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Historical Notes and a Few Definitions

Just as a much-loved child has many names, as the Swedish saying goes, so, too, does the term at the heart of this book: functional analysis. Originally, functional analysis was a branch of mathematics that studied the properties of functions and identifying relationships between them. Mathematicians still use it in this sense. In psychology, it is mainly employed in behavior analysis, which is to say in the area of psychology that operates in the wake of Burrhus Frederic Skinner. Here, it is used to analyze the relationship between what a person does and the consequences that follow, and in turn influence the person's behavior going forward. In Skinner's words, "Men act upon the world, and change it, and are changed in turn by the consequences of their action."[1]

So much for the history—a history that is beset with conflict and misunderstanding. Behavior analysis is often seen as inaccessible, technical, and, well, mathematical, and might lead one to draw the spontaneous inference that a functional analysis is an unsuitably blunt tool for the complex, emotionally charged interaction that is a common feature of psychotherapy. And yet it surely stands to reason that the above quote from Skinner describes something natural and universally human, something that applies to all human behavior. You do something, and its consequences affect you. In important areas of life, such as in our interactions with our loved ones, what we do and what follows can prove life-changing. For example, to do something in a situation of emotional engagement and thereby achieve (or not) what we want to achieve is

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[1]Skinner, B. F. (1957). *Verbal behavior* (p. 1). Appleton-Century-Crofts.

central to every human life. What we do affects how we continue to act, particularly if similar sequences are repeated. It can make us more proficient, make us grow as humans and find satisfaction in that. But it can also affect us in a way that interferes with our aims, leaving us feeling constrained and impotent.

When this book places the center of focus on functional analysis and claims that it plays a key part in a conversation designed to help in a change process, it naturally means that the book will be taking a closer look at the implications of this term as it is defined in behavior analysis. However, it is also important to point out that this separate tradition in psychology hardly has sole rights to the phenomenon in question. How someone acts in given situations, what the outcomes are, and how this person can change whatever it is he or she wants to change are critical to all types of psychological treatment, regardless of model. Consequently, this book tries to have a broader scope than strictly behavior analytical, so while it is written from this tradition, it also appeals to readers from other conceptual or professional backgrounds. This has been done in hopes of making a contribution to an overarching dialogue on how change happens and what a therapist with conversation as her primary instrument can do to help bring about whatever change the client seeks.[2]

DIFFERENT TERMS FOR THE SAME THING

Functional analysis also has different names among the treatment models that draw their concepts and ideas from behavior analysis. Perhaps the most common is the ABC sequence: Antecedent–Behavior–Consequence (ABC also giving it a pedagogical spin). An action (B) is always preceded by something (A) and followed by something (C). The consequences that ensue in this way in turn influence the likelihood that the behavior will be repeated, or not repeated, when a similar precursor (antecedent) arises. A person is formed by or learns from this sequence, especially if the sequence, or one like it, is repeated. Another way to describe the same sequence is SRS: Stimuli–Response–Stimuli. Despite its technical associations, in this context the word *stimuli* simply means aspects of the environment or circumstances. Under certain circumstances (in the presence of particular stimuli), something is done (response) that changes an aspect of the circumstances.

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[2]*Translator's note:* For the sake of readability, unless otherwise specified, the therapist is referred to as female and the client as male.

These labels have a slightly technical aftertaste. A more everyday term is used in dialectical behavior therapy (DBT), which calls this type of sequence *chain analysis*. Acceptance and commitment therapy (ACT) uses the term *creative hopelessness*, which places the entire focus on problematic sequences of the same kind in an attempt to help the client see the futility of his current strategy. It is assumed that doing so will open up new behavioral options—hence "creative."

The different names given to functional analysis can have their advantages and disadvantages. The important thing is not which term one uses but that one understands the phenomenon denoted, the functional relationship. At the beginning of our individual lives, we have very little influence over the circumstances surrounding us, yet we all act in one way or another, come into contact with the consequences, and are formed by these experiences. Gradually, we achieve a state of awareness and we gain greater, albeit varied, influence over our own actions. But this experience is also formed by the circumstances we encounter, what we do, and what happens next.

FUNCTIONAL CONNECTIONS ARE EVERYWHERE

The functional connection between circumstance, response, and consequence, and how the same person will act in new or in similar situations, is universal. This means that all human action can, in principle, be analyzed in this way. I say "in principle" because our knowledge of the different factors that come into play is usually patchy. What are the circumstances at any one moment, what exactly was it that a given person did, and how do those consequences contribute to the person's future behavior? Such questions are normally anything but simple to answer. Observing what someone does and then trying to give answers is mostly a guessing game, which can once in a while be useful, if one can identify a variable that seems to be in play and find a way to do something about it.

We are constantly doing this as we go about our daily lives, each and every one of us. I might say something to someone with a certain intention to influence this person in some mundane sense; for example, I enter a colleague's office and want him to turn his attention from his computer screen to me. I say something, but my opening gambit fails as he continues to stare at the screen, unaware of my presence and seemingly deaf to what I have just said. I surmise that a possible variable is that I was too quiet and so I raise my voice, perhaps expressing myself

differently. If my colleague then looks up and asks me what I want, then I continue with the reason for my visit. If so, I have changed certain variables and achieved the behavioral change I sought. But my inference may have been erroneous. Perhaps there were other factors influencing my colleague's fixation on his screen: Me raising my voice might even have made matters worse. My wrong guess, or rather my acting on it, might have had unwanted consequences for me. Perhaps it irked my colleague, who wanted me to pipe down while he read an important email. This entire chain of events illustrates different kinds of functional relationships, but my attempt at guess analysis may not be accurate.

This example reveals something fundamental to all attempts at a functional analysis: *We need to decide what action to analyze.* In my attempt to influence my colleague, it was his behavior that my functional inferences and resultant behavior centered on. However, a third colleague observing the scene could have been focusing on me, and possibly speculating on in what way the consequences I encountered would influence me the next time I entered our colleague's office on a particular errand.

FUNCTIONAL ANALYSIS WAS BORN IN A LAB

Functional analysis as a scientific tool was born in an environment totally different from the everyday situation described above. The work that was begun by Skinner and his early colleagues was done on nonhuman animals, often pigeons. Moreover, these animals and their behavior were not studied in their natural habitat but in a laboratory. This was, of course, deliberate: In order to be able to identify and then rearrange the circumstances that affected the animals' behavior, an environment with a limited number of affecting variables was needed.

First, the researchers established relationships between certain environmental phenomena, such as when and by what means food was made available to a pigeon (e.g., by its pecking a particular button). They then altered these few variables in different ways to study how that affected the animals' behavior. So, with the pigeon, they could adjust how often it had to peck before receiving food, how long it took for the food to arrive, maybe which button it had to peck; or they may have tweaked the environment by, say, introducing different sounds and lighting effects.

The researchers then did something on the basis of their observations that was actually very similar to the guessing game in which I engaged when interacting with my colleague: They used their observations to

guess what the influencing factors were. In doing this, they had two clear advantages over me. First, they had a very limited number of variables to play with and, second, they were largely in control of these variables. And the fact that they had control meant that they could do what was eventually termed a *functional analysis*. Going by their observations, they guessed that certain principles of influence were in effect and then tested them. The testing itself was essential; they did not just make do with well-founded guesses about the relationships at work, which is evident from the following quote from some leading colleagues of Skinner when describing their experimental design: "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."[3]

Notice that this is both similar to and different from the example of my colleague! I, too, wished to exercise control at that moment. I wanted him to stop staring at his computer and look at me, and no one would think that my attempt was in any way strange. The desire for influence is similar. The difference is, of course, also enormous. In my interaction with my colleague, the influencing factors were almost infinite or at least extremely numerous, my knowledge of them was very limited, and I had no influence over the vast majority of these factors. So, the risk was high that my attempt to influence him would fail.

Since fundamental principles of change have been mapped for many years in different laboratory experiments with animals other than humans, this knowledge has also been applied outside the laboratory in such notable areas as pedagogics and health care. This move to the human realm raises some important questions.

FUNCTIONAL ANALYSIS IN A NATURAL ENVIRONMENT

One such question in the past was how relevant such animal experiments are to understanding and influencing human actions. Can we really learn something significant about people by observing pigeons and rats? This question is no longer as topical as it was in the mid-1900s, as we now understand better how evolution works and there is broad scientific consensus that the answer is in the affirmative. This is especially evident in psychology. Two currently seminal fields of knowledge, research on

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[3]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.

attachment patterns and emotion research, are rooted in studies of non-human animals, the former using close human relatives (other primates), the latter actual studies of rats' brains. Key functions established by evolution tend to persist. At the same time, of course, there are essential differences among species, and I return to what appears specific to humans and has special relevance to functional analyses in Chapter 2.

The other question is how functional analysis can work in a natural environment with the vast number of factors that can come into play there, and which are often beyond the control of the person trying to do the analysis. This is also touched on in the quote about experimental design just cited, where the authors acknowledge that the rigorous demands enforced in the laboratory cannot be similarly enforced when trying to apply the fundamental principles in a natural environment. Yet the same approach is still used: Observe what happens, use understood principles to guess relationships, and test if interventions based on these principles have the desired effect.

A third question then possibly arises: Is it ethically correct to use scientifically explored principles of change factors to influence other people? The answer to this question naturally depends on what kind of influence you want to achieve and what the person affected thinks about it. In principle, it is indeed possible to use many different types of scientific knowledge unethically, not least through influencing the behaviors of other people. And this also applies to the knowledge of change processes discussed in this book. At the same time, influencing other people is an integral part of all human interaction: Wanting to influence and be influenced by others is an inescapable part of what it is to be human. One might say that what I am doing at this very moment as I write this book is an example of this. I am putting pen to paper in hopes of influencing you as a reader. It is also the case, during a psychotherapy session, for example, that one (or more) individuals can turn to another with a desire to be influenced, a wish to be helped along a process of change. In such instances, solid knowledge on how change is effected can be helpful.

FUNCTIONAL ANALYSIS IN PSYCHOTHERAPY

There are some fundamental things that must be kept in mind regarding the special environment that is created when two (or more) people meet to engage in what we normally call psychotherapy. In a psychotherapy session, the environment created is in large part very different

from the laboratory environment in which functional analysis was created. The variables that influence both client and therapist are legion: A great many are unknown, and most are beyond control. This said, the environment is not wholly natural and was created solely for this particular purpose: One person seeks out another to help him change his behavior, feelings, memories, or thoughts. In this sense, the relationship is an unequal one, focused on only one party. The client's private experiences, some of which might possibly otherwise never be aired, are part of the dialogue. Conversely, the therapist's private experiences, while relevant to understanding the therapist's behavior, are usually left outside the conversation. At the same time, the therapist is expected to be in some sense an expert possessing professional knowledge about change work.

Although the therapist should be an expert on treatment and the principles of change that presumably come into play, what the therapist knows is also limited. The client's dilemma, as he experiences it, is not immediately accessible to the therapist. The problematic elements play out somewhere out there where the client seeks change, but this "somewhere" is a place from which the therapist is largely absent so she must make do with the client's account of what happens there. And yet another facet of inaccessibility exists for the therapist. Commonly, a crucial component of the client's difficulties are his feelings, memories, thoughts, and physical sensations. These phenomena are also out of immediate reach for the therapist, even if they arise during a session. Here, too, the client is the expert directly observing whatever is tormenting, troubling, or appearing desirable to him. This is something the therapist needs to remember. If the therapist is unable to establish a cooperative relationship with her client, she will remain ignorant of therapeutically critical knowledge. This calls for humility.

While the focus of therapeutic dialogue is on the client, one of the many and often indefinite factors influencing the conversation is the therapist and her behavior, which is also the only tool she has at her disposal. If she is to exert an influence of benefit to the client, she must do so during the actual meeting. This is the very essence of psychotherapy: Therapist and client meet and interact, and ideally the client leaves and does something outside the therapeutic confines that leads to the change he desires. Central to the therapist's role is for her to make, with the help of her client, a functional analysis: In what situation are you enticed to do something that doesn't work well for you, and what consequences help to close the vicious circle? What alternatives are there for you in this situation, and what consequences would you like to achieve?

Describing how such a conversation, geared specifically toward functional analyses, can proceed is the theme of this book. The influencing factors are many, and in many respects a clinical functional analysis always begins as a kind of guessing game, although not as poorly informed as in my encounter with my email-reading colleague. There are opportunities for using well-studied principles when looking for decisive factors. The actual process of ascertaining just what these factors are also shares an important similarity with the original experimental environment—namely, the emphasis on experimentation. The concrete testing is part of the approach. This applies to the therapist, who needs to observe what effect her own actions have on her client and to let these observations influence what she does next. Ultimately, it also applies to the client, who is invited to test what they take note of together during the conversation. The critical challenge for the client is then to test these observations and qualified guesses about relationships in his own life outside the therapy room. The effectiveness of the therapy depends on whether the *client* can be helped to make functional analyses in order to bring about behavioral change.

A FEW WORDS ABOUT DIAGNOSES

This book only makes the exceptional mention of diagnoses. This is because the phenomena at the heart of a clinical functional analysis are much more fundamental than the descriptive diagnostic system that modern care systems use for mental health conditions. A particular diagnosis says little about how a functional analysis is to be performed with a given client. This is not to say, of course, that a diagnosis cannot be useful in many other respects. It sorts out clinical problems on the basis of symptoms, it has some interventional implications, and can also be used to entitle people to help and support. However, the treatment that this book describes is founded on individual analysis, where individual differences, often independently of diagnosis, are much more relevant.