

WHY TWO, CENTRAL REBT HYPOTHESES APPEAR UNTESTABLE

Frank W. Bond
Windy Dryden

Goldsmiths College, University of London

ABSTRACT: This article argues that two of REBT's central hypotheses, the core and the primacy of the musts hypotheses, are untestable. One reason that these hypotheses are untestable concerns the interdependence principle that REBT maintains. This principle suggests that cognitions, emotions, and behaviour are part of an interdependent system, and as such, none of the three elements of that system can be measured separately from the others. Due to this interdependence principle, it cannot be established that cognitions are at the core of psychological disturbance and health (the core hypothesis); furthermore, the interdependence principle prevents the primacy of the musts hypothesis from being examined, as well. This hypothesis states that of the four irrational beliefs purported by REBT theory, musts are at the very core of psychological disturbance and the other three irrational beliefs are derived from these musts. Irrespective of the interdependence principle and the core hypothesis, the primacy of the musts hypothesis is also apparently untestable due to the current inability to measure musts adequately.

Rational Emotive Behaviour Therapy (REBT) is currently facing a crisis concerning the scientific status of its underlying theory. As will be shown in this paper, REBT's theory of psychological dysfunction

Order of authorship was based upon the flip of a coin.

Frank W. Bond recently completed his Ph.D. in Psychology under the supervision of Windy Dryden at Goldsmiths College, University of London. He is now completing his training at the Behavioural Psychotherapy Unit, University College and Middlesex School of Medicine, University of London, England.

Windy Dryden Ph.D. is Professor of Counselling at Goldsmiths College, University of London, England.

Requests for reprints should be sent to Professor Windy Dryden, Department of Psychology, Goldsmiths College, University of London, New Cross, London SE14 6NW, England.

and health posits what will be called the interdependence principle; and this principle renders two of REBT's central hypotheses (the core and the primacy of the musts hypotheses) untestable. In this paper, we will first discuss the interdependence principle, and show how this principle affects the testability of the core hypothesis. Then, we will show how the inability to test the core hypothesis also renders the "primacy of the musts" hypothesis untestable, as well. Following this discussion, we will note that even if the core hypothesis could be examined, the primacy of the musts hypothesis may still be untestable, because it is currently unclear how people's musts can be accurately measured.

THE INTERDEPENDENCE PRINCIPLE AND REBT'S CORE HYPOTHESIS

REBT theory (Ellis, 1958, 1994) argues that cognition, emotion, and behaviour cannot be regarded as separate psychological processes. Instead, it maintains that these processes are intimately related in often complex ways. If REBT's principle of interdependence of cognition, emotion, and behaviour can be accepted, then it cannot be argued that irrational beliefs "cause" or "determine" unhealthy negative emotions. For to do so would be to state that irrational beliefs and unhealthy negative emotions are separate (i.e. non-interdependent) variables with the former serving as an independent variable "causing" or "determining" the latter, which serves as a dependent variable. According to this interdependence hypothesis, research studies that have attempted to test the theory that irrational beliefs "cause" psychological disturbance have not, in fact, tested what may be considered the core REBT hypothesis, which is: beliefs are at the core of psychological disturbance and health.

According to REBT, the interdependence principle can still be held, whilst maintaining its core hypothesis. For, this core hypothesis states, amongst other things, that irrational beliefs are "primus inter pares" (i.e. first amongst equals) (Neenan, quoted in Dryden, 1994a) in explaining psychological disturbance (although a more accurate REBT translation would be "first amongst interdependent equals"). Although it is not logically inconsistent for REBT to maintain both the interdependence principle and its core hypothesis, to do so poses a critical problem for the scientific status of REBT theory. If cognition (which includes irrational beliefs), emotion, and behaviour form an interde-

pendent system that determines psychological function, then how can elements of that system (i.e. cognition, emotion, and behaviour) be isolated and their separate effects on psychological function be measured? This question is crucial, because if it is to be demonstrated scientifically that cognition is first amongst equals in a system that determines psychological function, then the effects of cognition need to be isolated and compared with the effects that other elements of that system have on psychological function.

Of course, if a system is truly interdependent, then each element of that system cannot be isolated and its effects examined, because the effects of each element is contingent upon the other elements of the system; in other words, cognitions, emotions, and behaviour cannot legitimately be separated from each other; therefore, if one attempts to measure the effects of cognition on psychological disturbance and health, one is also measuring the effects of emotion and behaviour, as well. After all, cognition, emotion, and behaviour cannot be isolated from each other, because all three exist together in an interdependent system. Given REBT's interdependence principle, it is unclear how to test experimentally the hypothesis that cognitions are first amongst equals in a psychological system of emotional disturbance and health.

AN IMPLICATION OF NOT BEING ABLE TO TEST THE CORE HYPOTHESIS: THE UNTESTABILITY OF THE PM HYPOTHESIS

As will be shown in this section, the untestability of REBT's core hypothesis renders another one of its central and distinguishing hypotheses untestable, as well. Thus, as this section will further show, the interdependence principle provides a context in which REBT's theoretical hypotheses cannot be examined empirically.

As noted in the previous section, to say that cognitions are "primus inter pares" in an interdependent system of psychological dysfunction and health is an hypothesis that would be very difficult to demonstrate experimentally; and the implication of not being able to test this hypothesis is that another central, REBT hypothesis, known as the "primacy of the musts", cannot be examined experimentally. The primacy of the musts hypothesis (subsequently referred to as the PM hypothesis) states that rigid musts are irrational beliefs that are "primus inter pares" amongst the other three types of irrational beliefs. Specifically, this hypothesis separates REBT from other cognitive theories of emo-

tion (e.g. Beck, 1976; Lazarus, 1991); and it draws upon the REBT view that there are four types of irrational beliefs (Dryden & Ellis, 1987; Dryden, 1994b), which are musts, awfulising, low-frustration tolerance (LFT), and evaluations of worth. Ellis (e.g. 1983) has long maintained that the rigid musts are the primary irrational beliefs, and that the other three are not only secondary to the musts, but, in fact, stem from the musts.

Thus, to confirm REBT's PM hypothesis, one needs to be able to (1) measure cognitions exclusively (i.e. in the absence of emotions and behaviour, which, as noted above, probably cannot be done); and then (2) establish that cognitions that refer to musts have a greater effect on psychological disturbance than do cognitions that describe the other three types of irrational beliefs. How these two criteria can be successfully achieved is, indeed, unclear.

Despite the apparent inability to fulfil the above two criteria, there have been attempts to examine whether or not musts are the primary irrational beliefs in psychological disturbance, but these authors consider those efforts to be unsuccessful. A study by Burgess (1990) represents the best attempt to examine the PM hypothesis, and this study will now be discussed; however, this discussion will only focus on the methodology that Burgess (1990) employed, and it will then state why this methodology was unsuccessful in testing the PM hypothesis.

The Best Attempt (although unsuccessful) to Test the PM Hypothesis

Burgess (1990) conducted a quasi-experiment to determine how three different clinical groups (generalised anxiety disorder (GAD), agoraphobia with panic attacks, and dysthymic disorder) and a normal control group rated the Attitudes and Beliefs Inventory (ABI) that was developed by the author. The ABI sought to assess the effectiveness of three REBT concepts in differentiating the four groups just mentioned. Two of the REBT concepts that were measured by the ABI are rational and irrational beliefs and ego and discomfort disturbance, both of which are not relevant to this discussion; however, the third REBT concept that the ABI measured was the PM hypothesis, which is, of course, relevant. To examine the PM hypothesis, the ABI required that subjects indicate how strongly they agreed or disagreed (on a five point Likert-type scale) with statements that represented the four types of irrational beliefs about which REBT hypothesises (i.e. musts, awfulising, LFT and evaluations of worth).

There are two reasons why Burgess (1990) did not adequately test the PM hypothesis. Firstly, as discussed above, REBT's interdependence principle (i.e. cognitions, emotions, and behaviour are interrelated) means that people's ABI endorsements were a product of people's cognitions, emotions, and behaviour; and not, as Burgess (1990) assumed, a direct output of people's cognitive state. Thus, conclusions that are derived from the ABI cannot be said to address, solely, people's cognitive status.

Even if the interdependence principle did not exist, there is a second reason why Burgess's (1990) ABI cannot adequately test the PM hypothesis; this concerns the ABI's inability to determine whether or not one type of belief is more primary than is another type of belief, in creating and maintaining psychological functioning. Burgess (1990) thought that the ABI could make this determination; however, it cannot; for, even if people with an emotional disturbance endorse demanding (i.e. must) beliefs more strongly than they do awfulising beliefs, it does not follow that demanding beliefs are more primary than are awfulising beliefs, for example, in creating or maintaining emotional disturbance. Thus, it is possible that people who endorse a demanding belief more strongly than an awfulising belief do so because the demanding belief is more accessible to them.

As social psychologists note (e.g. Bargh, 1982; Bargh, Bond, Lombardi, & Tota, 1986), people are more likely to respond to words, concepts, and personality dimensions that they use more frequently, because their frequent usage makes them more accessible in people's minds. This means that if subjects with an emotional disturbance respond to demanding beliefs more strongly than to awfulising beliefs, then these subjects may be aware of and use the former beliefs more often than the latter beliefs. It does not follow, however, that if demanding beliefs are more accessible to subjects than are awfulising beliefs, then the former are more important than the latter in creating or maintaining subjects' emotional disturbance.

As can be seen, then, the ABI is not equipped to distinguish beliefs that are primary and secondary. In fact, none of the currently available irrational belief measures can be employed to test the PM hypothesis. As noted above, just because people hold demanding beliefs (even strongly), it does not mean that those beliefs are primary in causing and maintaining psychological disturbance. Even if it can be demonstrated that people with a psychological disturbance hold musturbatory beliefs very strongly, it does not then follow that those beliefs contribute in any way to the development and/or maintenance of their

disturbances; after all, musturbatory thinking may be a symptom, but not a cause of, people's psychological disturbance. In any event, the current irrational beliefs measures (including the ABI) are only able to make a correlational statement about the relationship between musts and psychological disturbance (e.g. musturbatory thinking is positively correlated with emotional disturbance); and this relationship cannot speak, in any way, to the PM hypothesis. Thus, even if it is temporarily assumed, for the sake of argument, that Burgess (1990) did isolate cognitions from emotions and behaviour, the methodology that he employed was not able to test the PM hypothesis adequately.

In conclusion, no study that has examined the PM hypothesis has addressed the (perhaps insurmountable) problems of attempting to isolate cognitions from emotions and behaviour (i.e. no study has accounted for REBT's interdependence principle); however, this step has to be taken, if the PM hypothesis is to be properly tested. Currently, two of REBT's most important hypotheses remain untested, and this would not be a critical problem, if it were thought that they could be examined eventually, however, this does not appear likely; because, the prospects are poor that cognitions can be measured independently from emotions and behaviour, since REBT maintains that they all form an interdependent system. In addition, if cognitions cannot be measured separately from emotions and behaviour, then the PM hypothesis cannot be examined, either.

THE PROBLEM OF MEASURING MUSTS: A FURTHER DILEMMA

In this section, it will be assumed that the quandaries that the interdependence principle poses for testing the core and PM hypotheses have been satisfactorily resolved. Whilst, for the reasons noted above, this is quite an assumption to make, it is necessary to make it in order to show a further problem with examining the PM hypothesis. In particular, this additional problem centres around how researchers and clinicians can determine whether or not subjects and clients actually hold rigid musts. To be able to measure the presence of musts is a very basic requirement if one is to establish that musts are at the very core of psychological disturbance; nevertheless, as this section will show, it is far from clear how musts can actually be measured.

Amongst REBT theoreticians, musts have been regarded as both a trait and a state characteristic. The implications for measuring musts,

depending upon whether they are viewed as traits or states is discussed below. Unfortunately, as will be seen, whether musts are viewed as traits or states does not affect one's ability to measure them; for, as either trait or state characteristics, musts appear unable to be measured accurately.

The Problem of Measuring Musts as a Trait Characteristic

A trait taps a general disposition towards a way of thinking, feeling, and/or behaving. As such, a "trait-like" must statement is expressed in general terms. "I must be approved of by significant others" is a good example of such a statement. It is statements such as these that comprise the variety of measures of irrational beliefs that currently exist. Now, let us suppose that I (WD) endorse such an item. Does my endorsement really mean that I hold this belief? On its own it cannot for a number of reasons. First, before I endorse such a statement, I probably make a hunch about whether or not the statement is true of me. If I conclude that it is, I will then very quickly scan, in my mind, a small number of specific situations where I believe that I needed the approval of significant others. From these interactions, I probably then infer that I believe that I need the approval of significant others in the vast majority of situations; however, my scan is most likely influenced by a confirmatory bias, therefore, I identify situations that are consistent with my general rigid must and edit out situations that are inconsistent with it.

Second, I may really hold the general rational alternative to this general demand and not realise it, thinking falsely that I hold the rigid must. Thus, I may truly believe: "I really want to be approved of by significant others, but I do not have to have their approval"; however, I may endorse the general must perhaps because I have identified one or a small number of specific situations which quickly come to mind where I believed in the specific must. Thus, I may falsely generalise from my specific belief that pertains to a small number of situations to a more general belief that refers to a wide variety of situations. The important question is this: who is to know what I REALLY believe when I endorse a general rigid must on a measure of irrational beliefs? The answer is, of course: nobody.

Third, there is no way of knowing whether or not I hold this general must without additional information. As was discussed above, cognition cannot legitimately be separated from emotion and behaviour.

Thus, to gain valid information about whether or not I really believe that I must have the approval of significant others, one not only needs to know what I believe in specific situations where I fail to get such approval (or where I think such approval is not forthcoming), one also needs to know how I feel and how I act in these situations. Without this information, one cannot make a valid conclusion, according to REBT, as to my general belief about disapproval.

The Problem of Measuring Musts as a State Characteristic

It is our opinion that the REBT theory of psychological disturbance is best viewed as a state theory. As a state theory, REBT posits that I (FWB) disturb myself (at C) about a specific situation, because I hold a specific irrational belief (B) about a particular event (at A) (be that event actual or inferred). As can be seen, REBT state theory does not believe that musts exist in a vacuum; therefore, according to this theory, any must that I may have (at B) can only be identified, with any degree of validity, if the specific psychological event (at A) and my emotional and behavioural responses (at C) are known. [Unfortunately, as anyone who has practised REBT knows, detecting people's A's and C's is not as easy as it may seem.] To maintain that musts can be validly identified without referring to A and C is to go against REBT clinical practice, which holds that we need to assess A and C before deciding whether or not a client has an irrational belief.

Unfortunately, maintaining that musts are state characteristics does not make it any easier to measure them, for several reasons. First, we need to have precise information about the A in the specific ABC episode in question. As Moore (in Dryden & Trower, 1988) and Dryden (1995) have shown, the specific A that triggers a person's specific irrational belief at B (what Don Beal calls the critical A) is often inferential in nature and is often outside of that person's immediate awareness. As REBT therapists know only too well, clients often have difficulty in identifying their critical A's and frequently need skilled help from their therapists in doing so. [This is why inference chaining and other sophisticated assessment techniques designed to identify the critical A are often employed in therapy (see Dryden, 1995, for a discussion of ten such techniques).]

To give a simple example of how a therapist often has to help their clients identify their critical A's, I (as the client) may claim to be anxious about being disapproved of by my boss; however, I may actually be

anxious about him not giving me approval. Receiving disapproval from someone is not the same psychological event as not receiving approval from that person. In the first case, receiving a neutral response from my boss will not constitute a critical A (since I do not see a neutral response as being disapproval), whereas it will in the second case (since a neutral response is seen as constituting lack of approval). Our point here is that clients may require the therapist to help them to identify accurately a critical A. Whilst this is not a problem in psychotherapy, it does pose a significant problem for the scientific study of REBT state hypotheses, as will be discussed below.

The second problem that arises when we consider the valid measurement of a specific must concerns the emotional aspects of C. In order for us to judge whether or not I have a specific irrational belief about being disapproved of by my boss in a specific situation, we need to know what my emotional response was or would be in that situation. Now, REBT theory distinguishes between healthy negative emotions (at the core of which are deemed to be rational beliefs), and unhealthy negative emotions (at the core of which are deemed to be irrational beliefs) (Dryden, 1994b). Examples of the former are anger, depression, anxiety, and guilt, whilst examples of the latter are annoyance, sadness, concern, and remorse. The problem with this aspect of REBT theory concerns language. As Dryden (1986) has previously shown, clients and REBT therapists do not spontaneously share a common language when referring to these qualitatively different emotions. In therapy, clients need instruction to use REBT's affective terminology, or they and their therapists need to work quite hard to develop a shared language so that the important distinctions between healthy and unhealthy emotions are agreed upon and understood by both parties.

Obviously, if we do not expect our clients to come to therapy knowing spontaneously REBT's affective terminology, we cannot realistically expect subjects and clients to know this vocabulary when they enter research studies. Thus, if I say that I feel concerned that my boss might disapprove of me, there is no valid way of knowing whether, from an REBT point of view, I am anxious or concerned without further exploration. So, once again, I would need external assistance to provide my researcher with the required information, and once again, this would be problematic from a scientific point of view, as will be discussed below.

In REBT theory, C also stands for behaviour, and, as Dryden (1994b) has pointed out, action tendencies. When it comes to actual

behaviour, there are problems in accepting my verbal reports about how I would act in a given situation and even about how I have acted in a given situation. My responses may well be subject to a number of contaminating factors. For example, I may wish to “fake good” and wittingly deny that I would or have acted in a self-defeating manner, or I may unwittingly be inaccurate in reporting how I did act or may act in the specific situation that is under consideration. Similar problems arise when I report actual or projected action tendencies. Consequently, my reports about my behavioural C's may be as unreliable as my reports of my emotional C's. This is problematic since without accurate information about C, valid data about B are compromised.

In summary, the following information needs to be acquired if a specific must is to be assessed accurately: (1) the critical A, (2) the unhealthy negative emotion that occurred in the situation, and (3) the behaviour or the action tendency that took place in the relevant situation. As we showed above, there are problems in obtaining valid information in each of these three categories. Also, as we have already stressed, if in therapy clients need a good deal of help to identify their specific irrational beliefs, why should one expect subjects in experimental investigations or clients in treatment studies to be able to provide this information without help? The answer is that we cannot; however, if subjects and clients in research studies require active help from investigators and therapists before they can be said to provide valid information about their specific, trait-like irrational beliefs, then the validity of those studies are gravely threatened, for the two reasons that are now mentioned.

*Teaching Subjects in a Study the REBT Model:
Threats to Validity*

If a researcher provides subjects with active help in identifying their irrational beliefs, then great problems arise in obtaining a valid measure of what subjects are really thinking. Firstly, the demand characteristics of this methodology would be unprecedented. As Orne (1962) indicates, subjects in experiments attempt to interpret the experimenter's hypothesis so that they can subsequently behave in a manner that makes them “good” or “helpful” subjects. Well, if subjects with emotional disturbances are taught what types of beliefs lead to those disturbances, then they do not have to do much interpretation to discover the experimenter's hypothesis; and, thus, how to act in order to confirm it.

Secondly, as noted, the goal of this hypothesised study is to examine a theory as to what types of beliefs are at the core of emotional disturbance. It is critical, then, for subjects to have an unclouded view of their accessible thoughts, so that they can accurately "see" and indicate what they are really thinking. If, however, a researcher teaches subjects the REBT model of emotional disturbance, then even if subjects want accurately to report the real thoughts that they hold (i.e. not be trapped by demand characteristics), they may be unable to do so, because of the interference produced by being told what REBT believes. Thus, even if demand characteristics could be controlled for, teaching subjects the REBT model produces a situation in which it will be difficult for the researcher to interpret what actually produced the subjects' responses. Was it their actual beliefs, having successfully and accurately rejected what the experimenter said? Was it the experimenter's hypothesis, because subjects truly believed (correctly) that it accurately described what they were thinking, although they could not have previously identified those (inaccessible?) thoughts? Was it the experimenter's hypothesis, because subjects truly believed (incorrectly) that it accurately described what they were thinking, although they could not have previously identified those (inaccessible?) thoughts? As can be seen, it would be unclear as to which of these three possible alternatives actually produced subjects' responses, in this hypothetical experiment.

This section has shown that even if REBT's core hypothesis could be tested, it does not appear that musts can be measured presently with any degree of accuracy. As stated at the beginning of this section, not being able to measure musts renders the PM hypothesis untestable; for, in order to demonstrate that musts are primary irrational beliefs, researchers have to be able first to assess people's musts. Although the inability to measure musts accurately is a grave problem for the testability of a central REBT hypothesis (i.e. the PM hypothesis), it is a moot problem until the core hypothesis can be adequately examined. After all, until that time, it will not be possible to assess the psychological effects of cognitions (and hence musts) independently from the effects of emotions and behaviours. Thus, assessing the validity of the PM needs to await the daunting task of being able to examine the core hypothesis. As indicated at the beginning of this article, it would appear that the scientific integrity of REBT's underlying theory is, indeed, in crisis, and, moreover, a way out of the crisis is not readily apparent.

REFERENCES

- Bargh, J.A. (1982). Attention and automaticity in the processing of self-relevant information. *Journal of Personality and Social Psychology*, 43, 425-436.
- Bargh, J.A., Bond, R.N., Lombardi, W.L., & Tota, M.E. (1986). The additive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology*, 50, 869-879.
- Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: Meridian.
- Burgess, P.M. (1990). Toward resolution of conceptual issues in the assessment of belief systems in rational-emotive therapy. *Journal of Cognitive Psychotherapy*, 4(2), 171-183.
- Dryden, W. (1986). Language and meaning in RET. *Journal of Rational-Emotive Therapy*, 4(2), 131-142.
- Dryden, W. (1994a). Reason and emotion in psychotherapy: Thirty years on. *Journal of Rational-Emotive and Cognitive Behavior Therapy*, 12(2), 83-99.
- Dryden, W. (1994b). *Invitation to rational-emotive psychology*. London: Whurr Publishers.
- Dryden, W. (1995). *Preparing for client change in rational emotive behaviour therapy*. London: Whurr Publishers.
- Dryden, W., & Ellis, A. (1987). Rational-emotive therapy. In K.S. Dobson, *Handbook of cognitive-behavioral therapies*, New York: Guilford.
- Dryden, W. & Trower, P. (1988). *Developments in rational-emotive therapy*. Milton Keynes: Open University Press.
- Ellis, A. (1958). Rational psychotherapy. *Journal of General Psychology*, 59, 35-49.
- Ellis, A. (1983). *The case against religiosity*: New York: Institute for Rational-Emotive Therapy.
- Ellis, A. (1994). *Reason and emotion in psychotherapy: Revised and updated edition*. New York: Birch Lane Press.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: Oxford.
- Orne, M.T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 17, 776-783.