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AN EXPERIMENTAL ANALYSIS OF CLINICAL PHENOMENA[1]

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The complementary roles of behavioral and psychodynamic theory are described. Behavior theory provided an objective communicable language and a tool of analysis. Dynamic theory indicated the important things to describe. The actual practices of therapy are sometimes very different from the theories or the language about the therapies.

Commentators on behavior therapy have suggested that the contribution of behavioral and insight or psychodynamic therapies is complementary rather than contradictory (Ferster, 1967a, 1967b; Herson 1970). If the techniques of insight therapy modify behavior in useful ways, then they can uncover new phenomena for the behavior therapist. An objective behavioral description will then make these phenomena communicable and replicable. An objective language can contribute to psychodynamic therapies because (*a*) the therapist can be reinforced by small indications of progress if the component details of a long-term therapeutic interaction are readily observable; (*b*) experienced therapists can train others if they can accurately describe what they do; (*c*) observations of the relevant component behaviors will lead to new discoveries.

The Behavior of Certain Therapists Is Differentially Reinforced by the Changes that Occur in Their Patients

It is important to distinguish among several styles of clinical work to discover those therapies which are most likely to develop phenomena which are profitable to analyze behaviorally. Conventional clinicians, like behavior therapists, probably differ in how much their activity is planned ahead of time. For some, therapy is a prearranged protocol administered to the patient, as in a prescription; for others it is a product of the moment-to-moment interaction between them. It is the proverbial middle ground that will be the most useful. Past experience, the transmitted experience of others, and theory provide a structure that gives therapy some direction, while the experiential quality and the primary focus on the behavior of the individual patient constantly adapts and

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bends the theory and the past experience on which treatment is based. The theory suggests what to look for, but when it ceases to be useful, the experienced therapist shifts to his observations of the patient's behavior and his own experience.

The changes in the patient's behavior may reinforce a therapist's behavior even though the procedures he is using are intuitive. It is this experiential side of therapy, derived from the point-to-point interaction between patient and therapist, that leads some clinicians to describe therapy as a scientific experiment. The outcome is not known in advance— each activity is determined by the results of the previous one, and the patient teaches the therapist what is effective. The successive approximation of the therapist's behavior by changes in behavior of the patient has potential for behavioral analysis because many of these phenomena and procedures do not appear to be discoverable in any other way. No matter how the phenomena and methods are discovered in the first instance, however, they can become objective and communicable. If the component performances and the environmental details which control them are observed, insight therapy may become behavioral even if it is not behavior therapy.

It Is More Profitable to Analyze Clinical Practice Than Clinical Theory

It is more profitable to concentrate on those parts of clinical theory and practice which suggest the underlying behavioral phenomena rather than to explain some theory in behavioral terms. The clinical terms and concepts useful in uncovering new behavior are those which give evidence of the actual conduct which prompts the therapist to use the terms. Terms like transference; mutative interpretation; strong, negative, or warm feelings; sense of identity; and feeling of abandonment are useful if they uncover the behavior that the clinician reacts to when he uses them. The heuristic value of the terms or the merits of the theory they represent has little relevance to a behavioral analysis. By paying attention to the behavioral observations rather than the theory, a behavioral analysis may discover kinds of conduct that are useful targets for behavior modification procedures. The venture proposed is different from the translation of clinical terms into behavioral ones, as, for example, the pioneering work of Miller and Dollard (1950). Rather, the clinical terms will provide an occasion to inquire about the actual behavior that prompted use of the clinical term.

BEHAVIORAL ANALYSIS OF DESENSITIZATION THERAPY

The dichotomy between the behavioral and insight therapeutic practices becomes less distinct when a behavioral analysis is made of the actual interaction. Despite the prescription of a scientifically based treatment plan in desensitization therapy, there are still questions about whether the stated procedures are actually the ones producing the final result. An analysis of desensitization therapy offers one such example. Although the results of desensitization therapy are often asscribed to

the extinction of conditioned aversive stimuli, other behavioral processes could equally contribute to the result.

The patient's complaint (hence the reason for therapy) is usually nonverbal. There is difficulty with such behavior as going into buses, riding in elevators, handling snakes, engaging in sexual behavior, or riding a bicycle. Yet the therapeutic procedures deal almost exclusively with *speech* about these outside activities. Most often, the outcome of therapy is measured by the frequency of such *verbal* behaviors.

Increasing the Frequency of Verbal Performance by Weakening Incompatible Behavior

One outcome of desensitization therapy is an increased frequency of talking about phobic activity, because of the patient's experience with the desensitization hierarchies. The desensitization procedure and its result is obviously parallel to those of psychoanalysis, where the patient is led to talk about difficult matters paced with the ability to tolerate the discomfort generated. This increase in frequency of talking about the phobic behavior has significance beyond the particular performance because the mechanism by which the behavior was suppressed involves more than the aversiveness of the phobic behavior substracting algebraically from its frequency (Azrin & Holz, 1966). The complication occurs because an aversive stimulus increases the frequency of whatever performance terminates it. Therefore, as soon as there is any tendency to talk about the phobic activity, the aversiveness generated will negatively reinforce[2] some other performance, most likely one that is incompatible with it. So the frequency of talking about the phobic behavior is reduced because the patient talks (or thinks) about something else which preempts the place of the anxiety producing language. The effect of this suppression is therefore not limited to the selected class of phobic behavior (Skinner 1937, Dinsmoor 1954). The incompatible behaviors are emitted performances, not available to the patient as a part of his normal useful repertoire, which take the place of other verbal activity in which the patient might otherwise engage. Since the ability to talk is, in general, a necessary part of a functioning person's repertoire, any increased capacity that could result from desensitization therapy would be of obvious therapeutic benefit.

Direct Reinforcement of Verbal Performances by the Therapist

The desensitization procedures also may teach the patient how to observe his own anxiousness. He is taught to relax sufficiently so that gross motor tensions do not mask the signs of incipient anxiousness. The patient constructs and practices exercises, with graded hierarchies of statements or thoughts, which progressively provoke discomfort. These

[2] Some readers may be misled by conflicting usages of the term negative reinforcement. The term is used here to define a performance which occurs because it terminates or avoids an aversive stimulus. The word negative is intended to have the connotation of "absence of." Some writers have used negative reinforcement as synonymous with punishment.

activities exemplify the same basic behavioral process as the formal discrimination procedures of the experimental laboratory. The patient's performance may be raising his hand or saying "I am anxious," and the discriminative stimulus it comes under the control of is the state of his anxiousness. The reinforcer is generalized. The size of the steps in the hierarchy which the patient constructs and practices depends on his ability to distinguish small changes in comfort. Most of the events the patient learns to talk about are private.[3] Therefore the therapist requires indirect evidence of the stimuli that prompt the patient's performance. Otherwise, he has no way of knowing how accurately the patient is observing his behavior. These collateral observations of the patient probably require considerable clinical skill and experience and constitute one of the "unwritten" aspects of behavior therapy.

The Transfer from the Therapist's Office to the Daily Events of the Patient's Life

The behavior changes which have been described so far, as logical products of desensitization procedures, were mainly verbal. Suppressed verbal behavior is freed; the patient is no longer burdened by an extensive repertoire whose only purpose is to suppress other behavior; verbal performances are developed under the discriminative control of private events. Although the new verbal behaviors which may emerge from therapy are related to the phobic behavior which brought the patient to treatment, they are by no means identical to it. One of the most pressing questions about therapy is how procedures in an office or other limited space can have a wide effect on the patient's behavior elsewhere. Behaviorally, phobias deal with the frequency of walking, climbing stairs, operating elevators, or standing at bus stops. A functional analysis of how desensitization works requires discovery of a behavioral bridge between talking to a therapist in an office and a change in the frequency of activities elsewhere.

The discomfort that brings the patient to therapy comes predominantly from nonverbal operant behaviors. In other words, he stays home instead of going to work, or he doesn't speak to people when he sees them. This suggests that the over-all desirability and effectiveness of the patient's operant repertoire is a more important dimension of his problem than specific phobias or fears. A strong positively reinforced operant repertoire is likely to include behaviors which can terminate aversive stimuli, rather than be disrupted by them. Conversely, it is hard to imagine how desensitization of a particular class of performances could be of much practical benefit in a repertoire whose over-all frequency is low for instance, because it does not distinguish important characteristics of the reinforcing environments which are potentially available. Even though the preceding analysis suggests limitations on

[3] The term private event follows Skinner's (1957) usage. It refers to events to which only one person has direct access because they are within the skin. Usually there are public accompaniments which allow the community to reinforce discriminatively even though only one person has direct access to the event.

what may be expected from desensitization procedures, practically there may be many situations where these procedures alone may have general therapeutic benefit. There is one extreme where the over-all repertoire is extremely limited and the other extreme where the phobia is of trivial importance in the context of the patient's total repertoire. Thus behaviorally and clinically, a phobia is not so much one kind of behavior as it is a change in a substantial part of the person's total repertoire. The patient's ability to react sensitively and differentially to his own behavior could provide one important bridge to his natural environment. The person who can react differently and specifically to that part of his natural environment that is upsetting him is a step away from acting on it to free himself from the disruption. To put the matter behaviorally, an aversive stimulus may disrupt an entire repertoire, or it can increase the frequency (by negative reinforcement) of some performance that terminates it. In the classical animal experiment, the passive reaction has the same characteristics as the buzzer preceding the electric shock, which disrupts the animal's food-reinforced behavior. The person who prevents the disruption of his repertoire has the characteristics of an animal who terminates the buzzer by emitting a performance negatively reinforced by terminating the conditioned aversive stimulus. A passive person who reacts diffusely and helplessly to the unfavorable aspects of his social world is the clinical parallel to the laboratory disruption of the ongoing operant repertoire by an aversive stimulus. It does not appear possible to spell out all the steps by which a person moves from a repertoire which accurately observes the elements in the environment influencing his behavior to the achievement of performances operating on the environment. Nevertheless, it seems possible that a discriminative repertoire (accurate perception of the functional environment) is a necessary prerequisite for effective action. Without differential control by aversive elements of the environment (noticing elements of the environment), there could only be a diffuse emotional reaction or withdrawal from the entire situation. The delicate interaction with the total environment, avoiding and escaping aversive elements, while at the same time acting on positive elements would obviously require a large discriminative repertoire.

Discriminative control by the environment is of course predominantly verbal in human behavior. It is also arguable that much of the differential control by the environment can occur *only* verbally, particularly where the properties of the environment on which reinforcement depends are themselves verbal.

It is useful to distinguish between two parts of the patient's environment which control his verbal descriptions: (*a*) the repertoire within the patient's skin; (*b*) his verbal descriptions of the environmental factors that are producing the internal, mostly private, reaction. The latter, requiring a functional analysis of the performance as it is controlled by particular elements of the environment (usually external), is obviously a necessary condition for a person to live successfully. Yet

the ability to notice changes in one's own internal state appears to be an important, perhaps necessary, start toward observing such a functional relation. The distinction between noticing one's own behavior and noticing its functional relation to the environment is an important one in Freudian theory which talks about the "ability to distinguish self from not self" and ascribes to this repertoire the highest importance (Freeman, Cameron, & McGhie, 1956; Searles, 1965). These observing behaviors—the tacts[4] under the control of private events—are natural events whose continued reinforcement does not depend on the arbitrary or special circumstances of the therapy situation.

Such ability to observe and analyze the environment is, of course, a goal of most insight therapists. The term psychoanalysis, for example, more aptly describes the patient's ability to analyze his own conduct than the therapist's observation of the patient. From the point of view of a behavioral analysis of insight therapies, they would more aptly be called "outsight therapies."

The Effectiveness of Token Procedures May Be an Indirect Result of the Procedure

Token procedures in schoolroom environments offer another example, similar to the analysis of desensitization therapy, of how a statement of clinical procedure may not account for all the reasons for its effectiveness. Even though many classroom token procedures appear practical and effective, it does not follow that over-all changes in the behavior of students come only from the specific behaviors that the teacher intends to reinforce with tokens. In fact, if control of the child's behavior by tokens and food is taken literally, it would suggest that he would stop reading when tokens are discontinued. Obviously, other reinforcers operate in an environment in which tokens are a part. Possibly one reason for the effectiveness of token procedures is the way that they make the child's behavior more visible to the teacher as well as to the child himself. As a result, they provide conditioned reinforcers for both repertoires. A teacher who can give a token selectively to produce specific increments in a child's behavior is also becoming more observant and hence more reactive to other aspects of the child's repertoire. Under these conditions, not only will she give tokens, but she will also attend to the child selectively and differentially, prompt other behaviors related to the target of the token procedures, and react to components of long-range programs making detailed and intimate contact with individual aspects of a child's behavior. Because she can observe significant and personal details of the repertoire of individual

[4] A special term, following Skinner (1957), to describe a verbal performance which is controlled by the stimulus present when it is reinforced. Control by the stimulus, rather than by the reinforcer gives the tact its objectivity, its usefulness for communication, and its common usage by different members of the community under a wide range of circumstances. In colloquial terms a tact *describes* some event. In the present case the event that the tact "describes" is within the person's skin, hence private. It is useful to talk about the tact as a verbal performance controlled by some stimulus rather than "describing" it because the former usage points to the exact procedures for establishing the behavior, while the latter usage is mentalistic. It is for this reason that the phrase "a performance under the control of stimulus" appears frequently in this paper in place of "awareness of the stimulus" or "ability to notice the stimulus."

children, her interaction with each will make contact with the performances and reinforcers currently in high frequency in that child's repertoire. The alternative is to command performances for which there is no current reinforcer—a situation likely to induce the teacher to use aversive control.

On the child's part, the token amplifies the product of his conduct (the natural reinforcer that maintains his study activity) so that he can observe his own progress and competence. Effective study procedures as commonly applied by independent, aggressive students illustrate how conditioned reinforcers are generated by organizing a study unit in parts so that completion of one part produces conditions for the next. When a student first makes an outline of his study unit, the completion of each sub-unit is a part of a chain leading to the completion of the entire unit. When a student looks away from the page and "says what he just read," his own speech provides a reinforcer for the preceding study behavior. Token procedures may, in a similar way to study behaviors, make the grain of the interaction with the study material finer. The child's increased ability to see his own progress and hence be reinforced by it is as much a product of a new classroom structure as it is a result of direct reinforcement of behavior by the token itself. The teacher who individualized instruction in her classroom soon creates a totally new environment in which her role shifts to an advisory, programming, and reactive role in which she designs tasks clearly within the child's competence and builds a total classroom environment which reacts to these changes after they occur. These secondary effects are of much more educational benefit than performances directly reinforced by the tokens because they create a repertoire in which the child becomes independent of the teaching procedures.

THE PROCEDURES ON INSIGHT THERAPY

The actual behavioral processes underlying the procedures and practices of insight therapy are no more obvious than those underlying desensitization therapy. Even though insight therapists frequently use mentalistic language, such as talking about the patient's feelings and rejecting the patient's emitted behavior as a surface manifestation of an inner problem, it is usually possible to know many of the behavioral circumstances prompting clinical descriptions. Mentalistic terms, i.e., feelings and emotional tone which put the locus of action inside the patient, appear to be designed to resolve the discrepancy raised when very different overt forms of behavior have the same function and similar forms of behavior have different functions. In other cases, his state of feelings is invoked to describe the frequency or strength of the behavior—strong feelings are generally equivalent to a high frequency of behavior. The clinical use of the term feelings, is an extension of ordinary speech, as for example, "I feel very strongly that . . ." "He doesn't express his feelings" usually describes a repertoire where certain behaviors are not being emitted despite collateral evidence that would lead an observer to expect a higher frequency. An interpretation of patient's feelings, such

as "You seem to feel angry," is usually a functional analysis which summarizes very different forms of behavior by indicating that they are controlled by a single variable—the aversive effect they have on someone's behavior. The performances range from a funny story at someone's expense, a high frequency of reporting unfavorable events, facial expressions, or mispronouncing a name to direct criticism. These are angry feelings clinically; behaviorally they are a potentially high frequency of performances which present aversive stimuli to others; or they are generated by an unfavorable event, such as an insult, a loss of property, or a withdrawal of attention or affection. The single variable responsible for the diverse forms of activities is generally placed inside the patient in the form of "angry feelings." The performances that lead the clinician to infer a common controlling variable are mostly directly observable in the immediate therapeutic situation, hence potentially as available to the patient as to the therapist.

Insight Therapies Emphasize the Development of Self-observation

Much of insight therapy appears to be directed toward the development of self-observation. Functionally, the therapist's verbal reactivity reinforces behavior which describes (is under the discriminative control of) other verbal behavior. When a patient says, "I wanted to stay longer, but I left anyway," the therapist is likely to reply, "Tell me more about it." The persistent reinforcement of behavior which describes behavior is designed to generate a repertoire of self-observation or awareness, including a description of the functional significance of the patient's behavior. The importance of self-awareness and self-observation is at the heart of psychodynamic theory. Primary narcissism, for example, represents the minimal amount of self-observation and awareness. Normal growth and development consists of an increased control of the child's behavior by the characteristics of the environment reinforcing it. Behaviorally, primary narcissism refers to a repertoire of the emitted operant behavior without any accommodation to the characteristics of the environment that can potentially support it. The failure to observe and accommodate to the characteristics of the external environment is a deficiency in repertoire that will obviously prevent both the avoidance of aversive elements and the development of an effective interaction with the full complexity of the normal environment.

Behaviorally, a person learns to observe when a performance comes under the control of a stimulus. The shift in language from "perceiving or observing a stimulus" to a "performance under the control of a stimulus" allows a behavioral rather than a mentalistic description. A description of the control of a performance by a stimulus has an advantage over an introspective account because it reveals the actual behaviors that the patient and therapist are reacting to and their functional relation to the objective features of the environment. It emphasizes a description of how the patient acts on his environment and how these performances are reinforced or not reinforced, depending on the circumstances.

The Kinds of Self-observation That Are Difficult

It is difficult to teach a patient to observe his own behavior because so much of it is private or of such a small public magnitude that it is essentially covert. Three kinds of events that need to be observed are: (*a*) the person's physiological and somatic state, (*b*) the strength of latent behavior in the repertoire, and (*c*) the functional relation between the performance and the element of the environment that controls it. Clinical descriptions do not always differentiate between these different kinds of events. When a patient says he is angry, the discriminative stimulus controlling this verbal performance may be physiological; or the disruptive effect of physiological changes on the ongoing repertoire; or it could be an increased frequency of aggressive behaviors. Often the patient can describe the internal physiological state but lacks verbal behavior about the events in the outside environment that generate it. Other patients may be able to describe neither external events nor changes elicited within their skin. Others, able to describe an increased frequency of actual or latent operant behavior, are unable to describe it functionally in relation to the environment cotnrolling it.

Skinner's (1953, 1957) discussion of verbal behavior under the discriminative control of private events applies directly to the problem of defects of self-awareness. The development of these behaviors in therapy appears to be almost the same as in normal growth and development. The child learns to describe his physiological state, his incipient or latent behavior, and the functional significance of his behavior in response to questions such as: "How do you feel?," "Where are you going?," or "Why did you do it?"

Probably the most significant and difficult event to learn to observe is the functional relation between one's own behavior and the element of the environment that controls it. In general, a factual account of what happened is not nearly as useful as the relation between the events and the part of the environment that controls them. When a child who hears that someone is sick says "I hope he won't die," we cannot know whether the performance should be classified as avoidance or punishment. The performance is avoidance of the loss of positive reinforcement if the child is apprehensive about the possibility of death. It is punishment if it is a performance reinforced by the injury it produces — if he is angry at the person. It is particularly difficult to observe the functional significance of behavior when the performances are distorted by multiple contingencies, as in the preceding example. In addition to the regular reinforcer maintaining a performance, certain forms may receive punishment or a special measure of reinforcement. In these cases, very strong behavior may be observed only indirectly because only indirect forms are emitted. Clinical descriptions summarize apparently different but functionally similar events as a statement of the patient's feelings or as the emotional tone of the acts. Behaviorally, they are performances with different topographies which alter the environment in the same way. In both cases the theoretical description serves to differentiate be-

tween performances which are topographically different but functionally similar. When clinicians assert that behavioral descriptions are insufficient, they are speaking of the necessity of a functional analysis. Behavioral language, however, has the advantage of describing events in the outside environment about which consensus is easy rather than an internal state which needs to be inferred indirectly.

Interpretation

Interpretation, which is such a prominent feature of most insight therapies, is given such importance because many patients are unable to observe more than the topography or content of their behavior. Traditionally, the "insight" therapist interprets the patient's feelings; that is, he tells the patient the functional analysis he has made of the behavior they observe together during therapy. Whatever other significance interpretations may have in various clinical theories, behaviorally they are *tacts* under the control of the patient's behavior. In more common language, they are statements which describe the patient's verbal behavior. A behavioral account of what happens when a clinician makes an interpretation requires an analysis of the verbal interaction between therapist and patient as speaker and listener when they maintain and alter the frequency of each other's behavior.

Interpretations are difficult technically because the clinician cannot simply tell the patient what his repertoire is and what is controlling it. If he did so the resulting verbal behaviors would be *intraverbal,*[5] like memorizing poetry. Whether the patient learns how to describe his own conduct, with some instruction from the therapist, or whether he is emitting behavior reinforced by the attention and differential reactivity of the therapist is a subtle distinction of crucial importance from a behavioral as well as from a clinical point of view. The distinction is between the direct reinforcement of verbal behavior by the therapist and a verbal performance under the control of a stimulus by differential reinforcement. In common language, we ask whether the patient has observed an event directly or whether he is saying the kinds of things that could have been dicovered by observing the event. The problem is doubly difficult because the verbal performances are topographically identical in the two cases. Both Kantor (1959) and Skinner (1957) have commented extensively on the importance of distinguishing between a topographic and functional description of verbal behavior.

The Reinforcement of Observing Behavior

Verbal behaviors occurring because they are reinforced by the therapist are arbitrary, since they are narrowly controlled by him and hence potentially unavailable to the patient in the absence of the therapist's special purposes. The therapist contributes by providing an

[5] A verbal performance under the control of a previous verbal performance as in a chain of behaviors. "Quick as a wink" is an example of an intraverbal sequence of performances. There is little point-to-point correspondence between each of the words in the sequence and a corresponding effect on the listener.

opportunity to make the patient's observation more visible, more overt and more frequent. In such a case, however, the primary control is by the events in the patient's life rather than the reaction of the therapist. The naturally reinforced observations have the advantage that a patient can make them in the absence of support by the therapist. The distinction is between natural and arbitrary reinforcement of the patient's verbal performances. (Ferster, 1967b) In the arbitrary case, the patient's verbal performances are observations in only a limited and literal sense. Technically, they are impure tacts[6] (according to Skinner's usage of the term) because they are reinforced by the therapist rather than by a generalized reinforcer. For example, the therapist may react especially to comments about sexual behavior or to some other performance which fits into a preconceived treatment plan. In the natural case, the reinforcer maintaining the verbal observation is reinforced because it clarifies the environment by providing discriminative stimuli for the reinforcement of other behaviors. The role of the therapist is that of an audience rather than a reinforcer; he reacts only to self-observation, leaving the form and content of the observation to depend on the patient's dispositions. Even when the therapist may selectively encourage the patient to note those behaviors which give evidence of the highest potential frequency, the content of the patient's observations will be a product of his unique history of reinforcement rather than of selective reinforcement by the therapist.

Timing

At the heart of clinical interpretation is its timing. The ability to influence a group or an individual by commenting or observing depends less on the correctness or importance of the observation than whether it can prompt an increase in the frequency of behaviors already prominent in the patient's repertoire. In technical language, the effectiveness of an interpretation will depend on whether the functional description of the patient's behavior is a discriminative stimulus, a tact, under the control of events in his own life, or *intraverbals* reinforced by the therapist, such as memorizing the facts. The delicacy of an effectively timed interpretation is reminiscent of Goethe's advice that you can only teach a student what he already knows.

From a behavioral analysis standpoint, many successful changes in the patient's behavior need to occur before there is substantial repertoire in a frequency high enough to be prompted by an interpretation. In fact, psychotherapy may be thought of as a series of procedures to develop new repertoires which cumulate in successful interpretations. As a minimum, the patient needs to emit enough verbal behavior to enable it to be differentially reinforced.

The patient's lifelong habitual patterns of action can be observed

[6] An impure tact is a verbal performance whose control is shared by the stimulus prompting it and a reinforcer relevant to the speaker's current level of deprivation. If the tact were pure, its form would be controlled solely by the stimulus to the exclusion of any reinforcers relevant to the speaker's current state of deprivations. Scientific descriptions represent the ideal of a pure tact.

and analyzed in the immediate therapy situation because the therapist's neutral position provides a setting in which the patient's characteristic manner of action can be enacted. This, of course, is the behavior that is clinically called transference.

Performances reinforced directly by the reactivity of the therapist are still another source of behavior for observation and analysis in the therapy environment. The therapy situation is a stable interaction in which two people reinforce, shape and sustain each other's behavior. The gross behavioral events in the immediate therapeutic situation therefore provide an opportunity for interpretation and description because they are an approximation of the kinds of observations which can be made elsewhere. The immediacy of the therapeutic situation is sometimes lost by those who emphasize the outside events the patient is talking about. Of equal clinical significance is the actual behavior of telling the events to the therapist. The patient's speech "to the therapist" has two simultaneous functions. First, it is a tact, usually quite distorted and impure, under the control of the childhood event (or any other past event the patient is talking about); perhaps it is even some intraverbal residue of the past event. More important, however, it is a performance whose form has been shaped by speakers whom the patient has influenced in the past. If the latent reactivity of the therapist is similar to those individuals who have maintained the patient's behavior in the past, the verbal episode will be successful and stable. To the extent that the therapist does not react in the same way as the patient's past listeners have, there is an opportunity, first, for differential reinforcement, and second, for observation of the discrepancy between the patient's behavior and reinforcement by the therapist.

The significance of the therapist's reinforcement of the patient's speech is in the functional relation between the two repertoires rather than the specific content of what the patient is saying. When a patient is telling a therapist, for example, about his childhood, the effect that is generated in the therapist, as a listener, is a more important characteristic of his verbal behavior than the event which it describes. The reinforcer in such a verbal episode is a subtle one, at the heart of the definition of verbal reinforcement.[7] The delicate interaction between two people that occurs when someone tries to explain something illustrates the process. There is give and take as the speakers and listeners play on each other until the listener says he understands and the speaker is no longer inclined to explain because the listener can now say what he was trying to explain. Functionally, the patient's speech is primarily a performance reinforced by "making the therapist understand" and only secondarily a performance describing the patient's past life. The advantage of such a functional relation between therapist and patient, listener and speaker, is that the interaction reinforces (hence increases the frequency) of explanations and observation of the patient's life. The therapist's ability to make a functional analysis of the emitted be-

[7] For an elaboration of the definition of verbal reinforcement see Skinner, 1957, pp. 224-225.

havior he is observing in the immediate situation and his interest in the patient's observations gives a unique advantage to his verbal reactivity.

A Successful Interpretation

One criterion of success of an interpretation is whether it prompts a verbal performance in the patient's repertoire under the discriminative control of his own behavior, which has the same essential elements that are prompted in the repertoire of the therapist when he is observing the same events. In colloquial language, does the patient observe the same thing as the therapist? The observations remain the patient's but the particular dimension which exerts special control may be a product of the therapist's rephrasing, suggestion, or question (prompt). The ultimate validation of an interpretation is, of course, a behavioral change beyond the immediate conversation.

Group therapy provides useful examples of interpretation because the group's task is to analyze its immediate behavior—the interactions between the members and between the members and leaders. A common occurrence in therapy groups is a long and uncomfortable silence which occurs because the performance which has the highest potential frequency for some reason cannot occur. The therapist, for example, observes a slow and depressed conversation from which he draws the conclusion that the group as a whole is sad because the sessions are going to end in two weeks. He judges that the behaviors he has observed, as well as their covert counterparts, are visible enough to the group members that he can attempt to prompt observations of them. When he comments that everyone seems sad and wonders whether the impending end of the meetings was the reason, the conversation increases in frequency. Someone remarks that he will miss the group meetings, another says how much benefit there was, and another indicates some remaining items of business with which there is still time to deal. Sometimes the therapist's interpretation will be prompted by remarks about difficult personal losses and separations which members of the group have encountered in their past lives. In that event, the interpretation may be a comment linking past losses experienced by the patient with the threat of loss currently experienced in the therapy group. The force of this interpretation in this case is to prompt (increase the frequency) two related performances simultaneously so that the patient can observe them together. The final observation (by the patient) is one performance controlled by the two events.

Circumstances surrounding a group's evasion of its task are often interpreted. An anxiety-provoking event may often lead a group to "chit chat," an atmosphere suggestive of a cocktail party. For example, a member of the group who had been roundly criticized the previous time fails to appear. If the therapists indeed have evidence that the light conversation is avoidance behavior negatively reinforced because it is prepotent over discussions of the missing member and the worry about

the extent of their responsibility for his absence, he might describe the group's current behavior and ask whether it is being produced by concern over the missing group member. A comment to this effect may suddenly change the atmosphere to a gloomy depressed silence from which a discussion slowly emerges about whether someone's unkind treatment was responsible for the missing member's absence. When the circumstances surrounding the absence are sufficiently clear, the conversation shifts to a new topic without interference by high frequency behavior which cannot be emitted. A therapist may speak only several times an hour, but if the remarks are successful interpretations, they produce dramatic alterations in the frequency and content of the group's behavior.

If the interpretation and its timing is correct, the frequency of observing the troublesome event (controlling the behavior that could not be emitted) increases. The overt occurrence of verbal performances, under the specific control of the disruptive aversive event, clarifies the control of their behavior for the group. The unanalyzed environment disrupts the group's behavior because the aversive situation generates behavior which has a latent, potential frequency higher than any available behavior but which cannot be emitted. The prepotency of the unemitted performances prevents any other activity. When these high frequency latent behaviors can be emitted and hence act on the environment to reduce the guilt over the absent member (technically avoidance performances), the group can turn to other matters. When the members of the group can observe how the impending dissolution of the group or the circumstances surrounding the group member's absence influenced them, specific behaviors under the control of the aversive elements, by negative reinforcement, can reduce the aversiveness that had been so disruptive. The distinction is the same as that between the disruptive effect of a preaversive stimulus and the negatively reinforced operant generated by its removal or diminution.

Transference

No account of insight therapy would be complete without a discussion of transference, since so many of the patient's behaviors with which the therapist interacts come from styles of conduct that have been recurrent and characteristic during the patient's lifetime. The behavior inappropriate to his environment which brought the patient to therapy is also likely to be inappropriate for his interaction with the therapist. These are performances which do not effectively alter the patient's environment in ways which are useful to him or which produce a harmful result. The performances can be characterized by the fact that they are inappropriate to the variable which generate them. For example, the patient reacts as if an acquaintance is bullying him when, in fact, the acquaintance is very positive. Another patient gets angry because his friend does not anticipate one of his wishes. It would be as if the food-deprived rat, in an environment in which pressing the lever produces a food pellet, should emit a high and persistent fre-

quency of staring at the lever from the distant corner of the cage. In all of these cases, the variable generating the behavior remains unaffected even after the performance occurs. In psychodynamic terms, there has been no release in tension.

Since most of the behaviors for which therapy is required concern performances reinforced socially, that is by their influence on another person, the personal reactivity of the therapist can provide a model of the patient's social environment. The patient can deal with the therapist as appropriately or as inappropriately as he does with other significant people he deals with. The neutrality of the therapist is vitally important if the patient is to be in a position to observe mismatches between his conduct and the therapist's potential reactivity. While the therapist's neutrality does not exclude reinforcement of the patient's behavior, the behaviors that are reinforced are the observation of what is occurring rather than conforming to the demand[8] the patient places on the therapist. Group therapy is a useful place to observe transference behaviors because the therapeutic procedure emphasizes the current behavior of the group members as they deal with each other and with the therapist. Groups consistently begin by looking to the therapist to tell them what to do, to provide a cure for their difficulties, and to explain what is wrong. Instead, the therapist observes carefully, describes to the group members what is happening, and interacts selectively to their current behavior.

In the group's early stages, the members tend to sit passively and wait for the leader to tell them what to do. The classical response to this opening circumstance is for the group leader to ask whether everyone is sitting in silence because they are expecting the therapist to take the lead and proceed with some kind of therapeutic procedures to which the group will react passively. This inevitably leads to a discussion of what the group members expect from their group interaction (and the therapist). Questions directed to the therapist tend to be deflected with comments which shift the group's attention back to analyzing the circumstances which led the group or the group members to ask direct advice. Sometimes the therapist's comment will be an observation of some of the immediate circumstances surrounding the remark. Other times his answer may be evasive and non responsive, such as "I think the reason for your needing assurance from me about this matter is probably more important than the particular answer I could give you or the assurances I could give." Such a remark is functionally equivalent to the differential reinforcement of other behavior because it specifies a class of behavior (direct demands on the therapist) which will not be reinforced. Almost any other kind of behavior can be reinforced in some way. Members of a therapy group commonly become angry at the therapist during the first group meeting. The therapist, of course, resists pressure for a prescriptive cure, or a "laying on of hands" simply by not complying. Instead, observations of the group members' evasion of the

[8] Technically, a mand (Skinner 1957, Chapter 3).

task of self-analysis is described and interpreted: "You wish we could prescribe a cure that will solve your problems," for example. In the meantime, in the course of searching about for a way to get the therapist to "produce a cure," the members of the group join forces, manipulate each other, otherwise reinforce each other's behavior to evade difficult work, to find comfort or to pressure the therapist. All of this the therapist continues to describe. Thus as a by-product of the therapist's neutrality the intergroup performance (usually called the group process) increases in frequency, is interpreted by the therapist, and is reinforced by the group members. Concurrently performances whose possible reinforcement comes from the demand they place on the therapist decrease in frequency. The term transference appears to derive from the history of reinforcement originally responsible for the performance. The therapist's neutrality guarantees that there is no current reinforcer for such behavior. When the primitive demands for a cure by the therapist decrease in frequency enough that the group members interact with each other and observe and interpret their interaction, one of the substantial goals of the therapy has been achieved.

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