Making Sense of Client Data: Clinical Experience and Confirmationism Revisited

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The purpose of this study was to examine if the order in which case file material is presented to clinicians and length of clinical experience affect clinical judgment. Using think-aloud procedures, 36 clinicians (trainees and veterans) diagnosed the case files of a middle-aged hospital outpatient. In one version, a neutral but vivid datum was placed near the start; in the second version it was placed toward the end. Protocols generated were coded on the dependent variables, confirmation and disconfirmation of earlier inferences, and dispositional and situational inferences. MANOVA results indicate that there is an interactive order-by-experience effect on proportion of confirmatory inferences articulated by participants. Other analyses indicate that order of information presentation but not level of practitioner experience is related to the variance in the proportion of contextual and dispositional inferences articulated by participants. Implications for praxis and for training programs are examined.

MAKING SENSE OF CLIENT DATA: CLINICAL EXPERIENCE AND CONFIRMATIONISM REVISITED

The *primacy effect* in information processing, as evidenced in the "configural" model for person perception developed by Asch (1946, 1997; Fiske & Taylor, 1991), has important implications for information processing in counseling and psychotherapy. This model states that an initial, global impression of another's personality exerts pressure on later, relevant information to take on meaning consistent with the initial impression. In this perspective, the point at which critical client information is revealed in a clinical session can seriously affect the formulation of diagnoses and the

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processing of information on which diagnoses are based. An alternative "algebraic" model, which essentially denies the proactive impact of prior judgments on later meaning-making, contrasts markedly with the configural model, and it has received some support (cf., e.g., Fishbein & Ajzen, 1975; Anderson, 1996) in the literature. Evidence, however, has accumulated in the clinical literature that information divulged early in the therapeutic process influences the shaping of a diagnosis more than will equally significant, and perhaps contradictory, information that comes to light later (e.g., Friedlander & Phillips, 1984; Nisbett & Ross, 1980; Richards & Wierzbicki, 1990; Tversky & Kahneman, 1974). One aspect of this dynamic, popularly known as the *anchoring effect*, unfolds through the interplay of a number of strategies and causal devices (see, e.g., Nisbett & Ross, 1980, pp. 41-42, for a succinct explication of this phenomenon). The anchoring effect is a continuous variable and is moderated by factors such as data availability and vividness (e.g., Friedlander & Stockman, 1983; Spengler, 2000) as well as the cognitive complexity of the clinician (Martin, 2001; Spengler & Strohmer, 1994). The character of this process, its psychological properties, and the tangential dynamics it releases have not yet been fully examined. This effect has called for consideration of a confirmationist bias in clinical information processing (e.g., Garb, 1998; Pope & Vasquez, 2005; Snyder & Thomsen, 1988; Strohmer, Shivy, & Chiodo, 1990; Strohmer, Boas, & Abadie, 1996), a bias that has been shown to be a robust component of the dynamics of clinical judgment (Ganzach, 2000; Pope & Vasquez, 2005; Strohmer & Shivy, 1994). The bias has consequences for (a) the inhibition of inferences that disconfirm previous hypotheses bearing on clients' problems or dysfunctions and (b) the generation of inferences or clinical hypotheses that are consistent with initial assessment propositions.

Social psychological research concerning bias among lay and professional evaluators provides support for the view that evaluators preferentially seek out confirmatory information when testing a hypothesis (e.g., Mahoney, 1976; McKenzie, 2004; Pfeiffer, Whelan, & Martin, 2000; Snyder & Swann, 1978; Snyder & Thomsen, 1988). In a series of studies, Snyder and Swann (1978) and Snyder and Cantor (1979) reported that clinicians had a propensity for confirming the hypothesis at hand. Participants adopted search strategies that led them to confirm, rather than discard, their initial hypotheses. For example, Snyder and Swann (1978) found that clinicians who tested the hypothesis that their interviewee was an extrovert tended to ask questions that inherently led them to support that hypothesis (e.g., by using leading questions bearing on incidents of

extroversion), even though countervailing information was readily available. More seriously, the clinicians tended to interact with their interviewees in ways that compelled the latter to behave according to the initial hypothesis. These confirmationist interventions persisted even when (a) the clinicians were given prior information that their hypothesis was probably not accurate and (b) they were offered incentives to test that hypothesis in a self-consciously unbiased manner. This confirmationist bias is not unique to hypothesis testing in the context of making clinical judgments. Schwarz (1999) warns us against a similar phenomenon in the context of self-reports. He argued that the wording, format, and context of questions may shape answers. Schwarz suggested that researchers unintentionally shape questionnaires in such a way that answers are more likely to support their hypotheses.

What emerges from the literature, then, is that clinicians tend to form relatively quick impressions about their clients and to be unduly influenced by their earliest observations (Houts & Galante, 1985; Meehl, 1960; Nisbett & Ross, 1980; Sandifer, Hordern, & Green, 1970). These early impressions tend to serve as anchors for subsequent inferences and judgments (Bishop, Scharf, & Adkins, 1975; Garb, 1998; Nisbett & Ross, 1980; Stromer, Boas, & Abadie, 1996), or become indicators of the most appropriate strategy to use with the client (Garb, 1998; Strohmer, Haase, Biggs, & Keller, 1982). This is not inconsistent with the premises of the thesis proposed by Asch (1946). It has been found that clinical anchoring in early-divulged information is indeed in evidence in clinical judgment but that it can be attenuated when sufficiently discrepant information is provided later (Ellis, Robbins, Schult, Ladany, & Baker, 1990; Strohmer et al., 1990). Clinical judgments about clients seem to be based on initial impressions rather than the exhaustive observation and hypothesis testing, which are characteristics of sound scientific inquiry. Failure to develop plausible alternative hypotheses creates concern that initial errors in hypothesis testing have a high probability of translating into flawed diagnostic and treatment effects within the helping relationship. This is all the more serious, of course, in that social influence researchers (e.g., Strong, Welsh, Corcoran, & Hoyt, 1992) have found that clients are prone to accept new conceptualizations of their problem—those of their therapist.

A second major clinical variable needing further exploration is the influence of experience on clinical performance. There exists a body of evidence, accumulated over the past generation, that demonstrates there are few discernible changes in competency indicators and in in-session

clinical process as a function of level of clinical experience (see Garb, 1989, 1998; Glaser & Chi, 1989; Spengler & Stromer, 1994 of psychotherapeutic outcome, the validity of clinical judgments, the accuracy of psychodiagnoses, and the validity of personality assessments, among other factors have not yielded desired outcomes. These findings have yet to be satisfactorily addressed. If "practice makes perfect," one may ask why this principle is not more evident in the mental health professions (Dumont, 1991).

The answer to this question depends on a number of factors. One is the absence of an authoritative knowledge base in psychotherapy. As there are approximately seven clusters of treatment approaches to remediate psychological disorders, and literally hundreds of specific and acknowledged psychotherapies (e.g., Goodheart, Kazdin, & Sternberg, 2006; Mahoney, 1991), there does not, as yet, exist consensus on "the correct way" to assess their relative intrinsic effectiveness for the treatment of many widespread disorders. Notable exceptions, as examples, are a number of phobic and anxiety disorders, as well as dysfunctional behaviors, that are amenable to one form or another of, say, cognitive-behavioral therapy. Thus, becoming increasingly proficient in the exercise of one or another treatment modality does not, in itself, assure practitioners of improved clinical outcomes. A second factor is the highly probabilistic nature of this field of endeavor. Our diagnostic taxa are fuzzy sets. Consequently, the mental health disciplines are less deterministic, more of an art, than the natural-sciences-based professions (e.g., Koch, 1981; Meehl, 1960). Third, clinicians get little reliable feedback on relapse rates or on long-term success, and even when they do, many different clinical interventions, not to mention subsequent life-events, can plausibly be hypothesized to be among the causes of outcome. Much of the feedback in question would prove useful for little but confirming the prevailing clinical scripts and hunches of the therapist. A fourth factor is that the number of relevant variables that could be usefully assessed during and after treatment is extremely (and impossibly) large, larger than those operative in other professions. And there is little scientific evidence to date that private practitioners engage in adequate sampling and proper weighting of post-treatment variables. This multitude of random, extratherapeutic events—what Meehl (1960) calls *context-dependent stochastologicals*—creates a vexing problem for research in empirically supported treatments.

Clinicians receive information from their clients and transform it into judgments that are inevitably interpretive and conjectural. These judgments flow from covert schemas and other accouterments of therapists'

values and belief systems (see Fiske & Taylor, 1991 for an explication of this principle) as well as from explicit schemas derived largely from the clinical training programs in which they were formed. Such personal schemas heavily influence the processing of client information. They are shaped not only by professional training but also by therapists' personal, life-long history and the particularities of the culture in which they have been educated and raised.

Nomothetic factors are operative as well. A particularly influential one is the *confirmationist bias* alluded to above. Individuals, once having seized on a simple, plausible explanation for a phenomenon, tend to perseverate, even in the face of discrepant, and even contradictory, evidence. The consequence of not compensating for, or somehow offsetting, the effects of this bias is that different therapists are apt to formulate different diagnoses as a function of the information on which they initially and selectively focus—and then elaborate (cf, e.g., Bandura, 1969; Casas & Vasquez, 1989; Lonner & Ibrahim, 1989; McReynolds, 1989; Tanaka-Matsumi & Higginbotham, 1989). Another nomothetic factor that has been well established in the research literature is the *fundamental attribution error* (Andrews, 2001; Burger, 1991; cf, e.g., Fiske & Taylor, 1991; Jones & Nisbett 1972, Nisbett & Ross, 1980; Ross, 1977). This error arises from the penchant of those who are observers of people to exaggerate the influence of the latter's dispositional characteristics (i.e., attitudes, abilities, or personality traits) on the observed person's behavior while overlooking (or minimizing) potential situational explanations. Batson and Marz (1979), among others, reported that trained therapists demonstrate this bias in their work, emphasizing intrapsychic determinants of problem etiology while minimizing environmental stressors that could account for much of the variance in their clients' disordered behavior and subjective stress. These authors propose that even when clinicians recognize situational causes, they have a tendency to prescribe treatment designed to address presumed dispositional causes rather than coercive situational factors (cf. Heppner & Frazier, 1992, for an overview of this and other sources of bias in clinical reasoning).

If the client's problems are improperly construed, then treatment can only be haphazardly rendered. Sound information processing during the intake interview and subsequent sessions is critical in discerning the client's actual problems and in planning appropriate treatment. We reason that with a greater understanding of the nature of data processing, psychological clinicians may better appreciate why cumulative professional

experience has not promoted continuous performance improvement (at a level intuitively expected) and how they may ameliorate that reality.

The purpose of this study is to address two questions. (a) Are therapist-confirmatory inferences (i.e., statements reaffirming initial and previously articulated inferences) and proportion of discarded inferences (i.e., statements that represent reversals or denials of previously therapist-articulated inferences) affected by therapist experience and the temporal order in which client information is presented? (b) Does the temporal order in which client information is presented and clinical experience of the therapist affect the proportion of dispositional inferences (i.e., statements bearing on personality traits and chronic attitudes) or the proportion of contextual inferences (i.e., statements bearing on current environmental conditions) generated in a case file analysis?

Method

We asked clinicians to examine the dormant case file of a long-term hospital outpatient. Using a think-aloud methodology (Ericsson & Simon, 1994; see below under heading, *Procedure*), we asked clinicians to formulate hypotheses about the client's condition and the origins of that condition. We examined the resultant protocols to determine if the order in which an intrinsically neutral sexual datum (the report of an isolated and purportedly homosexual experience in early adulthood) was presented, along with the clinician experience, affected the process by which the clinicians formulated conclusions about the client Material in the case file was arranged so that there was an equal amount of current environmental information, and historical, dispositionally interpretable information (defined below under heading, *Stimulus Material*). The data were carefully assessed by expert clinicians to assure that the two types of information were of generally equal clinical importance. Two versions of the case file were presented to the participants. They contained identical information. They differed only in that a single item of information, described above, was located near the beginning of one version, and near the end of the other.

Design

This study, using a 2 × 2 factorial design, examined two between-subjects factors: (a) temporal location of clinical information (early or delayed point in a case file in which a sexual datum was presented for consideration) and (b) length of clinical experience (trainees versus experienced therapists). The measures of the dependent variables were derived from an analysis of the transcribed protocols that were generated by the

participants. For purposes of performing multivariate analyses (MANOVAs), the dependent variables were grouped into two natural (and independent) sets: (a) frequencies of confirmatory and discarded inferences, and (b) frequencies of dispositional and contextual inferences. Multivariate and univariate analyses of variance, using SPSS-X programs, (Statistical Package for the Social Sciences, 2005) were performed on these data.

Participants

The 36 participants, all clinicians and evenly divided between two professional disciplines (clinical psychologists and counseling psychologists), can be characterized as a sample of convenience. Half the total sample (divided equally between the two disciplines and half from each discipline) was experienced; the Remaining participants, student trainees with comparable amounts of course and field work. The experienced participants had a minimum of five years experience with modal length of experience of 13 years. The participants were recruited by phone and posted announcement in mental health and clinical training settings. All the trainees were doing field work in a clinical setting (e.g., hospital, rehabilitation center, community mental health center) and were enrolled in a doctoral program or in a master's program that was a feed (for the most promising) to a doctoral program. The interns in the clinical and counseling psychology programs had spent approximately the same amount of time in their respective settings. Many, but not all, of the experienced participants had graduated from the same training programs in which the students were enrolled. All participants, both students and veteran clinicians, were remunerated at the respective prevailing modal mean rates for graduate student and postdoctoral professional services.

Stimulus Materials

A dormant case file from a local hospital's outpatient clinic of a middle-aged client was edited into segments that could be presented in a serial fashion to the study's participants. The client was diagnosed in the late 1980s as suffering from passive-aggressive personality disorder with elements of borderline personality disorder (301.84 in DSM-III-R [American Psychiatric Association, 1987], the case file antedates the DSM-IV-TR). Each segment of the file contained one to three sentences. The client file was altered, as mentioned above, to contain approximately equal number of units of dispositional and contextual information, that is, (a) historically remote events and conditions that might give rise to dispositional inferences, and (b) recent environmental and contextual events and circumstances that might give rise to contextual inferences). This case file

was chosen, among other reasons, because the remote, historical data and the recent, situational data in it were deemed to be of comparable gravity and clinical significance.

Procedure

The experimenters met individually with the practitioner-participants in their offices and with the student-participants in a university (lab) office. First, experimenters read the instructions and presented participants with three practice tasks to familiarize the participants with the think-aloud procedure. Ericsson and Simon (1994) have recommended that warm-up exercises be used to help participants habituate to thinking aloud as they perform a task. An example of a practice task is the following: Count the number of windows you have in your home. As you count them in your mind's eye describe to me, step by step and in every detail, the procedure you are using to arrive at your answer. Following the practice exercises, participants were presented with the case file in written form. These text units were widely separated (three or four to the page) to minimize the influence of the succeeding units on the interpretation of the preceding unit of material. Consistent with norms for this methodology, participants were asked to read each segment aloud and to articulate in an audible voice whatever thoughts passed through their mind as soon as they became aware of them. After this procedure, participants completed a questionnaire in writing that sought information about their educational and professional experiences and which posed several questions related to the case file. The entire procedure was audio-taped and later transcribed.

Two trained raters, doctoral students, who each had several hundreds of hours of experience working with these codes, coded the protocols. All protocols were rated independently by each rater. Discrepancies between ratings were then subjected to further analysis until consensus was achieved. Several irreconcilable differences were brought to the second investigator, and the pros and cons of the discrepant positions were discussed until agreement was reached.

Coding Categories

Inferences. Using the transcribed protocols, raters first determined whether or not a statement made by a participant was an inference. For our purposes, an inference was a statement that not only transformed the text of the case history, but also went beyond what was explicitly contained in that text or was implied by it. For example, for the participant to receive information that the client, as a youth, received sometimes painful boxing lessons from his father, an accomplished amateur boxer, and conclude the

client was a victim of childhood physical abuse, would be considered an inference (although the conclusion might quite possibly be true) in the context of this study. That conclusion, even without consideration of cultural and individual-differences factors, would be interpretive and considered an extrapolation from the data.

Dispositional inferences. Based on the criteria set forth in the studies cited above, all inferences bearing on the client were coded as either dispositional or contextual. Those coded dispositional explained behavior primarily by reference to long-standing intrapsychic dynamics or personality traits. For example, one participant read the following statement from the case file: "He then hooked up with an older woman, this relationship lasted until be was 21," and responded with the following inference (which was coded dispositional): "That makes me think of someone who is trying to repair his relationship with his mother."

Contextual inferences. In contrast, a contextual inference is an attribution based on contemporary events and conditions that could plausibly evoke in a patient a "normal", but perhaps inadequate, response. An example: "Mother lived with the father until he died two years ago", and one participant thought aloud: "This is a stressful event in his [the client's] life".

Confirmatory inferences. Inferences coded as confirmatory include all reaffirmations of initial and other previously articulated inferences, regardless of how often such inferences had been confirmed by the participant.

Discarded inferences. Inferences coded as discarded include all reversals or denials of previously articulated inferences, no matter how often such inferences had been disconfirmed by the participant.

A multivariate analysis of variance (MANOVA) was used to answer each research question. Multivariate statistical tests were completed, and, when appropriate, the univariate tests were observed. Proportions of inferences were used, as opposed to absolute frequencies, to eliminate a large source of within-group variance resulting from the fact that some participants produced a rapid and voluminous cascade of inferences, whereas others spoke in a slow, measured, parsimonious manner. In addition to the multivariate statistical tests performed, we also examined the data for violation of assumptions.

Results

Confirmationist Bias

Multivariate tests for the homogeneity of the matrices (i.e., Cochran's C and Bartlett-Box's F) were performed, and there was no reason to reject

the hypothesis that the variances were equal for the variable "proportion of confirmatory inferences." However, the same tests indicated that the variances were not equal for the variable "proportion of discarded inferences." Therefore, in all the analyses described below, the more robust Pillai's test of significance was used to evaluate all effects, as the significance level based on Pillai's trace is reasonably correct, even when assumptions are violated (Norusis, 1994).

A multivariate analysis of variance of the interactional effect of (a) temporal order and (b) clinical experience on proportion of confirmatory and discarded inferences produced an F-ratio (2,31) of 4.98 with $p = .013$. Next, the univariate results were examined in order to determine which variables contributed to the overall differences (Norusis, 1994). The univariate analyses indicated that as a function of temporal order and clinical experience the criterion variables varied as follows: (a) for proportion of confirmatory inferences, F (1,32) = 5.01, p =. 032; and (b) for proportion of discarded inferences, F (1,32) = 3.15, p = .085 (see Table 1 for sources of variance and Figure 1 for depiction of the data).

Dispositional Bias

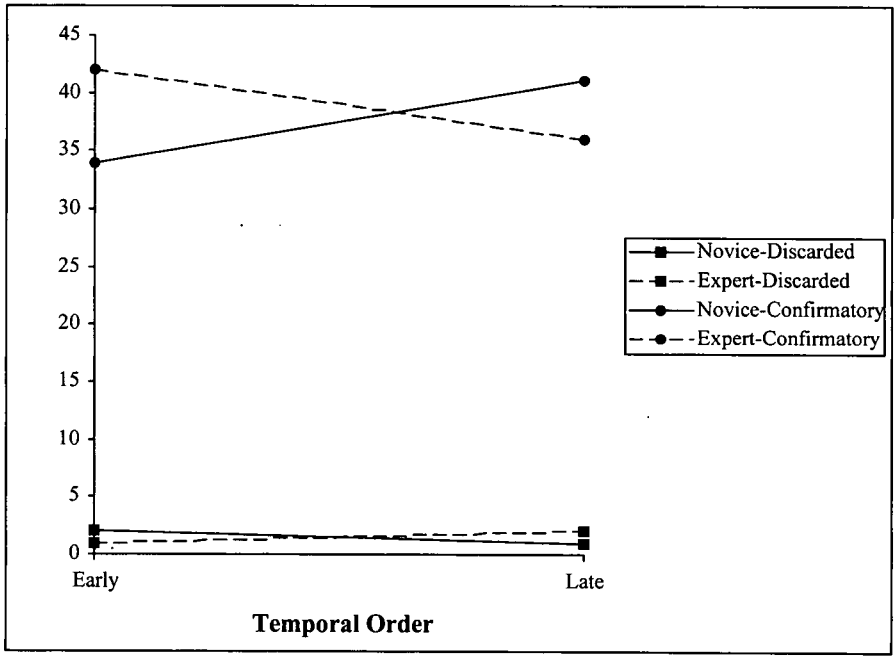
As the variable proportion of dispositional inferences is the inverse of the variable proportion of contextual inferences (that is, the two variables always sum to 1.0), a single ANOVA of only one of these variables was needed. We conducted a two-way ANOVA of temporal order (early, late) and clinical experience (novice, expert). The Cochran's C homogeneity of variance test indicated no difficulties. Further, the ANOVA indicated that there are differences in the proportions of dispositional inferences emitted by participants as a function of the temporal location of a vivid datum in a case file [F [1,32) = 7.27 p = .011] (see Table 2 for sources of variance.) The difference between the proportion of dispositional inferences expressed by participants using the early location of the vivid datum in percentage terms was $M = 66.76$, $SD = 11.27$, and for those using the later

Table I. UNIVARIATE ANALYSIS OF VARIANCE FOR PROPORTION OF CONFIRMATORY AND DISCARDED INFERENCES WITH (1 32) D. F.

Variable	Hypoth. *SS*	Error *SS*	Hypoth. *MS*	Error *MS*	*F*	*p*
Confirmatory Inferences	367.94	2348.03	367.94	73.38	5.01	.032*
Discarded Inferences	8.13	82.43	8.13	2.58	3.15	.085

*p < .05.

Figure 1.
MEAN PROPORTION OF CONFIRMATORY AND DISCARDED INFERENCES AS FUNCTION OF TEMPORAL ORDER AND THERAPIST EXPERIENCE.



location of the vivid datum was M =75.12, SD = 5.40. Correspondingly, the proportion of contextual inferences emitted by participants using the early location of the vivid datum was, in percentage terms, M = 33.24, SD = 11.27 and for those using the later location of the vivid datum in the case file was M = 24.88, SD = 5.40. We can conclude that participants who received the later vivid datum in the case file generated, on average, a larger proportion of dispositional inferences than did those who received the vivid datum early in the case file. Correspondingly, participants who

Table II. ANALYSIS OF VARIANCE FOR PROPORTIONS OF DISPOSITIONAL INFERENCES

Source	*SS*	*df*	*MS*	*F*	*p*
Temporal Order (A)	598.35	1	598.35	7.27	.011*
Experience (B)	99.30	1	99.30	1.21	.280
A x B	14.97	1	14.97	.18	.673
Error	3379.26	35	96.55		

*$p < .05$.

received the early vivid datum in the case file generated on the average a larger proportion of contextual inferences than did those who received the later vivid datum in the case file. On the other hand, the proportion of dispositional inferences and the proportion of contextual inferences did not vary as a function of clinical experience, nor was there an interactional effect of temporal order with clinical experience.

DISCUSSION

Report of an event of a nonpathological, and presumably innocuous, character (bearing on a patient's single homosexual experience in young adulthood) was located toward the beginning and toward the end, respectively, of two versions of a case file that were identical in all other respects. The experienced clinicians, in contrast to the trainees, adopted a more confirmationist mode when the sexual datum was introduced early. Novices, on the other hand, revealed themselves to be less confirmationist than the veterans as a function of the early divulgence of this datum and were less prone to seek information that corroborated their earlier hunches. To what extent this had to do with the sexual theme or with the simple saliency of the datum is not immediately evident. The confirmatory stance was not, evidently, limited to that datum but was operative over the larger database, although the exact distribution can only be revealed by a detailed qualitative analysis of the protocols.

The novices, in any event, appeared less inclined to make confirmatory inferences, whether about the homosexual contact—other apparently less vivid data—when the information in question appeared in the earlier, rather than in the later, part of the case history. This finding suggests that (a) the moment a vivid, and seemingly important client datum, is presented in a case file to a clinician, it has a significant influence on the information processing that follows; and (b) the level of experience of clinicians increases their penchant to make confirmatory hypotheses, as a function of when vivid information is divulged. It can be argued that as one becomes more experienced, one becomes more confident of one's ability to make quick, incisive, and accurate diagnostic judgments. One also, of course, gets older; it can be hypothesized that a maturational factor may have been operative here that is independent of experience.

The interaction of clinical experience, along with the timing of clinical information in the generation of confirmatory inferences, is of practical importance. If one acknowledges that a mindset less disposed to confirmation than to critical reassessment (of etiological as well as diagnostic hypotheses) is a desideratum in clinical practice, it is useful to reflect on the

reasons that account for the effects depicted in Tables 1 and 2. There are a number of properties inherent to the information processing of veteran clinicians among which are the automaticity, speed, and parsimony with which experts proceed to problem formulation (cf. Damasio, 1994, relative to the often covert, experience-determined, preselection of options for problem-solving). The findings of this study support the notion that novices may be less confident and thus less disposed than experts to quickly "lock" onto premature solutions to apparent, "ready-made" problems.

There is, however, virtually no difference between veterans and novices in the proportion of dispositional inferences proffered, when one collapses across versions. In the early version of the case file, a single fact seemed to galvanize clinicians' interest in situational variables, that is, the lifestyle and environmental settings that framed that encounter. As the data in Table 2 suggest, the absence of vivid information of a situational kind early on in the case analysis, or any other of comparable salience, allowed participants greater "freedom" to indulge their proclivity (cf. Ross, 1977) to explore the remote family history and intrapsychic realm of the patient rather than delve into an analysis of the situational determinants of his behavior and condition. It is of interest that trainees and experienced clinicians responded similarly, in this respect, to this stimulus. The finding that early-divulged information influences the course that therapy will take, and all the more so when it is vivid and possibly emotion-laden, corroborates the evidence in social psychology for the configural model that explains a primacy effect in social-information processing. These results support not only that thesis but also the principle of an anchoring effect in psychotherapy that derives from it.

Although it was not the investigators' intention in this study to explore the evidence for observers' (thus clinicians') purported penchant to favor dispositional explanations of patient behavior, it is interesting to note the overall tendency of participants to favor dispositional explanations of the patients' problem, even when an equal number of compelling contextual explanations could be inferred. Indeed, there was a consistent penchant across groups for clinicians to posit many more dispositional than contextual inferences–at a ratio of approximately 70 to 30. (The z-test for proportions revealed that the hypothesis that there would have been an equal split between dispositional and situational inferences can be rejected ($z = 2.49$, $p < .025$). These data support the established finding that observers generally lean to trait-based problem investigations rather than to situational ones. This corroborates a well-established principle in social

attribution literature known commonly as "lay dispositionism," that is, observers are apt to attribute an agent's behavior to aspects of the agent's personality rather than to the situation or the larger, often coercive, environmental context in which the behavior occurred (Jones & Nisbett, 1972; Nisbett & Ross, 1980; Ross, 1977). This also supports the view that many mental health practitioners seem less interested in altering the social environment and contingencies that have induced or simply maintain their clients' problems than in changing their perceptions and derivative cognitions (whether through cognitive restructuring, behavioral conditioning, use of psychopharmacological. agents, or combinations of these modalities). They engage in what can be called "professional dispositionism."

This study suggests that the information clinicians seek, and that clients divulge, in the earliest phases of a therapeutic relationship can have an influence on the course of therapy that is independent of, or at least not proportionate to, its intrinsic importance. That different therapists are oriented in radically different directions as a function of the theoretical importance their therapy of choice gives to various events in clients' lives is well known. Given the results that were found on the basis of relocating a vivid item of information in a case file, we can conjecture what the effects of reordering many of the clinical data might be, whether this be done in disparate and random bits (as not uncommonly happens during the course of therapy) or in large batches. That such information is selectively teased out in initial sessions, and that this temporal factor potentiates the "slant" inherent to one psychotherapeutic schema or another needs to be addressed in all training programs. Indeed, it seems to be advisable to give our students increased exposure to the generality of findings of basic research in social psychology, with particular emphasis on the domain of social cognition. Given the shortening half-life of the mental health sciences, the continuing education of experienced clinicians appears, as well, to be increasingly imperative.

Research literature seems to reveal that increased professional experience is not correlated with enhanced levels of therapeutic effectiveness (cf. e.g., Dawes, 1994; Dumont, 1991; Garb, 1989, 1998; Spengler & Strohmer, 1994; Peterson, 1995). Although studies in expert systems provide ample evidence that process in clinical medical disciplines can be profoundly affected by level of expertise (e.g., Azevedo, Lajoie, & Fleiszer, 1996; Chi, Glaser, & Farr, 1989; Johnson et al., 1981), such experience has not been related to many characteristics of information processing in psychotherapy. It remains for other studies to determine precisely in what

respects clinical experience influences process, and how, and in which circumstances, it heightens competence.

No social event is without effect. In the world of the natural sciences, causes are usually of a proactive character. That they are also of a proactive character in the field of human cognition should not surprise us. The anchoring effect attests to this. But neither should we be surprised that cognitions that arise at a later moment can modify cognitions that became entrenched in an earlier moment On the other hand, the exchange of information in a clinical session involves systemic, interactive, multiplex, and enmeshed feedback loops. All variables are not only susceptible to change, but they also are in constant flux, for in any social system, every variable has an impact on every other and serves as both cause and effect. There are moderator variables that magnify or diminish the influence of social events. The order in which data are presented to us would seem to be an important one. That it influences the very process by which we attribute meaning to such data seems supported by the finding of this study.

Cohen (1994) reminds us that psychologists must finally rely on replication—as have all the older sciences. We would be pleased to see these findings subjected by scholars to serious risk of disconfirmation, for they have serious implications for the practice of clinical professions. School wise approaches to the elicitation of diagnostic information from clients accounts for much of the diversity in the kinds, number, and sequencing of data that are brought to light in a clinical context. That in turn has great potential to generate diversity of diagnostic and etiological judgments that therapists make about their clients-and the subsequent treatment they provide. Further investigation of this matter appears indicated.

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