RFT for clinical use: The example of metaphor

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ABSTRACT

The current article argues that the conceptual analysis of metaphor as offered by relational frame theory (RFT) illustrates one way in which the theory may be integrated with, and have a constructive influence on, acceptance and commitment therapy (ACT). The article walks through the basic account of metaphor as the relating of relations and summarises the empirical evidence in support of this conceptualization. This understanding is then applied to a number of metaphors that are common to ACT in an attempt to illustrate how the RFT account of metaphor may be useful in aiding ACT practitioners to construct and deconstruct clinical metaphors.

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1. Introduction

Contextual Behavioral Science (CBS) is a broad church that encompasses three core areas of knowledge. First, functional contextualism provides clear and pragmatic assumptions about the scientific agenda such that behavior can be understood, predicted, and influenced with precision, scope, and depth (Gifford & Hayes, 1999). Second, Relational Frame Theory (RFT) identifies basic contextual elements (i.e., relating stimuli) that permit the prediction and influence of complex verbal behavior (Hayes, Barnes-Holmes, & Roche, 2001). Third, Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999) facilitates an empirically effective approach to psychological health and well-being, thus directly addressing the "challenge of the human condition" (Hayes, Barnes-Holmes, & Wilson, 2012). The challenge now faced by the CBS community is to draw these three strands into a broad, scientific, and coherent agenda. This is not an easy feat, and has rarely, if ever, been successfully achieved in the history of psychology. But as a starting point, Hayes et al. (2012) suggested the following:

"…a reticulated (that is, web-like) model of scientific and practical development, in which theoretical and technological progress occurs at multiple levels but in an interconnected way, with differing standards of progress appropriate to the particular level of the work" (p. 6).

2. Integrating RFT and ACT

The integration of RFT and ACT is central to the CBS reticulated model and the program of research it promotes and relies upon. Accordingly, RFT scholars are often asked by ACT clinicians for RFT-based definitions of fusion, for example. Because the concept of cognitive fusion is pivotal to ACT assumptions and practices, and RFT is after all, an account of language and cognition, it might seem straightforward to be able to provide this. However, an RFT translation of fusion is still a long way off because the necessary experimental procedures are not yet in place, and even when begun, research on broad, colloquial, and opaque concepts such as fusion will be slow and labor intensive.

The following paragraphs will summarize where the reticulated model is at, in our view, in terms of RFT research. The *first generation* of RFT research saw the development of the core concept of arbitrarily applicable relational responding (i.e., relational framing) and identification of the basic patterns of such responding or relational frames (i.e., coordination, distinction, opposition, and comparison), as well as of the defining features of frames in general, that is, mutual entailment, combinatorial entailment, and the transformation of stimulus functions (Hayes et al., 2001). The *second generation* of research marked the expansion

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into more complex relations and relational networks, such as analogy (e.g., Stewart, Barnes-Holmes, Roche, & Smeets, 2001); perspective-taking (e.g., McHugh, Barnes-Holmes, & Barnes-Holmes, 2004); and rule-governance (e.g., O'Hora, Barnes-Holmes, Roche, & Smeets, 2004). The *third generation* contained the beginnings of the integration of RFT with ACT through componential analyses of therapeutic components (e.g., Gutiérrez, Luciano, Rodríguez, & Fink, 2004), experimental analogs of de/fusion (e.g., Keogh, 2008), and applications of the perspective-taking protocol with clinical populations (e.g., Villatte, Monestès, McHugh, Freixa i Baqué, & Loas, 2008).

Although the volume of research produced to this point is substantial for such a young scientific field (we counted approx. 260 studies published from labs at Reno and Maynooth alone), a great deal has yet to be done. For example, the research described above does not yet allow for an adequate translation of ACT into the language of RFT (e.g., creating a functional definition of fusion), if that is possible. Hence, we are on the cusp of a *fourth generation* of RFT research, part of which aims specifically to try to define concepts that are central to ACT. In the remainder of the current paper, we take the example of the RFT account of analogy and metaphor and the second generation data this generated, and use it as an orienting exercise for the types of questions that will need to be addressed if CBS is to effectively integrate RFT and ACT. Of course, one might argue that the RFT account of analogy and metaphor we describe may relate to therapies other than ACT, and we would in fact agree with this view. However, it is important to emphasize that the theoretical arguments provided herein were generated specifically by the use of metaphor in ACT and by the broader conceptual field of CBS. At this stage in the paper, it is important to note that we are not arguing that RFT is preferable to any other approach to language. We are simply articulating what an RFT approach to metaphor would look like and how it may be applied in a clinical context.

3. An RFT account of analogy

Naturally, the RFT approach to analogy has the core concept of arbitrarily applicable relational responding (AARR) at its root. But what broadens AARR out and makes it specifically applicable to analogy is the more complex or higher order concept of *relating relations*. The first detailed analysis of this was provided by Barnes, Hegarty, and Smeets (1997). An example illustrating their basic account is provided in Fig. 1.

Consider the simple analogy in Fig. 1 that might be described as 'peach *is to* pear *as* cat *is to* dog' (and denoted as A:B::C:D). In essence, this analogy comprises an arbitrary coordination relation between two other arbitrary coordination relations. Let us explain.

- First, look at the vertical arrow on the left-hand side of Fig. 1 that shows a coordination relation between the words "peach"
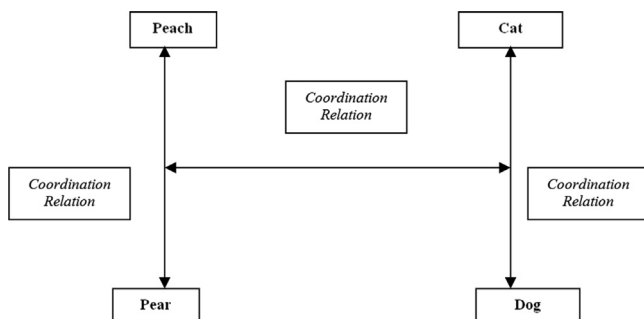

Fig. 1. An adaptation of the RFT account of analogy as outlined by Barnes et al. (1997).

and "pear". In this case, these two stimuli are primarily coordinated on the basis that both are members of the category of fruit. This coordination relation is controlled by the phrase "*is to*" (known in RFT as a Crel because it specifies the relation) that sits between "peach" and "pear". Of course, there are other features on which the coordination of these two words can be based, but we will return to this point later. We use the term relational network to refer here to the coordination relation, even though there is technically only one relation in what is presented. Indeed, there appears to be no precise definition in the literature of how many relations are required to distinguish a relation from a network. However, we have chosen to employ the term network because as you will see below, stimuli are always related to many other stimuli and in many different ways (as is the case with peach and pear).

- Second, look at the vertical arrow on the right-hand side of the figure that shows a coordination relation between the words "cat" and "dog". In this case, these two stimuli are primarily coordinated on the basis that both are members of the category of domestic animals (although once again coordination is possible on the basis of other features). This coordination relation is embodied in the phrase "*is to*" that sits between "cat" and "dog". Again, we will use the term relational network to refer to this relation because there are a number of ways in which these two words may be related.

- Third, look at the horizontal arrow in the center of Fig. 1 that refers to the *overarching* relationship between the coordination relations or networks on each side. In this case, the relation between the two coordination relations is also a coordination relation and is controlled by the word (Crel) "*as*" that sits between the two pairs of words in the described analogy. In other words, "peach" is to "pear" (coordination relation) *as* (coordination relation between the two coordination relations) "cat" is to "dog" (coordination relation). For analogies, it appears that the networks on either side are always related to one another by means of coordination and this relation is nearly always controlled by the Crel "as".

- In an analogy, the Crel (e.g., "is to") that governs the network on one side always governs the network on the other side. For Fig. 1, the Crels for peach/pear and cat/dog specify coordination relations. However, there is nothing in the definition of an analogy that says that these Crels must specify coordination relations (i.e., the relations on either side must be the same as each other, but they need not be coordination relations). For example, consider the analogy "John is to Mary as day is to night". In this case, the Crels on either side specify opposition relations.

- In the analogy in Fig. 1, there is no transfer of properties across the networks. For example, apples are not hairy and dogs are not juicy. Hence, the stimuli inside each network only share properties with other stimuli *inside that network*, but there are no shared properties (apart from the relation of sameness itself) *across the networks*. If these properties were shared across the networks, the analogy wouldn't work so well. Consider the example "apple is to peach as banana is to grapefruit". This is not a useful analogy because the shared properties are already apparent.

- As an aside, it is important to note that we have replaced the term "equivalence" used by the original authors with the more RFT consistent term "coordination". We take no issue with the concept of equivalence itself but it is not used in RFT language because the concept of coordination is used in its place. However, the disadvantage of this consistency with RFT in the current context is that we would then need to replace the term "equivalence-equivalence" used by the original authors to describe the relation between the two coordination relations

with "coordination–coordination". Admittedly, this now sounds even more unwieldy but in the interests of clarity we will use this term throughout.

- In the current example of analogy, the stimuli within the networks on either side *are only equivalent* (i.e., *substitutable*) *with regard to those shared properties* (e.g., four legged and hairy), but are not equivalent with regard to other properties (e. g., cats purr but dogs bark). As a result, it seems more accurate to refer to this as coordination and not equivalence. While some analogies may specify equivalence, it seems that a great many more specify coordination more broadly.

3.1. Empirical evidence to support the RFT account of analogy

In two preliminary experiments, Barnes et al. (1997) demonstrated that nine adults and two children aged 9 and 12 years old were capable of deriving coordination–coordination relations. Once again, it is important to note that in these original studies that used match-to-sample (MTS) training with nonsense syllables, the novel stimuli were related via equivalence because the training made them mutually substitutable. As a result, equivalence is the correct way to describe those relations. But, as noted previously, RFT refers to this more broadly as coordination relations, hence to avoid confusion for the reader, we use the term coordination throughout, even when discussing performances that are equivalent and which the original authors referred to as such.

Participants were first exposed to in a series of conditional discriminations (i.e., in the presence of A1, select B1, etc.). Successful completion of the training was followed by a test of the derived coordination relations B1–C1, C1–B1, etc. (i.e., an equivalence test). Participants who passed proceeded to a test involving samples and comparisons that were two-member compounds of stimuli from the previous training and were either from the same class (e.g., B1C1) or from two separate classes (e.g., B1C2). Participants were expected to relate one coordination relation to another (e.g., B1C1 to B3C3, rather than B3C4) and also to relate non-coordination relations to another (e.g., B1C2 to B3C4, rather than B3C3, because both of these compound stimuli contained elements that had *not* been coordinated previously). The first type of performance is the coordination of coordination relations, while the second is the coordination of non-coordination relations. Successful performances on these tasks provided preliminary evidence of the coordination of relational networks (i.e., coordination–coordination responding) as a type of higher order relational responding. A number of further RFT studies of analogy have extended the original research by Barnes et al. (1997) in various ways (e.g., Carpentier, Smeets, & Barnes-Holmes, 2002; Carpentier, Smeets, & Barnes-Holmes, 2003; Stewart et al., 2001; Stewart, Barnes-Holmes, Roche, & Smeets, 2002).

3.2. The abstraction of nonarbitrary properties

One way in which more recent research has extended the Barnes et al. (1997) model is by incorporating nonarbitrary relations. Stewart et al. (2001) suggested that analogies often involve the abstraction of perceptual, formal, or *nonarbitrary* features of the stimuli. Consider again the example in Fig. 1. For instance, the Crel that coordinates "peach" and "pear" may also abstract out the nonarbitrary properties of 'round' and 'juicy' (as well as abstracting out the shared property of the category of fruit), while the Crel that coordinates "cat" and "dog" may abstract out 'four-legged' and 'hairy' (as well as abstracting out the shared property of the category of domestic animals). This would work equally well in Fig. 1's analogy because the overarching Crel would specify that 'just

as peaches share some nonarbitrary properties with pears; cats also share some nonarbitrary properties with dogs'.

In line with this suggestion, Stewart et al. (2001) demonstrated the abstraction of nonarbitrary properties through coordination–coordination responding with nine adults. Participants were first exposed to MTS training in which they had to select nonsense syllables in the presence of particular colored shapes (i.e., Blue Cross-A1; Red Cross-A2, Blue Circle-B1, Red Circle, B2, Blue Square-C1, Red Square-C2, Blue Triangle-D1, and Red Triangle-D2). This was followed by a test of derived coordination relations among the nonsense syllables (printed in black), each of which had only been directly paired with a colored shape, but never with each other. Consider a test trial in which D1 (which had been matched with Blue Triangle) was the sample and A1 (matched with Blue Cross) and A2 (matched with Red Cross) were comparisons. A correct response involved selecting A1 because it shared the common property of the color blue, while A2 (which had been paired with a red shape) did not. In other words, the test required participants to always abstract on the basis of color and never shape. Although this is a very sophisticated example of the abstraction of nonarbitrary properties through derived coordination relations, this alone does not show this type of abstraction through *coordination–coordination* relations. This was addressed in the next part of the experiment.

Participants who passed the test above proceeded to a compound stimulus test that comprised samples and comparisons that were two-stimulus compounds from the previous training. Consider a trial in which the compound stimulus A1B1 (both previously matched with blue) was the sample and C1D1 (both previously matched with blue) and C1D2 (one matched with blue, the other with red) were the comparisons. A correct response in this case involved selecting C1D1 in the presence of A1B1 because both of these compound stimuli contained two elements that had been matched to the same color (i.e., blue). In other words, A1 is to B1 (blueness) as C1 is to D1 (blueness). Now, consider an alternative trial that presented A1B2 as the sample, and C1D1 and C1D2 again as the comparisons. A correct response now involved selecting C1D2 in the presence of A1B2 because both of these compound stimuli contained elements that had been matched with different colors. In other words, A1 is to B2 as C1 is to D2 (different colors). Although this study demonstrated the abstraction of nonarbitrary properties through coordination–coordination relations, it would clearly only serve as a very simplistic example of analogy, not least because all of the stimuli shared the same nonarbitrary property (i.e., color).

3.3. Analogical reasoning and verbal ability

A number of additional studies provided further evidence for this interpretation of analogy and demonstrated that this type of relational behavior requires some level of verbal sophistication (Carpentier et al., 2002, 2003; Carpentier, Smeets, Barnes-Holmes, & Stewart, 2004; Stewart et al., 2002; Stewart, Barnes-Holmes, & Roche, 2004). Carpentier et al. (2002) replicated Barnes et al.'s (1997) study to establish coordination–coordination relations with nonsense syllables in adults and two groups of children (9-year-olds and 5-year-olds). Their results demonstrated a developmental trend in which most of the adults and the 9-year-olds demonstrated the target coordination–coordination relations, while none of the 5-year-olds did. Using undergraduates as participants, Ruiz and Luciano (2011) found correlations between coordination–coordination performance and scores on a standardized analogical reasoning test (i.e., the Verbal Reasoning Scale of the Second Level of the Differential Aptitude Test). In addition, a number of other studies have expanded on the concept of relating derived relations in other useful ways. For example, Stewart et al. (2002)

demonstrated the transformation of functions of a block sorting task via coordination–coordination relations. Furthermore, Lipkens and Hayes (2009) provided evidence of variation in relating derived relations by providing an empirical demonstration not just of relations between coordination relations, but between comparison and opposition relations also.

4. Distinguishing between analogies and metaphors

The terms 'analogy' and 'metaphor' are often used interchangeably, and it is difficult to find distinct or concise definitions that separate one term from the other in the language of RFT. Critically, the current paper *does not* adhere to the traditional English language distinctions between metaphor and analogy (easily distinguished from each other by the use of "like" or "as") because this is not a working distinction for RFT. To clarify, in terms of RFT, we would define *analogy* as a coordination between two sets of stimuli or events not normally coordinated (e.g., fruit and domestic animals). In contrast, we would define a *metaphor* as one stimulus or event that is representative of another or embodies it in one or more ways. This latter definition suggests that the relationship among the stimuli in a metaphor is more complex than the relationship among the stimuli in an analogy. This view was proposed by Stewart and Barnes-Holmes (2001), who also argued that the complexity arises, in part, from the fact that metaphors involve *unidirectional* and *hierarchical* relations between the events involved, whereas analogies involve *bi-directional* relations. For example, in the analogy *peach is to pear as cat is to dog*, peach could be replaced with pear (and vice versa), and dog could be replaced with cat (and vice versa) and the analogy would have the same effect.

In contrast, this is not the case for a metaphor, where the relation within each network is unidirectional and hierarchical. The example used by Stewart and Barnes-Holmes (2001) to illustrate these relations was "cats are like dictators". In this metaphor, cats are coordinated with, for example, slyness and dictators are coordinated with, for example, dominance. Hence, the coordination–coordination relation specified by the Crel 'like' suggests that cats are both sly and arrogant. This metaphor does not have the same effect when the direction is reversed to "dictators are like cats". Although this metaphor may also work in terms of suggesting that dictators are both dominant and sly, the hierarchical nature of the first metaphor (i.e., cats are much lower than dictators) is lost when the direction is changed and the implication now is that cats are bigger than dictators, which is not as meaningful. In short, Stewart and Barnes-Holmes suggested that both analogies and metaphor share the following: (1) two separate coordination relations; and (2) the derivation of a coordination relation between these relations. In addition, metaphors, but not analogies involve: (1) the discrimination of a formal relation via the coordination–coordination relation, and (2) a transformation of functions based on this formal relation.

5. The role of metaphor in ACT

Metaphors have a long-established history as therapeutic tools (for a review see McCurry and Hayes (1992)). Their common purpose in clinical settings appears to be two-fold. First, they are designed to validate the client's experience. Second, they aim to enhance the client's awareness of her situation. For example, in Cognitive Behavioral Therapy (CBT) metaphors are used to link different areas of thought and thus challenge unhelpful styles of thinking (Blenkiron, 2005; Stott, Mansell, Salkovskis, Lavender, & Cartwright-Hatton, 2010). Third, they attempt to indicate solutions

to a client's difficulties and thus facilitate behavior change (Barlow, Pollio, & Fine, 1977; Bryant, Katz, Becvar, & Becvar, 1988; Di Giuseppe & Muran, 1992).

ACT's use of metaphors has broadly similar aims, but with one additional function also that coheres with its functional contextual roots. That is, metaphors promote the *deliteralization* of psychological content in a way that allows the client to experientially step out of her existing language system, and thus be less susceptible to the effects of 'cognitive fusion', whereby certain types of unhelpful transformations of functions occur (Hayes et al., 1999). These changes are believed to facilitate psychological and behavioral flexibility more generally, and thus ideally increase the probability of novel behaviors such as those suggested by the metaphor (Stewart, Barnes-Holmes, & Weil, 2009). It is important to emphasize at this point that technical definitions of concepts such as deliteralization and fusion have yet to be fully unpacked, and doing so will likely enhance our understanding of how metaphors work. Furthermore, these developments will also improve our understanding of the relationship between literality and psychological suffering. Specifically, without empirical investigation of these concepts, it is difficult to determine, for example, whether an important feature of psychological suffering is excessive literality and/or whether this might impact on one's potential to understand or use certain types of metaphorical language. These are empirical issues, but may have profound implications for therapy and behavior change.

6. Using RFT to enhance metaphor in ACT

From the outset, we acknowledge that the therapeutic pieces outlined subsequently appear, in some ways, to be out of context. For example, we do not focus on the client–therapist relationship, although we believe that this is central to all therapeutic change. Similarly, the client validation that invariably occurs within a good client–therapist relationship clearly impacts on the potential utility of individual techniques, including metaphor.

Perhaps the simplest place to start in an attempt to 'translate' an ACT metaphor into RFT speak is to select one of ACT's stock metaphors, the Quicksand–Anxiety Metaphor, and take it from there. We have selected the quicksand metaphor in which the basic message to the client is that struggling with her anxiety is like struggling in quicksand. We have provided a very basic illustration of this metaphor to work from in Fig. 2, which we will extend in a subsequent figure by adding RFT detail.

Consistent with the previous RFT definition of a metaphor, the example above contains all of the relevant elements: (1) two separate coordination relations (struggling with anxiety-panic and struggling in quicksand-drowning); (2) the derivation of a
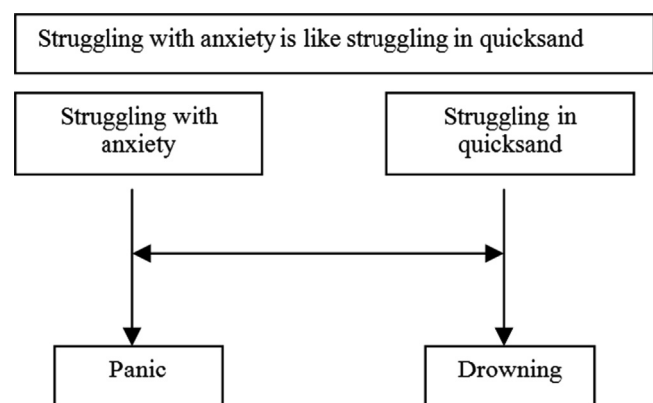

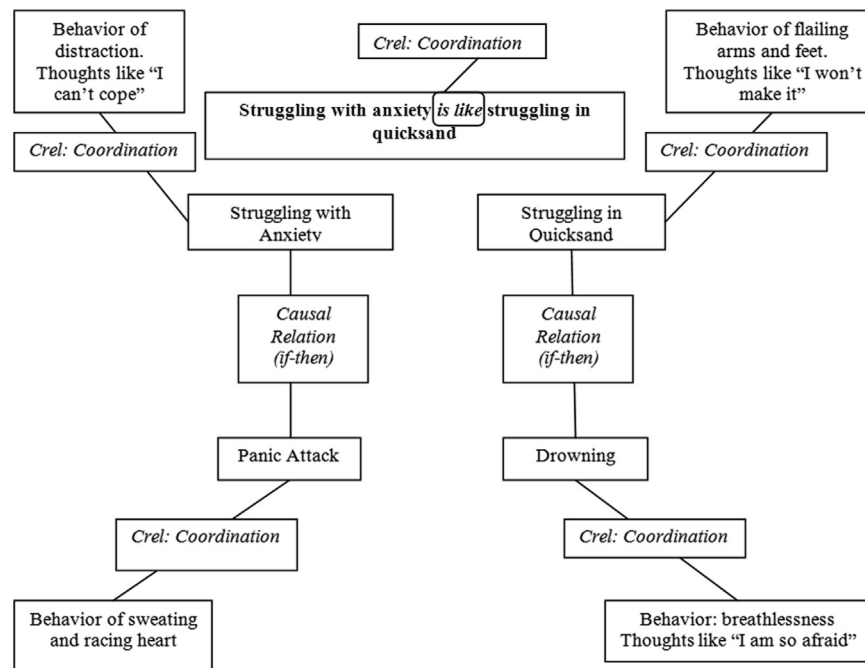**Fig. 2.** An illustration of the Quicksand–Anxiety Metaphor.

Fig. 3. An RFT analysis of the Quicksand–Anxiety Metaphor.

coordination relation between these relations (struggling with anxiety is like struggling in quicksand); (3) the discrimination of a formal relation via the coordination–coordination relation (struggling), and (4) a transformation of functions based on this formal relation (struggling produces bad outcomes). In short, the focus on struggling *is transferred* from the domain of quicksand where it is physically applicable, to that of anxiety where it is metaphorically applicable in a number of ways. In RFT terms, this is defined as a transfer of stimulus functions from quicksand to anxiety. Indeed, struggling in quicksand is coordinated with struggling with anxiety, and the former has a range of implications for understanding and dealing with the latter. For example, through the metaphor a client may derive that just as exposure, rather than struggling, with quicksand will avoid drowning, so will acceptance of anxiety reduce panic attacks. We will come back to this below.

Fig. 2 presents the metaphor as two relational networks, one on the left, the other on the right. We refer to the network on the left as the *target* and this usually represents an aspect of the client's situation that is currently being addressed in therapy. In most examples of the use of metaphor in therapy, we assume that the metaphor highlights a specific aspect of a client's situation (e.g., experience with anxiety), although it is also possible that the metaphor could have a broader scope and thus encapsulate a number of aspects, or perhaps even represent a client's life more generally.

We refer to the network on the right as the *vehicle* (and of course the word vehicle illustrates that this will be used to drive change). The vehicle network represents an alternative perspective on the client's situation. However, it is important to note that the alternative perspective is not necessarily the view held by the therapist, it simply denotes indicating to a client that a situation may be viewed from a number of perspectives, not just her own. The presentation or juxtaposing of the analogous situation specified in the vehicle (e.g., struggling in quicksand) relative to the target is designed to facilitate or enhance discriminations by the client of certain features that are common to both situations (e.g., struggling makes it worse). If this is effective (i.e., if the metaphor 'works'), the clinician should expect to see change in the target

behavior (in this case, struggling with his anxiety) or at least greater behavioral flexibility in this regard. In Fig. 3, we have taken the same metaphor and 'translated' it into RFT language. In the bullet points below, we work through the metaphor and the diagram step by step.

- In this metaphor, the core relation in each network (on the left and the right) is causal. We might also call this an 'if-then' relation. Hence, the metaphor coordinates a causal relation on the left with a causal relation on the right. In other words, each network specifies that the response of struggling in the context of a difficult situation actually causes the situation to become more difficult (e.g., struggling with anxiety causes panic, just as struggling in quicksand causes drowning).
- Consider the vehicle network on the right. This relies on the well-known fact that struggling in quicksand causes drowning. Hence, a causal relation between struggling and drowning is at the core of that network, and the futility of struggling in this context is highly salient. In other words, quicksand is the prototypical context in which the salience of struggling is highlighted to the client, and coordinating this with anxiety serves to highlight the futility of struggling there also, of which the client may not have been fully aware of previously. The salience of the futility of struggling is, therefore, abstracted via the Crel for coordination between the two contexts.
- It is through the overarching coordination relation between these two events that the transfer of functions occurs for the client. That is, the functions of struggling in quicksand are transferred to struggling with anxiety.
- Through the relation that the metaphor specifies between the two networks, the client will now derive that there is also a causal relation dominating each of the networks on either side. In this case, the expected derivation will be along the lines of struggling with anxiety *causes* panic (just as struggling in quicksand causes drowning). Indeed, the client may not have previously discriminated a causal relation between his struggle with anxiety and his panic attacks. In contrast, he may have believed that he *needed* to struggle to control his anxiety in order to *avoid* panic, but may now recognize that struggling is

causing him to panic. Through the metaphor, he may now come to see that struggling itself is causing him to panic.

- Consider again the target network on the left. As well as being causally related to drowning, struggling (with anxiety) contains a range of coordinated behaviors (e.g., ruminating and working it out), thoughts (e.g., "I can't cope"), and feelings (e.g., frustration). Even the coordination of these events may be somewhat novel for the client, who may not have previously recognized that these are all part of the *same* struggle.

- Similarly, consider the vehicle network on the right. Struggling (in quicksand) contains a range of coordinated behaviors (e.g., the physical actions of flailing arms and feet), thoughts (e.g., "I won't make it"), and feelings (e.g., panic). Drowning is similarly coordinated with a range of behaviors (e.g., choking), thoughts (e.g., "I am going to die"), and feelings (e.g., fear).

- One of the ways in which this metaphor works well is that the overarching coordination relation between the networks highlights the coordination between having a panic attack and drowning (e.g., both can feel life-threatening), which likely serves to suggest that the therapist really understands and validates the client's intense emotional experience during a panic attack (i.e., he agrees that it probably feels as bad as drowning). The greater the level of similarity, and especially emotional similarity, between some aspect of the vehicle and the actual experience of the target, the greater the level of validation of the client's experience. This is a key way in which we might say a good metaphor 'works' and partly because it has this strong empathic quality.

- The metaphor also facilitates empathy through the derivation of the inevitability of struggling. Indeed, it is almost instinctual to struggle in quicksand when your life is under such grave and immediate threat. A shared recognition of this inevitability in terms of struggle also serves to validate the client almost by suggesting that what he has done is a completely natural and logical reaction.

In the following sections, we first briefly summarize the RFT account of perspective-taking relations in order to then articulate the role of these relations in therapeutic metaphors.

7. Perspective-taking (deictic relations)

For RFT, perspective-taking comprises three types of deictic relations: I–YOU; HERE–THERE; and NOW–THEN.[1] These appear to interact, and comprise one's perspective such that I always see my world from HERE and NOW, and (from my perspective) YOU always see your world from THERE and THEN (but as you see it, it is HERE and NOW). As children, we learn from an early age to distinguish I from YOU using physical attributes and other relational frames. For example, the statement "you are taller than me" involves a comparison relation that distinguishes I from YOU on the basis of height. Furthermore, the relational networks within which I and YOU participate may be even more complex and involve evaluations. For example, if tall equals good (and by opposition small equals bad) and you are tall and I am small, then 'you must be better than me'. In verbally sophisticated adults, it

seems that these relations move increasingly away from physical attributes and become ever more arbitrary. And this arbitrariness may be potentially very problematic because it can remove you further away from the 'real' world and further into a verbal world. For RFT, the deictic or perspective-taking frames are pivotal to an individual's sense of self.

A well-established flexible sense of self has always been pivotal in ACT work (Levin, Hildebrandt, Lillis, & Hayes, 2012). Previously, ACT writings contained the three selves (self as content, self as process, and self as context), a nontechnical way of capturing the very broad colloquial concept of self. Foody, Barnes-Holmes, and Barnes-Holmes (2012) recently proposed an RFT interpretation of the three selves. According to these authors, self as content involves the coordination between your 'self' and your content because both are located HERE and NOW. Operating in self as content potentially permits over-attachment or fusion between the self and the content, and this may well be problematic.

For Foody et al. (2012), self as process also involves both the self and the content being located HERE and NOW. However, this is potentially a very different experience from self as content because the content that shows up HERE and NOW is viewed as ongoing and experiential. As a result, it would seem that operating in self as process would facilitate less attachment or fusion by virtue of its dynamic nature.

For Foody et al. (2012), self as context is different still and although self remains HERE and NOW, content, in this context, is located THERE–THEN. This would appear to be the safest place from which to operate with regard to our content. Clearly, our developmental histories strongly support the establishment of complex perspective-taking skills that are essential to complex language and cognition. However, and as is often suggested in ACT, these histories equally support our paths towards psychological suffering in the sense that the same verbal processes operate in both domains. As we become more verbally sophisticated, some content will inevitably be coordinated with the self and evaluations of this content will in some contexts be negative. For ACT, the amount of rigid or attached content should be minimized, and one of ACT's goals may be to transform the coordination relations between the self and content (both HERE and NOW) to distinction or hierarchy where the self is HERE–NOW, but the content is THERE–THEN. Indeed, the switching of one's content from HERE–NOW (i.e., in self as content and self as process) to THERE–THEN (i.e., in self as context) may well be involved in what ACT describes as psychological flexibility.

7.1. The role of deictics in metaphor

Almost by definition, metaphors (and perhaps analogies to a lesser extent) provide a shift in the client's relationship between the client and her content by offering the therapist's metaphorical view of this relationship as an alternative to the client's literal view of some aspect of this relationship. Let's think about this another way. The therapist says something along the lines of "I see where you are coming from on this matter, might you also consider looking at it from a different view?" In the Quicksand–Anxiety Metaphor, the therapist offers a different view on the client's struggle with anxiety which begins with the causal relation in which struggle leads to panic, which the client may have not recognized before. Of course, there are many other ways in which an individual can experience a shift in the way she relates to her psychological content, such as through direct experience, instructions, rules, etc., but when used in therapy metaphors appear to offer a potentially easy and effective means of achieving this and other beneficial outcomes.

For RFT, a shift in the way a client relates to her content that happens in a clinical metaphor is like the therapist saying "If I were

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[1] In the sections that follow, it is difficult for us to avoid using the colloquial concept of 'perspective-taking' if we are to try to illustrate our points fully. What makes it particularly difficult here is that we also rely heavily in RFT's technical and related concept of the perspective-taking/deictic relations. For RFT, the deictic frames provide a functional account of the more colloquial terms and there is good empirical evidence to support this. But, it remains possible that there is more to this broad concept than the way we understand it in RFT terms at present. Hence, we will try to be as clear as we can regarding the use of these two terms in the sections that follow.

you there (client's perspective) I would see it that way (client's perspective), but given that I am me (HERE) and not you (THERE), might you consider seeing it from here (therapist's perspective) rather than there (client's perspective)". This is not unlike what are called I–YOU reversal trials (if I was you and you were me) that are a strong feature of RFT-based protocols for assessing deictic relations. What is perhaps more important, however, is that this I–YOU reversal, in a therapeutic metaphor, also facilitates a HERE–THERE reversal through which the client can adopt the therapist's alternative perspective, and in doing so, her own psychological content can switch from HERE–NOW to THERE–THEN. Again, these HERE–THERE reversals are a strong feature of existing research on the deictic relations (e.g., McHugh et al., 2004).

Indeed for RFT, it is essential that the way the client relates to her content occurs in a metaphor if the coordination of I–HERE–NOW is to be changed to I–THERE–THEN and if behavior change is to follow. That is, if the client is coordinated with her thoughts and feelings such that they comprise the perspective that she holds here and now, and who she is, is someone who acts in accordance with this view; then behavior change will likely only occur after a deictic shift from I–HERE–NOW to I–THERE–THEN. In the Quicksand–Anxiety Metaphor, for example, the deictic shift works by breaking the coordination of the client's sense of self (I) and her response of struggling (i.e., when I feel anxious, I must struggle, that is who I am and what I do). In its place, the I may now be in a hierarchical relation with struggle (i.e., THERE–THEN), such that struggle is something that I do, or even one of a number of things that I do. In and of itself, the latter view suggests greater behavioral flexibility than the former. In a nutshell, therapeutic metaphors are, at least in part, designed to increase the probability of facilitating changes in deictic framing on the part of the client, particularly in terms of the client's relationship with her own content and behavior.

8. Using RFT to construct clinical metaphors

From the perspectives of both RFT and ACT, metaphors should be used to identify and change functional processes. For example,

clinical metaphors are used in part to create changes in the deictic relations and particularly the coordination between the I and the client's behavior. If metaphors do not achieve this, they are not maximally effective and may need to be modified or replaced. Put another way, the verbal behavior of the therapist, such as in providing a metaphor, changes the context in a way that will alter the client's target behavior in a particular direction. Below we walk through some of the steps that this functional analysis might involve and provide an illustrative clinical example.

To construct the vehicle relational network, the therapist should first determine functionally what the client's specific emotional/behavioral issue is (note again that it is unlikely that a therapist will want to construct a single metaphor to draw attention to *all* problematic aspects of a client's life). We would not advise using a single metaphor to do this – a single metaphor could not possibly target *all* problematic relational networks. Furthermore, presenting a metaphor too early or presenting one that is not fully formed may also limit their impact. We will return to the issue of why a metaphor might not work below.

As noted above, the therapist's functional analysis must focus on a specific target behavior or set of behaviors and for RFT it should also involve the identification of the target verbal relations that support this behavior (e.g., I coordinated with struggling in the context of anxiety). As a result, clinical metaphors are for the most part focused on specific behaviors and the relational networks within which these behaviors are placed. Once the therapist has identified the client's existing relational network (i.e., the target), she then constructs the relational network that will form the metaphor (i.e., the vehicle). The closer the vehicle matches the target relationally (including the transformations of function, etc.), the better the metaphor will be. As noted above, a better match also facilitates a strong sense of empathy for the client, in which she fully experiences that the therapist, to some extent, can see where she is at.

For the purposes of illustrating the functional analysis on which a clinical metaphor may be based, we have provided a hypothetical example below of a 40-year old woman with a history of trauma. Primarily, the client reports that she doesn't fit into the world around her, and she experiences loneliness and impaired
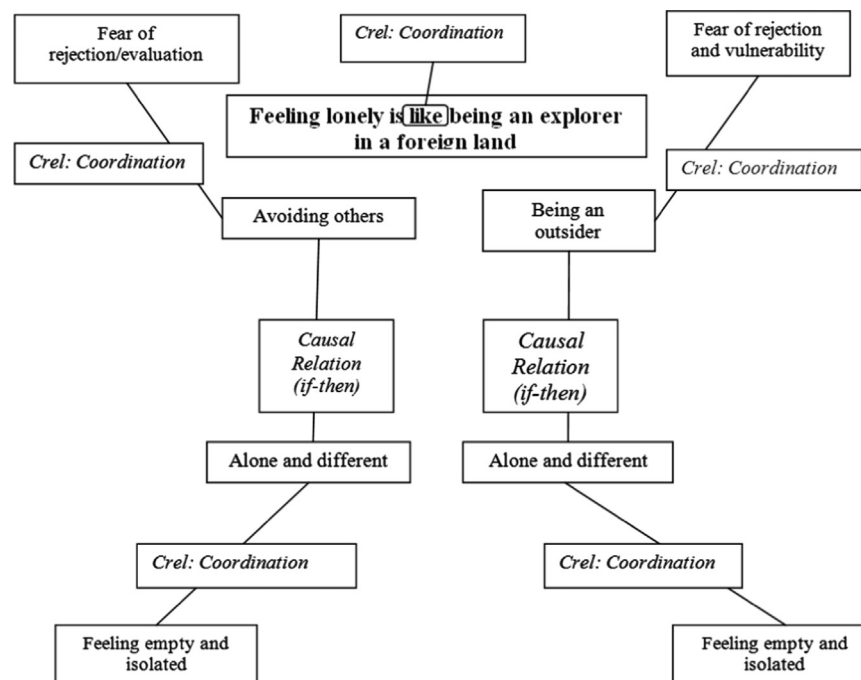

Fig. 4. An example of an RFT-based clinical metaphor.

social relationships as a result. While the critical details of these and other substantive problems would need to be obtained before any functional manipulation, let's assume we have these details, and so we will start with her loneliness. A very simple metaphor that captures this client's loneliness is as follows: "your loneliness is like being an explorer in a foreign land". We have illustrated in Fig. 4 the relational networks that comprise the target network of loneliness and the vehicle network that offers the coordinated scenario of being an explorer in a foreign land.

- Consider the vehicle network on the right. This relies on the well-known fact that if you are in a foreign country, you will not have your family or friends near and you will likely miss them. You will also be different in a number of ways from the people around you (e.g., separated by a different language). Taking these facts together, you will feel lonely and isolated. Hence, a causal relation between being in a foreign country and being alone is at the core of that network.
- Consider the target network on the left. This refers to the client's behavior of avoiding others, which keeps her on her own for long periods of time, and causes her to feel isolated and different from those around. Hence, a causal relation between avoiding others and feeling lonely is at the core of that network.
- It is worth recognizing that even at this level of simplicity something novel has probably happened, because it is unlikely that the client previously saw a causal relation between her avoidance of others and her loneliness. She will likely have believed that the only way to appease her feelings of loneliness and her worry about others was to minimize contact with others as much as possible. But the metaphor suggests that the very opposite might be the case. For example, if you mix with others in a foreign land and learn the language, you will be less lonely. The same applies to social contact in general.
- As well as coordinating the networks such that the sense of loneliness and difference is shared from one context to the next, the derivation that the only solution to being in a foreign land (i.e., mixing with others and learning the language) transfers to the client's own social context. In other words, the functions of mixing as the only solution transfer from being in a foreign land to being in a much smaller social context. In this particular metaphor, the solution of making contact with others is not explicit, but it is highly probable that this will be derived when one coordinates a broad context of a foreign land with a much narrower context.
- The solution in both situations is to be willing to feel emotions of fear and anxiety, and to continue to try to meet people. By continuing to 'explore' despite these experiences, the client will achieve what is important to her (i.e., meeting people and experiencing less loneliness as a result). In both contexts, events and people seem strange, unsettling and frightening, but by continuing to 'explore' despite these fears wonderful new experiences and connections can be discovered.

9. Can RFT enhance the use of metaphors in ACT?

There is an on-going debate within the CBS community about whether ACT therapists 'need' to learn RFT to better support their clinical work. For example, one might argue that ACT is a functional therapy based on core components (e.g., the hexaflex) and all therapists using this model are going to follow the model (i.e., do some defusion, acceptance, values, etc.) with practically all clients. Addressing this debate is an empirical issue. For example, you would need to compare outcomes and practices of two groups

with different training histories in RFT. However, the potential relationship between RFT and ACT is probably more subtle and complex than that. Specifically, if ACT is fully functional, the pace and timing of its clinical pieces should critically match what the client brings into the room and when. We suggest that the account of metaphor illustrates one way in which RFT can help ACT therapists to do exactly that.

Consider the following scenario in which a therapist new to ACT comes to rely on the use of stock metaphors to represent the core components, such as using the Chessboard Metaphor to establish self as context. From an RFT perspective, this is potentially problematic and again we have highlighted these problems below in a series of bullet points.

- If the therapist does not know a client well, it may be difficult to construct a metaphor that accurately reflects the client's situation and one that fails to do this will have limited value. Imagine a client who reports anxiety, but does not see his reactions to it as any form of struggle. Alternatively, he has given up all hope of overcoming it and doesn't bother to struggle anymore; instead he has just let it take over his life completely. Presenting the Quicksand–Anxiety Metaphor in this context as an attempt at defusion may simply fail to capture the client's dominant strategy for dealing with this pain.
- The client may indeed be deriving the coordination relation that the therapist intended in using the Quicksand–Anxiety Metaphor in relation to his anxiety, but this may not be based on the same two causal relations you had hoped for. Alternatively, he may derive something along the following lines: "*if I stop struggling with anxiety and just give up, I can avoid panic attacks, just as giving up the struggle in quicksand will avoid death*". However, this is what the client is already doing with his anxiety. Thus, in this context, the therapist has actually reinforced giving up (the client's current strategy), rather than presenting him with an alternative view of his situation in which his reaction to his anxiety is detrimental.
- To put this more broadly, if the therapist does not create a metaphor that has very precise control over the client's derivations (and based precisely on what is known about the client), a great array of alternative derivations are possible and the potential effect of the metaphor may be compromised or may even be detrimental.
- As we noted previously, the lack of effect for the metaphor may also suggest to the client that this therapist does not *really* understand him, has not validated his suffering, and may not have been listening to his heartfelt story. Therefore, the failure of metaphors may be detrimental to the therapeutic relationship which is so highly valued in ACT.

10. Future research

There is a great deal of research that is needed to make tracks into the *fourth generation* of RFT work, and thus to articulate more fully the functional overlap between it and ACT, where this is possible. We have created a short list below of topics that emanate directly from the issues discussed within the current paper. This is not a definitive list even of the issues encountered here, but is simply offered as a guide to those who may be struggling to see exactly what implications RFT has for ACT.

- Although there is a considerable body of basic research on deictic relations, we have only begun to explore experimentally what shifts in perspective-taking (e.g., I to YOU or I–HERE–NOW

to I–THERE–THEN) are like. We will need to look carefully at this verbal relational process if we are to determine whether this is central to ACT (and we think it is) and then to try to explore what it is in ACT that makes that happen (e.g., in self as context exercises).

- We are not aware of any research as yet that has explored the role of deictic relations in metaphor. This basic research would be needed before we could even begin to look at how these shifts occur in ACT metaphors or in clinical practice. Indeed, there are no obvious studies that have examined levels or types of metaphorical flexibilities in individuals, for example, who do or don't show fusion. Similarly, one could explore the relationship between metaphorical flexibility and behavioral flexibility.

- As is always the case, these advances will rely heavily on the development of new experimental methodologies. For example, the Implicit Relational Assessment Procedure (IRAP), as a measure of relational flexibility, has been making strong strides in advancing knowledge of implicit cognitions regarding human suffering, specifically in suicide (Hussey & Barnes-Holmes, 2012), and Obsessive Compulsive Disorder (Nicholson & Barnes-Holmes, 2012). This has also forced us to broaden our understanding of RFT in terms of levels of derivation and complexity involved in relational responding (see Hughes, Barnes-Holmes, & Vahey, 2012).

11. Concluding comments

Psychological content and its hold on behavior is an ultimately verbal and uniquely human experience. So too, are our metaphorical and analogical reasoning skills. But there appears to be little empirical study of how these two matters overlap. For the community of CBS, it will become increasingly important to establish functional links between our approach to psychological suffering and our approach to its alleviation. It is thus imperative that fourth generation explorations in RFT begin to merge with ACT research and practice if the community is to build a sound empirical bridge between the two agendas. This will ultimately allow us to strengthen elements of the therapeutic package that are accountable for behavior change. Thus more research programs investigating metaphors and metaphorical reasoning skills would be well placed in the future of CBS. In general, we are not saying that you *need* RFT to do effective ACT-consistent clinical work. What we are suggesting is that there are at least some aspects of RFT, such as its account of metaphor, which can help you to think functionally about the way you approach and help your clients within ACT.

References

Barlow, J. M., Pollio, H. R., & Fine, H. J. (1977). Insight and figurative language in psychotherapy. *Psychotherapy Theory Research and Practice, 14*, 212–222.

Barnes, D., Hegarty, N., & Smeets, P. (1997). Relating equivalence relations to equivalence relations: A relational framing model of complex human functioning. *The Analysis of Verbal Behavior, 14*, 1–27.

Blenkiron, P. (2005). Stories and analogies in cognitive behaviour therapy: A clinical review. *Behavioural and Cognitive Psychotherapy, 33*, 45–59.

Bryant, L., Katz, B., Becvar, R. J., & Becvar, D. S. (1988). The use of therapeutic metaphor among members of the AAMFT. *The American Journal of Family Therapy, 16*, 112–120.

Carpentier, F., Smeets, P. M., & Barnes-Holmes, D. (2002). Matching functionally-same relations: Implications for equivalence-equivalence as a model for analogical reasoning. *The Psychological Record, 52*, 351–370.

Carpentier, F., Smeets, P. M., & Barnes-Holmes, D. (2003). Equivalence-equivalence as a model of analogy: Further analyses. *The Psychological Record, 53*, 349–372.

Carpentier, F., Smeets, P. M., Barnes-Holmes, D., & Stewart, I. (2004). Matching derived functionally-same relations: Equivalence-equivalence and classical analogies. *The Psychological Record, 54*, 255–273.

Di Giuseppe, R. A., & Muran, J. C. (1992). The use of metaphor in rational-emotive psychotherapy. *Psychotherapy in Private Practice, 10*, 151–165.

Foody, M., Barnes-Holmes, Y., & Barnes-Holmes, D. (2012). The role of self in Acceptance and Commitment Therapy (ACT). In: L. McHugh, & I. Stewart (Eds.), *The self and perspective taking: Research and applications*. Oakland, CA: New Harbinger.

Gifford, E. V., & Hayes, S. C. (1999). Functional contextualism: A pragmatic philosophy for behavioural science. In: W. O'Donohue, & R. Kitchener (Eds.), *Handbook of behaviourism* (pp. 285–327). San Diego: Academic Press.

Gutiérrez, O., Luciano, C., Rodríguez, M., & Fink, B. C. (2004). Comparison between an acceptance-based and cognitive-based protocol for coping with pain. *Behavior Therapy, 35*, 767–783.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational Frame Theory: A post-Skinnerian account of human language and cognition*. New York: Plenum Press.

Hayes, S. C., Barnes-Holmes, D., & Wilson, K. G. (2012). Contextual behavioural science: Creating a science more adequate to the challenge of the human condition. *Journal of Contextual Behavioral Science, 1*, 1–16.

Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and Commitment Therapy: An experiential approach to behavior change*. New York: Guilford Press.

Hughes, S., Barnes-Holmes, D., & Vahey, N. (2012). Holding on to our functional roots when exploring new intellectual islands: A voyage through implicit cognition. *Journal of Contextual Behavioral Science, 1*, 17–38.

Hussey, I., & Barnes-Holmes, D. (2012). The Implicit Relational Assessment Procedure as a measure of implicit depression and the role of psychological flexibility. *Cognitive & Behavioral Practice, 19*, 1–10.

Keogh, C. (2008). *Cognitive and emotional defusion: Investigations of the underlying psychological processes using explicit and implicit measures* (Unpublished doctoral dissertation). Maynooth: National University of Ireland.

Levin, M. E., Hildebrandt, M., Lillis, J., & Hayes, S. C. (2012). The impact of treatment components suggested by the psychological flexibility model: A meta-analysis of laboratory-based component studies. *Behavior Therapy, 43*, 741–756.

Lipkens, G., & Hayes, S. C. (2009). Producing and recognizing analogical relations. *Journal of the Experimental Analysis of Behavior, 91*, 105–126.

McCurry, S., & Hayes, S. C. (1992). Clinical and experimental perspectives on metaphorical talk. *Clinical Psychology Review, 12*, 736–785.

McHugh, L., Barnes-Holmes, Y., & Barnes-Holmes, D. (2004). Perspective-taking as relational responding: A developmental profile. *The Psychological Record, 54*, 115–144.

Nicholson, E., & Barnes-Holmes, D. (2012). Developing an implicit measure of disgust propensity and disgust sensitivity: Examining the role of implicit disgust propensity and sensitivity in obsessive-compulsive tendencies. *Journal of Behavior Therapy and Experimental Psychiatry, 43*(3), 922–930.

O'Hora, D., Barnes-Holmes, D., Roche, B., & Smeets, P. M. (2004). Derived relational networks and control by novel instructions: A possible model of generative verbal responding. *The Psychological Record, 54*, 437–460.

Ruiz, F. J., & Luciano, C. (2011). Cross-domain analogies as relating derived relations among two separate relational networks. *Journal of the Experimental Analysis of Behavior, 95*, 369–385.

Stewart, I., & Barnes-Holmes, D. (2001). Understanding metaphor: A relational frame perspective. *The Behavior Analyst, 24*, 191–199.

Stewart, I., Barnes-Holmes, D., & Roche, B. (2004). A functional-analytic model of analogy using the relational evaluation procedure. *The Psychological Record, 54*, 531–552.

Stewart, I., Barnes-Holmes, D., Roche, B., & Smeets, P. M. (2001). Generating derived relational networks via the abstraction of common physical properties: A possible model of analogical reasoning. *The Psychological Record, 51*, 381–408.

Stewart, I., Barnes-Holmes, D., Roche, B., & Smeets, P. M. (2002). A functional-analytic model of analogy: A relational frame analysis. *Journal of the Experimental Analysis of Behavior, 78*(3), 375–396.

Stewart, I., Barnes-Holmes, D., & Weil, T. (2009). Training analogical reasoning as relational responding. In: R. A. Rehfeldt, & Y. Barnes-Holmes (Eds.), *Derived relational responding: Applications for learners with autism and other developmental disabilities*. CA: New Harbinger.

Stott, R., Mansell, W., Salkovskis, P. M., Lavender, A., & Cartwright-Hatton, S. (2010). *Oxford guide to metaphors in CBT: Building cognitive bridges*. Oxford: Oxford University Press.

Villatte, M., Monestès, J.-L., McHugh, L., Freixa i Baqué, E., & Loas, G. (2008). Assessing deictic relational responding in social anhedonia: A functional approach to the development of Theory of Mind impairments. *International Journal of Behavioral Consultation and Therapy, 4*(4), 360–373.