parents, at least, can come to reframe their understanding of some interactional patterns in a relatively decentered or objective way. Selvini-Palazzoli

(31) notes that this input "always represents alternative information and therefore a possibility of learning" (p. 165).

The Invariant Approach provides the systematic use of specific tools, guidance, and a forum, which enable the parents, in particular, to assimilate and accommodate the information engendered both in the home environment and during sessions. Through the prescription of the disappearance, for example, the therapist increasingly and consistently propels family members into a process of generating and "digesting" information in a manner that circularly functions to generate more information. In addition, the use of notes, together with therapeutic discussions, increases the propensity of individuals (and eventually the group) to process such information in a systemic, relatively more objective fashion. This provides the impetus for family members to equilibrate from an egocentric, preoperational style of thinking about their family and themselves to a decentered, operational style. Such cognitive changes correspond to a change from feeling bogged down in their situation to feeling more in control of their options.

There are also some specific tactics in the Invariant Approach for enhancing the lateral generalization of operative competencies from other areas of individual functioning in order to deal with family issues (in Piagetian terms, horizontal decalage). These are provided through the use of metaphors, circular questions, paradoxical injunctions, and positive connotations, to name a few. For example, when Selvini-Palazzoli asks a father, "How can a successful architect and famous politician like you be a 'salami' at home?" she is tantalizing him to use operative structures he applies at work while pointing to the direction for expansion of such expertise into tackling family problems. The therapist also uses potential strengths, which may be evident on the preoperational level, as building blocks for later operations. These include the capacity to model, to enjoy mystery, and, occasionally, to discover intuitive solutions to problems without knowing why or how the solution works.

In this manner, the Invariant Approach may spur clients to invent new family games, to create new rules, and to exercise new options in their own evolution. We shall now illustrate how Piagetian principles can be applied to explain the effect of specific techniques of the Invariant Approach toward the overall goal of epistemic shifts in the family.

Circularity and Circular Questions

Circular questions, generally, address a difference or define a relationship (21, 23, 32). The cognitive processes demanded by circular questions are analogous to operations required in various Piagetian experiments geared to assess classification, class inclusion, and other operative structures. The most famous example is Piaget's three-mountain problem. In this experiment, a child stands on one side of a relief map of three mountains. After reporting his or her perception, the child is asked how another person may perceive the same map from a different angle. The egocentric, preoperational child's inability to solve this problem demonstrates centration and developmental difficulty in seeing things from the perspective of others.

Family members often cannot decenter, in the Piagetian sense, because they are so ego-involved in the problem as to be bound to the most immediate perceptions and unable to apply thoughts or logic. As a result, they are often unable to shift perspectives, observe differences between people, or to define relationships within their family clearly. Although examples of centration are most pronounced in families with schizophrenic transactions, they are also evident in less dramatic forms of family dysfunction.

In the Invariant Approach, circular questions are powerful injunctions that come from an operative frame of mind (the therapist's) and compel the listener to muster his or her operative structures in order to respond. This allows an integration of a whole system in a manner that simultaneously incorporates reversibility, associativity, and transformation.

Some comparisons to linear questions may enable us to see the suitability of circular questions in achieving this end. With linear questions, the respondent is usually asked about his or her viewpoint (for example, "How do you feel when your spouse gets angry at your children?"). The answer requires no more than a reflection on one's internal feeling state without consideration of anyone else, let alone their viewpoints. Compare this to circular questions (for example, "How do each of your children feel when you fight?"), the subtype of seriation questions ("Who gets most upset when Johnny misbehaves, who next, who next?"), or classification questions ("Is he more like your mother, father, or unlike either of them?"). These questions encourage all listeners to scan and conserve data about themselves as well as other family members in order to compare and contrast reactions. These tasks require the use of the operational structures of decentration and conservation.

Responses to circular questions go beyond the provision of information. They suggest that the family can be viewed from a transactional perspective. That is, these questions compel the respondent and all others who think about the question to use operative faculties in order to answer the question—a change not only in the content of their thoughts and conversations, but also in the very process of thinking—individually or as a group. Thus, a repeated exercise in (asking and) answering such questions can prime mental structures for an epistemic shift.

Neutrality

It has been observed that combining the attitude of neutrality with the use of circular questions can make the family

therapist resemble the offbeat, often agitating television detective, Columbo. To the uninformed observer and, in the light of emotional overtones usually conveyed by family members, the therapist seems to ask unexpected questions in an innocuous, roundabout way. Out of this morass of questions and answers, the therapist pieces together the chain of events that help explain the mystery of the family game. The effects of the therapist's neutrality on family members may first emerge as representing a contrasting attitude to family members' subjective involvement with the problem. The family's epistemology is perturbed by the therapist's neutrality, which implicitly projects a radically different approach to the problem. This challenge may provoke equilibration or rearrangement of nonneutral schema into a new order. Neutrality also helps to give each family member the freedom to entertain new ideas or review old ideas afresh. The therapist's neutral stance toward individuals and behavior change is the hallmark of objective, logical operations. In addition, in his or her focus on differences, transactions, and on how the system works, the therapist also offers models of a decentered, meta-position toward individuals, issues, and transactions.

Positive Connotations

In the Invariant Approach, positive connotations may be given in the midst or at the end of sessions. In contrast to circular questions, which stimulate the conservation and integration of various viewpoints or reactions relating to discrete events, positive connotations are examples of the therapist's conservation, integrating the overall family game through its transformations over time. This conservation provides the connections between different parts of the family, places the whole group at a juncture along a continuous process in time, and attributes motivational forces to the family's being together the way it is.

For example, during or at the conclusion of session two, a therapist can say, "We recognize that you, son, can succeed so well at university and far away from home. On the other hand, you, daughter, can remain close to your mother and father at home, attending to all of their minor squabbles and making certain that your problems are more magnified than any of theirs. Although you, daughter, have been thus sacrificing a great deal of your personal life and freedom, it is an ennobling act, serving each and every member of the family as follows.... Thus, we are aware that until such time that each of you discovers and uses your own appropriate channel for growth, you, daughter, will continue dutifully to relieve them of this burden." Such a positive connotation is tailored to suit family members' existing structures by virtue of its being an "interesting answer" to their questions (for example, "What is happening to us? Why is this happening? Who is to blame?"). At the same time, it challenges each family members' understanding by reframing the family problem as a necessary, positive, but costly solution for maintaining family cohesion. Interest, in Piagetian terms, reflects the incompleteness of a structure (22). In this example, such an interest may emerge when the therapist positively "packages" all information provided by family members in such a manner as to produce a composition that is familiar but unknown, or never thought of before, (for example, the costs, cohesion, loyalties, sacrifice). This may become interesting. As well, it is within their reach to tackle and to develop further. Selvini-Palazzoli *et al.* (32), from their own frame of reference, observe:

But at the same time the positive connotation implicitly puts the family in a paradox: why does such a good thing as the cohesion of the group require the presence of a "patient"? [p. 61]

Since the family's interactions have never been "packaged" in this way before, such positive connotations may offer a confrontation to the content of the family myth, for example, from "daughters are tyrants" to "daughters are born to be martyrs." Instead of viewing the family problem from the perspective of a particular family member, the therapist is providing a bird's eye view of the problem. However, through this operation, family members are also challenged either to (a) assimilate this "old" information in a "new" frame or (b) accommodate to a completely new structure, that is, to restructure elements furnished by family members themselves. In so doing, the therapist returns to each family member his or her individual key to grasping the "me"/"us" in the family.

This challenge to the existing schemata of some family members provides an impetus for equilibration. Alternately, it may provide a long-lasting resource for those who are less ready to evolve into operative levels of functioning. Whatever its effect, a well-integrated, positive connotation cannot possibly go unnoticed. The act of noticing or becoming interested, as Piaget would say, already is an indication of the presence of relevant schemata, if not their perturbation.

The Invariant Prescription

According to Piaget, systematic understanding and systematic work proceed in an interactive, reciprocal process (24). However, at the beginning of every learning process, actions precede thought. According to Selvini-Palazzoli, prescriptive rituals supply the actions needed to complement and to integrate the cognitive shift initiated during sessions. Each prescription furnishes what amounts to powerful, time-released and content-free stimulus that (a) primes the parents for noticing differences and (b) acts as a vehicle for generating new information. Prescriptions are geared to ward the whole system. However, no member of the family is guided as to how to react or to understand the prescription. Nor are specific

changes prescribed. These prescriptions are, thus, examples of analogic communication between the therapist and the parents, evoking different reactions from family members. They also have the potential to expose intergenerational coalitions, homeostatic tendencies, and other therapeutically relevant information. Such information will be brought to the parents' attention during the sessions, if it had not been noticed already.

To illustrate how the Invariant Prescription may accomplish these goals, we shall discuss the secret. Imagine two parents who previously disagreed, competed, and perhaps were even growing far apart. They are asked to carry out an abstract task that may seem completely nonsensical from a concrete point of view. That is, they are asked to declare that they have a secret. (Interestingly, couples rarely ask what is the secret.) First, they announce this to their children. Second, in their children's presence, they proclaim the same message to selected members of the extended family system. The parents now stand united in sharing something. Furthermore, they are the exclusive partners in this pact. No one can intrude or be invited to join. Third, they are equally in control of the secret. For other family members, this is clearly a new image of the couple from what was previously conveyed. It implies authority, discretion, privacy, cooperation, and a multitude of other abstract concepts that bear many behavioral ramifications.

A declaration of this nature is hard to ignore. It sets off a whirlpool of reactions. These repercussions are not only behavioral. Attitudinal, emotional, and cognitive changes go hand-in-hand. For instance, someone may ask, "What is the secret?" and react petulantly when told by both parents, "It is our private matter." Even if the announcement appears to be ignored by a family member, this itself can be construed as a reaction. But for the less discerning eye or ear, there are some more obvious reactions. The families of origin, for example, may wonder why they have been told "this piece of nonsense". Perhaps one child in particular will be upset at being excluded from the secret and may begin to agitate the one parent to whom she or he feels closest. That parent may especially feel the strain of being caught in the middle, between remaining loyal to the other spouse in maintaining the secret while trying not to alienate the child or an intrusive in-law. A less obvious dilemma is sometimes expressed in feeling that one is caught having fun (in the new game), or caught off-guard and slipping into old and painful patterns of reactions.

In addition, the prescription also serves to delineate boundaries and equalize the generations: children versus parents, parents versus extended family members, friends, colleagues, and so on. Hence, in conserving the parental unit within its full familial context, not only do both parents emerge as equals, and are treated so by the therapist, but the children and extended family members are also treated equally by the parents. Furthermore, this prescription affords the parents a unique opportunity to observe distinct, individual reactions among members of their family. The same holds true for any other tangled web of transaction within the extended family system and outside.

Diaries

Part of the prescription is to keep diaries about others' reactions. Observing and writing such notes also have a multidimensional effect on the family. The difference between writing and announcing the secret or disappearing is that, in the case of the latter, parents initiate a chain reaction of changes, whereas, through recording their observations in their diaries, they are noting either examples of the relational cobwebs in their family or the markers of change for their family. Thus, the diaries are a vehicle for developing an outward or decentered perspective on things. They also provide a chronology of dates testifying to each parent's operative schemata as they evolve over the course of sessions. For example, in having to look for any reactions to their secretive decision to leave home on a certain evening, each parent must conserve an image of their family life and each one of its members both pre- and post-disappearance (reversibility). The task of keeping diaries also demands that they note each change and evaluate whether and how it could be connected to their outing (associativity). Such computations require neutrality and generate circular thinking (decentration).

The acts of observing and having to make succinct notes in diaries, is a skill that evolves in the process of therapy and supports the development of a new dimension in the parents' roles. For example, in having to stand outside of things and to furnish relevant observations, parents must relinquish temporarily the role of victims or victimizers to provide as objective an account as possible. Furthermore, these diaries cannot be filled with just any personal or private notes. Everything written must be considered by its writer as being relevant to the prescription, whether it be the secret or outings. Thus, on an individual level, the initial processing of this information can be structured in accord with this new rearrangement of roles. For example, both parents act similarly but may notice a different set of reactions among their children.

Diary-keeping also reinforces the following boundaries: (a) inasmuch as each parent keeps his or her notes privately, individual boundaries within the couple are delineated and preserved; (b) since both parents share the experience of observing others and keeping notes, this exercise reinforces the boundaries of the parental unit and distinguishes it from other familial subsystems; (c) everyone within the system who is observed is considered important to the family game; and (d) over time, each parent comes to expect (as well as respect) that their spouse's viewpoint, as conveyed in his or her diary, may be quite *different yet equally viable*.

During therapy sessions, the mother and father share their notes for the first time. These discussions give the parents additional exercise in observing, comparing, serializing, and classifying objective information. By sharing notes with the

therapist and accommodating both his or her input, as well as integrating the observations from the spouse, each parent reprocesses this information and consolidates newly developed schemata. For example, consider the following scenario. The father writes that he noticed Johnny instigating a fight with his sister. The mother says that Johnny did not appear to start the fight. By comparing and contrasting their equally viable observations, each individual's egocentric equilibrium is disturbed by a powerful conflict. They may eventually reconcile themselves with the realization that neither viewpoint can be correct by itself, and thus rediscover cooperation.

In addition to helping analyze the parents' input, the therapist often injects information from the team's level of observation, for example, by underlining the importance of an observation that the parent may have passed off as trivial. By tantalizing the parents' curiosity about a certain behavior or alerting them to observe the sequelae of their actions, the therapist may pique their interest. From a Piagetian perspective, curiosity is the antidote to worries. This renewed interest corresponds to adding a new dimension to an old schema or possibly activating entirely new schemata. For example, if a mother reports that none of the children reacted to the announcement of the secret, the therapist may ask whether the children did not react or did she just not notice. This may enable the parents to assimilate a new possibility: the children may have reacted and we did not notice. Alternatively, they may accommodate to a new structure altogether, for example, I should also try to notice when the children do not react.

Assimilation and accommodation to information generated during sessions and the intervals between sessions are tested through the diaries. Every surprising, prescriptive ritual induces further equilibration. This circular process eventually perturbs the family system to the point that the parents begin regularly to think about their family on an operational level. The direction of therapy remains invariant: information is injected that stimulates an equilibration to concrete operational thinking about the family.

CONCLUSIONS

As stated in the introduction, the Invariant Approach is distinguished through its unique tactics used to facilitate family evolution. Our thesis is that several of these tactics are directed at changing the way the parents understand their family and, hence, the way they think, act, and organize their family life. It should be noted that change is not merely effected through making the parents more rational or by convincing them that there are a multitude of perspectives regarding family functioning. Rather, the Invariant Approach intervenes on many levels. These include the rational, experiential, and structural.

It also appears likely that the parents' understanding of their family is changed in most, if not all, other forms of family therapy. Furthermore, although the cognitive-developmental framework is particularly useful in explaining the epistemology-altering effect of the Invariant Approach, it is an empirical question, yet to be validated, of whether the cognitive changes outlined cause or correspond with therapeutic change.

We have attempted to offer our suggestions as to how Piagetian notions help to account for the effect of various components of the Invariant Approach. This understanding has illuminated our work in this area and helped enrich it. However, this is by no means to be considered an exhaustive account, or one amenable to everyone's understanding. On the contrary, over the course of our experience with this still-new approach, the salience of different aspects continually emerges. We thus hope that the ideas presented in this article will stimulate understanding of and further thought about both Piaget's theory and Selvini-Palazzoli's, as well as others' work in family therapy.

We have emphasized the application of Piaget's theory of cognitive development because we see it as facilitating comprehension of many aspects of the Invariant Approach. In so doing, several researchable topics emerge. These include the hypothesis that families coming for therapy think about their problems in a style characterized by the cognitive structures of the preoperational period. Second, do parents of families considered "healthy" use concrete operations to a greater extent than less functional families? Third, our hypothesis that, with the Invariant Approach, the parents shift to concrete operations in reference to their family problem over the course of therapy is also testable through research, but not yet accomplished.

It may be important to iterate the genetic process that applies to both Piaget's theory and Selvini-Palazzoli's work. Both began with a kernel of an idea that, as it grew, enabled them to discover invariances and variations. Their later work is a revision and an outgrowth of earlier endeavors.

The ideas presented here are the result of a similar process. Beginning in 1975, the senior author saw the connection between Selvini-Palazzoli and Piaget and continues to work on these beyond publication of this article. We use this article as an opportunity to share some of our understanding (and success) in showing the commonalities and usefulness of applying Piaget's framework of cognitive development to the work of Selvini-Palazzoli. These two creative individuals became internationally known for their innovation and courage. Working entirely independently, they went through similar processes of invention and innovation. Can we learn from that process? What can we learn, and what kind of ideas emerge from such persons and processes?

Finally, it is important to note that whereas Selvini-Palazzoli has restricted her attention to families with schizophrenic or

anorexia children, we have applied the Invariant Approach with a variety of families (with particular emphasis by Gelcer on families of gifted children). Our experience indicates that the Invariant Approach can be used as a model for working with a wide variety of families and with individuals. We find that the Piagetian explanatory principles greatly encourage and enhance such applications.

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¹We agree with Bateson and Piaget that, in this context, epistemology refers to the way one understands (thought process as well as thought content), acts, and organizes one's existence. It also includes maturation of experiences (2, 14).

²Although Piaget views progression through the stages of cognitive development as dependent on maturation, development is not necessarily acontextual. A number of researchers have demonstrated that this progression can be accelerated even with children (3-5, 8, 9, 12, 17).

³In the context of progression through Piaget's cognitive stages, "higher" does not imply "better." Instead, it reflects having achieved a meta-level regarding problem solving relative to the previous schema. As does a "higher" level of abstraction, use of higher cognitive structures suggests a qualitatively different perspective or manner of thinking about a problem (2, 33). We use these terms because they depict the evolutionary nature of Piaget's model.

⁴In this discussion, we are not attempting to infer the many possible dynamic reasons why these parents fail to make use of operational structures. The command or organizational aspects of their communication are also not addressed within the scope of this article.
