Depression, Informal Fallacies, and Cognitive Therapy:
The Critical Thinking Cure?

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Depression is the mental health issue of our time, as anxiety was in the time of Sigmund Freud. Indeed, depression has aptly been called the common cold of mental illness. But while little headway has been made in finding a cure for the common cold, tremendous strides have been made in the treatment of depression. Perhaps most notable, and certainly the most publicized, among these strides is the new generation of antidepressant medications, (SSRIs) including Prozac, Paxil, and Zoloft. We wish, however, to focus on a different advance, cognitive therapy. In a world that medicates and anesthetizes reflexively, cognitive therapy is indeed an anomaly. It points to a way of analyzing and debunking the negative thoughts of the depressed individual in a way that comes under the rubric of critical thinking. In many works, including two classic volumes, Depression: Causes and Treatments and Cognitive Therapy and Emotional Disorders, Aaron T. Beck, a pioneer of the cognitive movement, has demonstrated that correcting our ways of thinking can actually cure certain maladies, including depression.

It is not the purpose of this paper to confirm Beck’s thesis, however. Rather, what we will be concerned with is a single question: Given what cognitive theorists tell us about the way a depressed person thinks, is depressed thinking illogical? The message of cognitive therapy in general, and Beck in particular, is that “the depressed patient shows certain patterns of illogical thought” (1967, p. 285 emphasis added). But is depressed thinking illogical, technically speaking? Yes, it is, to the extent that the cognitive distortions, the ways of thinking typical of the depressed individual, embody and exemplify a number of logical fallacies. Indeed, Beck even speaks in these terms. “The cognitive therapist induces the patient to apply the same problem-solving techniques he has used throughout his life to correct his fallacious thinking” (1976, p. 20, emphasis added).

In this paper, then, we shall begin with a brief examination of the characteristic cognitive distortions of the depressed individual, highlight the fallacious nature of each of the distortions, and conclude that depressed thinking is illogical, thus indicating correction by critical thinking in some cases.

10 Cognitive Distortions

Let us make two things clear from the beginning. First, our examination of the illogical thought of the depressed individual is simply a description of the way a depressed individual is thinking. We do not wish to argue that the thoughts are the cause of the depression, only that they serve to perpetuate it. No responsible cognitive therapist would rule out the possibility that there may be other causes contributing to the depression, nor would a responsible therapist rule out the possibility of pharmacological assistance in treating the patient (Beck, 1991, p. 371). Second, our account of cognitive therapy has been simplified, to fit the confines of this modest project. We refer the reader interested in learning more to the works of Aaron T. Beck mentioned above.

David D. Burns, a student and disciple of Beck, has captured Beck’s insights, and indeed developed them, in a remarkably lucid and accessible popular book entitled Feeling Good: The New Mood Therapy. We shall, then, use Burns as our primary point of reference. Perhaps Burns’s (1980) greatest contribution has been that of taking the hodgepodge of illogical depressed thinking and classifying it in terms of ten cognitive distortions. What follows is a brief examination and explanation of each of the
cognitive distortions. To be certain, each of these distortions may be found in the thought of any of us on occasion, but in the case of the depressed individual these ten distortions become pervasive. Inasmuch as these distortions are illogical and actually cause pain and emotional upset, we are all better off without them to whatever extent we can manage that.

1. All-or-Nothing Thinking (Beck, 1976, p. 100, speaks of this distortion as "absoluteness"). This is the cognitive distortion in which an individual sees things in black-and-white categories. Either I am a complete success or a total failure. A student of mine once told me she had to get an A in my course or else she would have to leave school. "Why?" I asked, "are you on academic probation?" "No," she said, "but if I don't get an A my grade point average will drop below 3.5, and I wouldn't be able to stand that." We all, at times, engage in all-or-nothing thinking, but for many depressed individuals such thinking is ever-present.

2. Overgeneralization (Beck 1976, pp. 94 & 219; Beck, 1967, pp. 234-235). Overgeneralization is the tendency to see a single negative event as a never-ending pattern of defeat. A single disappointment is taken as an ominous sign of a dark future; all hope is lost. The high school senior who does not get into the college of her choice may conclude that her life is "over." If she does not go to that college she will not get into the right law school, find the right job, and live a happy life. On occasion any one of us may think in this way, but quickly we discover, either on our own or through the help of another, that we are being illogical. There are many paths we can take towards our ultimate goals, and this one disappointment was but an opportunity to change paths. The depressed individual just cannot seem to manage to see things this way, however.

3. Mental Filter (Beck, 1967, p. 234, calls this distortion as "selective abstraction"). This is the cognitive distortion in which an individual picks out a single negative detail and dwells on it exclusively, and as a result, the individual's vision of reality is dark and gloomy. The mind picks out one clearly negative detail and filters out the rest. The owner of a new car notices a small chip in the paint, and can seem to think of nothing else. Instead of enjoying his new car, he sees it only as flawed, and perhaps bitterly sees the whole world as flawed. In the case of our car owner this disillusionment may be temporary, but in the case of the depressed individual it remains as an unwelcome guest.

4. Disqualifying the Positive. This is the cognitive distortion in which an individual rejects or denies the value of positive experiences, insisting they "don't count" for whatever reason. A man complains, "no one likes me," to which his wife responds, "I like you, the children like you, and your friend Bob likes you." In turn the man responds that none of that counts; all of those people only pretend to like him or like him out of a sense of duty. The man ignores, rejects, or explains away positive experiences and evidence in order to persist in his negative thoughts. Some of us have trouble taking a compliment, but few of us indulge in disqualifying the positive to the extent that the depressed individual does.

5. Jumping to Conclusions (Beck, 1976, p. 117). This is the cognitive distortion in which an individual makes a negative interpretation of the facts, and then draws a negative conclusion without convincing support. This distortion, in fact, has two major types, mind reading and the fortuneteller error. In mind reading an individual concludes, without good evidence that another thinks negatively of her or is reacting negatively to her. I call an old friend to chat, but he tells me this is a bad time—would I please call him back? Rather than accept that I may actually have gotten him at a bad time, I conclude that he does not value our friendship and does not care to stay in touch. I am, in essence, "mind reading." Without the proper evidence, and in fact even with contradictory evidence, I conclude that I know what someone else is thinking.

In the fortune teller error an individual concludes that things will turn out badly, almost as an already established fact, though the evidence in support of her conclusion is tenuous at best. A woman concludes that she will not get the job she interviewed for, on the basis of a bad feeling. In fact, though, she is highly qualified and did well in the interview. Despite the
evidence, she chooses the negative belief that she will not get the job. Isolated incidents of jumping to conclusions are unfortunate and unpleasant, but in the depressed individual they can be engrossing.

6. Magnification or Minimization (Beck, 1967, p. 231). This is the cognitive distortion in which a person does not, seemingly cannot, see things in the proper perspective. The person exaggerates the importance of, magnifies, some things such as someone else’s achievement or her own setbacks. The person may also diminish the importance of, minimize, some things, such as her own achievements or someone else’s setbacks. A person believes, for example, that the promotion she received was not a big deal and that the fact that she has not stayed on her diet makes her a worthless individual. Any of us may fall prey to this kind of thinking on occasion, but for the depressed individual it is a much-traveled path to feelings of inferiority and deepening depression.

7. Emotional Reasoning. This is the cognitive distortion in which a person believes, without justification that his negative feelings reflect the way things really are. Fortunately enough, however, feelings do not always mirror reality. Still, a person might reason for example: “I feel like the world is against me, so the world must be against me.” or “I feel like no one likes me, so it must be the case that no one likes me.” Intensely negative feelings such as these rarely correspond to reality. If one can suspend belief in them for a short time, one is likely to discover how misguided they are. The difficult part can be in pushing oneself to give up belief in the reflecting power of these feelings, even temporarily. The depressed individual may see this as an overwhelming and fruitless task, but truly it is not.

8. Should Statements (Beck, 1967, pp. 232-233). This is the cognitive distortion in which a person tries to motivate himself by declaring, without justification that he “should” or “should not” do, say, or think certain things. While this practice seems harmless enough at first glance, it is actually a much harsher motivation than may be necessary. Guilt, shame, and self-loathing are often the results of taking this so-called “shouldy” approach to life. Should-motivation is the emotional equivalent of whipping oneself to bring about desired behavior. A person, for example, may claim “I should stay on my diet.” or “I should spend more time with my children.” The problem with this approach is that there is nothing to win and everything to lose. If the person does what she “should,” there is no sense of having done well, and if the person fails to do what she “should” the consequence may be guilt, shame, and self-loathing. It would be preferable to rephrase these goals as, “It would be good if I could stay on my diet.” and “It would really be nice if I could spend more time with my children.” The differences between these formulations and the earlier ones are subtle but important. Something positive to do is pointed out, not something that “should” or “must” be done. If the person follows through, she can feel good about herself; she did not do something she was obligated to do but something that was good to do. By the same token, if the person falls short she can recognize that she is a human being, an imperfect human being like all others. There is no need for her to beat herself up emotionally. We could all benefit from removing the unwarranted “should” motivation from our lives, but for the depressed individual it is a necessary step to recovery.

9. Labeling and Mislabeled (Beck, 1967, p. 235). This is the cognitive distortion in which a person inappropriately describes himself or another with negative, emotionally charged language. As was the case with should statements, this is truly emotional violence. A person does not get the promotion he wants and so says “I’m a loser.” Instead of simply recognizing that he has had a disappointing experience, one with a number of contributing factors, he sums it all up with an abusive self-label—“I’m a loser.”

A person may also choose to label another, one whose behavior he disapproves of. For example, a man calls or thinks of his wife as a “bitch” on the basis of a series of minor disagreements they have had. This, of course, does not help matters, but rather generates resentment. The problem is that most labeling
is really mislabeling; rarely, if ever, can an individual be adequately described by a single label or even a series of them. Human beings are complex and ever changing; we do others and ourselves a tremendous disservice when we think and speak in terms of labels. The depressed individual uses a stockpile of labels to assault himself and injure his relations with others.

10. Personalization (Beck, 1967, p. 232). This is the cognitive distortion in which a person sees herself as the cause of some negative external event, which in actuality she is not primarily responsible for, or perhaps not responsible for at all. A teacher, for example, feels like a failure when she cannot seem to get through to a particular student. It may turn out, however, that the student is not working hard enough and also does not have a very good aptitude for the subject matter. A child misbehaves at daycare and the parents are filled with feelings of guilt and parental inadequacy. Personalization goes hand in hand with guilt; it augments and furthers it. Instead of personalizing, we would do better to recognize our own limitations; we cannot control, nor are we personally responsible for, everything, which concerns us. Recognizing limitations in this way is an act of liberation, particularly for the person suffering from depression.

Fallacies and Cognitive Distortions

Having surveyed the cognitive distortions characteristic of depressed thinking, let us now examine in what ways they are "illogical." Clearly these distortions are illogical in the ordinary language use of the term, but are they illogical in a more technical sense? In fact they are; each cognitive distortion contains and exemplifies at least one of the logical fallacies. There has been an extensive debate in recent years over the nature and theoretical value of fallacies (Hansen & Pinto, 1995). A fallacy, as we shall use the term, is a logically defective argument (Kahane & Cavender, p. 6). An argument is logically defective when it contains errors in reasoning resulting from premises, which are unacceptable, irrelevant, or insufficient (Schlecht, 1991; Johnson & Blair, 1994, p. 55). It follows from this definition that all fallacies fall into one or more of three general categories. Fallacies of unacceptable premise occur when an arguer accepts a premise that is unwarranted. Fallacies of relevance occur when an argument contains premises that are logically irrelevant to the conclusion. Fallacies of insufficient evidence occur when an argument's premises are insufficient to support the conclusion.

Despite the deficiencies in their premises, arguments containing fallacies are often found quite persuasive. The depressed individual, unfortunately, finds the cognitive distortions and the fallacies embedded within them all too persuasive. The goal of cognitive therapy is to get such an individual to recognize the illogical and self-defeating patterns within his thought, and through a variety of measures (which we cannot begin to detail here) cease to think that way. Whether or not cognitive therapy can succeed in this effort is not our concern here. Rather, we are simply concerned to show that each of the cognitive distortions is in fact illogical, that each does in fact exemplify a specific or general logical fallacy.

1. All-or-Nothing Thinking. This cognitive distortion exemplifies the fallacy of false dilemma, presuming that only two alternatives exist when in fact there are more than two (Schick & Vaughn, 2002, pp. 299-300). The student who believed she had to either keep a 3.5 grade point average or else drop out of school was certainly setting up a false dilemma. There were, of course, other alternatives. It is in this way, then, that the cognitive distortion of all-or-nothing thinking is illogical—it involves the fallacy of false dilemma.

2. Overgeneralization. This cognitive distortion exemplifies the fallacy of hasty generalization, drawing a conclusion about all or most things of a certain type on the basis of evidence concerning only a few things of that type (Bassham, et al., 2002, pp. 172-73). The person who engages in overgeneralization sees a single event as a sign of a never-ending pattern of defeat. The high school senior who concludes on the basis of not getting into the college of her choice, that all of life will be a series of disappointments is engaging in overgeneralization, and in the language of logic is
committing the fallacy of hasty generalization. On the basis of one important event being disappointing she reasons that all future important events will be disappointing.

3. **Mental Filter.** This cognitive distortion exemplifies the fallacy of **suppressed evidence.** This fallacy occurs when an arguer unjustifiably overlooks or slight relevant evidence that warrants a quite different conclusion than the one drawn by the arguer (Kahane & Cavender, 1998, pp. 54-56, slightly adapted). When, through the cognitive distortion of mental filter, we allow for a single negative detail to color our vision of all reality we commit the fallacy of suppressed evidence. The new car owner who allows the small paint chip to so disturb his life is committing the fallacy of suppressed evidence. He is dwelling obsessively on this one negative reality, while ignoring other positive realities in his life. Obviously this person has let things get away from him, has let a small negative fact dictate conclusions that are simply unwarranted.

4. **Disqualifying the Positive.** This cognitive distortion also exemplifies the fallacy of **suppressed evidence.** Consider the depressed man who discounts his wife’s statement that “I like you, the children like you, and your friend Bob likes you” in order to persist in his negative thought that “no one likes me.” This individual is unjustifiably ignoring or downplaying evidence that is inconsistent with his conclusion, and thus commits the fallacy of suppressed evidence.

5. **Jumping to Conclusions.** This cognitive distortion exemplifies the general fallacy of **insufficient evidence.** The person who “jumps to conclusions” often makes a negative interpretation of facts that are inconclusive. An old friend tells me that he does not have time to talk on the phone at the moment. I have no good evidence that he doesn’t want to talk to me, but I nevertheless assume this to be the case. A strong candidate for a job concludes she will not get the position, essentially because she assumes the worst about herself. The depressed individual is nearly always inclined to draw negative or self-critical conclusions from evidence that more objective observers would find to be inconclusive or supportive of a less negative conclusion.

6. **Magnification or Minimization.** Magnification and minimization typically involves the general fallacy of **unacceptable premise.** Clearly, the woman who believes that her new promotion is not a big deal and that breaking her diet makes her a failure is drawing conclusions from premises that are not reasonable or warranted.

7. **Emotional Reasoning.** This cognitive distortion exemplifies the general fallacy of **insufficient evidence.** The distortion occurs when an individual believes, without good reason, that his or her negative feelings reflect the way reality is. Thus, for example, a depressed individual who reasons that he is worthless because he feels worthless commits the fallacy of insufficient evidence by drawing an unwarranted conclusion from insufficient evidence.

8. **Should Statements.** This cognitive distortion commonly exemplifies either the specific fallacy of **false dilemma** or the general fallacy of **unacceptable premise.** In one variant of this distortion, a depressed individual may reason something like this:

Example 1
1. I must stay on my diet, or else I’m worthless and must punish myself.
2. I didn’t stay on my diet.
3. Therefore, I’m worthless and must punish myself.

Since the first premise poses a false either/or choice, this argument commits the fallacy of false dilemma. In the second common variant of the distortion, a depressed individual draws a conclusion based on a false and unrealistic “should” statement. That is:

Example 2
1. Anyone who feels angry with his or her kids is a bad parent and should feel guilty.
2. I sometimes feel angry with my kids.
3. Therefore, I am a bad parent and should feel guilty.

In this example, the first premise is unrealistic and unwarranted. Thus, the arguer commits the fallacy of unacceptable premise.

9. **Labeling and Mislabeled.** This cognitive distortion illustrates the general fallacy of
insufficient evidence. A depressed individual who reasons, for example, "I didn’t get the promotion, therefore I’m a loser," is guilty of drawing an excessively self-denigrating conclusion from insufficient premises. Similarly, a person who labels his wife a "bitch" after a series of minor disagreements commits the fallacy of insufficient evidence by attaching a harsh and inappropriate label that is not warranted by the evidence.

10. Personalization. This cognitive distortion exemplifies the fallacy of false cause, the error of supposing two events are causally connected when they are not (Bassham, et al., 2002, pp. 171-72). Personalization is, in fact, one of the leading ways in which we mistakenly assume a causal connection. Perhaps because we would like to think we have more control over things than we actually do, we assume personal responsibility for things that are not actually our fault. The teacher who feels like a failure because a certain student is failing may well be involved in the cognitive distortion known as personalization, and so may well be committing the fallacy of false cause. A dedicated and competent teacher cannot reasonably assume she is the cause of failure in the case of a lazy or mediocre student. Most people can see this easily, but the depressed individual often cannot.

As we have seen, then, the cognitive distortions are indeed illogical; that is, they each embody and exemplify at least one logical fallacy. Our examination makes no claims to being exhaustive; there may be other fallacies to be found within the cognitive distortions. There are other interesting and important questions, which we could not hope to answer in this paper: Does such negative and fallacious thinking actually cause depression, or is it just symptomatic of depression? Can we correct such thinking, and so alleviate depression through realizing that our ways of thinking are illogical? Since at least the time of Socrates philosophers have argued whether knowing the good necessarily implies doing the good. Part of the weakness of Freudian psychoanalysis is, of course, that in practice a realization of a problem’s source does not necessarily lead to the problem’s correction. Does cognitive therapy fall prey to the same difficulties, perhaps as a result of human weakness and a less than fully rational human nature? Perhaps, but we would suggest that the techniques developed by cognitive psychologists have a leg up on those of Freudian psychoanalysts. We cannot even begin to detail those techniques here but the interested reader should know that they are logical and philosophical in nature, involving a rigorous examination of one’s own thoughts committed to writing. Research in cognitive therapy appears quite promising (Burns, 1980, pp. 233-255), and so we shall leave it to the cognitive psychologists to further establish on scientific grounds what initially appears plausible on philosophical grounds.

References


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**Author's Notes**

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**Endnotes**

1  Cf. Kahane & Cavender, p. 6; Layman, pp. 165-166; Churchill, pp. 436-437; Johnson & Blair, pp. 54-56 (restricting the term “fallacy,” however, to types of logically defective arguments that occur “with some marked degree of frequency”).

Of course, there are alternative ways of defining “fallacy.” Some writers exclude arguments that are defective only because they include false or unwarranted premises. See, for example, Hurley, p. 18. Others restrict fallacies to logically defective arguments that “seem to be correct” but aren’t. See, for example, Copi & Cohen, p. 690. Others restrict fallacies to serious infractions of argumentative norms. See, for example, Walton, p. 15. Still others (the so-called “Amsterdam school”) propose reconceptualizing fallacies as violations of rules of a “critical discussion.” See, for example, van Emeren & Grootendorst, pp. 130-144. It would be out of place, clearly, to debate the merits of these alternative definitions in this essay. Our claim is simply that on one plausible and widely held definition of “fallacy,” depressed individuals’ thinking is characteristically fallacious.

2  Thanks to Alan Clune, William Drumin, William N. Irwin, and two anonymous reviewers for comments on an earlier version of this paper.