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Insight in terms of Behavior in the Clinical Context: Transfer and Rule-governed Behavior

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ABSTRACT

A redefinition of insight-type events is presented, an initial attempt to view insight in terms of behavior analysis in the clinical context and relevant variables are suggested for their study. This definition assumes the insight as a novel behavior that involves the search for solutions to psychological problems. Solving a problem is discovering an effective behavior pattern, based on the creation of verbal rules that help the client to reach the solution. In this problem-solving process, a new behavior emerges, explained through the solution of a transfer task. The theoretical proposal exposed allows a better understanding of this phenomenon, overcoming the problems of mentalist conceptions about the term of insight, and contributes to a better understanding of some relevant elements of change process.

El *insight* desde el análisis de la conducta: la transferencia y la conducta gobernada por reglas

RESUMEN

Se presenta una redefinición del evento tipo *insight*, un intento inicial por explicar el *insight* en términos del análisis de la conducta en el contexto clínico, así como la propuesta de variables relevantes para su estudio. Esta definición asume el *insight* como una conducta novedosa que involucra la búsqueda de soluciones a problemas de carácter psicológico. Resolver un problema es descubrir un patrón de conducta efectivo, a partir de la creación de reglas verbales que ayudan al cliente a llegar a la solución. En este proceso de resolución de problemas, emerge una conducta novedosa explicada a través de la solución de una tarea de transferencia. La propuesta teórica expuesta permite una mejor comprensión del fenómeno, superando los problemas de concepciones mentalistas y contribuye a un mejor entendimiento de elementos relevantes del proceso de cambio.

The clinical significance of this article is to propose a better understanding of the insight phenomenon in terms of behavior analysis, with the aim of elucidating a phenomenon that may be important to improve clinical practice.

Insight is a phenomenon studied in various areas in psychology, from cognitive science through the analysis of the subject's responses in problem solving (e.g., Kounios & Beeman, 2014) to psychological therapy and its role in clinical change (e.g., Høglend & Hagtvet, 2019). It is a phenomenon that has been analyzed over the years from both theoretical and empirical approaches; however, it seems there is not agreed definition or explanation of its operation (Shen et al., 2018). The aim of this paper is to present a conceptual critique, define, and propose theoretical explanations from the analysis of behavior on insight-type events in psychotherapy in order to clarify the possible relevance of its role in clinical change and propose relevant variables for its study.

Conceptualization of Insight in Psychotherapy

Traditionally, insight has been considered as a mentalistic causal phenomenon that occurs in a ravishing way on the client. It has been defined as the understanding of penetrating interpersonal patterns, the recognition of the relation of a present behavior and a past event or the knowledge of certain defenses and their purposes (Blagys & Hilsenroth, 2000). It has been defined through four elements: (1) a metaphorical illumination that involves looking inward; (2) the identification of patterns or links involving reasons, causes or categories; (3) its suddenness and (4) its novelty or sense of discovery

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(Elliot, 1984). These four elements can be summarized in two principal characteristics, as an event of cognitive illumination and a somatic experience (Shen et al., 2015). In this sense, the insight could be understood as a cognitive-emotional bidimensional construct, so a stronger sympathetic or parasympathetic activity can be expected to be identified (Shen et al., 2018). Shen et al. (2018), in fact, have reported the feasibility of using the electrocardiogram to specify the nature of insight, finding support to the hypothesis that insight can be modulated by somatic activities.

The concept of insight in psychotherapy originated from psychoanalysis. Insight was understood as the moment when the patient became aware of essential and unconscious aspects of himself. Insight from this perspective is a new awareness that triggers emotional responses leading to conscious elaborations. This concept has been related to the efficacy of the therapy. Høglend and Hagtvet (2019) suggested that insight could help other processes such as transference to take place. Transference, as a concept derived from psychoanalysis, is conceived of as a patient's patterns of feelings, thoughts, perceptions, and behaviors emerged through the therapeutic relationship, which reflects a reconstruction of the patient's repressed historical past. It's a core concept in therapy; in fact, it has been reported that cases in which there has been transference interpretation seem to benefit more from therapy in the long term than in the absence of transference interpretation. Høglend and Hagtvet (2019) proposed that as insight can ease integration of cognition and affect more affectively, it can be a mediated mechanism for a long-term effect of transference interpretation.

In psychiatry, the concept of insight has been incorporated to reference a psychotic patient's recognition that their symptoms and other difficulties were pathological. In this context, insight has come to be conceptualized as a central element to overcome psychological problems, a mediating variable of change in therapy (Mervis et al., 2022; Palma & Cosmelli, 2008).

The relationship between insight capacity and results in therapy has been widely studied in psychosis (Livet & Estingoy, 2022; Lysaker et al., 2018; Mervis et al., 2022; Riggs et al., 2012). Particularly, from a behavior analysis perspective, cognitive behavioral therapy has shown important improvements in illness awareness in psychosis, applying the cognitive restructuring technique (Livet & Estingoy, 2022), as well as mindfulness therapy (Fattahi et al., 2022). However, other studies have found cognitive behavior therapy achieves only a poor level in insight (Moritz et al., 2019) or found equivocal improvements in insight (Ma et al., 2020). In other psychological problems, such as social anxiety or body image problems (Halaj & Huppert, 2022; Phillips et al., 2012; Vigne et al., 2014), the association between a lower capacity for insight and a more severe clinical presentation has been highlighted, but there is a lack of studies from behavior analysis focused on the study of the insight.

This lack of studies could be due to the rejection of the concept of insight by cognitive behavioral therapy, being disqualified for referring to unconscious processes (Cautela, 1993). Despite this, some theorists consider that its role in therapy has been underestimated (see Wachtel, 1977) and even that it has an important place to understand clinical change. Ellis (1963), for example, considered that through insight the client is capable of knowing their irrational beliefs and the behaviors that lead to sabotage themselves, as well as develop the desire to change them. Mahoney (1974), for his part, believed that cognitive contingencies, as mediational symbolic products of stimulus-response-consequence relationship, were the key to change. More recently, Grosse Holtforth et al. (2007) pointed out that a better knowledge of the factors contributing to insight development could increase the effectiveness of cognitive behavioral therapy, since they conceive of insight as a change in perspective on the origins, determinants, meanings, or consequences of their behaviors, thoughts, intentions or feelings. They consider that, by having a causal influence on cognition, emotion, and behavior, insight would have an important weight in the change of general behavior. On the other hand, these authors agree with Bandura (1969) in considering that being aware of contingencies increases learning and acting, so verbalizing and making conscious changes in the scheme (having an insight) can facilitate the therapeutic change and will increase the therapeutic potential of the interventions.

Despite the lack of a homogeneous definition of insight, there seems to be a certain general consensus in taking into consideration that a patient's knowledge about non-adaptive thoughts and the general scheme that encompasses these thought patterns are essential factors for achieving clinical change (see Freeman & Boyll, 1992). Therefore, it seems that a fundamental part of all psychotherapy, as in cognitive behavioral therapy, would be aimed at getting a client to recognize harmful or non-adaptive contingencies and the adaptive contingencies that will lead him/her to the desired behavioral change.

Critical Analysis of Conceptual Proposals

Given the arguments suggested by various authors with different theoretical backgrounds to consider insight as a causal variable of change in therapy, the study of insight from the field of behavior analysis could seem pertinent. However, first a critical analysis of the theoretical conceptualizations of this phenomenon is required to assess whether its consideration could be a valuable contribution to the clarification of the mechanisms of change in psychotherapy instead of venturing to investigate "ghosts".

Insight has been conceptualized, to a greater extent, from a psychoanalytic perspective, though there is no possibility of exchanging discoveries nor of integrating contributions, insofar as it starts from an epistemological nature that is different from scientific psychology (Zepf, 2018). From another perspective derived from Gestalt theory of problem solving, insight has been explained as the understanding of how a problem has to be solved and encompasses a representational change that gets closer and closer to the solution (Ohlsson, 1984). Finally, insight has been conceived of as the change in the self-schema (Grosse Holtforth et al., 2007), which consists of cognitive generalizations about self-involving interactions of views of ourselves and others (for example, a woman realizes that she avoids confrontations with her husband about what she wants by shrugging off or another woman understands why she allows herself to stay in an untenable relationship). These conceptions of insight involve, in some way, the idea of "mental representation". The contributions of this perspective on the phenomenon of insight are undeniable, though from a behavior analysis perspective an explanation based on mental representation entails certain problems. According to F. Varela (2000), by taking "representation" as the basis of explanation, it would be assumed that we capture the properties of the world by representing them internally, a process that would be carried out by a separate "we". Under this assumption, we would be returning to the dualistic problem between mind and body, a separation that, according to Ryle (1949), is given by a categorical error that would provoke tautological explanations of "mental" phenomena and would increasingly move us away from an explanation of the phenomenon that concerns us. As the author points out, there are no mental processes as internal abstract entities governed by special rules. Our perception of the world or the perception of our own behavior is constructed in terms of the interaction of the organism and the environment and the learning history of the latter does not imply that said construction occurs within the subject, nor through different learning mechanisms. Furthermore, one of the errors that dualistic conceptualizations of psychological processes entail is attributing an explanatory character of behavior to the mind, giving it a special agency.

On the other hand, there may be other ways of conceiving of insight that allow the analysis and operationalization of this

phenomenon from the analysis of behavior in order to understand its possible role in clinical change. Moreover, there are traditional concepts in psychotherapy that, although being born far from a certain foundation, it does not always mean that they are irrelevant in the applied field, and ignoring or not understanding these mechanisms, owing to their conceptual origin, could lead us to ignore relevant clinical phenomena.

In order to operationalize insight from a behavioral-analytic point of view, we propose to reconceptualize or explain two defining elements of the insight phenomenon: (1) its novel or creative character and (2) its relation to problem solving and clinical change in the context of psychological therapy. These aspects are related to transference phenomena in terms of emergent behavior and problem solving through behaviors governed by rules, as we will explain below.

The Novelty of Insight

A defining characteristic of insight is its suddenness and sense of discovery (Elliot, 1984), an original behavior that seems to arise spontaneously. From the behavior analysis, a behavior would be original to the extent that it appears before a certain event without having been previously reinforced. A novel or emerging behavior depends on the reinforcement history of each organism and depends on the novelty of a situation. Thus, the emerging behavior, no matter how complex it may be, does not arise by chance, which has been empirically demonstrated both in experimental studies with animals and humans. One of the classic contributions on insight was the work of Epstein et al. (1984), published in Nature, where it was explained from operant conditioning how pigeons solved the banana and box problem. Years later, Epstein et al. designed a similar experiment with humans, concluding that in all species learning processes such as automatic chaining (sequence process of behaviors that emerges when one behavior produces a stimulus that makes another behavior more likely) or functional generalization (generalization based on functional characteristics) were explanatory mechanisms that, in turn, occurred based on the past history of each organism and the specific arrangement of the signals present in the problem-solving situation.

As noted by Critchfield et al. (2018), stimulus relation could explain emergent learning. According to the authors, when stimuli are related or form a class, the behavioral functions served by any stimulus influence the functions served by others. A Sidman experiment exemplifies this concept (1971, as cited in Critchfield et al., 2018) in stimulus equivalence. A boy is taught to pick out a picture of a cat when another person says “Cat”; then, he is taught to pick out a printed word “CAT” when he listens “Cat”. Later, when shown the printed word “CAT”, the boy picks out the CAT picture. The boy began to respond to the printed word “CAT” as he would to the picture of the cat or when listens “Cat”, and, even, to say “Cat” when shown the picture of the cat. Stimuli (printed word “CAT”, “CAT” picture, and “Cat” pronounced) are related, form a class, this is the base of stimulus relation. This “free” learning, or emerging learning that seems to emerge or “going beyond” the experience, is not. In terms of derived stimulus relations, it is possible to explain or track how an organism (or the boy in Sidman’s experiment) has learned to respond effectively through various essays that leads him/her to achieve a new behavior. Sidman conceived of derived stimulus relations as inherent in the reinforcement process (Critchfield et al., 2018). In this sense, there is not a “going beyond” what experience has directly taught, but a possibility of knowing the process through the analysis of the experience.

Various experimental procedures and phenomena that give rise to emergent behaviors have been described: stimulus generalization, repertoire recombination, multiple discriminative control, functionally equivalent stimulus classes, or equivalence-equivalence relationships, among others (García et al., 2004).

These procedures could take place in the clinical context and we could even identify how a client’s reinforcement history and the disposition of signals in the situation to be resolved form the basis for these emergent behaviors to take place.

One of the emergent behaviors that occur in the clinic context is the transference phenomenon. We propose that the novelty of insight could be explained by this phenomenon. The way we respond to novel stimuli is always through our reinforcement history, in an orderly manner, making changes and acting effectively in the face of novelties or modifications. The way to do it is through generalization and transference. Generalization can be observed when the same response occurs to variations of the stimulus or variations of the response to the same stimulus. For example, in a case of social skills problems, the therapist highlights the importance of greeting others by looking into their eyes and role-played the greeting looking into the eyes with the client. By carrying out the greeting behavior with his colleagues, the client would be performing a generalization behavior. Insight would be something more than the application of knowledge or the application of knowledge to variations of the same stimulus; that is, it involves more than a generalization task. The transference phenomenon would better represent insight. According to J. Varela et al. (2006), the transference consists of a generalization of stimulus and response; the transference would be observed when an effective and new stimulus-response relationship occurs in a situation that assumes functional criteria equivalent or derived from those of the original training. Insight, being a transference behavior, is perceived as something new, but not by chance, but in an orderly way. For example, a client attending therapy for marital problems. The therapist makes her understand in session that the public disapprovals she makes of her partner are related to his rejection behavior of going out with her and her family. The client returns the next session with a new conclusion made by herself, that not only the benign complaints she makes of her partner with her family causes her partner not to want to go out with her and her family, but also some jokes (around his behavior) that the client makes with their friends. In this case, the client performs a transference behavior because it responds to the identification of a relationship that maintains two types of generalization: a stimulus generalization, when responding to variations of the same stimulus (friends instead of family) and a behavior generalization by varying the answer (jokes instead of complaints). This work of abstracting this conclusion could be experienced as a novel behavior.

Within this line of thought, returning to the novelty of insight, the fact that a response is or seems novel and spontaneous can occur without it being necessarily an original response. Not perceiving the progression of a process that gives rise to a product can make us perceive this product as unexpected. A patient in consultation may have made successive approximations to the solution of a problem without having discriminated that these behaviors are an approximation and, therefore, perceiving the final behavior that has led to the solution as the first and only approximation, leading to a perception of surprise. For example, the client realizes that she cannot shrug off what she wants to avoid confrontations with her husband, but actually, she has been working on asking other people for what she wants, getting each time closer to the goal of confronting her husband. It is worth wondering if in therapeutic interactions in which the psychologist does not indicate and guide the successive approaches of the client and does not apply contingencies of reinforcement to the behaviors that suppose an improvement, more insights are given rise by the client, without implying necessarily that it solves more, but be surprised at the fact that it is in fact working as a solution.

Another way we tend to perceive a response as surprising or novel without being so is when it has extraordinary consequences, such

as solving a problem considered especially complex, when solving a transfer task, for example, which implies a higher level of complexity than other behaviors such as generalization, sometimes predicting or knowing when the solution will be reached is not possible. As Skinner (1974) stated, a subject who is trying to solve a task, will emit, based on his history of reinforcement, behaviors previously reinforced because they have been effective in solving the problem. Thus, in the process of solving problems, conditions are created that make it more likely that a solution will be reached. We can say that in therapy the psychologist favors conditions outside and within the clinical context that approach the problem solution, for example, through exposing the client to different imaginary situations in the clinical setting and shaping the client's responses or exposing the client to specific situations outside the clinical setting. Hence, psychologists cannot always predict when exactly the solution will be reached, not because there are no principles to explain it, but because we do not always have precise information about the entire reinforcement history of the individual with respect to concrete contexts or the stimulus disposition outside the clinical context.

The unpredictability of some client behaviors, in this sense, largely explains the perception of novelty. This unpredictability could be due as well to the complexity of the tasks, the arrangement of the stimuli in the natural context could not be evident as well as the required responses. This complexity could lead to an uneasily predictive behavior and uneasily to track.

When experiencing an insight, a person will have the feeling that an illumination has just hit him, suddenly, without background. According to the explanations from the behavior analysis mentioned above, this sudden illumination could be explained by analyzing the person's reinforcement history, the person's experience. The feeling of enlightenment could just be an illusion. Emergent behavior is the result of a learning process, a process that involves effective responses to stimuli relationships. And due to the complexity of the task and the rapidity of the process, the person could have a sense of enlightenment beyond experience.

Problem Solving Behavior in the Clinical Context

The second fundamental characteristic of insight, highlighted by Elliot (1984), is the metaphorical illumination, that consists of looking inwards and the perception of patterns or links that involve reasons, causes, or categories. These characteristics describe the resolution of psychological problems that one tries to overcome during therapy. Looking inward is an exercise in introspection, in deep analysis towards oneself, which in terms of behavior analysis is nothing more than analyzing our behaviors. Reasoning, imagining, problem solving or creating are ways of thinking. However, the behavior of thinking, although covert, does not differ from the rest of the behaviors, its explanation does not require different learning principles. As Skinner (1957) argues, thought is not a mysterious process responsible for behavior, but behavior itself. So when we talk about analyzing our interior, we are analyzing our behaviors.

On the other hand, the perception of patterns or links that involves reasons, causes, or categories refers to the causal analysis of our problems, that is, finding patterns of behavior, their causes and consequences. Therefore, this characteristic of insight involves the search for solutions to problems of a psychological nature. Solving a problem is discovering a pattern of behavior that has helped me to solve that problem. In other words, problem solving is a behavioral event where the response that solves or satisfies a set of contingencies may arise as a result of different ways or strategies of relating to contingencies.

From the operant analysis of problem solving, we are faced with a difficulty when the contingencies are complex and an individual does not have the specific and adequate repertoire of responses to some contingencies (Skinner, 1966). There are many different ways to change a situation to make it easier to respond to it effectively. According to Skinner (1966), we can solve a problem by applying different behaviors until we achieve the desired results; our behavior is shaped by contingencies until the problem is solved. An example, mentioned by Skinner, could be if you have to pick up a friend's suitcase from among a large number of suitcases turning in a large rotary display and you only know the number of the suitcase, so, you will have to check each suitcase and maybe, some suitcases will be checked more than once, while others, none. This is a form to resolve the problem, but is going to take you very much time. Nonetheless, we can also solve problems, through the construction of signals or verbal signals. For example, back to the case of the suitcase, you can mark each suitcase as it is checked to reduce the number of samplings needed to find the suitcase. In fact, we can start checking the red suitcase and create a verbal sign, "red ones are eliminated". In the next check we will ignore all red suitcases. As another example, you want to go to work on the fastest route. These roads differ in the number of traffic lights and length. So, you realize that routes with a greater number of traffic lights, despite being shorter, take you longer to get to work. Then, you create a verbal signal, "I must avoid routes with many traffic lights to get to work faster", and you can even apply this verbal signal to go to other places as well. When we face a problem, we create "signals" that are marking the right path, we create these discriminative stimuli or signals verbally because of their usefulness: they are easier to remember and make it possible to execute anywhere. These verbal signals are also called rules. A rule would be defined as a verbal discriminative stimulus that gives rise to a behavior originated by the description of contingencies (Skinner, 1969/2013).

Rule-governed behavior has played an important role in problem solving. In the clinical field its importance has also been highlighted; for example, the value of rules in the clinical context has been pointed out, both to understand and to generate change (Sturmey et al., 2007). However, the study of rules in the clinical field has also been affected by the debate regarding their definition (see Vaughan, 1989).

In this sense, starting from the original definition of a rule, in a previous study, Vargas-de la Cruz, Pardo Cebrián, et al. (2018) suggested that the concept of rule developed by Skinner from the field of problem solving could be extended to the clinical field. Thus, the authors developed a definition of a rule adapted to the clinical field, based mainly on Skinner's rule concept and other theoretical contributions. The criteria for identifying a rule are as follows: (a) a rule describes a contingency relationship – a situation, behavior, and consequence (although some of these elements may be implicitly present); (b) a rule exerts control in a variety of circumstances and is directed to different types of responses or response class, so it can be applied to different situations and not only to a specific situation, such as an instruction (Cerutti, 1989); (c) although a rule can be developed silently, to identify it in the clinical context, a rule must be vocalized; finally, (d) a rule can alter the function of a stimulus, for example, if a person is told "this fungus is poisonous", the stimulus "fungus", which in principle it is neutral, acquires a discriminative function (Schlinger & Blakely, 1987). Now, in the clinical context, we cannot verify the change in function, so we can only assume that it could potentially have this function.

By meeting the aforementioned criteria, a rule can be defined as a verbalization that specifies a regular and generalizable contingency relationship to different contexts that can alter the function of the elements that constitute a behavioral sequence (Vargas-de la Cruz, Martínez, et al., 2018; Vargas-de la Cruz, Pardo-Cebrián et al., 2018). We believe that this definition of rule may be useful to study its role in the clinical field and, as we will show, pertinent in the study of insight.

Rules consist of verbal stimuli that people construct when solving problems. These rules can be helpful to other people. An individual

can solve problems based on both direct experience and following the rules constructed and transmitted by their verbal community (Pérez Fernández et al., 2010).

The development of rules can be done through exposure to direct contingencies, an inductive process (Skinner, 1969/2013). For example, in the clinic, the client can develop his rules through his/her experience. When carrying out a task instructed by the therapist ("The next time you go to the mall and your kid ask for a candy, deny it even if the kid makes a tantrum") related to an therapy objective (to stop the tantrums), the client interacts with his environment (go to the mall or any store) and marks his environment through discriminative stimuli (kid asks for a candy or any other desirable thing) in the form of rules to solve a problem, which will be related to the objective of the task ("When the kid makes a tantrum to get something, in order to stop the tantrums I should ignore the request in order to stop the outburst").

Another way of constructing rules is from the manipulation of other rules, a deductive process (Skinner, 1969/2013). In the clinic, they would be generated through the discussion of their own rules and other rules formulated by the therapist. For example, during the Socratic debate, the therapist will emit rules and the client can generate new rules by contrasting his rules and those of the therapist (Vargas-de la Cruz, Martínez et al., 2018). Following the example, the therapist could emit rules as "obedience is something that is learned through experience, if the consequences are real, it is not a magical quality that some boys have", "everybody will continue to repeat the same behavior if gets what they want" or "the child is learning that, to achieve his goal, (candy) he should make tantrum". These rules could help the client to generate the rule "when the kid makes a tantrum to get something, in order to stop the tantrums I should not access the tantrum".

In therapy, the rules and instructions given by the therapist himself (when role-playing or when performing certain specific tasks) can help the client to construct new rules. The verbal marks (rules) developed by the therapist when identifying a client's problem and its solution could be identified, in turn, by the client in later situations, which would help them to form their own rules to be applied in future situations.

Problem Solving, Insight, and Rule-governed Behavior

Returning to the example mentioned above, when we talked about the transfer phenomenon, note that the client with marital problems, who realizes that not only the public disapprovals she constantly makes of her husband cause the rejection of dating her and her family, but also the jokes she makes about him with other people. What is relevant about this example is that the client is able to identify similar discriminative stimuli, react to them, and reconstruct the rule given by the therapist. That is, through her experience, she develops a verbalization in the form of a rule that will help her to redirect her behavior in future situations and that linguistic reformulation is experienced as a discovery or illumination, as a novelty of pattern identification. If the client had only reacted to the new contingencies without being able to describe the contingencies for which she has followed her behavior, according to our view, this behavior is not an insight because it would not have that sense of discovery, it would only imply following the indications given by the therapist (and that is what the client would notice), in other words, the application of what the client has learned in the clinical setting, but not a sense of having understood something else or having discovered something else. Consequently, we believe that insight is a behavior that implies, on the one hand, solving a problem, a transference task and, on the other, being able to describe the contingencies that led the client to solve it through a rule.

Verbalizations in the form of rules and instructions from the therapist may suppose marks in the client's environment made in the clinical context, but it is the client who identifies these marks in different new situations outside the clinical setting with equivalent or similar functional criteria (since there is a variation of stimulus and response). The client also is capable of abstracting a verbalization in the form of a rule, that is, the client is able to develop his/her own marks by relating them to the contingencies that she/he has followed.

Although it is the client's job to summarize his contingencies through a verbalization in the form of a rule, the therapist, who aims to facilitate the client's ability to solve the problem in an effective way, contributes to the client developing an insight. According to Rees et al. (2001), insight can sometimes be accelerated, delayed, or sometimes requires some help such as a session report, so insight would be a behavior that occurs in a given context and is susceptible to manipulation like any other behavior.

Insight, like any behavior, cannot occur without the specific conditions. The rules that the client builds about their behavior and that will guide their future behavior to a certain extent should not be analyzed in relation to the future, but in the history of the client's reinforcement. Now, given that a large part of the change is achieved thanks to the therapist's verbalizations, part of the client's reinforcement history is given through the verbalizations of the therapist. Therefore, the study of the client's rule-like verbalizations should be based on the study of their reinforcement history, on the training that she/he has followed during therapy from the therapist's verbalizations.

On the other hand, as mentioned before, there are rule-like verbalizations that the client constructs to solve the problem and that can be generated based on direct experimentation with contingencies, on examining the therapis's rules or following them. Not all rule-like verbalizations that the client emits throughout the intervention are insights, nor are all insights verbalized in a way that can be observed and manipulated by the therapist in therapy. Terminal verbal behavior that allows the client to satisfy a series of contingencies for which she/he had not found an answer (problem) can be conceived of as insight and will be a verbalization in the form of a rule that describes contingencies. However, this verbalization will not be the only verbalization in the form of a rule emitted throughout this process and it may not be fully verbalized within the session, but rather out of the session. Despite this, we believe that studying the insights that take place within the clinical context is an important advance to learn more about this phenomenon.

With all that has been stated so far, we could reconceptualize insight in the following way: the verbal response (vocal or silent) of the client who achieves to give an effective response to a problem (transfer task); understanding a problem as a disposition of novel contingencies for which there is no effective response that has been previously reinforced as such. This solution is achieved through the rule-like verbalizations that the client constructs by theirself along the therapeutic process. In this rule-like verbalization, the therapist arranges the verbal contingencies in a way that facilitates, probably through verbal shaping, the client's development of "verbal marks" that will allow solving the problem.

We believe that analyzing insight starting from the proposed definition of rule-like verbalization could mean a step forward that allows us to understand such events in operational terms, which enables their study through their identification and manipulation. In addition, since its study is possible, we can learn more about this phenomenon and get a better understanding under what conditions its emission is more likely. A step in that direction would be to understand how the client's verbal behavior is shaped until these types of verbalizations are achieved. Or, if the insight is the resolution of a transfer task, how can we bring the client closer to that type of task so that he can resolve and abstract a rule-like verbalization, that is, to facilitate insight.

Conclusions

The aim of this article was to develop an initial attempt to view insight in terms of behavior analysis in the clinical context and to propose relevant variables for their study. Taking into account the arguments exposed, it can be conclude that: (1) although insight is known in only some therapeutic approaches, it seems to be present in other therapeutic approaches that ignore its presence; (2) insight can be explained from the behavior analysis perspective; (3) insight does not go beyond the experience, in fact, it is through the client's experience (history of reinforcement) that it can be tracked; (3) from the behavior analysis perspective, insight involves solving a problem, a transference task; (4) and could be seen as rule verbalization-like, which is the construction of a verbalization that summarizes the contingencies to solve the problem; and (5) insight could be linked to the effectiveness of the therapy.

In this paper it has been exposed that, in consultation, insight would arise from specific mechanisms that take place in the verbal interaction between the client (and his/her reinforcement history) and the therapist; which would lead, as well, to the client's interaction with the contingencies of the client's natural environment. It also comprises two fundamental characteristics: on the one hand, it is characterized by being something new, since it implies an orderly variation in the behavior of the organism through the interaction between the subject's reinforcement history and a new environment; on the other hand, insight implies solving a problem, a transfer task, through the elaboration of verbal marks or rules, which will help the client to achieve the therapeutic objectives and solve similar problems in the future. In other words, insight constitutes the construction of a verbalization (public or private) in the form of a rule in which the contingencies that helped solve a problem are specified through a transfer exercise.

In therapy, far from the traditional conceptions of insight that highlight its random, sudden, or unexpected nature, the client emits specific verbalizations with which to develop a solution; these verbalizations are responses that are under the control of a series of concrete contingencies that can be studied, explained, and modified. The approach presented about insight-type events allows an increase in knowledge about its role in therapy, about how it emerges, what it depends on when it emerges and, therefore, contribute to a better understanding of clinical change. In order to achieve this aim, this study, moment by moment of verbalizations in the form of rule during the therapeutic process, can contribute to the identification of relevant factors in clinical change.

The implications of this study benefit the clinical field in general terms, particularly in the treatment of some psychological problems, such as psychosis, whose symptom recognition and pathology scope could be especially hard to achieve, or in therapy with adolescents or children, where it can be difficult to get the young client to understand their problem and motivate or commit to the behavior change.

Future lines of research on insight from a behavioral perspective in the clinical context could be directed to analyze the relationship between the subject's learning history in relation to specific events and the provision of verbal stimuli in therapy to determine to what extent said interaction can influence phenomena of transfer of functions and problem solving through the creation of verbal rules. Similarly, it could also identify how transfer tasks could be promoted in the clinical context and how to promote the verbalization of the solution. The clinical implications of this line of study could lead to the discovery of procedures that increase the efficacy and effectiveness of psychological treatments, along the lines of process-based therapy. In recent times, there has been a shift towards process-based therapies that could represent a paradigm shift in clinical science (Froján-Parga et al., 2016; Froxán-Parga et al., 2018).

Psychotherapy still has great challenges to solve today, one of which is to improve the understanding of what contributes to clinical change. In this sense, the theoretical discussion about certain phenomena linked to clinical change is essential to identify them and to have the possibility of studying them.

Conflict of Interest

The authors of this article declare no conflict of interest.

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