Frames of Mind

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1. Introduction

In the past decade psychotherapy researchers' strategies have converged on a set of closely related methods for the systematic description of patient's conflicts, of the processes of change in treatment, and of their relationship to the outcomes. Hoffman and Gill's coding of the Patient's Experience of the Relationship with the Therapist (PERT), (this volume), Luborsky's Core Conflictual Relationship Theme (CCRT), (1977, 1984, this volume; Levine and Luborsky 1981), and Strupp et al.'s Cyclical Maladaptive Patterns (CMP), (this volume; Schacht, Binder and Strupp 1984) each adopt a slightly different version of an interpersonal focus on the patient-therapist dyad. Others such as Horowitz's (Horowitz et al. 1984) Configurational Analysis and Slap's Schema (1986; Slap and Slaykin 1983) emphasize systematic description of internally represented States of Mind (Horowitz 1979) in patients and of the role of these states in the processes of change.

These strategies are summarized in Table 1. All of them share two fundamentally important commitments. First and foremost they focus on repetitive structures. And second, the detailed nature of the structure is a central function of the particular descriptive method employed. This is most clearly illustrated in the case of Luborsky's CCRT. Luborsky is concerned with identifying one or two content themes that capture a patient's central conflicts, but in so doing he imposes a uniform structure on the way this conflict is represented by always specifying the same three components of a relationship episode. These are, (1) a wish about

[1] I first chose the title of this chapter for a presentation to an American Psychological Association Division 39 Research Panel (April 1985) entitled, *Templates of Mind: The Thematic Analysis of Psychoanalytic Data*, unaware that in 1983 H. Gardner had puplished his theory of multiple intelligences under the same title. As the reader will discover, my use of the expression is completely different from Gardner's.

an object, (2) a real or anticipated response from the object (RO), and (3) a response from oneself (RS). Similarly, Strupp et al.'s and Hoffman and Gill's methods yield structures that are direct reflections of their methods. After I have presented an alternative to these approaches I will return to make some comparisons.

Table 1

RUBRIC	FIRST PUBLICATION	REPRESENTATION
PHANTASY	Freud (1897)	Phantasies rather than actual events postulated as etiology of neuroses.
FANTASY	Arlow (1969a, 1969b, 1980)	Clinical summaries of recurrent manifestations of unconscious fantasies.
CCRT	Luborsky (1977) Levine and Luborsky (1981)	Sequential structures extracted from a patient's relationship with objects.
CA	Horowitz (1979)	Configurational Analysis: a systematic method of case formulation.
FRAME	Teller and Dahl (1981a)	Sequential event structures extracted from a patient's discrete narratives.
PERT	Gill and Hoffman (1982b)	Coded instances of a patient's experience of the relationship with the therapist.
SCHEMA	Slap and Slaykin (1983)	Clinical summaries of recurrent themes.
TLDP (CMP)	Schacht, Binder, and Strupp (1984)	Dynamic focus on a patient's cyclical maladaptive patterns of action.

I did not start out to look for repetitive structures in my work with my colleague Virginia Teller (see this volume). We made our discoveries after several years spent with Rubinstein (see Rubinstein 1978) studying the structure of the implicit reasoning processes of psychoanalytic clinicians. Our method was to examine specific clinical hypotheses about a patient paired with specific pieces of evidence from transcripts of the patient's sessions (Dahl 1983). We had clinicians rate the degree to which the evidence supported the hypotheses and then we studied the logical (and illogical) relationships between the pairs rated high and low. In short, unlike those researchers mentioned above, our agenda was something far removed from the structures that we eventually discovered.

2. Frames

In 1981 Teller and I first reported our discovery of repetitive structures in the free association of a patient in psychoanalysis (Teller and Dahl 1981a) and have published a detailed report of some of their characteristics (Teller and Dahl 1986). As a name for these structures we chose Frames, Marvin Minsky's (1975) term for stereotyped knowledge structures that have many desirable theoretical features. Here I will briefly summarize some of the features of three such frames (one of which is also examined for different purposes by Teller in this volume), all found in the transcript of the Specimen Hour (this volume), of a tape-recorded psychoanalysis. I will include some extravagant, and to some, I am sure, fanciful claims about them, claims that imply, or surely ought to imply, a program of empirical research.

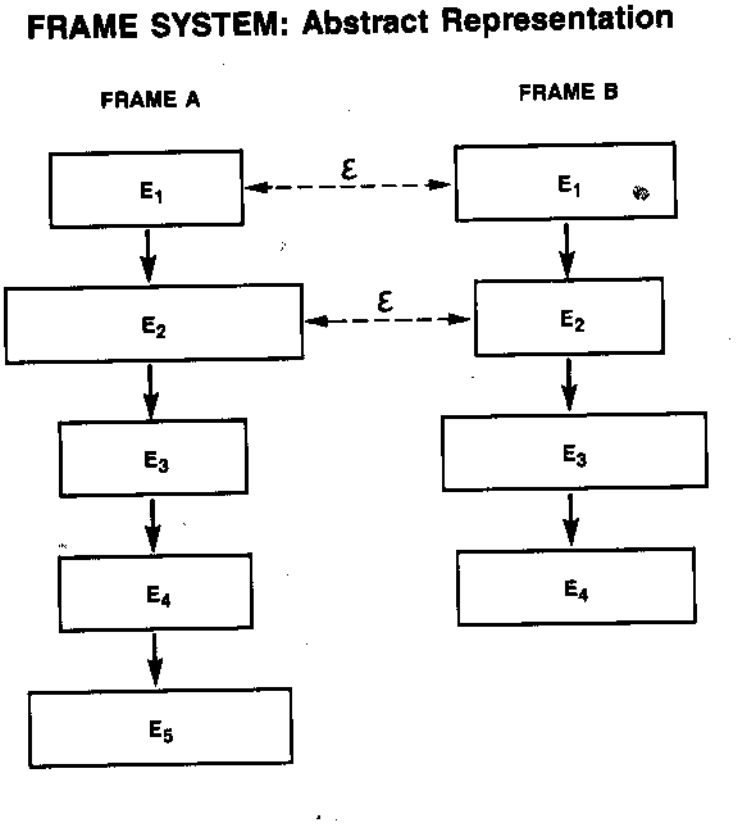

Figure 1

Figure 1 illustrates some of the basic properties of Frames. A frame is an Event Sequence Structure. Events are variables whose values

may include mental and other events such as acting, perceiving, believing, knowing, wishing, feeling, being in certain states, etc. The relationship among the events is defined by their sequential order, indicated by the arrows. The dotted lines between the corresponding events in Frame A and in Frame B represent the fact that some events in two or more frames may be similar or may overlap in some way.

Figure 2 shows the values of each event for two specific frames that we labeled DELAY and SUPPORT. For each frame we distinguish between a Prototype in which the value of a specific event is completely justified by evidence from the manifest content of the transcript, and Instantiations, which are repetitions of a prototype. For example, Having Conflicts is a summary of specific patient statements taken from the transcript; and each of the values of the other events is also either the patient's literal statements, a close paraphrase, or a summary of several statements.

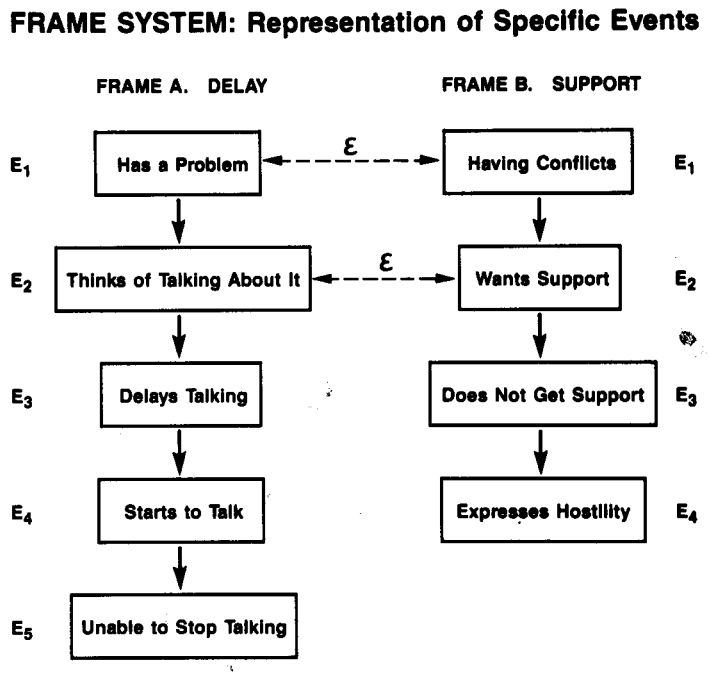

Figure 2

To illustrate, Table 2 is the text of paragraph 18, from which the prototype for the SUPPORT frame was constructed. Table 3 shows all of

Table 2

18 Because I, I (chuckle) was just thinking I probably do the same thing with David. Last night in particular, I was talking with him about – I don't know, I just seemed to be in a funny mood by the time he got home. He got home sort of late, and it wasn't that he was late, because I knew he would be. But I guess he didn't immediately respond to me in the way I wanted him to or – I don't know what it was, because I imagine that somehow I was already in some kind of a mood. And (sniff) at one point I was talking to him, and I know I was talking to him wanting either confirmation that I'd done the right thing or a suggestion on what would be a right thing because I wasn't sure. I was upset about something I'd done and I didn't want him just to listen to me say it. I wanted him to actually react to it, and either suggest another course of action or, or approval that well, I guess that in the circumstances that wasn't that bad a thing to do. And, and he just didn't say anything, except sort of mutter under his breath. And so I got furious at him and (sniff) I imagine in a way it's the same kind of thing that my father always is doing. (Pause, stomach rumble)

Table 3 Support Frame

Table 3 Support Frame **PROTOTYPE**
TALKING TO HUSBAND

1. JUSTIFICATION for **HAVING CONFLICTS**
Statements about "the thing I did":
....either confirmation that I´d done the right thing or a suggestion on what would be a right thing because I wasn´t sure. I was upset about something I´d done

2. JUSTIFICATION for **WANTS SUPPORT**
I was talking to him wanting either confirmation that Id done the right thing or a suggestion on what be a right thing.
I didn´t want him just to listen to me say it. I wantd hinm to actually react to it, and either suggest another course of action, or, or approval that, well I guess that in the circumstances that wasn´t a bad thing to do...
ASSUMPTION: Spoken approval is one kind of support

3. JUSTIFICATION **for DOES NOT GET SUPPORT**
...and he just didnt say anything, except sort of mutter under his breath

4. JUSTIFICATION for **EXPRESSES HOSTILITY**
...and so I got furious at him...

WARRANTS FOR INDUCTIVE GENERALIZATION
..I probably did the same thing with David
..Last night in particular, I was talking with him....
...and (sniff) I imagine in a way it ´s the same kind of thing that my father always is doing

the evidence used to justify each of the four events in the SUPPORT frame. The data in this figure were taken from a single, succinct narrative that the patient told to the analyst about an episode with her

husband. This is typical – a single narrative forms the basis for a prototype or a repetition. In three short paragraphs (18, 19 and 20) consisting of 612 words, we found one prototype and two instantiations for each of the DELAY and SUPPORT frames. In cases where there is no evidence for a particular event in an instantiation, the value in the corresponding prototype event becomes the predicted value in the instantiation.

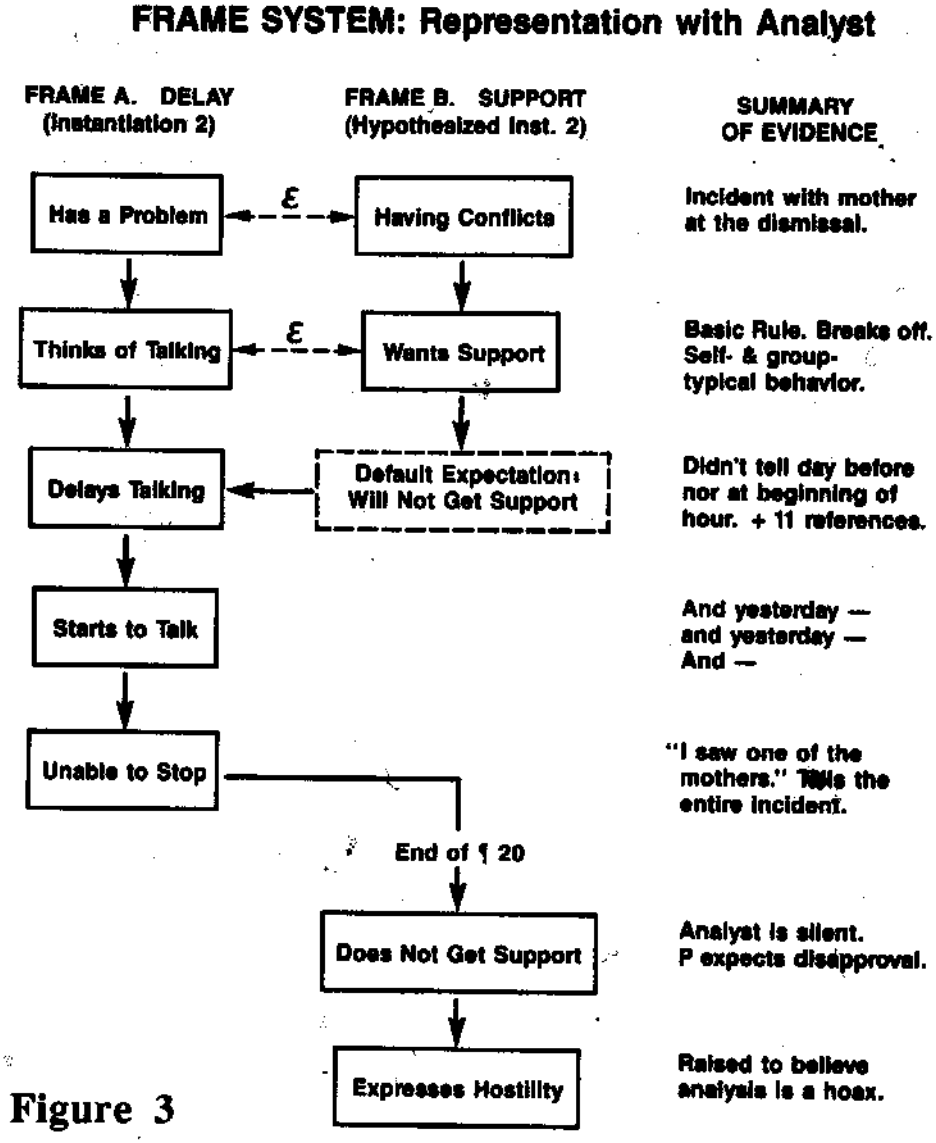

Figure 3

3. Frames of Mind

It does not stretch the imagination to think of the SUPPORT frame as a wish frame and DELAY as a defense frame. Our clinical knowledge would lead us to expect that these frames might interact with each other. Indeed much of the explanatory power (aside from predictive power) of these frames lies in their hypothesized interactions. Figure 3 allows us to

explore such an interaction and to formulate a rather precise prediction about the patient's (P) interaction with the analyst (A).

On the day before this session P found herself in a conflict over an incident at her school, but she failed to tell A about it at her session later that afternoon. During the next hour (Hour 5) she started to relate the incident, but broke off and then made eleven abortive references before finally coming to the point. The steps in this are summarized in the right-hand column. Each event represents one of P's states and the arrows indicate transfer of control from one state to the next.

Thus P, in a state of conflict, wanted support for what she did, but she believed that she would not get it (default value from the prototype), which produced a .i.transference;"transference" expectation that A would not fulfill her wish. According to standard theory this is the occasion for a .i.defense;defense against the actual or anticipated unpleasure and the arrow shows a transfer to the Delays Talking event in the DELAY frame. Shortly afterward (#20) P finally told A about the incident. At this point there was no data to instantiate the last two events in the SUPPORT frame; we may therefore take the default values from the prototype as predictions and look to the rest of the session for .i.evidence;evidence.

Indeed, direct confirmation was forthcoming. A little later, in response to a question by A, P said that not only did she not expect his approval, but was certain to get his active disapproval. Then toward the end of the session she confessed that she was raised to believe that analysis is a hoax, that it doesn't do any good and just costs a lot of money – possibly the only criticism she could think of at the time. It should be clear that these predictions need not necessarily have been confirmed; and, had they not been, that would have reduced the weight of evidence for the existence of this particular instantiation.

Figure 4 represents a different hypothesis about P's interaction with two boys in her school and their mothers. It is meant to illustrate the implicit side effects and/or the self-fulfilling intended consequences of two actions in the DELAY frame. The double-line arrows identify this particular type of interaction, one which we might hypothesize to be causal. P wanted the parents' support, but believed that she would not get it (default prototype value). As before, we hypothesize that this expectation aroused a defense and we think of control again being transferred to the Delays Talking event. By not calling the parents, P assured that she would not get the support she wanted. Later, she finally began talking to the mother at the dismissal even though she herself felt

that complaining to the mother about her son in the presence of the other children and mothers was inappropriate. Common sense lets us understand that this was a covert expression of hostility.

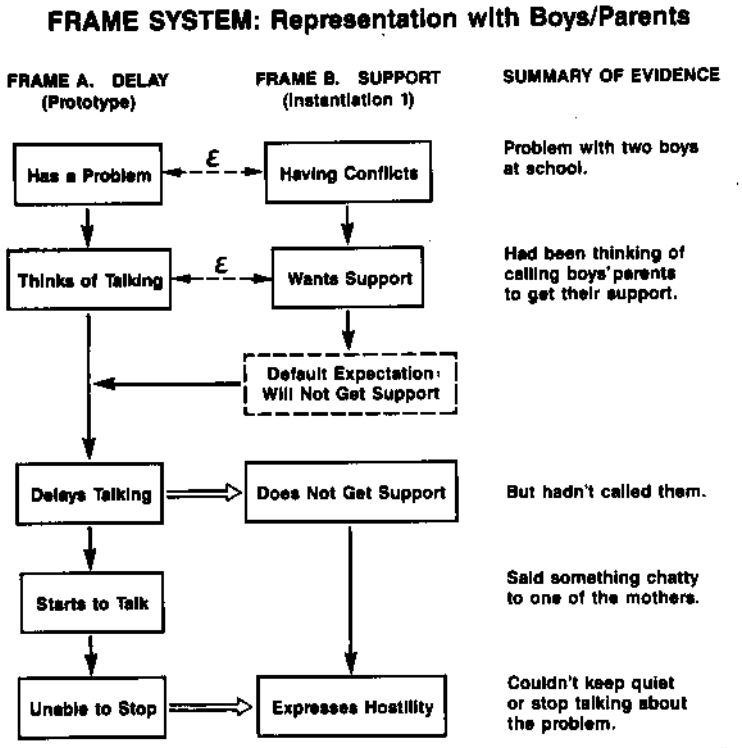

Figure 4

There are at least three other frames to be found in Hour 5. Two of them we have called TOGETHERNESS and CONTROL. Georges Moroz (1984)[2] has shown that these two, along with SUPPORT and DELAY, form a variety of clusters that are distributed throughout the hour. And Bucci (this volume) has demonstrated that Moroz's distribution is highly correlated with the distribution in Hour 5 of Bucci's (1984) measure of Referential Activity, a group of scales that assess how concrete, focused, and specific the language in the transcript is. Intuitively this fits both our common sense and our clinical belief that narrative episodes or Luborsky's "relationship episodes" give us direct, clear, coherent and significant information about a person's wish-defense organization.

[2] personal communication

One of the advantages of identifying and reasoning with and about frame structures, as compared with say, clinical themes, is that such reasoning is disciplined and constrained by three factors: (1) by the need for specifying the evidence explicitly and precisely, (2) by requiring that the sequence of events itself be repeated and, (3) by the ability to make and confirm or disconfirm specific clinically relevant predictions. These constraints constitute the heart of one answer to both Spence's (1982) worry about „soft pattern matches" and Grünbaum's (1984) concern about contamination and suggestion. On the one hand it is hard to see how frame structures can be suggested to a patient and on the other it is difficult to hide misclassifications given the requirements for literal or close paraphrases that we impose on what counts as evidence. Moreover the specific predictive powers allow us to systematically assess the degree of supporting evidence for any instantiation.

Most clinicians at least implicitly believe in the centrality of the recurrent manifestations and the influence of both conscious or unconscious fantasies in patients' lives. While they might quibble about the relatively mundane content of the two frames I have illustrated, they should not find the idea of frame structures and their interactions at all unfamiliar. Arlow (1969a, 1969b) for example, has provided convincing and informative accounts of the clinical manifestations of repetitive more or less unconscious fantasies. And in 1980, in a brilliant analysis of the movie Blow-Up, he described three different event structures, which had the essential characteristics of frames, as varieties of derivative representations of primal scenes. One of them recurred five, one four, and one three times in scenes of the movie. So we must assume that gifted artists such as Antonioni have their own ways of detecting and representing frame structures. Nonetheless the scientific problems associated both with clinical reports and with artistic creation are also recurrent and are the fundamental motivation for all the searches for structure to which I have already referred.

4. Comparison of Frames with other Repetitive Structures

Luborsky's (1977) CCRT's are recurrent structures, but their structure is at least partly imposed by the Wish/RO/RS sequence Luborsky defined. I say partly because intuitively this sequence makes a lot of sense as a candidate for a perfectly general structure that is built into all of us. We do wish about others, we do expect and observe their responses, and we do then respond ourselves. The uniformity of the structure is appealing as a way to eliminate a lot of individual variability

that otherwise might obscure whatever patterns are to be found and as a way to make easy comparisons among patients. However the determination of a central theme by frequency or preponderance might sometimes lead one to overlook some less frequent themes that interact with the "central" theme.

Strupp et al.'s CMP's posit four "action categories" as basic elements of structure: (1) acts of self, (2) expectations about others' reactions, (3) acts of others toward self, and (4) acts of self toward self. Again, intuitively such categories are very appealing, but they carry with them limitations similar to those of the CCRT's.

Hoffman and Gill's codings of the PERT, like CCRT's and CMP's, begin with a set of predetermined categories, albeit quite different. Their categories of implicit and explicit .i.transference;transference references and experiences are obviously relevant to any therapy that employs the theoretical concept of transference. But this strength is also the PERT's central limitation, namely, its exclusive focus on the transference. Only empirical studies can ultimately decide the correctness of this view.

Horowitz's Configurational Analyses are much too complex to do justice here, but therein lies one of their limits. Their very richness and individuality as well as their imposition of many preexisting categories deprive them of the benefits of simplification that are the real strengths of CCRT's, CMP's, and PERT's.

Finally there remain the persistent hopes of clinicians, as embodied in Slap and Slaykin's resurrection of Bartlett's (1932) concept of the .i.Schema;Schema, that they might yet contribute to our systematic knowledge. But schemas, with their structure, categories, and other properties nonsystematically described or defined, are subject to all the limitations of traditional clinical methods.

The most important way in which Frames differ from the preceding recurrent structures is in the fact that they are composed of categories of events that are explicitly represented in the discrete .i.narratives;narratives told by a patient under instruction to free associate. Unlike structures using predetermined categories, Frames inevitably reflect the unique internal structure of a particular patient's memories, both conscious and unconscious, of a wide range of recurrent events such as wishes, beliefs, defenses, emotions, and actions. It is the belief in the causal role of these memories for the patient's adaptations that makes them important.

5. Frame Claims

Now for the extravagant, if not grandiose, claims, or more precisely for a mixed bag of hypotheses about the characteristics of Frames, loosely strung together. I propose them in full knowledge that we have little or no evidence for some of them, because I believe that we either now have, or will have in the next decade or so, the means to empirically investigate all of them. The claims then comprise an implicit program of research to which Bucci, Teller and myself all hope to contribute. Indeed we have already begun a variety of studies designed to reduce our ignorance and help clarify our hypotheses. We will be delighted if others join in. So here goes:

Frames

(1) are represented in the mind in *nonverbal* code in a dual code system of mental representations (see Bucci 1985),

(2) especially as *structured sequence of memories of emotions* (see Dahl 1978, 1979b)

(3) that are the *residues of early relationships with objects* (Gedo 1979);

(4) they *endure over time* and

(5) *across conflicts, objects, and situations*, and

(6) in principle *can account* for a wide spectrum of both *repetitive, neurotic, maladaptive behavior and normal, adaptive behavior*;

(7) they *permit specific predictions* of wishes and beliefs, and

(8) provide the *framework for a theory of change* independent of any particular theory of technique.

As part of the program of research, Leeds (1986) is applying a newly developed systematic method for objectively identifying repetitive frame structures in Hours 1 through 5 of the same case as Hour 5 in this volume. Davies (1988) is using the same method to try to identify in the behavior of 3-year-old children frame structures that recur in their interactions with their mothers and with two other 3-year-olds.

6. Final Frame

As Teller (this volume) describes in detail, the last frame that I will discuss was constructed differently from those I have just illustrated.

Instead of first finding a prototype and then looking for instantiations, Teller took seriously an inductive generalization that the patient reported about herself in Hour 5.

Figure 5 shows the simple, but nonetheless unusual structure of the CRITICAL/FRIENDLY (C/F) frame along with the evidence that

PROTOTYPE OF THE CRITICAL-FRIENDLY FRAME

FRAME (SUMMARY PREDICATES)	SUMMARY OF JUSTIFICATION PRIMARY PREDICATES
Thinks of friendships	1. Patient has friends (And this makes me think of friendships I had with other people) 2. People in general want to have friends (group- typical behavior) 2.1 I seem to have to find faults with just about everybody that I am friendly with 2.2 I still have to find fault with everybod y and maybe criticize them to David 2.3 I always have to openly criticize them 2.4 If I cat be critical than I just can´t be around them
to be critical of X	
Can be friendly with X	3. I have to kind done that and then I can go on to a re a some kind of friendly relationship

Figure 5

justifies each event. What makes this frame particularly interesting is that the logical status of the Critical event appears to be that of a necessary but not a sufficient condition for being able to be friendly. Thus C —> F but not vice versa. And, although the patient was obviously aware of this contingency, we found no evidence to indicate that she was in any way aware of the origins of her compulsion, nor of each instantiation, most importantly her enactment of the frame in the transference with the analyst (see Teller loc. cit.).

If we take the patient's self-description seriously we can then predict two empirical consequences: (1) critical behaviors are likely to outnumber friendly behaviors since friendly behavior does not automatically follow critical behavior, and (2) her critical behavior toward people should clearly precede friendly behavior. Very recently I rediscovered a study by L. Horowitz (1977), which, in retrospect, seems almost to have been designed to test these two hypotheses, although his rationale for doing the study rested on different grounds from our C/F Frame. His data consisted of the process notes of the first 100 hours from the same case as Hour 5. Horowitz investigated the change over time in two types of behavior: Friendly (F) behaviors, which he defined as those that bring persons closer together, and Critical (C) behaviors, defined as those that create distance between people.

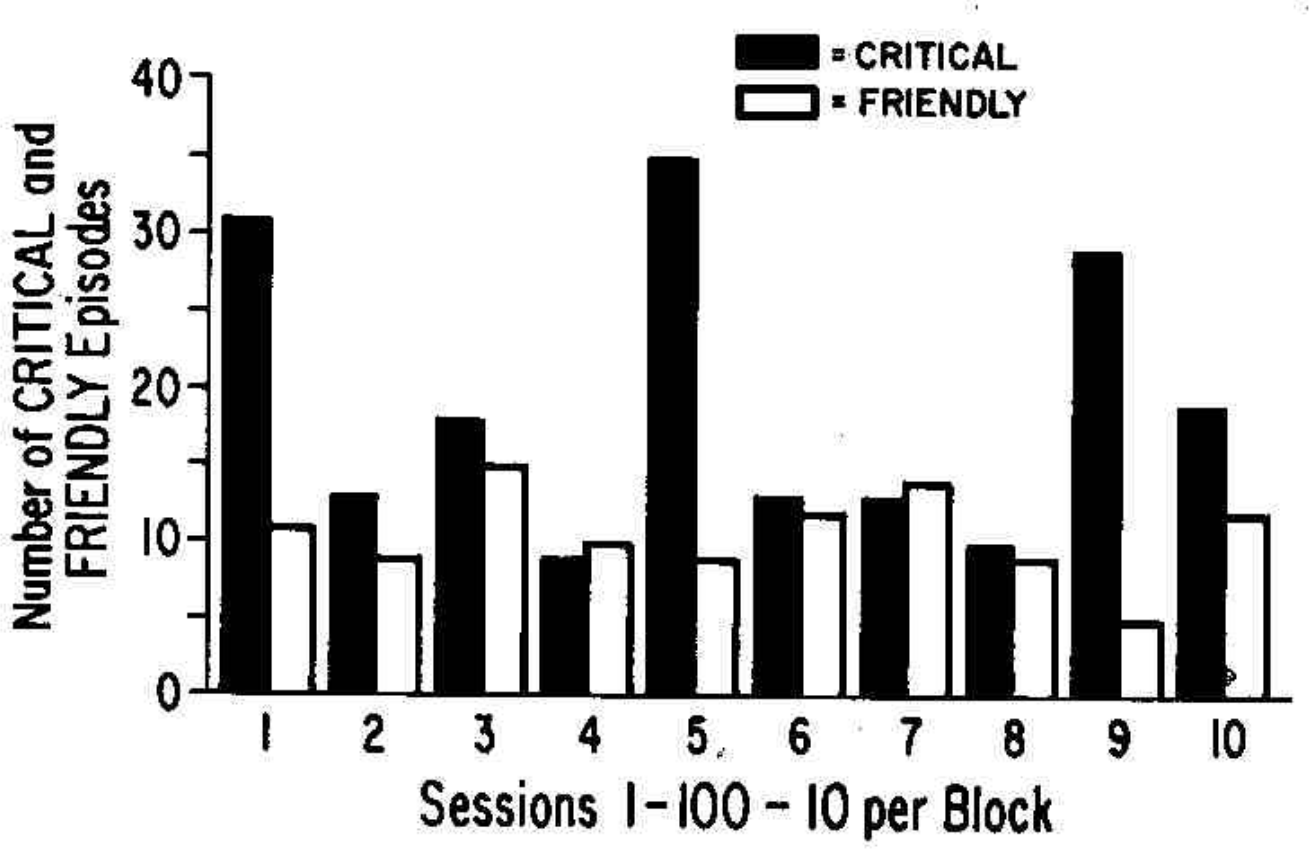

Figure 6

Three clinicians read through the entire 100 hours and identified all instances of both types of behaviors in 10 blocks of 10 hours each[3]. Figure 6 shows the distribution in each block of the total of 190 C behaviors and 106 F behaviors that were identified. A t-test of the difference in frequency between the C and the F behaviors in each of the

[3] Horowitz graciously provided me with the mean values on each scale for each of the ten blocks.

blocks (t=2.49, df=9, p<.05) supported the first hypothesis that the patient should exhibit more critical than friendly behaviors.

Next, four different clinical judges independently rated each behavior on a four-point scale designed to assess the directness of expression of the behavior. For C behaviors, a rating of 1 meant expressing a criticism indirectly to a third party and a rating of 4 implied a direct confrontation or criticism of a person, and similarly for F behaviors. The means of these ratings (no reliability measure was given) for each block of 10 hours are plotted in Figure 7.

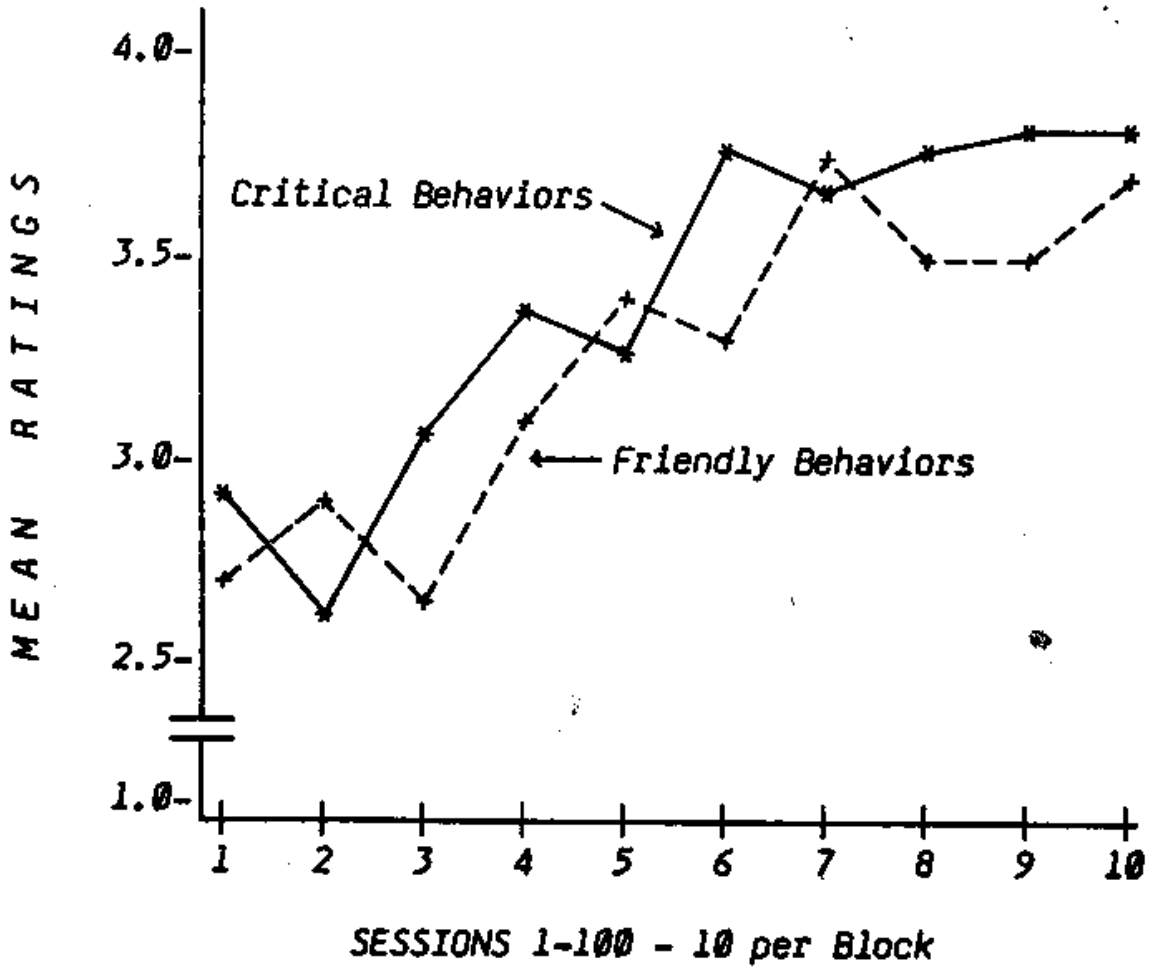

Figure 7

Note that the ratings of both behaviors increased over time: rcf = .83. But the correlations of each behavior with time are even higher: rct = .92 and rft = .90. If time is partialled out there is no correlation between C and F: rcf.t = .01. Thus both C and F behaviors increased over time but were unrelated to each other in the same blocks of hours.

However, Figure 8 shows a dramatic change in the relationship when the C behaviors from block n are compared with the F behaviors from block n+1. Now the similarity of the curves is apparent and the first order lagged correlation, rc(f+1) = .97. But here again, both C and F are highly correlated with time. Nonetheless, when time is partialled out of both, rc(f+1).t = .89, df=6, p<.005. In a test of the logical possibility that if F were lagged one block (to see if F might precede C), rf(c+1).t = .26, ns. Thus the empirical test supports the second prediction derived from the CRITICAL/FRIENDLY frame, namely, that critical behavior must precede friendly behavior.

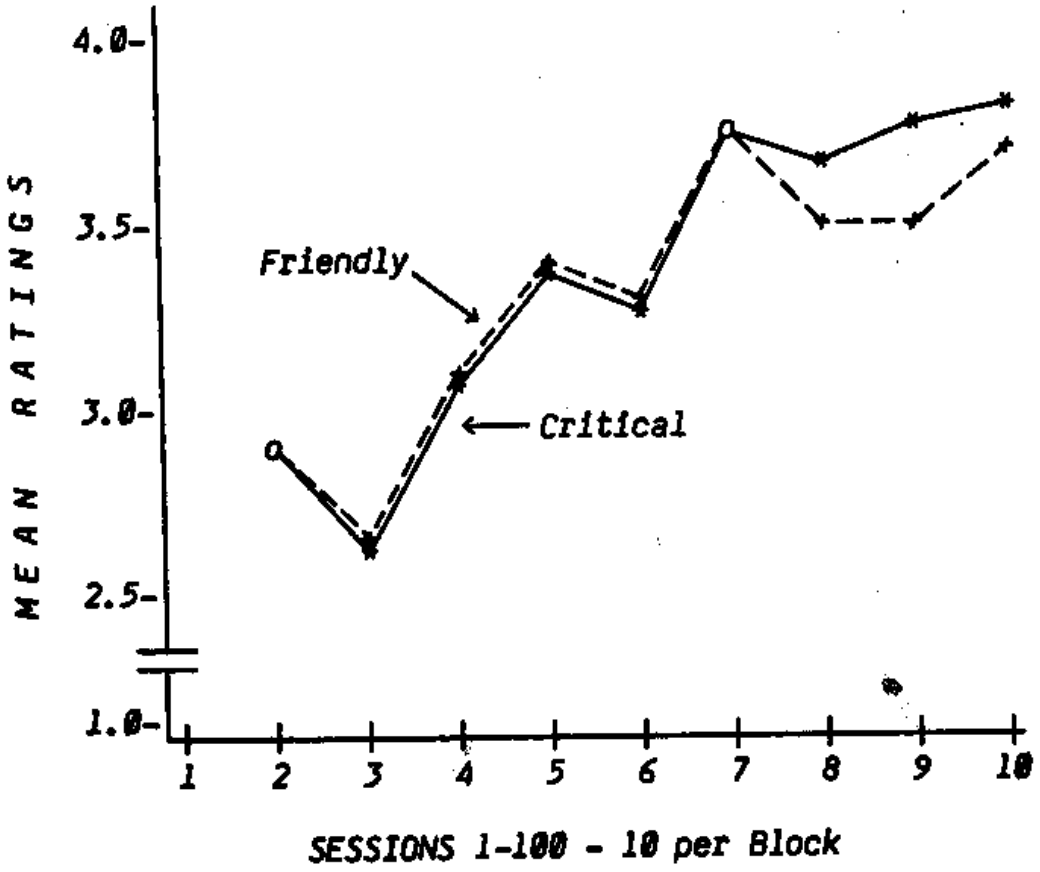

Figure 8

7. The Future of Frames

Research on Frame structures is proceeding in three essential directions. First, detailed descriptions of the general characteristics of and methods

for finding Frames (Dahl and Bucci, In preparation) are forthcoming. These will include illustrations of systematic applications to the first five hours of the Hour 5 psychoanalysis (Leeds 1988). Second, we are exploring the question of the fate of the Frames in the course of the same psychoanalysis, specifically the fate of the five Frames (with a total of 20 instantiations) that we have thus far identified in Hour 5. Scott Miller, a graduate student at Adelphi University, has traced their fate in the course of the analysis. During three hours at the height of the transference neurosis, as independently identified by Jones and Windholz (Submitted), four of the five Frames were still in evidence, but several instantiations of them had one significant event added at the end of their structures, an event Miller dubbed "Realization" because the patient indicated her beginning awareness of both the existence of the Frames and their roles in her transference struggles. As might be devoutly wished, in the last three hours of the analysis the five structures had either disappeared or radically altered. The SUPPORT Frame changed from a maladaptive to an adaptive structure; the third and fourth events, "Does Not Get Support" and "Expresses Hostility" were replaced by: "Insights" (which implied having felt support in the analysis) and "Wishes" (for the future). Similarly, these same two new events replaced the last two events in the one remaining instance of the TOGETHERNESS Frame.

And third, but perhaps most important, are questions of both the reliability of the identification of Frame structures (which Miller is pursuing) and their presence in the behavior of young children, as predicted by Frame Theory. In her doctoral dissertation Davies (1988) has found Frame structures in the behaviors of three-year-old children, structures that are unique to each child and, as the theory predicts, recur with different children as well as with the child's mother. Finally, it is clear that we will also need much work on the similarities and differences among the different repetitive structures that have been described in this volume.