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Clinical functional analysis and the process of change

Análise funcional clínica e o processo de mudança

Análisis funcional clínico y el proceso de cambio

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Resumo: O termo análise funcional tem uma posição extremamente central na análise do comportamento, desde que foi cunhada pela primeira vez por Skinner. Seu uso na parte clínica da análise do comportamento aplicada, ou no que se chama de psicoterapia, ainda é, de algum modo, controverso. Esse artigo argumenta que o termo e o fenômeno que ele descreve deveriam ocupar uma posição central também na psicoterapia. Para isso ocorrer, uma análise da linguagem humana deve ser incluída e a teoria das molduras relacionais (RFT) oferece esse tipo de análise. O artigo aplica as conclusões de tal análise ao diálogo clínico e fornece direções práticas sobre como a análise funcional clínica pode ser conduzida nesse contexto.

Palavras-chave: análise funcional, processo de mudança, teoria das molduras relacionais, emolduramento hierárquico do próprio responder

Abstract: The term functional analysis has an extremely central position within behavior analysis, ever since it was first coined by Skinner. Its use within the clinical part of applied behavior analysis, or what is often called psychotherapy, is still somewhat controversial. This article claims that the term and the phenomena it describes should hold a central position also in psychotherapy. But for that to happen an analysis of human language must be included and relational frame theory (RFT) offers that kind of analysis. The article applies the conclusions from such an analysis to the clinical dialogue and gives practical directions on how a clinical functional analysis can be conducted within that context.

Keywords: functional analysis, process of change, relational frame theory, hierarchical framing of your own responding

Resumen: El término análisis funcional tiene una posición extremadamente central dentro del análisis del comportamiento desde que fue acuñado por primera vez por Skinner. Su uso en la parte clínica del análisis conductual aplicado, o lo que a menudo se llama psicoterapia, sigue siendo algo controvertido. Este artículo sostiene que el término y los fenómenos que describe deberían también ocupar un lugar central en psicoterapia. Pero para que eso suceda, se debe incluir un análisis del lenguaje humano y la teoría del marco relacional (RFT) ofrece ese tipo de análisis. El artículo aplica las conclusiones de tal análisis al diálogo clínico y brinda instrucciones prácticas sobre cómo se puede realizar un análisis funcional clínico en ese contexto.

Palabras clave: análisis funcional, proceso de cambio, teoría de marcos relacionales, encuadre jerárquico de la propia respuesta

The term *functional analysis* is originally borrowed from mathematics (Ponte, 1992). Its use within psychological treatment heavily relies on B.F. Skinner and the way the term is used within behavior analysis (Skinner, 1953). But even within that context the term is used in somewhat different ways. More generally Skinner uses the term to discuss behavior and how contextual factors surrounding that behavior influence it. Those factors are explored as part of the practical undertaking to "predict and control the behavior of the individual organism" (Skinner, 1953, p. 35). From early days this undertaking has been done with non-human animals, in a laboratory setting where the experimenter or analyst has a high degree of control over the relevant contextual factors. In that context the way to use the term is quite specific and assumes this level of control. A typical example of this use of the term is the following quote: "An experimenter has achieved an analysis of a behavior when he can exercise control over it. By common laboratory standards, that has meant an ability of the experimenter to turn the behavior on and off, or up and down, at will" (Baer, Wolf & Risley, 1968). As the authors then continue, this level of influence is seldom possible outside of the laboratory setting. And, as any psychotherapist knows from her own experience, this is definitely not our position as clinicians practicing psychotherapy.

There is, though, a looser way the term functional analysis is used within clinical psychological science. Even this actually has ties back to Skinner. He also uses the term outside of a situation where the analyst exhibits a high degree of control. Most specifically he does so in his attempts to analyze the complex type of human behavior he refers to as verbal, that is human language and cognition (Skinner, 1957). In this attempt he uses an interpretive, conceptual analysis but still uses the term functional analysis. This somewhat looser way of using the term is also common in a whole range of behavioral models of psychotherapy, which are sometimes referred to as clinical behavior analysis (Dougher, 2000; Jacobson et al., 2001; Kohlenberg & Tsai, 1991; Linehan, 1993; Sturmey, 2020; Wilson & Murrell, 2002). Basic behavioral principles, based on rigorous experimental work, are explicitly used for understanding and influencing clinical phenomena. Client behavior, both outside and inside the therapy room, and its relationship to critical environmental events, is explored and targeted for change. Sometimes more emphasis is laid on empirically demonstrating the relevance of certain factors (see Haynes et al., 2012, for such an example) and sometimes the interpretive aspect takes a more prominent place.

In this article the term functional analysis is used in this somewhat looser way, as in clinical behavior analysis generally. It is discussed with the objective to assist clinicians in doing what they already do, suggesting a more generic understanding than the ones provided by the different models referred to above and giving practical suggestions on how to do it, based on this understanding.

Functional analysis of complex human behavior

Basic, experimental science regarding human language and cognition has advanced a lot since Skinners attempt at a functional analysis of these phenomena. One specific line of research which keeps the connection to the Skinnerian tradition of science is *relational frame theory*, RFT (Hayes et al., 2001). The key element of the findings presented in RFT is that the basic unit of human language is a specific repertoire of relating, which humans learn in early childhood. This acquired ability then has enormous effects on human behavior over all. Language-able humans will interact with the environment according to how they have learned to relate one phenomenon to another in very complex ways. Or, in more traditional behavior analytic terminology, stimuli can acquire function for human behavior in a way that is different from what has been demonstrated for non-human animals, due to the learned ability to relate in this particular way. To go into detail regarding the specifics of the broad findings of RFT lies outside the scope of this article. The interested reader is referred to either the basic reference of Hayes et al. (2001) or to more recent, updated summaries (Hughes et al., 2016a, 2016b) At the same time a few conclusions from this research needs to be discussed for us to be able to go on to the more practical sides of doing a functional analysis within the context of a clinical dialogue.

Once a human being has learned the particular type of relating which is at the core of language, in RFT termed *relational framing*, all human interaction with the environment is affected by this ability. Events of all kinds acquire meaning to humans. Potentially everything a human being encounters has its functions transformed, due to the ability to frame relationally. This is not restricted, though, to events in the physical environment. The same holds true for events that are aspects of the behavior of the human herself. Feelings, memories, thoughts and bodily sensations (often termed "private events" within behavioral analysis) also acquire complex functions due to relational framing and thus come to influence the behavior of the same person experiencing them. The question of the place of private events in a functional analysis is still somewhat controversial within behavior analysis, even though their place in such an analysis long has been argued for by prominent members of the behavior analytic community (Day, 1971; Dougher, 1993; Ferster, 1972). From the perspective of RFT the importance of private events for understanding human behavior, and thus for conducting a functional analysis, is pivotal. This is especially so in the context of psychotherapy, as the interaction of a human being with her own emotions, thoughts, memories and bodily sensations appear to be central to psychological problems (Hayes et al., 1996), as will be discussed in the next session.

An RFT-informed functional analysis

The general conclusions from RFT has influenced a specific model of psychotherapy, acceptance and commitment therapy, ACT (Hayes et al., 2012). Attempt have also been made to use RFT for describing clinical work in a more generic way, that would be applicable to a wide variety of specific models of therapy (Törneke, 2010; Törneke et al., 2016; Villatte et al., 2016). This article follows this second trend.

A functional analysis of behavior is often done using the acronym A B C (Ramnerö & Törneke, 2008; Wilson & Murrel, 2002). Focus is on the behavior to be analyzed (B) and its relationship to the consequences (C) that follow and the antecedent (A) factors of relevance. The history of behavior analysis is the history of examining the different ways contextual factors (both antecedent and consequential) come to influence behavior. A major claim of this article is that this basic unit of analysis still holds, but that when using it analyzing human behavior you need to take the human ability of relational framing into account. For a language-able human both antecedents and consequences can acquire their function in a way different from other animals. One result of this is the central function private events hold for human behavior.

Through early language training a human learns to use her own private responding (thinking, feeling, remembering) to guide further behavior. This increases behavioral flexibility enormously. For example, if a particular behavior is followed by immediate aversive consequences this event can be related to something appetitive and thereby acquire other functions. Humans can "side-step immediate gratification" and thus act for long-term consequences even in the presence of aversive, short-term consequences. You can decide to remain in the chair of the dentist despite the pain caused by the drilling, relating this aversive experience to something yet not experienced like "this will do me good in the long run".

At the same time as this repertoire of relational framing increases psychological flexibility it also leads to a risk of the opposite, rigidity. The benefit of side-stepping immediate gratification is of course that by that action eventually you will reach something of importance to you. But there is also a risk that you will continue to pursue a particular line of action even though the long-term consequence you go for never materialize. You can do so for achieving "what is right", "what must be done" or "what should work", for example. The behavioral perseverance that opens up for humans due to the repertoire of relational framing can lead to vicious behavioral circles. A very common such circle is the effort of trying to control your own spontaneous reactions, such as feelings, memories or aversive thoughts. This is often called *experiential avoidance* and a growing number of scientific findings support this being a central component of a variety of psychological problems (Chawla et al., 2007; Hayes et al.,1996; Kashdan et al., 2006).

How can a functional analysis become part of the solution?

According to an RFT-informed analysis of human psychological problems, the way you interact with your own private behavior is key. What thoughts, emotions, memories or bodily sensations that are evoked in a specific situation is, to a large degree, spontaneous and outside voluntary control. To interact with what turns up in co-ordination, without making a distinction between that response of yours and yourself as an acting being, can easily lead to behavioral rigidity (Luciano et al., 2004; Törneke et al., 2016). Not as a single instance of behavior. To interact that way with spontaneous reactions is commonplace for all humans. But when this way of interacting either generalizes over life or dominates a particular important area there will be substantial problems. Given a certain context and a particular learning history a human being can easily come to persevere in a particular behavioral strategy, becoming insensitive to the fact that it brings in aversive long-term consequences. In that kind of situation there is no experienced distinction between yourself as an acting person and whatever response is evoked in the moment. If a particular emotion or memory, for example, turns up it can function as an instruction[1] for a particular behavior, and you will simply follow without experiencing any alternative. This is the position termed "fusion" in ACT. With RFT terminology this is responding in co-ordination with a particular response of your own. If this way of acting has been well trained it will often occur outside of awareness and the instructions followed can thus be implicit.

The alternative to responding to your own responses in this way is to respond, to use RFT terminology, *hierarchically* to your own responding. This way of responding is technically defined in RFT (Foody et al., 2013; Hayes et al., 2001; Luciano et al., 2011) but can be described in common sense language as discerning a particular response of your own as only part of yourself; "This is what I feel, think, remember – and I am more". In ACT this is labelled *de-fusion*. Another term used to refer to the same phenomena is *establishing an observational distance* to your own responding. A distance not to avoid or to get rid of but to be able to contact and discern your own responses more fully, to be able to use them in guiding your own behavior.

This phenomenological area of influencing your own behavior has long been discussed within behavior analysis under the heading of terms like self-management, self-control and self-knowledge. In a classical quote from Skinner: "A person who has been 'made aware of himself' by the questions he has been asked is in a better position to predict and control his own behavior" (Skinner, 1974, p. 35). With a growing scientific understanding, provided by relational frame theory, we are now in a better position to undertake the task of supporting clients, in the context typically labelled psychotherapy, in this process of change (Callejón, 2020; Gil-Luciano et al., 2017). We know that a particular behavioral strategy, responding in co-ordination to certain key private responses, is central to psychological problems in general. We also know what alternative strategy is to be trained, namely responding hierarchically to the same key responses. The therapist is to train the client in establishing an observational distance to key private responses, responses that typically has problematic functions for the person in question. This is done based on the understanding that this way of interacting with those feelings, thoughts, memories or bodily sensations will change the function of those events and thereby increase the probability that other contextual factors will affect subsequent behavior. And as the function of the events involved is critical to this training, the process can be assisted by a functional analysis.

A peculiar predicament

If private responses have a key function in the problematic behavioral strategies used by the person seeking treatment this puts the therapist in a peculiar predicament. Private responses of the client are not only hard to detect for the therapist but are also not available for direct control. Definitely not for the therapist and, as was noted above, often not even for the client having the responses. As for detecting relevant private responses of the client it is essential to establish co-operation. A functional

1 Or "rule", as would be the more classical behavior analytic term.

analysis assuming the importance of such phenomena as thoughts, emotions and memories can never be an analysis done by the therapist alone. The task is to interact with the client in such a way that the client will report phenomena only observable to herself. To this the therapist adds a knowledge of the relevant behavioral principles to be applied. As for influence on private events therapist and client share the position of having no direct tools for control. For the therapist the task is to focus on the function of the phenomena described by the client and to act in a way that changes those functions for the behavior of the person seeking help. Let us now turn to a more practical description of this way of interacting.

The content of a clinical functional analysis

At the most basic level the content of a dialogue attempting to accomplish a clinical functional analysis is obvious. The therapist should try to focus the dialogue on behavior (B) occurring in situations the client describes as part of the problem presented, and the antecedents (A) and consequences (C) of such behavior. But this can often not be done in a straightforward way. The client might not be so interested in talking about his own behavior, for example, but rather talk about his symptoms or what he conceives of as the reasons for his problem. Someone seeking help for anxiety problems, for example, might spend a lot of time just describing that experience. In this situation the therapist need not cling to a set agenda to talk about behavior but can follow the client as in a normal conversation. This will be done keeping ABC in mind, using her knowledge about basic principles. She can ask questions regarding anxiety for example, assuming that experience to be a central antecedent factor for a possible problematic behavioral strategy the client typically uses. Also, the therapist cannot know from the start what behavior to focus. In this situation the therapist must remain open and curious, using her knowledge of basic behavioral principles to guide exploration.

When clients come for therapy they typically describe problems they experience in their lives outside of the encounter with the therapist. Perhaps in their family, at work or in some other life-setting. Sometimes these events occur regularly in their present experience, sometimes they will describe events far off in time. Perhaps from their childhood. Even though present life situations might be easier to describe than something that happened a long time ago, all of these events are only available as a story told by the client. From the position of the client these events, in and of themselves for ever gone, are the natural topic for dialogue. They constitute a description of the problem the person wants to share. For the clinical behavior analyst there is a dilemma in this. The sequence of behavior experienced in the daily life of the client is one thing, a description of these problems given in the dialogue with the therapist is another thing. From this point of view modern versions of clinical behavior analysis stress the importance of working with behavior actually occurring in the interaction between client and therapist, as they meet (Follette & Bonow, 2009; Kanter et al. 2008; Kohlenberg & Tsai, 1991). This can be done by catching interactions that occur naturally or even setting situations like that up, deliberately.

There are many advantages in focusing such work, the most obvious one being that both therapist and client are present when such events occur and can share what they notice. At the same time, we know that therapy that does not focus events like these at all, or rarely, still can be of help to clients. This is true of several empirically validated models of therapy, such as interpersonal therapy (Klerman et al., 1994) and behavioral activation (Jacobson et al., 2001). Our understanding of human language, based on RFT, explains why and how that is so. More specifically this is a result of the ability language able humans have of following instructions or rules (Hayes et al., 2001; Törneke et al., 2008). Nevertheless, analyzing the interaction between therapist and client in session remains an important focus. This has long been acknowledged outside of clinical behavior analysis, most explicitly perhaps within psychodynamic therapy under the heading of "transference" but also for example in cognitive therapy (Safran & Segal, 1990).

It seems theoretically reasonable to assume that a clinical functional analysis, at its best, should be using examples both from the interaction between

therapist and client and from descriptions from outside, given by the client. Both ways will be discussed in what follows. It is worth considering that even interaction between therapist and client in the here and now includes descriptions of that interaction. Humans cannot step outside relational framing, once the repertoire is acquired.

Three aspects of a clinical functional analysis

The first and basic aspect is given by the classical Antecedent-Behavior-Consequence sequence. This flows naturally from the argument that becoming aware of, or discriminating, your own behavior is key to changing your behavior. So, in helping a client to change, the therapist will need to help him discriminate what he does (B), in what situation and with what purpose he acts that way (A) and what normally follows such action (C). Many people who search out psychological treatment are aware that they need to change something they are doing. They are also typically aware that things are not going the way they want them to, otherwise they would not be seeking help. Nonetheless, clients are often out of contact with the relationship between the consequences they experience as aversive and their own behavior that contributes to those consequences. So, a fundamental task for the therapist is *assisting the client in discerning the relationship between his own action in the moment and the consequences that follow, short term and long term.*

The second aspect focuses on what has been stressed above, namely that key antecedent factors involved in psychological problems are private, often subtle responses of the person himself. This aspect of the functional analysis is *assisting the client in discerning his own thoughts, emotions, memories and physical sensations by establishing an observational distance to them as they emerge.* Using technical, RFT-terminology, this is to assist the client by training the repertoire of framing his own responding hierarchically. Or, to say the same thing using other terminology: the task of the therapist is to shape the client's repertoire of hierarchical responding to his own responses. This is extremely central to the change process, as an individual's subtle responses typically include self-instruction and if the behavior that follows is part of a vicious behavioral circle it is essential to change the function or effect of these very responses. By establishing an observational distance to them, their automatic input is counterbalanced and other contextual factors, both those external to the individual and those that consists of other possible responses (other emotions, thoughts, etc.) get a change of influencing subsequent behavior. Two things are important to stress. The first is that what is needed is to change the *function* of these subtle responses, not necessarily their content. It is not the thoughts, emotions or memories in themselves that constitute the problem but the behavior they tend to evoke. The second important point is that to establish an observational distance to your own responding is not to avoid it. Quite the contrary: you do this to observe it better.

As subtle responses which have had problematic antecedent functions loose some of their influence other contextual factors get a better chance of affecting subsequent behavior. What is important to the individual, what would be over all valuable consequences, can then be clarified and possibly acquire influence over an alternative behavioral strategy. Thus, the third aspect of a clinical functional analysis is *assisting the client in using the skill of hierarchical framing of his own responding to clarify what is important in his life and what would be concrete steps in that direction.*

It can be helpful for the therapist to be aware of these three strategies and to know, in each moment, where to focus. At the same time, all three are aspects of the one clinical functional analysis and do not necessarily come in any special order but are focused interchangeably throughout clinical interaction.

Illustration

Marcello, 47, has a long history with going to psychotherapy. He has seen several therapists through the years and his last therapist for almost two years. That contact ended some time back and Marcello is now seeking help again. He is single and has no children. He describes problems in many different aspects of life. When asked

about his difficulties he describes a floating sense of anxiety, dysthymia and frustration. "I have not been feeling well for as long as I can remember and even though I have seen lots of therapists, no one seem to be able to understand what is wrong and actually do something about it". The following is part of the third session and so far, the therapist notices her own difficulty in getting a clear picture of what happens to Marcello in his daily life. She asks questions meant to clarify connections between contextual factors and Marcello's experience and behavior, thereby focusing the first aspect of a functional analysis, but gets very vague answers. Marcello repeatedly refers to his symptoms of frustration and anxiety in a general way. The therapist makes another try.

Therapist: One thing I have caught so far is that you have really tried hard to solve your problem. Do you think you could tell me a bit more about how the difficulties you face appear in your everyday life?
Client: Sure, if that can help you find out what to do. I am open to anything.
Therapist: You mentioned feeling low, frustrated and anxious. Does this differ much from day to day?
Client: Well, some. But I never feel ok, really.
Therapist: What troubles you the most, you would say? Feeling low, being frustrated or being anxious?
Client: They go together, hard to divide them up.
Therapist: And they trouble you all over your daily life, if I get you right. Is there some area in which they bother you more than in other areas?
Client: What do you mean? I told you I never feel ok.
Therapist: I get that. I just meant that for some people their anxiety, for example, becomes worse at work perhaps and even if they are more or less anxious all the time it is a little bit better when they are at home. And for others it varies in some other way. Can you notice any variations like that?
Client: I actually have less anxiety at work, even though I feel bad there also. I do pretty well at the bank, even though my boss pushes me a bit too much. She knows I have a hard time but doesn't seem to care that much. She doesn't really understand.
Therapist: And how do you feel when that happens?
Client: What do you think? I get irritated, frustrated. It is as if there is no way out, and I just don't know what to do. And no one else seems to know either.

Once again, the therapist notices the same thing. She has a hard time involving the client in a cooperative functional analysis of events outside of their interaction, as he does not provide clear examples of his experience and behavior in concrete situations in his life. She could go back over and try again, using other kinds of questions. But in this situation the therapist chooses another way, as she also notices the way the interaction with Marcello is playing out in the here and now.

Therapist: What about the therapists you have seen before? To what extent did you get the sense that they understood? Could they help you in seeing a way out?
Client: Well, I am not sure. My last therapist did to a degree, I guess. But I don't think he really got to the core of my problem. Even though I saw him for almost two years.
Therapist: And I guess the very fact that you come to see me indicates that you did not get what you wanted… Let me ask you another thing about this: here and now, what is your sense of the work we are trying to do? This is the third time we meet; do you get the impression I have something to offer?
Client: I don't know. Too early to tell. But I don't give up, you know. There must be some kind of solution for me. There has to be a way out and I need someone who can help me find it.
Therapist: I sense a strength in you there; you don't give up, as you said. Would that be true of you more generally, that you persevere, trying to reach things that are important to you?
Client: Yes, I don't give up easily. But at the same time, I can't get out of my frustration and anxiety, it seems. I need someone to help me get to the core of all this mess. To find a way out. It is not reasonable to feel like I do. There has to

be a way out of all this.
Therapist: So, you keep persevering, hoping someone will help you find the way out…?
Client: Yes, what do you suggest? Should I give up? Never! That would be the end for me. I can't stand having it like this.

The therapist continues to search for ways to assist the client in discerning behavior that might be central to the aversive consequences he experiences. Sensing something going on in the present interaction she uses information from the client's story about his life experience (a recurring effort to attain something from another person but not getting it) to focus the interaction here and now, exploring the possibility that this is an important behavioral strategy of the client. In this case the following interaction seems to confirm that possibility.

Notice the way the therapist tries to talk about the behavior in question, stressing the adaptive aspect of it. Assuming that the client at this point does not see his strategy as part of the problem but rather as a necessary component of the solution, she is aware of the risk that her attempt to help him see the problematic side of it can be too aversive to him at this point. So, she honestly validates aspects of the behavior, hoping that this will help deepening the exploration.

Therapist: That's quite reasonable, isn't it? If you are in a real stressful situation and you sense you cannot stand it, then it is pretty natural you try to find a solution. You try to get out of it, maybe try to get some help.
Client: That is what I am doing, trying to find a way out.
Therapist: Trying to find a way out…. I wonder, knowing that your work at the bank is helping clients who have financial problems, you must be quite capable of finding ways out in that kind of situation, right?
Client: Yes, I guess. I am good at my job.
Therapist: So here is your strength again, you are capable of finding ways out in problematic situations…
Client: Not with how I feel, though. Not with all this frustration. Not with the mess I am in…
Therapist: So, we can see your strength here, a skill of solving problems. Of finding a way out of them. And then it does not seem to work in some areas, like with the frustration and anxiety you experience.
Client: But I have to get out, I can't stand this in the long run.
Therapist: Yes, I get that. Can I just ask you a bit more about this, to see if we can learn something?
Client: Ok…
Therapist: So, this skill of finding a way out. We know it works well in many situations and not so well with your anxiety and frustration. What about other situations in your life? Are there other situations where you would say you use this skill of finding a way out of a problem, and it does not work? Or does it always work, except with frustration and anxiety?
Client (first silent): Well, when you ask… I am single as you know. And I try dating, on and off. And I guess it is a bit similar. I don't seem to succeed very well. Even though I really try to figure out how to do it. To find somebody, to get out of being single.
Therapist: To find a way out of being single.

Notice it now has become possible to talk about a possible problematic strategy the client uses. The term used ("trying to find a way out") is pretty imprecise and even metaphorical. But it allows for a deepening dialogue and the client seems to recognize something he tends to do, with different consequences. Later in the article we will return specifically to the use of metaphor in doing a functional analysis but now let us focus on something else that this transcript tries to illustrate, namely the balance between talking about concrete situations on one hand and abstractions (metaphorical or otherwise) on the other.

Finding the problematic functional class

In the interaction with Marcello the therapist initially has problems in doing a functional analysis of relevant behavior. And this is at the core of the task: what is the behavior we need to focus on to be able to go on to the analysis of relevant contextual

factors (antecedents and consequences) that can be targeted for change? The experience of the very interaction going on is then used as an example from where to start. In doing this the therapist uses a term first used by the client, when he repeatedly states that he needs to "find a way out". As this term is used interchangeably the therapist asks for, and also suggests, other examples of the same overarching strategy, trusting that the client can discriminate similarities and thereby confirm that they are on the right track. A good clinical functional analysis includes several concrete examples and formulates the overarching strategy or *functional class*, using the classical behavior analytic term. In a more straightforward case therapist and client will move from several concrete examples to the functional class and sometimes, as in the interaction described with Marcello, one example will lead to trying to formulate the functional class directly. In this case you will need to confirm the analysis done, by looking for more concrete examples. In what specific ways, perhaps in different situations, does Marcello "try to find the way out?" See Figure 1[2] for illustration!

The therapist and Marcello have not yet formulated a full ABC analysis. Focus has been, so far, on finding a term for the problematic functional class or strategy. The relationship between that behavior and its consequences (C) has also been talked about, by examining whether the behavior in question leads to the desired consequence or not. Very little has so far been said about the antecedent factors in which Marcello tends to do what he does. Still, some is implicit in the dialogue as "a problem that needs to be solved".

Continuing the ABC.

Let's assume that the therapist, based on the above, wants to pursue the possibility that the strategy of "trying to find a way out" is a key aspect of the client's dilemma. A next step would be to explore relevant antecedents and consequences further. As for consequences, some work has already been done, in making the distinction as to whether the strategy gives the client what he wants to achieve or not. When "trying to find a way out" works, as in Marcello's working with financial problems, one important re-

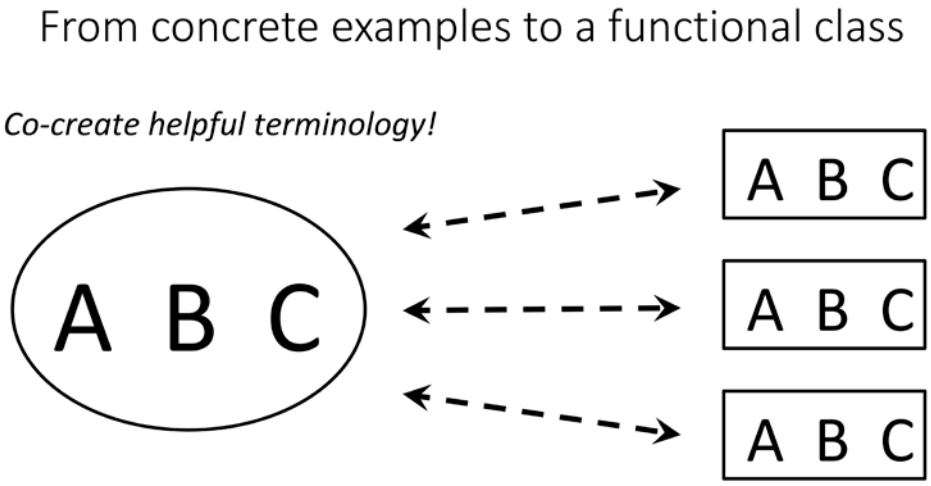

Figure 1. Finding the functional class

2 Many thanks to my friend Fabián Olaz, PhD, for fruitful dialogue regarding these figures.

inforcing consequence is probably that the problems are solved, and the experience that goes with that. This should of course be confirmed in the dialogue with Marcello. But what consequences are central in upholding the problematic functional class when the problems are not solved and Marcello does not find a way out and still continues to pursue it? In this, once again, the therapist brings in an understanding from RFT and how the repertoire of relational framing changes the functions of events. The assumption that experiential avoidance plays a central role can guide the therapist to ask if the client has any idea on what would turn up for him if he simply let go of the strategy he uses. In this case Marcello has already hinted to something in that direction when he said "Should I give up? Never! That would be the end for me". This can be explored further:

> **Therapist**: You said something about the importance of not giving up in this effort of trying to find a way out. Can you tell me some more about that?
> **Client**: What can I say? I can't stand having it like this. If I give up, that would be the end of it.
> **Therapist**: The end of it… What kind of end is that end?
> **Client**: I don't really know… It's just so scary and sad. It's like a dark hole, that I don't want to fall down into. Like if everything would be lost.
> **Therapist**: Then it is quite natural you want to find a way out, right? And that you really try hard.
> **Client**: Yes, I don't want to end up there.
> **Therapist**: Have you ever been there?
> **Client**: Well, no, not really. And, …., that's a weird question, you know. Sometimes it feels so close, but I keep it off.

Here we can see what consequences of the present strategy is reinforcing it. One is the experience of avoiding something that could be even worse and, in a sense, succeeding. As Marcello says: "…I keep it off". Another aspect is that due to the special way Marcello has learned to relate events even the aversive consequences he actually experiences are overruled by the sense of having done the right thing, the only thing possible.

So far, the functional analysis done has been focused on present behavior and its consequences. Not much have been said on the situations in which the behavior is evoked, that is antecedents

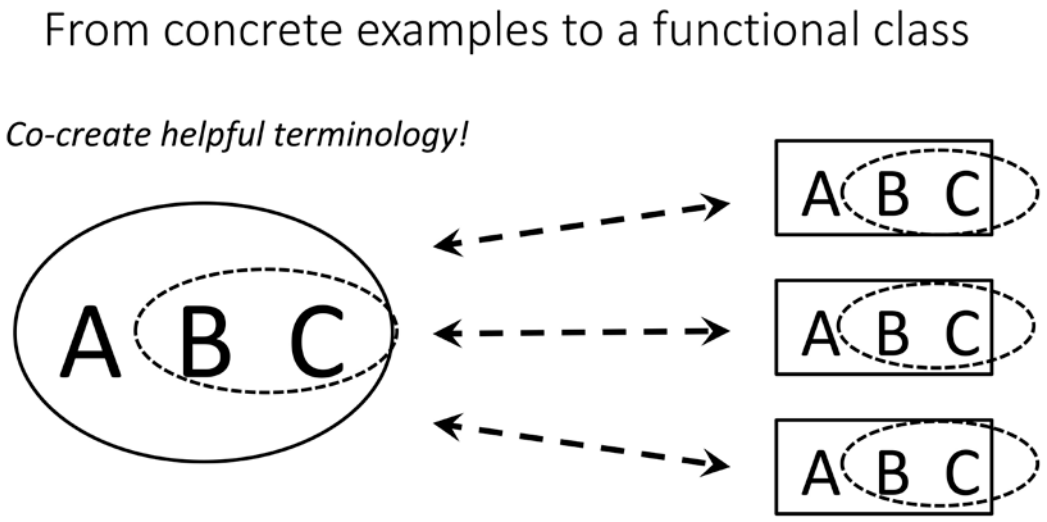

Figure 2. Finding the connection between behavior and consequenc

influencing the behavior. In a more straight-forward case all three aspects of the analysis (A:B:C) are spelled out as shown in Figure 1. A summery can then look like "So, in this kind of situation (A) you tend to do this (B) and this (C) is what follows". But often the dialogue will not be as clear cut, but different aspects of the sequence will be spelled out in steps, focusing different parts at a time. This has been so this far with Marcello, focusing the B:C connection (Figure 2). An alternative would be that the A:B connection is given priority (Figure 3). The main reason for these adjustments is that the analysis attempted is a cooperative one. Remember that the goal of the therapist is to assist *the client* in discriminating his own behavior, as that is assumed to be the key process of change. Assisting the client to "be aware of himself… to be in a better position to predict and control his own behavior" (Skinner, 1974). So, in doing this the therapist tries to establish a natural conversation, to encourage the client taking active part, rather than the therapist just instructing the client. Often the explicit structure of the ABC analysis is only present in the strategy of the therapist. It can be explicitly presented of course, but even when it is it would typically be mentioned as part of a natural conversation. Such as the therapist saying something like: "The idea is to look at the situations that are problematic to you, see what you tend to do and what happens then".

The following is an illustration of what focusing the A:B connection could look like, in the conversation with Marcello.

Therapist: I get that anxiety and frustration is there almost always. Does that mean that you are constantly engaged in this effort of finding a way out?
Client: Well, most of the time but not always. There are times when I get occupied by other things. Like at work, as I said. But of course, in a way I use the same effort there, in dealing with my clients.
Therapist: Yes, and in that situation the strategy seems to work, right? Often, at least. I am wondering about when you are trying to find a way out of what you called the mess, avoiding falling into that dark hole.

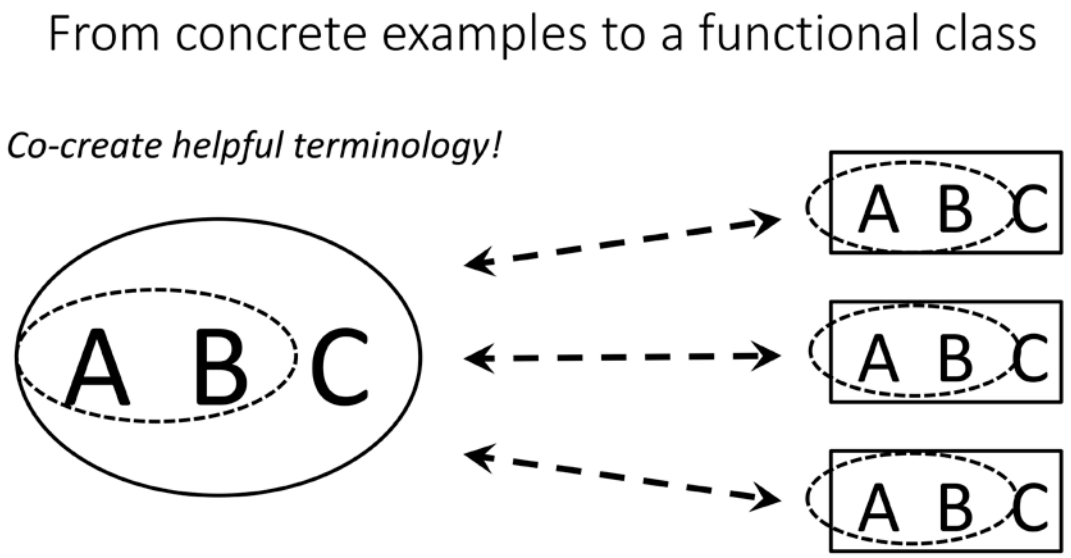

Figure 3. Finding the connection between critical antecedent factors and behavior

Client: Well, I guess that is when I get more frustrated, more anxious.
Therapist: Would it be correct to say that this effort of trying to find a way out of the mess is going on most of the time at a lower level and then, when it gets worse, you really focus on it?
Client: Yes, that fits.
Therapist: This increasing the effort, this almost desperately trying to find a way out, in what kind of situation does that happen?
Client: Many different situations. I am just in this mess, floating around, and sometimes it gets worse and then I get desperate, as you say, and try to find the way out. It's not like this happens in just this or that situation, it can happen anywhere.
Therapist: I get it. It can happen anywhere. At the same time, it seems to me that when you actually increase your efforts of finding a way out, something has told you that now you *really* need to get out.
Client: Well, yeah, I guess. I think I just notice that it gets worse and that gets me even more frustrated. I have to get out, I can't stand this, kind of…

A clinical dialogue like this, when the client does not describe a typical outward situation as antecedent to the problematic behavior, is quite common. This is not always so, of course. It might be that this sequence appears more exclusively in the presence of a special person (or type of person) for example or an object of some other kind. Like in specific phobic problems. And the therapist always has a choice: should this be explored further? In this case the therapist chooses to stay with the description the client provides. One reason for this is simply that this might be enough to support the needed change process. Another reason is that there is a risk that trying to figure out all possible factors will fall into Marcello's own problematic strategy. As if understanding everything exactly would be finding a way out.

Therapist: Let's see if I get this now. What typically happens is that in many different situations you notice your own frustration and anxiety and get this kind of order, almost: You have to get out! And then you increase your efforts, trying almost desperately to find a way out.
Client: Yes, that's it. Even though I don't know if it is like an order. More like there is no other way to go. I just have to get out.
Therapist: The only way is the way out. So, you really try to find it. And then…?
Client (shaking his head): I am just stuck, it is the same thing all over.

This is an example of how the therapist tries to establish a collaborative analysis. She suggests a term for the experience the client describes (getting an order) and when the client rejects that part she goes along, using the terms the client sees as more fitting.

In this a basic A:B connection is described, where the central antecedent factor focused is the private responses of the client: the experience of having only one way to go; trying to find a way out. And together with the earlier description of the B:C connection a basic ABC analysis has been done. There are many other things that could, and perhaps should, be explored of course. Historical connections? More exact dimensions of the experience of being stuck? More precise descriptions of the way the client tries to "find a way out"? And more. For the sake of illustrating the basic aspects this article tries to describe, we will leave those issues aside and stay with the material we have so far.

To assist the client in establishing an observational distance

To Marcello there is no alternative to doing what he does, once he is in the experience of frustration/anxiety and "I have to find a way out!". He is acting in coordination with this experience, and the instruction implied thus has a key antecedent function for his problematic behavioral strategy. So, the task for the therapist is to interact with Marcello in such a way that the function of this experience changes and that other contextual factors might impact his behavior. The repertoire to be assisted, or trained, is a hierarchical framing of the same response, something like "this is my experience and I am more". At a basic level this is already started within the ABC analysis illustrated above. By dis-

cerning his own behavior and the consequences that follow, by giving it a name and also noticing the experience that tends to evoke that behavior the client is already starting the process. So, what follows here is not a different thing, it is rather focusing an aspect of the clinical functional analysis.

One way the therapist tries to accomplish this is by talking about the experience in a way that establishes a certain distance between the experience and the person experiencing it.

Therapist: So, you notice your frustration increasing and if sometimes it is whispering in the background, now it is really up front.
Client: Yes, it is like it is the only thing. All I can see is that I need to find a way out.
Therapist: Ok. And at the same time, it seems to me there are two things here. It is the frustration and it is you, noticing it increasing. Right?
Client: Well, that's weird… But yeah, I guess…
Therapist: Well, I mean, as you say: All you can see is that you need to get out. So, it is the need to get out and… Who is the one seeing this?
Client: (silent for a while). Me, I guess. I am still there, of course.

One further step in this could be to use a metaphor, hoping it will evoke a certain observational distance.

Therapist: As you notice the frustration and anxiety and see the need to find a way out, would it be correct to say that this is like a road sign, telling you where to turn so to speak?
Client: If it just told me where to turn, that would be great. That's the problem, it shows me no way.
Therapist: So, the sign does not tell you where to go. What does it say?
Client: Out! But it does not tell me where the way out is.
Therapist: It just says "Out!". If this was a real sign, you know one that you could see with your eyes, what would it look like? Can you try to imagine? The text is "Out!"
Client: It's all over, like covering the whole wall (waving his hand towards the opposite wall in the room). Like an alarm, blinking.
Therapist: Does it have a color?
Client: Red. Bright.
Therapist: Can you please keep that image for a while! So, *there* (waving her hand towards the wall) is the red alarm-sign and *here* (holding her hand close to the Client) are you, watching that sign.

This way of evoking new behavior in the interaction can be elaborated further by asking the client to interact with "the sign on the wall" by for example moving it around (or asking the client to move around, keeping the alarm-sign on the wall), changing its color or the way the text "Out" is written in the image. All this to train a new way of interacting with his own experience, establishing an observational distance.

To assist the client in taking direction

So far in the dialogue with Marcello there has been a focus on problematic interaction with his own responding and how to counteract that. This should not hide the fact that over all the human ability to interact in complex ways with private responses is a helpful repertoire. It increases the possibility for a human being to adjust her behavior to a changing environment. So, as the problematic functions of certain responses change alternative behavioral strategies should be pursued. In this process the ability to frame your own responding hierarchically remains key. Your own thoughts, feelings and memories are reflections of your learning history and if you are capable of noticing these phenomena without necessarily acting in coordination with them, you can rather use them in directing your behavior towards something important to you.

Therapist: I wonder if this alarm, this red blinking sign that tells you that you have to get out, if this sign also has something more to tell you. Something more than just that you have to get out.
Client: What would that be, you mean? All this frustration, for all these years. I just need to get out, get rid of it. Or that is the way it feels like, even though it seems like I can't find that way out.

Therapist: Yes, if something is really painful you want to get out. And, at the same time, imagine you actually found a way out. What is out there that is important to you? If you, in some strange way, came out of this mess. What would be important to do then, out there?
Client (first silent): I am not sure. To be able to move freely, I guess. I have been locked in with this mess for so long I haven't really given that much thought. What I would do if I got out…?
Therapist: Sounds reasonable. As the sign "Get out!" has been "all over" it has been hard to see what would be out there, what it would be like if you could move freely. And at the same time, I think we need to look at that together, what would be important to you, given that you were free to take some new direction.
Client: I am not sure, really. It's kind of blank. The whole question feels so different…
Therapist: And I don't mean to say that you have to give an immediate answer. But maybe we could stay here for a while, trying to imagine how you would move about, if you would be able to "move more freely".
Client: But what about all the anxiety? It's still there. I am still in the midst of all this mess.
Therapist: Yes. And I can almost see the sign turning up right here: Get out! Or am I mistaken?
Client: No, I guess you are right. I just get this sense that I have to get out, as always.
Therapist: And what if you could just allow that sign to stay on the wall for a while? We can come back to it, and take a closer look once again. But I am interested in what is outside of this. What a free moving around could entail.
Client: Yeah, I think I get what you are asking but it's kind of blank…
Therapist: Let's look at some situation in your life right now where you really feel that you are in the mess and get this compelling experience, this alarming sign, that you have to get out. Maybe we could go from there, to see what would be important to you if, for some strange reason, you could move freely in that situation. What area of your life could give us an example, you think?
Client: Maybe when I interact with people I start to care for. There are a few colleagues, for example. And a woman I recently dated. I feel stuck, but I would like to be able to make more contact.
Therapist: So, there is something about getting closer to some people around you…

When a person, like Marcello, has been stuck in a vicious circle of experiential avoidance for a long time, questions about direction (other than getting rid of the painful experience) can be hard or even perplexing. There are many different places the therapist can go in the effort of assisting the client in getting closer to an answer. In this example one place was chosen: the painful situation in itself. When there is painful emotion something important is at stake, one way or another. To explore that situation, what is feared and what is hoped for, is a way to find a possible important direction. Other ways would be questions about areas of life, at present or in the past, which stand out in contrast to the problem in focus. With Marcello such a question could be: "This moving around more freely, have you ever had some of that? Perhaps just in a small area of your life, or in the past. I mean, it seems to be what you want to have so one way or another you must have had some, even if small, experience of it. What comes to mind as I ask?"

For other clients, questions about direction, what they see as important, have more straightforward answers once the client manages to establish an observational distance to the private instructions that have evoked the problematic behavioral strategy at the core of the analysis done.

Use of metaphor in a clinical functional analysis[3]

It has been evident to any reader of the dialogue above that it includes a heavy reliance on the use of metaphor. Both in the sense that the therapist introduced new metaphors (the "sign") and also that she selected quite conventional metaphors originally used by the client and put them to deliberate use ("to find a way out", "to move freely"). In an experimental context of behavior analysis that would be

3 For a fuller account of metaphor use in psychotherapy, see Törneke (2020).

problematic, as metaphors typically are imprecise and a rigorous scientific analysis typically should be as precise as possible. The clinical dialogue, though, is different. Here metaphor is the very tool of intervention and should be judged according to its effectiveness in contributing to change. And there are several reasons why the use of metaphor serves this function well.

The first reason why a therapist should deliberately use metaphor in any dialogue with a client is the simple fact that the only alternative would be to use metaphor without noticing. One conclusion from research on the place of metaphor in human language is that metaphors are everywhere and are fundamental to everyday talking and thinking (Lakoff & Johnson, 1980; Kövecses, 2010). Even such common formulations as saying metaphor has a place in language (as if language was a space) or that they are fundamental (as if language was a building standing on a foundation) exemplifies this. Metaphor will be part of a client-therapist dialogue regardless of whether the therapist is aware of this or not.

The second general aspect is that metaphors are easy to remember. One important aspect of psychotherapy having effects in the daily life of a client, outside of the meeting with the therapist, is that essential things from the therapeutic discourse are remembered. Deliberate use of metaphor can support this.

The third reason for the therapist to use metaphor is more directly connected to the basic process of change, discussed above. When talking about a client's subtle experiences, such as feelings, memories and thoughts, using metaphor can provide a way to establish an observational distance to these phenomena. This is especially so if the source used in the metaphor is an object that typically occurs in the world surrounding the client, and thus is normally contacted at a certain "distance", in contrast to an experience of a thought or an emotion. This is what is aimed at in the dialogue above when the therapist introduces the word "sign" when talking about Marcello's aversive experience which tends to influence his behavior in a problematic way. Asking questions about this "sign", and trying to have him interact with it as if it is "out there" is a way of trying to assist the client in establishing an observational distance to these responses of his own.

A fourth reason is also more directly connected to the targeted change processes. Recall that according to the analysis of psychological problems, based on RFT, the core aspect is how a human being interacts with her own responses and their instructional functions. When a metaphor is used for guiding behaviour, and thus functioning as an instruction or rule, it can have some advantages compared to more literal instructions. Let's say that in the continued dialogue with Marcello a concrete situation is talked about, perhaps a situation of interaction with a colleague. Marcello describes increasing anxiety and needing to find o way out. And then the therapist says "So, what if you just noticed the alarming sign on the wall, not tried to find a way out and focused on moving around freely? Even in the presence of the sign…"

If Marcello, in that kind of situation, tried to do what is suggested, the metaphoric expression would function as an instruction or rule. Two things can be said about Marcellos possible interaction with such an instruction. First, Marcello would know *something* about what is meant. The behavior of noticing the sign on the wall has been trained to some extent in the interaction with the therapist and as for "moving around freely" that was his own expression to start with, and he used it when asked what he would do if his problem was solved. So, it refers to a behavior that he sees as desirable. Second, whatever behavior is instructed by this metaphor, it is not described in detail. If Marcello would try to follow this instruction and keep track of whether he did or not, he would have to stay aware of his direct experience. In this way the insensitivity to direct experience which is at the core of the ability to follow instructions can be counterbalanced by using metaphoric expressions. And the human tendency to get hooked up in instructional control might be diminished.

There are of course also risks with using metaphor. One is that their imprecise character increases the risk for misunderstanding. That is counterbalanced by the cooperative way they are developed, as is illustrated above. There is also a risk that the dialogue will lose itself in all possible connotations that are available through metaphor-

ic talk. One way to avoid that happening is to constantly use both aspects of all metaphoric talk. A metaphor always consists of a phenomenon talked about (the target of the metaphor) and another phenomenon used to talk about the target, that is the source of the metaphor. So, in the example above, Marcello's anxiety/frustration is the target of the metaphor where "the alarming sign" is the source. Some type of behavior, here not yet described in detail, is the target of the metaphoric instruction and "moving freely" is the source. As a therapist you should be aware of the risk of losing yourself in the many possible connotations of the source. So, it would be a place in the dialogue with Marcello to also try to describe the behavior of "moving freely" more in detail, thereby making the target of the metaphor explicit.

Conclusion

A clinical functional analysis remains at the core of the type of psychotherapy that sees itself as part of applied behavior analysis. At the same time an analysis of complex human behavior requires an analysis of human language and such an analysis is provided by relational frame theory. Guided by such an analysis we gain an understanding both of the problematic processes involved in human psychological suffering and of the way we can help our clients free themselves from some of the traps that block their lives. We do so by assisting them in "becoming aware of themselves" and thereby to "be in a better position to predict and control their own behavior".

This article is conceptual, using basic research and a variety of models within clinical behavior analysis as its empirical support. This is done in a historical situation where the explicit use of functional analysis in psychotherapy is still debated (Hofmann & Hayes, 2019) and much empirical research remains to be done (see for example Villas-Bôas et al., 2016, for an illustration of this). In addition to assisting clinicians in their daily work the hope is that this conceptual analysis might also suggest to researchers what specifics to focus on, in the important ongoing work to empirically demonstrate in what way a functional analysis can be of help within the context of psychotherapy.

References

Baer, D. M., Wolf, M. M. & Risley, T. R. (1968) Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*, 91-97. http://doi.org/ 10.1901/jaba.1968.1-91

Callejón, Z. (2020). *Training the hierarchical responding*. Unpublished doctorol thesis Facultad de Psicología Universidad de Almeria.

Chawla, N., & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology, 63*, 871–890. https://doi.org/10.1002/jclp.20400

Day, W. (1971) Methological problems in the analysis of behavior controlled by private events: Some unusual recommendations. Paper presented at the meeting of the American Psychologial Association. Printed in Leigland, S. (1992) *Radical Behaviorism: Willard Day on Psychology and Philosophy*. Reno, Context Press

Dougher, M.J. (Ed.) (2000). *Clinical Behavior Analysis* Reno: Context Press.

Dougher, M. J. (1993) On the advantages and implications of a radical behavioral treatment of private events. *The Behavior Therapist, 16*, 204-206

Ferster, C. B. (1972) An experimental analysis of clinical phenomena. *The Psychological Record, 22,* 1-16. https://doi.org/10.1007/BF03394059

Follette, W. C., & Bonow, T. B. (2009). The challenge of understanding process in clinical behavior analysis: The case of functional analytic psychotherapy. *The Behavior Analyst, 32*, 135–148. http://doi.org/10.1007/BF03392179

Foody, M., Barnes-Holmes, Y., Barnes-Holmes, D., & Luciano, C. (2013). An empirical investigation of hierarchical versus distinction relations in a self-based ACT exercise. *International Journal of Psychology and Psychological Therapy, 13,* 373-385.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.) (2001). *Relational Frame Theory: A Post-Skinnerian Account of Human Language and Cognition*. New York: Kluwer Academic/ Plenum

Gil-Luciano, B., Ruiz, F. J., Valdivia-Salas, S., & Suarez-Falcon, J. C. (2017) Promoting psychological flexibility on tolerance tasks: Fram-

ing behavior through deictic/hierarchical relations and specifying augmental functions. *The Psychological Record, 67*, 1-9. https://doi.org/10.1007/s40732-016-0200-5

Hayes, S. C., Strosahl, K., & Wilson, K. G. (2012). *Acceptance and commitment therapy. The process and practice of mindful change.* New York: Guilford Press.

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of consulting and clinical psychology*, *64*, 1152–1168. https://doi: 10.1037//0022-006x.64.6.

Haynes, S. N., O'Brien,W. H., Keawe´aimoku, J., & Witteman, C. (2012) Concepts of causality in psychopathology: Applications in clinical assessment, clinical case formulation and functional analysis. *Journal of Unified Psychotherapy and Clinical Science 1*, 87-103.

Hofmann, S. G., & Hayes, S. C (2019) Functional analysis is dead: Long live functional analysis. *Clinical Psychological Science, 7*, 63-67. https://doi: 10.1177/2167702618805513

Hughes, S., & Barnes-Holmes, D. (2016a). Relational frame theory: The basic account. In R. D. Zettle, S. C. Hayes, D. Barnes-Holmes, & T. Biglan (Eds.), *The Wiley handbook of contextual behavioral science* (pp. 129–178). Chichester: John Wiley & Sons.

Hughes, S., & Barnes-Holmes, D. (2016b). Relational frame theory: Implications for the study of human language and cognition. In R. D. Zettle, S. C. Hayes, D. Barnes-Holmes, & T. Biglan (Eds.), *The Wiley handbook of contextual behavioral science* (pp. 179–226). Chichester: John Wiley & Sons

Jacobson, N. S., Martell, C. R., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. *Clinical Psychology: Science and Practice, 8*(3), 255–270. https://doi.org/10.1093/clipsy/8.3.255

Kanter, J. W., Manos, R.C., Busch, A. M. & Rusch, L. C. (2008) Making behavioral activation more behavioral. *Behavior Modification, 32,* 780-803. https://doi:10.1177/0145445508317265

Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour Research and Therapy, 9*, 1301–1320. https://doi:10.1016/j.brat.2005.10.003

Klerman, G. L., Weissman, M. M., Rounsaville, B. J., & Chevron, E. S. (1994*) Interpersonal therapy of depression: A brief, focused, specific strategy*. Maryland: Rowman & Littlefield

Kohlenberg, R. J., & Tsai, M. (1991). *Functional analytical psychotherapy: Creating intense and curative therapeutic relationships*. New York: Plenum.

Kövecses, Z. (2010). *Metaphor: A practical introduction*. New York: Oxford University.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: University of Chicago Press.

Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press.

Luciano, C., Rodríguez, M. & Gutiérrez, O. (2004). A proposal for synthesizing verbal contexts in experiential avoidance disorder and acceptance and commitment therapy. *International Journal of Psychology and Psychological Therapy, 4*, 377–394.

Luciano, C., Ruiz, F. J.,Vizcaíno-Torres, R. M., Sánchez-Martín, V., Gutiérrez-Martinez, O., & Lopes-López, J. C. (2011). A relational frame analysis of defusion interactions in acceptance and commitment therapy. A preliminary and quasi-experimental study with at-risk adolescents. *International Journal of Psychology and Psychological Therapy, 11,* 165-182.

Ponte, J. P. (1992) The history of the concept of function and some educational implications. *The Mathematics, 3*(2), 1-5.

Ramnerö, J., & Törneke, N. (2008). *The ABCs of human behavior. Behavioral principles for the practicing clinician*. Oakland: New Harbinger Publications.

Safran, J. D. & Segal, Z. D. (1990). *Interpersonal process in cognitive therapy*. New York: Guilford Press.

Skinner, B.F. (1953). *Science and human behavior*. New York: Macmillan

Skinner, B. F. (1957). *Verbal behavior*. New York: Crofts-Century-Crofts.

Skinner, B. F. (1974). *About behaviorism*. New York,

NY: Knopf.
Sturmey, P. (Ed.) (2020) *Functional analysis in clinical treatment*. London, San Diego, Academic Press.
Törneke, N. (2010). *Learning RFT. An introduction to relational frame theory and its clinical application.* Oakland: New Harbinger Publications.
Törneke, N. (2020) Strategies for using metaphor in psychological treatment. *Metaphor in the Social World*, *10*, 214-232 https://doi.org/10.1075/msw.00004.tor.
Törneke, N., Luciano, C., Barnes-Holmes, Y., & Bond, F. (2016). RFT for clinical practice: Three core strategies in understanding and treating human suffering. In Zettle, R. D., Hayes, S. C., Barnes-Holmes, D. & Biglan, T. (Eds.), *Wiley handbook of contextual behavioral science* (pp. 254–272). Chichester: John Wiley & Sons.
Törneke, N., Luciano, C., & Valdivia Salas, S. (2008). Rule-governed behavior and psychological problems. *International Journal of Psychology and Psychological Therapy 8*, 141-156.
Villas-Bôas, A., Meyer, S. B., & Kanter, J. W. (2016). The effects of analyses of contingencies on clinically relevant behaviors and out-of-session changes in functional analytic psychotherapy. *The Psychological Record*, *66*(4), 599-609. https://doi.org/10.1007/s40732-016-0195-y
Villatte, M., Villatte, J. L., & Hayes, S. C. (2016). *Mastering the clinical conversation: Language as intervention*. New York: Guilford Press.
Wilson, K. G., & Murrell, A. R. (2002). Functional analysis of behavior. In Herson , M. & Sledge, W. (Eds.), *Encyclopedia of Psychology* (pp. 833-839). New York: Academic Press.

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