

The Metaphysics of Logic-Based Therapy

Elliot D. Cohen, Ph.D.

Elliot D. Cohen is the inventor of *Logic-Based Therapy*, co-founder and co-executive director of the American Society for Philosophy, Counseling, and Psychotherapy and director of the [Institute of Critical Thinking](http://www.instituteofcriticalthinking.com). His recent books on the subject include *The New Rational Therapy* (Rowman & Littlefield, 2007) and *What Would Aristotle Do?* (Prometheus 2003). E-mail Address: elliott.d.cohen@instituteofcriticalthinking.com

Abstract: This article examines four key metaphysical assumptions of LBT regarding human emotions, human fallibility, reality, and human freedom. By way of examining these assumptions it shows how the theory of LBT systematically integrates philosophy and logic into a cognitive-behavioral approach to philosophical practice.

Logic-Based Therapy (LBT) is a philosophical development of Rational-Emotive Behavior Therapy (REBT), a form of psychotherapy founded by psychologist Albert Ellis in the nineteen fifties.¹ LBT holds that human beings largely create their own emotional and behavioral problems by *deducing* self-defeating and destructive behavioral and emotional conclusions from irrational premises.² The purpose of this article is to discuss four basic *metaphysical assumptions* of LBT regarding human emotions, human fallibility, reality, and human freedom. These four major assumptions are as follows:

1. Human beings logically deduce the cognitive-behavioral components of their emotions from premises.
2. Human beings are inherently fallible and the premises of their behavioral and emotional reasoning tend to contain fallacies.
3. Behavioral and emotional problems tend to stem from absolutistic, perfectionistic constructs of reality.
4. Human beings have an inherent power of will that can be used to overcome fallacious behavioral and emotional reasoning.

This paper is divided into four general parts which address each of the aforementioned assumptions in its turn.

1

HUMAN BEINGS LOGICALLY DEDUCE THE COGNITIVE-BEHAVIORAL COMPONENTS OF THEIR EMOTIONS FROM PREMISES.

This logical theory of emotion builds on the general phenomenological thesis of intentionality.

According to the thesis of intentionality, as held by phenomenologist Edmund Husserl, “the essence of consciousness, in which I live as my own self, is the so called intentionality. Consciousness is always conscious of something.”³ LBT subscribes to this thesis with respect to emotions insofar as they involve states of consciousness.

For example, one is not merely angry; one’s anger is directed upon some external object. It is *about* something. Whether or not this *intentional object* actually exists is irrelevant to whether the emotion itself exists.⁴ Thus a person can be angry about someone’s having placed a spell on him, even if no spell was actually placed. The anger is nevertheless real and a proper subject of LBT therapy.

Strictly speaking, intentional objects are *states of affairs* that include particular objects. Thus the intentional object is not *the particular man* perceived to have placed a spell but rather the *state of affairs* consisting of this man’s having placed the spell.

Human emotions also rate their intentional objects.

LBT holds that all emotions *rate or evaluate* the state of affairs comprising the intentional object or some aspect of that state. Thus the man perceived to have placed the spell might be rated as a horrible monster. Clearly, unless there is such a rating, there can

be no emotion of anger. If one did not care about the purported spell, then one would not get angry about its having been placed.

Human emotions can be identified in terms of their objects and ratings.

In this manner, LBT maintains that different kinds of emotions (E) can be identified in terms of their distinct intentional objects (O) and ratings (R):

$$E = (O + R)$$

For example, following are some examples of emotional definitions in terms of this formula:⁵

Emotion	Intentional Object	Rating
Anger	An action (i.e. a state of affairs of someone's having acted)	Negative rating of the action itself or the person who performed it.
Guilt	A moral principle one perceives oneself to have violated.	Strong condemn of the violation or oneself for the violation.
Depression	an event or state of affairs	Strong negative rating of this event or state of affairs on the basis of which one bleakly perceive one's own existence.
Anxiety	A future event or possible future event having certain forecasted consequences	Negative rating of forecasted consequences on the basis of which one perceives need to ruminate about them.

Emotional reasoning can be constructed out of an emotion's intentional object and rating.

According to LBT, the *standard form* of emotional reasoning is that of *modus ponens*, which inference can be stated in terms of the intentional object (O) and rating (R) of an emotion:

(Rule) If O then R

(Report) O

Therefore R

The *rule* here consists in a conditional statement that links the intentional object (O) to the rating (R). The *report* is accordingly the intentional object (O) itself; and the conclusion consists in the rating (R) detached from the object (O). For example:

(Rule) If that man put a spell on me then he is a horrible person who deserves hell and damnation

(Report) That man put a spell on me

Therefore, he deserves hell and damnation

Thus, in identifying the emotion by determining its intentional object and rating, it is possible to construct the premises and conclusion of human emotional reasoning. This in turn permits LBT analysis, which consists in pinpointing and refuting the irrational premises, and then finding a suitable antidote to them.⁶

Behavioral reasoning can supervene on emotional reasoning.

Behavioral reasoning can in turn piggy back on emotional reasoning.⁷ Where B is a behavioral “ought” or “should,” the resulting inference chain takes the following form:

Rule) If O then R

(Report) O

Therefore R

(Rule) If R then B

Therefore B

For example, the behavioral reasoning in question may be:

(Rule) If the man deserves hell and damnation, I should kill him and expedite his departure

(Report) The man deserves hell and damnation

Therefore I should kill him and expedite his departure

The “should” in the above behavioral conclusion will be put into action if nothing prevents it. However, even if the actual behavior does not ensue, the disposition to engage in such violence, *which disposition LBT defines as the deduction of the behavioral “should,”* is still a component of the emotion. Thus LBT holds that the cognitive and behavioral components of emotions are syllogistic deductions from premises in a person’s belief system. Moreover, LBT holds that the physiological changes that occur during emotional episodes (for example, rapid heartbeat, increased adrenalin, etc. concomitant with syllogistic deductions) can be produced by these inferences and are causally interactive with them—that is, capable of feeding a vicious cycle in which the emotional responses, including inferential activity intensify.

**HUMAN BEINGS ARE INHERENTLY FALLIBLE AND THE PREMISES OF
THEIR BEHAVIORAL AND EMOTIONAL REASONING
TEND TO INCLUDE FALLACIES.**

There are eleven cardinal fallacies that tend to impede human happiness.

Human behavioral and emotional problems stem largely from fallacies that occur in the premises of people's behavioral and emotional reasoning. There are eleven primary fallacy types, some of which infect the rules of such reason (Fallacies of Behavioral and Emotional Rules), and some of which infect the reports (Fallacies of Reporting):⁸

Fallacies of Behavioral and Emotional Rules:

1. *Demanding perfection*: Perfect-a-holic addiction to what one can't have in an imperfect universe.
2. *Awfulizing*: Reasoning from bad to *worst*.
3. *Damnation*: Shit-ification of self, others, and the universe.
4. *Jumping on the bandwagon*: Blind, inauthentic, antidemocratic and parrot-like conformity.
5. *Can'tstipation*: Obstructing one's creative potential by holding in and refusing to excrete an emotional, behavioral, or volitional *can't*.
6. *Thou shalt upset yourself*: Dutifully and obsessively disturbing oneself and significant others.
7. *Manipulation*: Bullying, bullshitting, or well poisoning to get what one wants.
8. *The world-revolves-around-me thinking*: Setting oneself up as the reality guru.

Fallacies of Reporting:

9. *Oversimplifying reality:* Pigeonholing reality or prejudging and stereotyping individuals.

10. *Distorting probabilities:* Making generalizations and predictions about the future that are not probable relative to the evidence at hand.

11. *Unsupported explanation:* Advancing explanations, causal judgments and contrary-to-fact claims about the world based on fear, guilt, superstition, magical thinking, fanaticism, or other anti-scientific grounds.

These fallacies can be refuted and redressed using philosophical methods and theories.

LBT holds that people can *refute* and then construct *antidotes* to fallacious premises. A refutation shows what is wrong with a premise. Types of refutation include those commonly used in philosophical analysis including the method of *reduction ad absurdum*; adducing evidence that falsifies a premise; and showing that the inference used to support a premise itself commits an inductive fallacy.⁹

Refutations set the stage for the construction of appropriate antidotes. An antidote corrects a fallacy by introducing a rational philosophy in its stead. Many potent antidotes can be derived from the myriad of philosophical theories. For example, Kant's categorical imperative to respect the inherent dignity and value of oneself as well as other human beings—as he says, to treat them as “ends in themselves” and not as “mere means”—can constructively help to rectify the damnation of self and others. Descartes' philosophy gives credence to how desolate and lonely it would be, trapped inside one's own subjectivity, completely cut off from meaningful interchanges with other human beings. Such Cartesian reflection yields a useful antidote against *world-revolves-around-*

me thinking, namely, not to discount the existential being of others. Hume’s empirical philosophy underscores the irrationality of demanding certainty in a world of contingent facts and probabilities. Locke’s view on the primacy of experience in acquisition of knowledge reminds us to use our failures as learning occasions instead of occasions for devaluing and degrading ourselves. Plato admonishes us not to look for perfection in a world of perishable, changeable objects set in space and time. The repository of philosophical ideas that can be used to offset, correct, and *transcend* fallacious thinking is indeed bountiful.¹⁰

LBT does not merely attempt to overcome the eleven cardinal fallacies. It also includes a positive psychology that aims at cultivating eleven transcendent virtues.

According to LBT for each of the eleven above-mentioned fallacies there is a transcendent virtue that trumps it:¹¹

Cardinal Fallacy	Transcendent Virtue
Demanding perfection	Metaphysical security (security about reality)
Awfulizing	Courage (in the face of evil)
Damnation (of self, others, and the universe)	Respect (for self, others, and the universe)
Jumping on the bandwagon	Authenticity (being your own person)
<i>Can't</i> stipation	Temperance (self-control)
Thou shalt upset yourself	Moral creativity (in confronting resolving moral problems)
Manipulation	Empowerment (of others)
The world revolves around me	Empathy (connecting with others)
Oversimplifying reality	Good judgment (in making objective, unbiased discernments in practical affairs)
Distorting probabilities	Foresightedness (in assessing probabilities)

Blind Conjecture	Scientificity (in providing explanations)
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These virtues are “virtues” because they involve dispositions of character acquired through practice. They are “transcendent” because they constitute higher human capabilities. They make the difference between doing and feeling OK and doing and feeling excellent. While classical REBT has tended to concentrate on the negative aspect of avoiding fallacies (what *not* to do), the more recent LBT variant also provides a *positive* set of values to which to aspire in overcoming fallacies.

Following is a concise description of each of the eleven virtues:¹²

Virtue	Description
1. <i>Metaphysical Security</i>	The ability to accept imperfections in reality. The metaphysically secure person accepts his <i>human</i> fallibility and limitations as well as those of others and does not expect the world to be perfect. He remains hopeful about realistic possibilities, is humble in the face of the uncertainty of the universe, and has a strong desire for knowledge but is not frustrated by his inability to know all. Such a person does not attempt to control what is beyond his ability to control but stays focused on excelling in what he <i>can</i> control.
2. <i>Courage</i>	Confronting adversity without under- or overestimating the danger. It means fearing things to the extent that it is reasonable to fear them and, in the face of danger, acting according to the merits of the situation. The courageous person perceives evil as a <i>relative</i> concept according to which things could always be worse and are never <i>absolutely</i> bad (the worst thing in the world). Such a person tends to learn from and derive positive value from his misfortunes and is willing to take reasonable risks in order to live well.
3. <i>Respect</i>	Transcends the tendency to rate reality, including human reality, as utterly worthless or totally shitty and instead looks for goodness and dignity. Global respect avoids rating the whole according to the part and looks favorably on the larger cosmic picture. Self-respect involves unconditional, self-acceptance based on a deep philosophical understanding of human worth and dignity. Respect for others consistently extends this profound respect for unconditional human worth and dignity to other human beings.

<p>4. <i>Authenticity</i></p>	<p>Autonomously and freely living according to one's own creative lights as opposed to losing oneself on a bandwagon of social conformity. An authentic person is no cog in a social establishment. She values her individuality, cherishes a democratic life style and its inherent personal freedoms, and does not hide her responsibility for life choices behind deterministic excuses.</p>
<p>5. <i>Temperance</i></p>	<p><i>Rational</i> control over one's actions, emotions, and will. By telling oneself one <i>can't</i> do otherwise, one can defeat one's own prospects for happiness. For example, you easily lose your temper, cave to pressure, eat or drink to excess, and keep yourself from advancing by refusing to try. In contrast, in becoming temperate, one can take control of one's life (body, mind, and spirit) by cognitively and behaviorally overcoming such self-stultifying <i>can'ts</i>.</p>
<p>6. <i>Moral creativity</i></p>	<p>Philosophical grasp of morality and moral standards; tolerance for the ambiguity and uncertainty of moral choices; an ability to frame life in constructive, unproblematic ways; a willingness to try out novel ways of resolving concerns; and a consideration for the welfare, interests, and needs of others.</p>
<p>7. <i>Empowerment</i></p>	<p>Treating others as rational, self-determining agents in contrast to trying to get what you want through power plays, intimidation, and deceit. This means advising rather than goading, using rational argument to convince rather than making threats, recognizing the right of others to informed consent, and respecting the right to just treatment, even when serious conflicts arise.</p>
<p>8. <i>Empathy</i></p>	<p>Transcending one's own ego-centered universe by connecting (cognitively, emotionally, and spiritually) with the subjectivity of others. It means giving up the self-defeating idea that only one's own values, interests, preferences, and beliefs carry import and validity. It is a condition of such other virtues as beneficence, friendship, and gratitude.</p>
<p>9. <i>Good judgment</i></p>	<p>The ability to make objective unbiased discernments in practical matters. In cases of judging other human beings, it means equitable and sympathetic judgment in contrast to stereotypical and prejudicial judgment. A person with good judgment is realistic, perceptive, open minded, creative, and constructive.</p>
<p>10. <i>Foresightedness</i></p>	<p>The ability to make generalizations about the material world and predictions about the future that are probable relative to the facts as known. A person who has this virtue is able to use it successfully in making life decisions. Such a person is able to cope effectively in this material universe, where there are degrees of probability, not certainty.</p>
<p>11. <i>Scientificity</i></p>	<p>The ability to apply a critical, scientific method in accounting for the whys and wherefores of existence. A scientific person recognizes that scientific and religious explanations can be compatible but is disinclined toward superstition, magical thinking, religious fanaticism, and other antiscientific ways of accounting for reality. Such a person tends to rely on confirmatory evidence rather than on personal emotional reactions (like fear and guilt).</p>

These eleven virtues define LBT's concept of human happiness.

According to LBT, an individual is happy to the extent that these virtues are attained. Thus, LBT's analysis of human happiness resembles that of Aristotle who also provided a virtue-based account of happiness in terms of intellectual (cognitive) and moral (emotional) development.

LBT's concept of human happiness is constructive, tolerant, and pragmatic.

Philosophical theories can provide useful recipes for attainment of the eleven transcendent virtues and accordingly of human happiness.¹³ However, LBT does not dictate which philosophical views are appropriate for an individual. Instead, it provides a range of possibilities and permits clients to choose for themselves. Thus one might *un-**can't*stipate oneself with some sobering existential antidotes derived from the philosophy of Jean-Paul Sartre, for instance, that "there is no determinism or fixed human essence to hide behind; that "man is condemned to be free," that "man is responsible for his passions"; and that one's "existence precedes one's essence." For the religious client, Sartre's philosophy is surely heresy since it decries the fixed rational human essence of humankind and a God that has created us according to this pre-defined teleology. But, from the LBT perspective, the client is free to decide to embrace a fixed human essence; to proclaim, along with Sartre, that "existence precedes essence"; to accept a theological stance; or to join Nietzsche in pronouncing the death of God. Thus LBT tolerates a host of philosophies, even ones that are inconsistent. If Aquinas can work for one person and Sartre for another in overcoming and abandoning self-destructive behavioral and emotional rules, then each of these discordant philosophies can be harmonized within the LBT framework.

While LBT as such permits a wide range of alternative philosophies, it does recognize limitations, in particular those set by the cardinal fallacies themselves. For example, LBT would reject any “philosophy” based on blind conformity, authoritarianism, perfectionism, fear and superstition, force and violence, manipulation, denigration of human worth and dignity, and the denial of human responsibility. To the extent that philosophies promote the respectful treatment of others, self-acceptance, creativity, independent thinking, and other modes of existence that support transcendent virtue, they are legitimate.

LBT embraces the Aristotelian definition of truth as correspondence to reality but is pragmatic in its test of reality.

For example, the fallacy of *world-revolves-around-me thinking* arises when persons think that reality must correspond to their beliefs rather than their beliefs to reality. (“If I believe (want, desire, value, prefer) p then p must be true and everyone else must similarly accept p”).¹⁴ On the other hand, LBT holds to the conventional philosophical wisdom that an important test of truth (reality) is its tendency to solve human problems (to have “cash value” in William James’ terms). Thus *world-revolves-around-me thinking* tends to defeat its purposes by leading to individual strife in getting along with others rather than promoting adaptive, successful interpersonal relationships.

It is in this practical, operational sense that LBT defines fallacies as “ways of thinking and reasoning that have a proven track record of frustrating personal and interpersonal happiness.” In calling this definition *operational*, I intend to distinguish it from an explicit definition that states necessary and sufficient conditions for the application of the term. As Gustav Bergmann once expressed it, an operational definition

is to a term like a recipe is to a pie. It is not the pie itself but it tells you how to make one.¹⁵ A fallacy is a mistake in reasoning, a cognitive glitch in the truth-seeking mission, but the measure of mistaken reasoning is its tendency to generate unhappiness for the one who makes the mistake.

LBT also subscribes to the view that truth tends to beget truth and that falsehood sooner or later tends to be exposed when it runs upstream against the steady, coherent tide of truth. It is for this reason that lying and other forms of deception tend to breed distrust and discord rather than functional, adaptive interpersonal relationships.

3

BEHAVIORAL AND EMOTIONAL PROBLEMS TEND TO STEM FROM ABSOLUTISTIC, PERFECTIONISTIC CONSTRUCTS OF REALITY.

Reality is imperfect and flawed.

According to LBT much human unhappiness stems from *metaphysical insecurity*—the refusal to accept the imperfect and flawed character of empirical reality. As a result, they suffer anxiety, depression, guilt, anger, and related forms of emotional distress. Metaphysically insecure people deduce these emotions from a self-destructive demand for perfection. Thus one tells oneself, since negative things have happened (I did not get what I wanted, someone treated me unjustly, others did not approve of me, and so on), the world is not the way it absolutely must be (namely perfect or near perfect) and I must never allow myself to accept reality as long as these things are part of it. LBT teaches humans who reason like this to identify and refute their perfect-a-holic, metaphysical rule by which they disturb themselves; to construct rational antidotes to this

self-destructive premise, and to exercise willpower in overcoming cognitive dissonance between this rational directive and the irrational demand for perfection. For example, refutation here can be in terms of a *reductio ad absurdum* of the idea that reality is perfect. If it was, then there would be nothing to strive to improve, which would make life boring. An antidote following this line of reasoning might take a lesson from Nietzsche and instruct the individual to turn misfortune into as an occasion to grow stronger. Suffering, says Nietzsche, ennobles.¹⁶

LBT emphasizes the importance of accepting probability rather than certainty as a condition of being realistic. The demand for certainty in an uncertain world leads to anxiety about the future. When one must be certain before acting, one invariably ends up ruminating about what to do and tends to abandon rational control over one's life to decisions by indecision. LBT emphasizes rational decision-making based on probability assessment rather than on the demand for certainty. In accepting probability and not certainty as a realistic basis for judging and acting, one eliminates one of the most self-stultifying forms of perfectionism.¹⁷

Reality is neither absolutely good nor absolute bad.

Human beings who terrificize another human being as the absolutely best, set themselves up for disappointment—and individuals who so idealize others often end up depressed when the true reality sets in. At the other extreme, human beings who perceive another person, or themselves, as absolutely bad, often experience intense anger, guilt, and depression. Telling oneself that one is worthless, inhibits one from doing worthwhile things since worthy actions are unlikely or impossible if one is truly worthless. Calling other humans worthless turns them into disposable waste, making it easier to dispose of

them, thereby leading to regrettable, self-defeating actions. LBT stresses that the rule that says that anyone who does something worthless must also be worthless confuses the deed with the doer and engenders a fallacy of composition. What's true of an individual action attributed to a person is not necessarily true of the entire person. Cosmic damnation (damning the universe) as much as damning others or oneself is similarly destructive. If all reality is bad then every individual must also be bad. For human beings harboring this jaundiced metaphysics, trust is not possible and interpersonal relationships are destined to falter or fail.

LBT does not deny that evil exists. It does not deny that things happen that are awful, horrible and terrible. However, it denies the inference from bad to *worst* on the grounds that it is not metaphysically possible that anything can be absolutely the worst. The tsunami that left thousands dead in Thailand was tragic, a terrible thing; however this means that there was devastation and loss of life which, on a scale of values, was sufficiently into the negative numbers to warrant a rating of "terrible." However, this is still a relative not an absolute ranking. Without understating the tragedy, it does not mean that the Tsunami was absolutely the worst thing that could have happened. Things could always get increasingly worse ad nauseam. More lives could have been lost, and more suffering and devastation could have occurred. LBT helps people put loss into perspective. A divorce or loss of one's job can never rise to the absolute worst. The death of a loved one, no matter how tragic and painful, can eventually be put into perspective.

**HUMAN BEINGS HAVE AN INHERENT POWER OF WILL THAT CAN BE
USED TO OVERCOME FALLACIOUS
BEHAVIORAL AND EMOTIONAL REASONING.**

This is either “(a) the power or ability to refrain from doing something (either before you do it, or while in the midst of doing it) even though you are strongly inclined to do it; or (b) the power or ability to continue doing something even though we are strongly inclined not to.”¹⁸

Many behavioral and emotional problems stem from self-*can't*stipitation—telling oneself one *can't* control one's emotions; change one's behavior; or tolerate frustrating or challenging situations. While LBT does not attempt to resolve the free-will-determinism debate, it holds that human beings' use of *can't* in many cases is unrealistic and anti-empirical.¹⁹ Human beings *have*, as a matter of fact, overcome self-destructive behavioral and emotional reasoning by exercising their willpower as defined above. Therefore they *can* do so.

LBT holds that such willpower can be cultivated through exercise and practice. For example, a person who is afraid of rejection can engage in the feared act—for example asking someone out on a date. Whether this is behavioral conditioning consistent with determinism or instead the autonomous exercise of free will in a deep metaphysical sense is not an issue LBT attempts to adjudicate. Human beings do exercise such control regardless of the metaphysical explanation.

Summary

This paper has discussed some key metaphysical concepts of Logic-Based Therapy pertaining to human emotion, human fallibility, reality, and human freedom.

1. Human beings logically deduce the cognitive-behavioral components of their emotions from premises.

According to LBT human emotions can be identified according to their intentional Objects (O) and their ratings (R) such that $E = (O + R)$, out of which the standard form of emotional reasoning can be constructed:

(Rule) If O then R

(Report) O

Therefore R

Further, behavioral reasoning supervenes on emotional reasoning, whereby a behavioral “ought” (B) is deducible from a behavioral rule and a rating (R) deduced from emotional reasoning:

If R then B

R

Therefore B

2. Human beings are inherently fallible and the premises of their behavioral and emotional reasoning tend to include fallacies.

There are eleven identifiable, cardinal fallacies which tend to infect the premises of human behavioral and emotional reasoning, which can be refuted and redressed using

philosophical methods and theories. In contrast to classical REBT, LBT includes a positive psychology that aims at cultivating eleven transcendent virtues. These eleven transcendent virtues define LBT's concept of human happiness, which is constructive, tolerant, and pragmatic.

3. Behavioral and emotional problems tend to stem from absolutistic, perfectionistic constructs of reality.

Reality is imperfect and flawed and is neither absolutely good nor absolutely bad. Demands for perfection and certainty in an imperfect universe are the basis of metaphysical insecurity. In contrast, a realistic metaphysic meets coherence and pragmatic tests of truth (understood as correspondence to reality) and thereby tends toward metaphysical security and happiness.

4. Human beings have an inherent power of will that can be used to overcome fallacious behavioral and emotional reasoning.

Human tendencies to deduce irrational behavioral and emotional conclusions are not overcome merely by refuting fallacious premises and constructing rational antidotes. Instead it typically takes special effort of will to overcome the cognitive dissonance (conflict) arising between one's irrational and rational (antidotal) reasoning. This power is practical freedom and not necessarily metaphysical freedom. It can be cultivated through exercise and practice.

LBT provides the cognitive, behavioral and volitional tools, including the philosophical methods and theories, not merely to avoid commonplace human fallacies at the root of much human suffering and anguish, but also to overcome these fallacies and to attain instead a philosophically enlightened security and happiness in an imperfect world.

Endnotes

¹ See especially Albert Ellis and Robert A. Harper, *A Guide to Rational Living* (No. Hollywood, CA: Melvin Powers, 1961). Albert Ellis, *Reason and Emotion in Psychotherapy* (Secaucus, NJ: Citadel Press, 1962).

² See especially, Elliot D. Cohen, *The New Rational Therapy: Thinking your Way to Serenity, Success, and Profound Happiness* (New York: Rowman and Littlefield, 2006); Elliot D. Cohen, *What Would Aristotle Do? Self-Control Through the Power of Reason* (Amherst NY: Prometheus Books, 2003); “Logic-Based Therapy: The New Philosophical Frontier for REBT” Albert Ellis Foundation <http://www.albertellisfoundation.org/essays/logic.html>

³ Edmund Husserl, *The Paris Lectures*. 2nd Ed., Trans. Peter Koestenbaum (The Hague, Netherlands: Martinus Nijhoff Publisher., 1967), p. 12.

⁴ When an object of an emotion does not exist, this is sometimes called its “intentional inexistence.” See Roderick M. Chisholm, *Perceiving: A Philosophical Study* (Ithaca, NY: Cornell University Press, 1969).

⁵ Cohen *What Would Aristotle Do?* pp. 122-123

⁶ Cohen, *What Would Aristotle Do?*

⁷ Elliot D. Cohen, “The Process of Logic-Based Therapy,” *Pratiche Filosofiche* (Fall 2003); “Philosophical Principles of Logic-Based Therapy,” *Practical Philosophy* Vol 6.1 (Spring 2003)

⁸ Cohen, *The New Rational Therapy*, pp. 6-7.

⁹ Cohen, *What Would Aristotle Do?* Chapter 9.

¹⁰ Cohen, *The New Rational Therapy*.

¹¹ The shaded region of the following figure contains Fallacies of Reporting and their respective transcendent virtues. The un-shaded region represents the Fallacies of Behavioral and Emotional Rules. See Cohen, *The New Rational Therapy*, p. 16.

¹² Cohen, *The New Rational Therapy*, pp. 16-18.

¹³ Cohen, *The New Rational Therapy*

¹⁴ Cohen, *The New Rational Therapy*

¹⁵ Gustav Bergmann, “Outline of an Empiricist Philosophy of Physics” in Herbert Feigl and May Brodbeck, eds., *Readings in the Philosophy of Science* (New York: Appleton-Century Crofts, 1953), pp. 262-287.

¹⁶ Cohen, *The New Rational Therapy*, pp. 52-53.

¹⁷ Cohen, *The New Rational Therapy*

¹⁸ Aristotelis Santas, “Willpower,” *International Journal of Applied Philosophy* 4, no. 2 (fall 1988): 9.

¹⁹ Cohen, *The New Rational Therapy*