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# **Analyzing Obsessive-Compulsive Disorder Using Relational Frame Theory, Experiential Avoidance, and Emotion Regulation**

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## Abstract

Relational frame theory (RFT), experiential avoidance (EA), and emotion regulation (ER) are psychological frameworks that can inform useful conceptualizations describing the experience, perpetuation, and maintenance of obsessive and compulsive symptomology in obsessive-compulsive disorder (OCD) and body dysmorphic disorder (BDD). RFT-based processes of language and cognition, including bi-directional stimulus relations, arbitrarily applicable derived relational responding (AADRR), and relational framing facilitate evaluative and higher-order conditioning; together, these forms of conditioning can account for the experience and perpetuation of obsessions. EA, which is a behavioral process addressed by acceptance and commitment therapy (ACT), can contribute to the maintenance of compulsive responding through negative reinforcement. Further, EA is a problematic method of ER that contributes to the transformation of distress into the suffering individuals diagnosed with problems, such as OCD, may experience. Finally, metaphors can function as effective tools for clinicians to use with clients during treatment modalities such as exposure-and-response prevention therapy (ERP) for OCD in the service of fostering acceptance. Further study of the clinical applications of metaphors may be beneficial for the treatment of OCD and other psychological problems.

## Introduction

Obsessive-compulsive disorder (OCD) is classified as an anxiety disorder by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association [APA], 2013). It is characterized by distressing and intrusive thoughts or sensations, known as obsessions, and unwanted repetitive behaviors aimed at reducing distress associated with the obsessions, known as compulsions. These obsessions and compulsions contribute to functional interference and decreased quality of life. There is a functional relationship between obsessions and compulsions, as 90% of people with OCD engage in compulsions in response to obsessions (Foa & Kozak, 1995). Although there is usually a predominant obsession and corresponding compulsion, most people diagnosed with OCD tend to have multiple obsessions and compulsions varying in intensity and severity. According to current estimates, approximately 1% of the U.S. population (or 2.2 million people) meet criteria for OCD each year (Kessler, Chiu, Demler, & Walters, 2005).

The obsessional aspect of OCD can be explained by Relational Frame Theory (RFT), which is a psychological account of human language and higher cognition (Hayes, Barnes-Holmes, & Roche, 2001). RFT purports that, as a result of their languaging abilities, humans are able to respond to stimuli based on their histories of interaction with them, as well as the mutual relations of stimuli to other events. To illustrate this concept, a rat must interact with a stimulus in order to learn its functions, but a human can be told or assume that a novel stimulus is “the same as” or “different than” something that he or she has interacted with; based on this information, the new stimulus will gain a meaning and function relative to the relational network that these cues establish. Humans also have the ability to form bi-directional stimulus relations, where a word and the actual item or event describing that word each can equally stand for the other. For example, the word “biscuit” and an actual biscuit are equal for humans as a result of language-based abilities; we do not need to see the biscuit in order to anticipate getting it. Another example of bi-directional stimulus relations is a child who learns that touching a hot stove will burn him or her without having the direct experience of touching a hot stove and getting burned. Even if someone has never experienced a particular event, the ability to use language allows them to learn about it. The concept of

bi-directional stimulus relations explains why evaluative conditioning can occur and why arbitrary associations can be made. These two processes are integral components of Neziroglu's learning model of body dysmorphic disorder (BDD). BDD is a subtype of OCD characterized by the obsessive idea that some aspect of one's own appearance is severely flawed and warrants exceptional measures to hide or fix it (Cororve & Gleaves, 2001; Neziroglu & Mancusi 2012). RFT principles, their associated explanatory functions of OCD symptomology, and relevant conclusions for the practice of clinical psychology will be elaborated upon.

Experiential avoidance (EA) is a useful construct for analyzing the maintenance of compulsive responding in OCD. EA frequently occurs in response to obsessions and their associated anxiety (Barlow, 2004). EA is defined as the tendency to engage in behaviors for the purpose of altering the frequency, duration, or form of unwanted private events (i.e., thoughts, feelings, physical sensations, and memories) and the situations that occasion them (Hayes, 1994; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). People diagnosed with OCD tend to avoid situations that give rise to their obsessions by actively avoiding, engaging in compulsions, rationalizing, distracting, and thought-suppressing in response to the distress associated with their obsessions. Therefore, EA serves as a form of negative reinforcement for such cognitive and behavioral responses in OCD.

EA also serves as a form of emotion regulation (ER), which is defined as any action designed to influence "which emotions we have, when we have them, and how we experience and express them" (Gross, 2002, p. 282). ER is not a dysfunctional process in itself, but it can be problematic in individuals suffering with OCD; two problematic ways ER can occur are when the anxiety one is attempting to regulate cannot and need not be regulated, and when the very act of ER interferes with one's engagement in meaningful life activities. The compulsion-maintenance and ER functions of EA, as well as related conclusions for the practice of clinical psychology, will be further discussed.

**Background: RFT Principles**

RFT principles offer insightful and useful explanations for the obsessional component of OCD. As mentioned previously, BDD is a subtype of OCD, and its obsessional symptomology related to bodily appearance can also be explained by RFT. Neziroglu's learning model of BDD suggests that early experiences and conditioning begin to shape an individual's cognitions and emotions, and language mediates the learning, conditioning, and development of appearance-related beliefs (Neziroglu & Mancusi, 2012). RFT then explains the role of language and how it influences cognitions and emotions in BDD.

According to Neziroglu's learning model of BDD, evaluative conditioning strengthens obsessions in BDD. Evaluative conditioning is a type of classical conditioning defined as a change in liking, which occurs due to an association with a positive or negative stimulus (Hofmann, De Houwer, Perugini, Baeyens, & Crombez, 2010). Language supports classical conditioning by stimulating complex networks of associated ideas, images, and evaluations; for example, someone could learn that having a pimple (unconditioned stimulus or US) is associated with disgust (unconditioned response or UR), and later, any blemish (conditioned stimulus or CS) would then elicit disgust (conditioned response or CR). Further, the word pimple shares similarity in meaning with acne or blemish, and so those similar words alone can also gain the ability to elicit the same aversive effect. According to RFT, this arbitrarily associated stimulus-response relationship, as formed through classical conditioning, would then be said to occur through the relational frame of coordination or similarity. The relationship explains why an individual suffering with BDD may respond with aversive affect to any word or event that reminds him or her of a "defective" bodily feature. So, for example, if an individual diagnosed with BDD has a reaction of disgust to a pimple, any stimulus similar to a pimple may give rise to the same reaction by thinking about it, even if it no longer exists.

The following example effectively summarizes the role of evaluative conditioning in the development of BDD. First, a negative event related to one's physical appearance may serve as a US (e.g., being made fun of because of one's weight or the appearance of one's stomach), which may then contribute to an unconditioned emotional response

(e.g., anxiety, depression, shame, or disgust). Subsequently, the US (being teased about one's weight or stomach) may be evaluated as negative, and finally, any stimulus paired with it may be evaluated as negative as well. For example, if a person is made fun of for having a fatty stomach, this may evoke negative affect, and then a word like "fatty" (CS) or a body part like the stomach (CS) may be evaluated as negative. In line with the framework of evaluative conditioning, any previously neutral word or body part may incite the same negative reaction as the unconditioned stimulus (being teased about one's weight or stomach). Eventually, when the individual is exposed to the body part of concern, a negative emotional response can occur. Not only is the CS (the word "fatty" or a body part like the stomach) evaluated negatively, but it can now also evoke the same response (e.g., anxiety or disgust) as the US (being teased about one's weight or stomach). With the aforementioned in mind, it seems the interplay between language and evaluative conditioning contributes to the experience and perpetuation of BDD-related obsessions.

Arbitrary association, which involves the use of language as a way of making connections that may or may not be factual, is another idea within RFT that can contribute to the explanation of BDD symptomology. It is possible that people suffering with BDD form arbitrary associations between appearance, social success, and/or undesirable physical traits; these associations rarely are tested and therefore are not likely to be extinguished (Neziroglu & Mancusi, 2012). To illustrate this point, a child may hear a parent comment about another child who is annoying to invite over because she is a finicky eater. However, the parent may also comment that the other child is so cute and pretty, and it is a shame that she is such a difficult and finicky eater. Consequently, the first child may learn that people tolerate unpleasantness (finicky eating) when someone is cute and pretty, and therefore, she may start comparing her looks with her friends' in order for people to accept her as well. These problematic arbitrary associations could contribute to BDD symptoms in the forms of obsessing about appearance and associated emotional responses such as anxiety.

Another example of an arbitrary association is that if one thinks of using a spoon to eat, he or she may have a neutral response, but if one thinks of using a spoon that fell in a toilet bowl to eat, then he or she may have a disgust-based reaction. Due to our

abilities with language, we are able to form arbitrary associations and experience certain emotions in response to thoughts. In addition, referring back to the role of conditioning and language in creating and perpetuating obsessions in BDD, language may mediate the direct conditioning of the CS (e.g., the word “fatty” or a person’s stomach) and the US (e.g., being made fun of for one’s weight or stomach size); as the CS (the word “large” or a person’s stomach) is paired with the CR (e.g., anxiety or disgust), this set of cognitions is strengthened, and beliefs initially introduced through life experiences are reinforced. In line with this example, these beliefs may center around thoughts, such as *“Looking fit is the most important thing in the world,” “I can only succeed in life if I look fit,” “I am worthless if I do not look fit,”* and so on. Overall, it seems that arbitrary associations created utilizing language play an important role in contributing to the problematic obsessions associated with BDD.

Building upon the role of language and evaluative conditioning in producing obsessions in BDD, higher-order conditioning also interacts with language to perpetuate obsessions. Higher-order conditioning is a form of learning in which a stimulus is first made meaningful for an organism through an initial step of learning, and then that stimulus is used as a basis for learning about some new stimulus (Jara, Vila, & Maldonado, 2006). An example of higher-order conditioning in BDD would be while someone is mirror-checking one body part, a second body part becomes more noticeable and then elicits the same negative response as the original area of concern. In fact, it is common for individuals with BDD to obsess about more than one body part, as research has found that people with BDD are typically dissatisfied with up to three body parts, with one usually causing the most distress (Khemlani-Patel, 2011; Neziroglu, Khemlani-Patel, & Yaryura-Tobias, 2006).

Higher-order conditioning can occur through relational framing. For example, initially a child is taught to see an object, then hear its name, and then say its name. Later, the child can hear the name and point to the object; this is an example of training object-word and word-object relations as well as derived relational responding. So, if a child is taught about his nose, ear, and mouth, then the child can identify those facial parts when asked about their locations even in the absence of reinforcement for doing so. This phenomenon is known as a derived arbitrarily applicable relation, or relational

frame, and is under the control of contextual cues through a process of differential reinforcement. After a history of reinforcement, a derived relation emerges without reinforcement (the child being able to identify his or her nose simply by being asked about its location), and generalization to novel situations without direct reinforcement of these situations happens by using what was learned in the past. Relating this phenomenon to BDD and higher-order conditioning, if a person has a disgust reaction to a fatty stomach and then equates a fatty stomach with fatty arms or another body part, then the other body parts can elicit the same disgust response; this is similar to higher-order conditioning where the conditioned stimulus (fatty stomach) is paired with another conditioned stimulus (fatty arms) and thus evokes the same response. Higher-order conditioning, assisted by language, seems to play an integral role in the formation and perpetuation of obsessions in BDD.

RFT also provides explanations for the experience of obsessions in individuals diagnosed with OCD. The abilities to relate stimuli based on arbitrary properties and derive relations that were never directly trained are, together, known as arbitrarily applicable derived relational responding (AADRR). AADRR consists of three main processes known as mutual entailment, combinatorial entailment, and transformation of stimulus functions, all of which can be seen in an individual with OCD (Smith, Bluett, Lee, & Twohig, 2017; Twohig, 2009). For example, a person with obsessions related to contamination fears becoming ill due to germs, and consequently avoids the use of public bathrooms. Through language, illness is related to germs, germs are related to public bathrooms, and consequently, the person avoids bathrooms as he or she would avoid illness. In this example, germs are in a causal relation or frame with illness (in other words, germs cause the illness) and a hierarchical relation or frame with public bathrooms (in other words, germs are in restrooms). Both of these relations may have been directly trained at some point in this person's life, but due to language, the individual now derives that public bathrooms cause illness, which is a relation that was never directly trained between two stimuli that share no formal properties. The process by which the germs, illness, and bathroom become related is combinatorial entailment, and if the relation were only between two stimuli — such as illness and germs — this would be called mutual entailment. Transformation of stimulus function, in this case,

would be the bathroom acquiring the same functions for the person as illness, and therefore leading to avoidance of the bathroom. AADRR is a useful concept within RFT that can account for individuals' experience of obsessions in OCD.

The notion that language can account for the experience of obsessions in OCD and BDD leads to important implications for the practice of clinical psychology. Acceptance and commitment therapy (ACT) promotes the therapeutic development of the self-as-context through awareness of a sense of perspective that RFT shows emerges through the deictic relational frames of I/you, here/there, and now/then. Self-as-context is a difficult concept to grasp at first, but is known as the perspective from where observing happens, the observing self, the silent self, self-as-perspective, pure awareness, or pure consciousness (Harris, 2019). This sense of self supports contact with the present moment that is open, undefended, and effective. Patients suffering from conditions such as OCD work to develop this sense of perspective where experiences are noticed from an accepting and open stance and not judged as either good or bad (Twohig, Plumb, Mukherjee, & Hayes, 2010). Non-evaluative description and observation can help grow a sense of perspective through which thoughts and other private events have less power. Also, self-as-context can help individuals suffering from OCD to internalize the idea that they are not controlled or defined by their private experiences or OCD symptoms. Therefore, these individuals may learn to contain those experiences and observe them non-threateningly.

## Methods

Thus far, we have seen how RFT can explain language's role in the production and perpetuation of obsessions. This is only one component of OCD, however, and does not address the compulsive or emotional aspect of the disorder. Simply put, obsessions contribute to distress/anxiety, and consequently, individuals suffering with OCD tend to engage in EA of situations that give rise to obsessions and their associated anxiety.

EA can maintain compulsive responding in OCD through negative reinforcement. Oftentimes, people with OCD tend to follow the verbal rule that obsessions cause behaviors as well as the corollary that obsessions are dangerous and must be

controlled (Hayes et al., 2004; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). This way of thinking contributes to problematic response styles such as EA. EA sustains itself through negative reinforcement, because it rewards the individual with a sense of temporary relief from the anxiety associated with obsessions (Bouton, Mineka, & Barlow, 2001). EA can occur by way of compulsions, which are behaviors performed in the service of controlling obsessions (Twohig, M., Plumb, J., Mukherjee, D., & Hayes, S., 2010). For example, an individual who experiences distressing obsessions with regard to the symmetry of his work environment may engage in compulsive EA by ordering his work environment. This behavior may temporarily relieve anxiety or distress associated with the symmetry-related obsessions, but this relief is only temporary, as obsessions and compulsions will occur again when the work environment changes. EA also maintains compulsive responding in individuals living with OCD by preventing opportunities for corrective emotional learning that would otherwise come about through direct experience with the distressing stimulus (e.g., Eysenck, 1987). It is evident that EA contributes to the maintenance of compulsive behavior in individuals with OCD.

EA also serves as a method of ER in individuals diagnosed with OCD. Anxiety in itself is an aversive emotional experience, but it transforms into problematic suffering through EA, because it oftentimes occurs in response to the thoughts that anxiety is bad, is dangerous, and requires a response (Eifert & Forsyth, 2009). Simple thoughts transform into difficult thoughts, anything associated with anxiety or the likelihood of experiencing anxiety becomes a problem, and thus, anxiety is likely to be responded to with anxiety, and fear with fear. EA follows as an effort to manage anxiety and the circumstances that give rise to it and works as a form of ER. Linehan (1993) defined suffering as pain plus non-acceptance, and EA is exactly the response that results from the non-acceptance of distress associated with anxiety; when we do not accept our feelings of anxiety and instead struggle to get rid of them, the unpleasantness of anxiety turns into the suffering associated with OCD. Suffering manifests when we do not accept and acknowledge the reality of our experiences and instead act to escape from or avoid them. We can see how EA works as a form of ER and creates a sense of suffering in individuals diagnosed with OCD.

Social learning also creates a context where EA can thrive (Hayes, Strosahl, & Wilson, 1999). In our social milieu, ER is viewed as evidence of maturity, health and wellness, emotional stability, success, happiness, and fulfillment. Therefore, we typically do not question how life might be if unpleasant emotions and thoughts were treated simply as events to be experienced as part of being human and not as experiences to be managed or controlled. We do not question that culture equates failures of ER with suffering and positive feelings with the ability to engage with life to the fullest. What results is the widespread attitude that feelings and thoughts must be managed and controlled through response styles such as EA. However, as explained above, attitudes like these come at a significant cost to the individual.

Addressing EA and its damaging effects is an important issue in clinical practice. Acceptance is considered an alternative response to EA, and it is defined as a behavior in which the individual experiences private events as they are while not taking steps to regulate or control them (Twohig et al., 2010); it involves an active embrace of one's inner experiences. Acceptance has been shown to increase an individual's willingness to make contact with obsessive-like thoughts (Marcks & Woods, 2005, 2007). Acceptance is also central to many mindfulness-based therapies (e.g., Segal, Teasdale, & Williams, 2004), and the more that individuals with OCD are in contact with their obsessions — as seen in ERP — the more effective the exposure therapy is likely to be (e.g., Abramowitz, Franklin, & Foa, 2002).

When utilizing ACT to treat OCD symptoms, clients are encouraged to accept the presence of obsessions and their associated anxiety without attempting to change these experiences through EA, which can appear as avoidance, compulsions, cognitive actions, or any other control strategy (Smith et al., 2017). ACT can promote acceptance through the use of metaphors. For example, one metaphor involves a therapist holding a piece of paper that serves as a symbol of an OCD-related obsession. The therapist then instructs the client to not let the paper touch him or her, and so the client ends up putting forth a large amount of effort to avoid contact with the paper or to push it away when contact is made. Next, the therapist puts the paper on the client's lap and asks him or her to let the paper lay there. Finally, the therapist explains that the obsession was touching the client in both situations, but the former situation required a much

greater effort on the client's behalf — the contrast between struggling and acceptance thus becomes clear (Twohig, 2009).

A clinically useful allegory for acceptance (and contact with difficult experiences) is the story of a moth. A man finds the cocoon of a moth and notices that the moth starts forcing its body through a little hole in the cocoon. Thinking that the moth is stuck and has stopped making progress, the man takes a pair of scissors and cuts off the remaining bit of the cocoon in order to help the moth get out. However, this stunts the moth's growth, and it is never able to fly; because the moth did not struggle as it was supposed to while getting out of the cocoon, fluid was not forced from its body into its wings. For the moth, pushing its way out of the cocoon is the main process that strengthens its wings for flight. The takeaway from this metaphor is, in certain situations, that one can only achieve freedom and flight by making conscious contact with difficult experiences.

Exposure and response prevention (ERP) is another effective treatment for OCD that is used to counteract the harmful effects of EA. With at least 50% improvement as the cutoff, approximately 75% to 80% of those suffering with OCD can be treated successfully with ERP (Foa, Steketee, Grayson, Turner, & Latimer, 1984). ERP may work because it undermines the use of EA by promoting approach behaviors in a structured way. Fortunately, EA can be addressed through ACT and ERP. ACT is a psychotherapy that addresses obsessions and compulsions metaphorically and experientially. Experientially, these symptoms can be addressed through ERP by consciously and incrementally engaging in approach behavior towards the feared stimulus that the individual has otherwise learned to compulsively avoid.

An example of ERP may involve a student struggling with perfectionism in his or her academic work. He or she may experience obsessions with regards to the importance of performing tasks optimally and thus may compulsively engage in behaviors like evaluating his or her options before making work-related decisions. This type of compulsion could be a form of EA aimed at controlling difficult experiential consequences, like anxiety, associated with carrying out behaviors that may result in suboptimal academic work. In ERP meant to address this type of academic perfectionism, a psychologist may ask a student struggling with such symptoms to write

a paragraph for an essay after spending a limited amount of time understanding content, brainstorming, and evaluating ways to express the ideas. This exposure should consequently result in the student's discomfort, because he or she is approaching the feared stimulus of engaging in possibly imperfect work. While approaching the feared stimulus of possibly producing suboptimal writing, the student will also work to not engage in compulsive responses aimed at perfection, such as the evaluation of his or her options. Ultimately and ideally, by doing graded exposures with a simultaneous focus on response-prevention, the student will learn that the consequences of making possibly imperfect decisions resulting in imperfect work are not nearly as aversive as his or her emotional experience made them seem.

## Conclusions

OCD is an anxiety disorder characterized by distressing obsessions and functionally interfering compulsions that contribute to suffering and decreased quality of life (APA, 2013). RFT acts as a framework that utilizes humans' language abilities to explain the experience and perpetuation of obsessions in individuals diagnosed with OCD. For example, through processes such as arbitrary association, AADRR, bi-directional stimulus relations, and relational framing, evaluative and higher-order conditioning can occur and contribute to the formation and perpetuation of BDD-related obsessions. Thus, obsessions in OCD and BDD are ultimately created through language and are explainable using RFT.

An effective clinical approach used for the improvement of behavioral responses to obsessions involves development of the self-as-context, as conceptualized by ACT, which can support contact with the present moment that is open, undefended, and effective. Acceptance of obsessions can ultimately give them less power over one's behaviors, and consequently, reduce suffering. Further research and theorizing regarding the implications of RFT in the practice of clinical psychology could prove tremendously helpful.

In response to the anxiety associated with obsessions, EA can act to maintain compulsive responding through negative reinforcement. Avoiding contact with an aversive experience through active avoidance, engaging in compulsions, rationalizing,

distracting, and thought-suppressing (forms of EA) negatively reinforces EA by temporarily relieving anxiety. However, in the long-term, EA reduces quality of life and prevents individuals from engaging in meaningful and valuable activities. EA also serves as a problematic method of ER and transforms the intrinsic discomfort of anxiety into the suffering that can functionally impair individuals diagnosed with disorders such as OCD.

Social learning contributes to today's societal context that allows EA to thrive due to cultural norms associating positive emotions with happiness and negative emotions with dysfunction. Acceptance and ERP are two clinical approaches that promote engagement with difficult experiences and reduce EA. Further clinical outcomes research about the use of metaphors and their relationship with behaviors reflective of acceptance would be useful. Studying the quality of what makes certain metaphors more effective than others in the promotion of such behaviors could also be fruitful. Finally, studying ways to constructively combine acceptance and ERP could contribute to positive outcomes for anxiety disorders such as OCD.

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