

Draft of August 1, 2008

Happiness: Empirical Research; Philosophical Conclusions¹

1. Introductory

In recent years there has been a tremendous surge of academic interest in happiness. It seems that just about every week there is an announcement of a new book on the nature of happiness, or the measurement of happiness², or the causes of happiness, or the history of happiness³. Some of these books have been written by philosophers. Others have been written by psychologists, economists, sociologists, and other empirical scientists.⁴ The surge of interest in happiness is truly interdisciplinary.⁵ Everybody wants to get into the act.

One feature of this burgeoning literature especially interests me. There are many instances in which it is alleged that some body of empirical research has important implications for some long-standing philosophical question. The suggestion seems to be that philosophers had better pay more attention to the work of their colleagues in psychology or economics, lest they embarrass themselves by being ignorant of important findings that bear directly on their philosophical work.⁶ This suggestion meshes nicely with the current “science worship” prevalent among some philosophers.⁷

¹ Thanks to Dan Doviak, Jeremy Cushing, Brad Skow, Owen McLeod, Jason Raibley, and students and colleagues who attended Phil 760 in the Spring term of 2006. Also, thanks to Bernard van Praag for some interesting correspondence.

² One example: Bernard van Praag and Ada Ferrer-I-Carbonell, *Happiness Quantified: A Satisfaction Calculus Approach*, Oxford University Press, 2004.

³ One example: Nicholas White, *A Brief History of Happiness*, Blackwell, 2006.

⁴ One example: Michael Eid and Randy J. Larsen *The Science of Subjective Well-Being*, Guilford Press, 2008.

⁵ See, for example, the essays in Kahneman, D., E. Diener, and N. Schwarz, eds., *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation Press, 1999, for an indication of how interdisciplinary this research has been.

⁶ This attitude may be illustrated by this remark from Daniel Haybron: “Philosophical reflection on the good life in coming decades will likely owe a tremendous debt to the burgeoning science of subjective well-being and the pioneers, like Ed Diener, who brought it to fruition. While the psychological dimensions of human welfare now occupy a prominent position in the social sciences, they have gotten surprisingly little attention in the recent philosophical literature. The situation appears to be changing, however, as philosophers begin to follow the lead of their peers in psychology and other disciplines and examine seriously the psychology of human flourishing.” (Dan Haybron, “Philosophy and the Science of Subjective

Since I have been trying to write a book about happiness, I figured that I should find out something about this empirical research. I wanted to avoid embarrassing myself. I certainly do not want to seem parochial or ivory-towerish. Accordingly, I set off into previously unexplored regions of the library. In an effort to make myself at least minimally familiar with what's going on in the empirical side of happiness studies, I read books and articles that I otherwise would not have read. I learned about the work of some people who are not members of the American Philosophical Association. I even exchanged emails with some of them. Today I want to report on one small but perhaps illustrative example of what I discovered.

The example involves an economist – Richard Layard – and a psychologist – Richard Davidson. In a recent series of lectures and a book, Layard seems to claim that Davidson's empirical research bears directly on some philosophical puzzles about happiness. I want to say something about Davidson's research; I want to look more closely into these claims about the philosophical relevance of this empirical research. I want to explain why I think that Davidson's research (no matter how interesting it may be otherwise) has no such relevance.

First, however, some background.

2. Layard on the Reality of Happiness

Peter Richard Grenville Layard, (born 15 March 1934), is a British economist.⁸ He was educated at Eton, where he was a King's scholar. He attended King's College, Cambridge and the London School of Economics. He was Senior Research Officer for

Well-Being” in Michael Eid and Randy J. Larsen *The Science of Subjective Well-Being*, Guilford Press, 2008).

⁷ For a vigorous and amusing discussion of the pernicious effects of “scientism”, see Section 9.4.4 of Michael Huemer's *Ethical Intuitionism*.

⁸ This biographical information about Layard can be found in the Wikipedia article about him. See http://en.wikipedia.org/wiki/Richard_Layard,_Baron_Layard

Robbins Committee on Higher Education. He was founder-director in 1990 of, and is a current programme director at, the Centre for Economic Performance at the London School of Economics. Layard has worked as advisor for numerous organizations, including government institutions in the United Kingdom and Russia.

He is a Labor life peer in the House of Lords as Baron Layard, of Highgate in the London Borough of Haringey. According to the article on Layard in Wikipedia, Layard has been a vigorous proponent of the idea that welfare should be assessed not by appeal to income, but by levels of happiness. He is the author of several books including *Happiness: Lessons from a New Science* (New York: Penguin, 2005). Some of the material that appears in his book about happiness previously appeared in a series of lectures that Layard presented at the London School of Economics in March of 2003. In his book and lectures, Layard discusses the work of Richard Davidson.

Davidson is the Vilas Professor of Psychology and Psychiatry at the University of Wisconsin. He got his Ph D. in 1976 at Harvard University. He is now the Director of the Laboratory for Affective Neuroscience at Wisconsin as well as the Director of the Waisman Laboratory for Brain Imaging & Behavior. His work has been described in many professional papers as well as a remarkable number of newspaper articles and popular magazines, including *O: The Oprah Magazine* in March, 2008.

In his Lionel Robbins Memorial Lecture⁹ as well as in his book on happiness¹⁰, Layard provides a brief summary of some empirical research that was undertaken by Davidson. According to Layard, Davidson had taken brain scans of various subjects while they were undergoing certain controlled experiences. After describing this research, Layard concludes by saying, ‘I hope I have persuaded you that there is such a thing as happiness, as Bentham believed.’¹¹ Apparently Layard is claiming that

⁹ “Happiness: Has Social Science A Clue?”, delivered at the London School of Economics on March 3,4,5 2003; available online at <http://cep.lse.ac.uk/events/lectures/layard/RL030303.pdf>. Lecture One: “What Is Happiness? Are We Getting Happier?”

¹⁰ Richard Layard, *Happiness: Lessons from a New Science* (New York: The Penguin Press, 2005).

¹¹ Layard 2003, p. 11. In the corresponding passage in Layard 2005 he says, ‘I hope I have now persuaded you that happiness exists and is generally good for your physical health.’ p. 24.

Davidson's empirical research provides reason for us to accept the conclusion that "there is such a thing as happiness" or, as he expresses it in his book, that "happiness exists".¹²

This would be a remarkable result. It would be a case in which empirical research would support what appears to be an ontological or conceptual conclusion ("there is such a thing as happiness") that would otherwise be in doubt. Let us look more closely into this.

Davidson and his colleagues at Wisconsin did a lot of studies involving brain imaging technology. Among other things, they put people into MRI machines, or gave them PET scans, or EEGs. In some cases they asked their subjects how they were feeling. They discovered that there is a high correlation between reports of "positive feelings" and 'brain activity in the left side of the pre-frontal cortex, somewhat above and in front of the ear.'¹³ (For convenience in what follows, let us call this the "LH area" of the brain – short for "Left Happiness".) This finding emerged only in cases in which the subjects were right-handed. In left handed people, Davidson discovered a correlation between "positive affect" and increased activity in the corresponding area on the other side of the brain. (Let us call this the "RH area".) In another series of experiments, people were put into an MRI machine. They were shown pictures of babies. One of the pictures showed a cute smiling baby; another displayed a baby with a disturbing facial deformity. Davidson found that there is a high correlation between seeing the cute baby and having increased activity in the LH area (whereas there is a high correlation between seeing the deformed baby and having increased activity in the RH area). Again, this held true for right-handed subjects, but the reverse was true for left-handed subjects. In yet another series of experiments, it was found that right-handed people who have a lot of activity in the LH area also tend to smile a lot and also are judged by their friends to be pretty happy whereas right-handed people who have a lot of activity in the RH area tend to report "negative thoughts" and to smile less and to be reported as being less happy. It

¹² Layard's reasoning is not based solely on Davidson's research. Layard mentions some other evidence that might support his conclusion. I am focusing on the question whether Davidson's research, taken in isolation, provides any support for the conclusions that Layard states.

¹³ Layard, 2003, p. 8.

was also found that when babies suck on something nice, their LH area becomes active. And it was also found that 2.5 year old toddlers with active LH areas are more exploratory whereas other children who tend to cling to their mothers had lower amounts of activity in the LH area.¹⁴

In fact, Davidson and his colleagues have performed many more experiments. Their work has been described in great detail in an impressive series of publications.¹⁵ It has also been discussed in a number of newspapers and magazines.¹⁶ Though brief, Layard's summary seems fundamentally accurate and is certainly adequate for our purposes here.

Layard evidently thinks that Davidson's work gives us some reason to be persuaded that "there is such a thing as happiness". How would the reasoning go?

On the most straightforward interpretation, the argument (admittedly somewhat compressed) would look like this:

Argument A

1. There is a high correlation between increased activity in the LH area and reported positive thoughts, being reported as happy, seeing cute babies, sucking on something nice, and exploring.
2. If (1), then there is such a thing as happiness.
3. Therefore, there is such a thing as happiness.

¹⁴ This research is summarized on pp. 17-20 of Layard, 2005 in a section entitled "Brainwaves".

¹⁵ A list of publications can be found at <http://psyphz.psych.wisc.edu/>.

¹⁶ "This is Your Brain on Happiness" by Penelope Green *O The Oprah Magazine*, March, 2008, pp. 233-5. For a list of popular newspaper and magazine articles about Davidson and his research, as well as TV interviews, see Davidson's website at <http://psyphz.psych.wisc.edu/>.

Premise (1) is intended to be a brief summary statement of some of Davidson's results. Premise (2) links these results to Layard's conclusion, (3). But (2) seems to presuppose an essential assumption. It will be worthwhile to make this more explicit.

So far as I have been able to determine, Davidson himself never explicitly said that the subjects in his experiments were all happy. Rather, he described them in a variety of other ways. Some were said to be crawling around energetically; others were said to be sucking on "something nice"; others were looking at pictures of cute babies. Perhaps the underlying assumption is that those subjects were all happy, whereas babies who were clinging to their mothers and sucking on things that were sour were unhappy. Let us consider what happens to the argument when this is made explicit.

Perhaps the argument would be expanded as follows:

Argument B

1. There is a high correlation between increased activity in the LH area and reported positive thoughts, being reported as happy, seeing cute babies, sucking on something nice, and exploring.
2. If (1), then there is a high correlation between increased activity in the LH area and happiness.
3. If there is a high correlation between increased activity in the LH area and happiness, then there is such a thing as happiness.
4. Therefore, there is such a thing as happiness.

When the argument is expanded in this way, its weakness becomes more obvious. Premise (2) is problematic for at least two reasons. (2) is problematic in part because nothing has been said to support the assumption that the subjects of Davidson's experiments were actually happy when undergoing the listed experiences or engaging in

the listed activities. There's no evidence that subjects who were seeing pictures of cute babies were happier than those seeing pictures of deformed babies. Or that infants clinging to their mothers or not sucking are less happy than those exploring or sucking. The pieces of information that have actually been given might bear not on happiness, but on pleasure, or curiosity, or feelings of security, or even thirst.

I think it is interesting to consider what would have to be done to establish that there is a correlation between increased activity in the LH area and actual *happiness* (as premise (2) says). It seems to me that a careful researcher would have to start by figuring out what must be true of a person in order that he is correctly described as being "happy". And this, of course, is a matter of some controversy.

According to the currently most popular conception of happiness; happiness is fundamentally a matter of being satisfied with one's life as a whole.¹⁷ If this theory of happiness is correct, then it is very doubtful that all of Davidson's subjects were happy while undergoing their MRIs. Consider the sucking and crawling toddlers. One may reasonably doubt that those toddlers were satisfied with their lives as wholes (from beginning to end) as they sucked and crawled. One may reasonably doubt that those toddlers were judging that their lives as wholes matched up quite well with their ideals. (Do 2.5 year old toddlers have life ideals? Do they think about their lives as wholes?) As a result, if the Whole Life Satisfaction theory provides the correct account of the nature of happiness, then many of Davidson's subjects were not happy when Davidson took his measurements. His findings, in that case, have no bearing on the question whether happiness is correlated with electrical activity in the LH area.¹⁸

¹⁷ For defenses of this view about happiness, see Tatarikiewicz (1966, 1976), Brandt (1967), Telfer (1980), Sumner (1996), etc. For critical discussion, see Feldman "Whole Life Satisfaction Concepts of Happiness", *Theoria* (forthcoming).

¹⁸ Whole Life Satisfactionism seems to be the most popular conception of happiness among empirical scientists, too. In "Ed Diener and the Science of Subjective Well-Being", Randy Larsen and Michael Eid indicate that, as currently understood among psychologists and others, subjective well-being has both an affective (or hedonic) component and a cognitive component. This is described as "a cognitive judgment about one's life, as a whole, as satisfying." (Larsen & Eid, 2008); p. 4.

Another well-known theory of happiness has been defended by Daniel Kahneman.¹⁹ According to this theory, a person is happy at a time if and only if he is having experiences at that time that he wants to continue having. Consider a toddler in Davidson's experiment who is clinging to his mother. It's possible – even likely – that this toddler would be dismayed if someone started to pull him away from his mother. So he very well may want his current experience to continue. In this case, Kahneman's theory of happiness would rate this baby as happy; yet Davidson noted a correlation between clinging behavior and *decreased* activity in the LH area of the brain. He cited these toddlers as examples of *unhappy* subjects. Once again, if the cited theory of happiness is true, Davidson's research would seem to show that in some cases happier subjects have decreased levels of LH brain activity. It certainly would not provide any support for premise (2) of the argument.

Possibly those sucking and crawling toddlers were taking intrinsic attitudinal pleasure in the taste of the nice things on which they were sucking, or were taking pleasure in the sights and sounds they were experiencing as they crawled. In this case my own theory of happiness would imply that they were happy (given a bunch of other assumptions about their cases).²⁰ But, of course, it's also possible that they were not happy while taking the test. Maybe they were just curious, or thirsty, or amused. Or maybe they were just crawling around without being in any particular emotional state.

So my point is simple: Davidson's research may have found a neurophysiological commonality among a bunch of test subjects. They had increased activity in the LH area of the brain. It is conceivable that every one of those people was experiencing some sort of "positive emotion" (although it is also conceivable that some of them were not). But there is little evidence to support the notion that every one of them was actually *happy*. Some theories of happiness suggest that they were happy; others suggest that they were not happy. But since there is little agreement about which theory is correct, and there is not much solid evidence about how the subjects were feeling, there is little justification

¹⁹ Kahneman (1999).

²⁰ I explain and defend my theory of happiness in "What is Thing Called Happiness?" (currently unpublished).

for any claim about their happiness. And even if they were happy, there is not much evidence to support the notion that their degree of happiness is correlated with the intensity of the electrical activity in their brains.

Suppose Davidson had identified the correct theory of happiness. Suppose it is the theory according to which a person's level of happiness is equal to his net balance of intrinsic attitudinal pleasure over pain. Then, in order to determine whether there is a correlation between happiness and electrical activity in the LH area of the brain, Davidson would have to run an entirely different experiment. He would have to give the babies sweet things to suck on, etc. and then determine the extent to which they were happy. This, on the assumption, would be a matter of the total amounts of intrinsic attitudinal pleasure those babies were taking in things while undergoing the experiment. If it could be shown that sucking and crawling babies, people looking at pictures of cute babies, etc. are all happy, and if it could be shown that their levels of happiness were proportional to their levels of brain activity, then we would have reason to believe premise (2). So far as I know, Davidson never attempted any such experiment.

Perhaps Davidson just assumed that the sucking and crawling babies and the other experimental subjects were happy. Perhaps he did this without having any particular view about what happiness is. Let us suppose that he managed to get this right – the subjects he took to be happy in fact were happy, and his estimates of their levels of happiness were approximately right. Nevertheless, the argument would still be a failure.

The deeper problem with premise (2) is that it seems to presuppose precisely the thing that the argument is designed to establish. That is, premise (2) presupposes that the subjects in Davidson's experiments were happy when they were sucking on sweet things and crawling around, etc. But of course if there is no such thing as happiness, this could not be true. If there were no such thing as happiness, no one would ever be happy. Hence, the assumption that the subjects were happy during the experiments begs the question at issue. It assumes that there is such a thing as happiness. Clearly, there is no point in assuming that a certain bunch of subjects are all happy, and then finding that

there are some physiological similarities among them, and then concluding that there is such a thing as happiness. The existence of the physiological similarities is irrelevant; the existence of happiness was already assumed when the subjects were declared all to be happy.

In some passages in his papers, Davidson himself speaks more generally of “positive emotions”. Maybe he was thinking that the crawling and sucking babies, the observers of pictures of cute babies, and the others in his experiments were all alike in this respect: they all were experiencing “positive emotions” while their brains were being scanned. Let us consider what happens to the argument if we understand it in this way.

Suppose we alter premise (2) so as to say (roughly) that there is a high correlation between increased activity in the LH area of the brain and “positive emotions”. We could then adjust the conclusion so that it said merely that there really are such things as positive emotions. The argument as a whole would look like this:

Argument C

1. There is a high correlation between increased activity in the LH area and reported positive thoughts, being reported as happy, seeing cute babies, sucking on something nice, and exploring.
2. If (1), then there is a high correlation between increased activity in the LH area and positive emotions.
3. If there is a high correlation between increased activity in the LH area and positive emotions, then there are such things as positive emotions.
4. Therefore, there are such things as positive emotions.

There are three main comments that I would like to make about this argument. First, and most obviously, when reformulated in this way, the argument does not even purport to establish any conclusion concerning happiness. There is no mention of

happiness in the last line. Thus, it would not be relevant to the conclusion that Layard apparently found so interesting and it is not relevant to philosophical questions about the nature or ontological status of happiness.

Second, although the precise meaning of the conclusion is unclear, the central point seems to be presupposed in premise (2). Any advocate of this argument would have to assume that sucking and crawling babies etc. are experiencing positive emotions. If there are no such things as positive emotions, the babies could not be experiencing them. And if the babies were not experiencing them, the cited experimental evidence could not support the claim that these emotions are correlated with activity in the LH area of the brain. So it appears to me that the argument does nothing to establish that positive emotions exist; rather, it makes use of the assumption that they exist as part of the basis for affirming premise (2).

I mentioned that I think that the conclusion is unclear. This brings me to my third point. I'd like to say a bit more about the concept of "positive emotions". I was not sure how researchers draw the distinction between positive and negative emotions. I tried to find a definitive account by searching through various websites. I did not succeed. I found a website that contained a list allegedly of positive emotions.²¹ It contained 310 items starting with 'able', 'absolved', 'abundant', and 'accelerated' and going all the way to 'worthy', 'yielding', and 'zealous'. It seemed to me that most of the items on the list are not emotions at all, and hence could not be positive emotions. I saw no particular commonality among the items. I found another list that contained seven items listed as positive emotions.²² These are: interest, enthusiasm, boredom [sic], laughter, empathy, action, and curiosity. The author of this list mentioned that "tears" and "pity" might be positive emotions and might be negative, depending upon the circumstances. I found many more lists, but with little agreement about what justifies including anything on the list of positive emotions. Some listers explicitly say that positive emotions need not be

²¹ <http://www.forwardsteps.com.au/docs/PositiveEmotion.pdf>

²² <http://www.worldtrans.org/TP/TP2/TP2A-35.HTML>

“good” in any way²³; others say precisely the opposite. They say that a positive emotion is one that is good to have.²⁴ Although I found many lists of positive emotions, I was not able to find two lists that agreed on which emotions should be counted as positive, though there was some overlap.²⁵ For these reasons I feel that the term is too obscure to be of any value in the reporting of serious empirical research.

This whole line of thinking seems to me to be a dead end. Nothing in Davidson’s research gives us any new reason to suppose that there is such a thing as happiness. Understood in one way, one of the premises of the argument simply assumes that there is such a thing as happiness. Understood in another way the argument has no relevance to the existence or non-existence of happiness. In any case, it is hard to see why we would need to resort to MRI machines to gain evidence that there is such a thing as happiness. Don’t we all know this already simply in virtue of the fact that we have been happy?

3. *The “Objective Reality” of Happiness*

Layard says that he hopes he has persuaded us ‘that there is such a thing as happiness’. Maybe that is a loose and misleading expression of the thesis he actually meant to affirm. In earlier passages, Layard makes some remarks that suggest another interpretation of his thesis. There he suggests that the real question is whether when people report being happy their reports ‘correspond at all accurately to any kind of objective reality?’²⁶ He refines this by asking whether when they make those reports ‘there is a corresponding event that can be objectively measured’.²⁷ He goes on to say that the answer to this question is ‘yes’. ‘... happiness is a cardinal variable’ and the

²³ Some seem to think that an emotion should count as “positive” if the occurrence of that emotion would typically cause a person to behave in a more open, seeking, exploratory way, whereas an emotion should count as “negative” if its occurrence would naturally lead a person to close himself off, or narrow the range of possible experience. See, for example,

http://www.psychology.pl/download/emotions_and_motivation/emotion&motivation_6.ppt.

²⁴ <http://www.improvedlives.com/2008/05/06/are-positive-emotions-a-means-or-an-end/>

²⁵ In fact I did find some pairs of lists that coincided. However, it seemed to me that in these cases one of the lists was simply copied from the other. Perhaps I should say that I could not find any case in which two *independently constructed* lists agreed on what should count as a positive emotion.

²⁶ Layard 2003, p. 8.

²⁷ *ibid.*

‘correlation [between happiness and brain activity] holds strongly across people, confirming our view that happiness can be compared between people’.²⁸

All of this suggests that Layard was really trying to persuade us of a fundamentally different thesis about happiness. Perhaps his aim in citing Davidson’s research was not to persuade us that happiness is real, or that it exists, but rather to persuade us that happiness is “objectively measurable”. Suppose amounts of happiness correspond to amounts of a not merely introspectable but externally observable, intersubjectively measurable, (possibly measurable on a cardinal scale) phenomenon. To say that amounts of happiness “correspond” to amounts of this phenomenon is to say presumably that there are laws of nature according to which amounts of happiness are directly proportional to amounts of this intersubjectively measurable phenomenon. The intersubjectively measurable phenomenon is, presumably, electrical activity in the LH area of the brain. If this is so, then we have an indirect way to measure amounts of happiness. Using Davidson’s empirical techniques, we can measure amounts of electrical activity in the LH area of the brain. Then using the correlations, we can infer amounts of happiness. Surely this is what Layard meant when he said that ‘We can use physical measures to compare the happiness of different people.’²⁹

Utilitarianism, hedonism, and other associated normative theories have from the outset been troubled by the difficulties involved in establishing a reliable method for measuring amounts of utility. Critics would allege that there is no empirical observation that can establish that your pleasure when you say “ten hedons” is just as intense as my pleasure when I say “ten hedons”. During the heyday of positivism, it would then be inferred that it makes no sense to say that your pleasure is equal in magnitude to mine (or that it is not equal in magnitude to mine). The whole utilitarian project was thus called into question. People ridiculed the hedonic calculus. Nowadays the positivistic overkill

²⁸ *ibid.* As a result of some editing and rewriting, these passages do not appear in the same form in Layard 2005. In the later work, he says, ‘Brain science confirms the objective character of happiness.’ (p. 20) He also says, ‘We can also use physical measures to compare the happiness of different people.’ (p. 19) So though the words have been changed, the suggestion that Davidson’s research bears on interpersonal utility comparisons remains.

²⁹ Layard, 2005, p. 19.

has been discarded, but the problem remains: we worry about adding up numbers when there is no way to determine whether equal units represent quantities that are in fact equal in magnitude.

But if it can be shown that levels of happiness correspond to levels of an objectively measurable phenomenon, and this phenomenon can be measured on a cardinal scale, then the complaint can be answered. We can say that even if there is no *direct* way to measure amounts of happiness, still these amounts can be measured *indirectly*. We can in principle accomplish the measurement by noting that amounts of happiness correspond to amounts of electrical activity in the LH area of the brain. Amounts of electrical activity in the brain can be measured using the methods Davidson described. By appealing to the correspondence laws, we can reach conclusions about the amounts of happiness subjects are experiencing. The amounts of happiness would be measurable on an intersubjectively valid cardinal scale. In this way, it might be claimed, the problem of utility measurement is solved and the hedonic calculus is redeemed.

So the construction of this sort of objective system for the measurement of happiness would clearly be of considerable philosophical interest.

If this is really what Layard had in mind, then we get a new interpretation of the argument. As I see it, the argument would go like this:

Argument D

1. It is possible to make objective intersubjectively valid measurements of levels of electrical activity in the LH area of brains.
2. Levels of electrical activity in the LH areas of brains correspond to levels of happiness.
3. If (1) and (2) are true, then it is possible to make objective intersubjectively valid measurements of levels of happiness.

4. Therefore, it is possible to make objective intersubjectively valid measurements of levels of happiness.

In summary, then, the point would be that Davidson's empirical research revealed that amounts of happiness correspond to amounts of electrical activity in the LH area of the brain. That appears as premise (2). Since these amounts of electrical activity are measurable on a cardinal scale that holds for different people (premise (1)), observation of brain activity makes it possible to indirectly measure amounts of happiness. Since we have an objective way to measure amounts of happiness, we presumably also have a solution to the old problem of interpersonal utility comparisons. I should emphasize that Layard did not present precisely this argument. In passages that I have quoted, he made a number of claims relevantly like the claim that appears as the conclusion; he made claims relevantly like the claims that appear as premises (1) and (2). He made remarks that strongly suggest that he may have intended to derive the conclusion from the premises; I have speculated that he may have been thinking of premises like the ones I have provided.

Whether this is Layard's argument or not, the confusion at its core should be obvious. The problem emerges in premise (2). Notice that when the empirical researcher performs his experiments, he makes observations on his subjects, including some babies. Suppose Baby A is sucking on something sweet and has fairly great electrical activity in the LH area of its brain. The researcher has his MRI machine to determine the level of electrical activity in Baby A's brain. Perhaps the level of electrical activity is observed to be 10 volts. This part is fairly unproblematic, but in order to establish a correlation between this amount of electrical activity and some amount of happiness, the researcher must have some way of determining how much happiness Baby A is enjoying when her brain is in this state. But how does the researcher determine the happiness level of Baby A? From the fact that she goes on sucking, nothing follows about her level of happiness. Maybe Baby A sucks that much when she is very happy; maybe she sucks that much when she is considerably less happy. Maybe she is not happy at all; maybe she is just thirsty. From the fact that she smiles while sucking, nothing follows about her level of happiness. Maybe Baby A smiles broadly when moderately happy, or maybe she smiles

only narrowly when very happy. The researcher must then just assume that if the baby is sucking very vigorously and smiling broadly, she must be very happy. Perhaps the researcher decides that Baby A is experiencing 10 units of happiness. This suggests that there is a correlation between certain level of happiness and a certain level of brain activity. Similar observations could be made in cases involving babies who have higher and lower levels of electrical activity in their brains. The researcher could assume that those babies were, respectively, happier and less happy. Then he could summarize his results by stating as a general principle that amounts of happiness correspond to amounts of electrical activity in the LH area of the brain. Thus we have an explanation for premise (2).

Obviously, however, if the researcher proceeds in this way he has simply assumed that he has the capacity to assess the amounts of happiness that his subjects are experiencing; and that he can do this in some way independent of the use of MRI machines. In other words, the researcher proceeds as if there is no problem about making intersubjectively valid measurements of happiness *prior to the application of Davidsonian methods*. But in this case, it is hard to see how the use of the MRI machines helps to solve some problem. The research methodology presupposes that the problem has already been solved.

Someone might suppose that the problem here arises because we are dealing with babies. Suppose instead that our subjects are adults. Imagine that they have no problem talking about amounts of happiness. Suppose the researcher tests many adults. Suppose the MRI machine indicates in each case that the subject is experiencing 10 volts of electrical activity in the LH area of the brain. Suppose each of the adults reports that they are feeling 10 units of happiness. Can't the researcher use this as evidence that amounts of happiness are proportional to amounts of electrical activity? Can't he then use information about amounts of electrical activity to infer conclusions about amounts of happiness?

The answer, obviously, is that unless the researcher has some way of determining that when all these different adults said “10 units of happiness” they were feeling the same amount of happiness, the whole project cannot get off the ground. For if the researcher cannot determine that they were feeling the same amount of happiness, then he has no way of knowing that amounts of electrical activity correspond to amounts of happiness in different people. For all he knows, people with equal amounts of electrical activity may be experiencing different amounts of happiness, even though every one of them reports “10 units of happiness”.

Of course, the researcher could just assume that these adults are able to express their amounts of happiness on an interpersonally valid scale. That is, he could assume that when A says “10 units of happiness” and B says “10 units of happiness” they are in fact feeling the same amount of happiness. In this case, the researcher has assumed that there is no problem about determining how much happiness a person is experiencing. He has assumed that if you want to know how much happiness a person is experiencing, all you need to do is explain the scale and ask the person how happy he is. He will tell you.

Thus it appears that Davidson’s research methodology (under the present interpretation) presupposes that he has the ability to determine how happy his subjects are even before he checks the results generated by his MRI machines. As a result, the research does not indicate a new solution to the problem of happiness measurement. It presupposes that the problem has already been solved in a vastly simpler way.

It is possible that Layard cited Davidson’s research merely to support an even weaker conclusion. Assume first that there is such a thing as happiness; it exists. It is a psychological state that we can observe in ourselves by introspection. Assume next that when other people observe us, they are sometimes able to tell how happy we are. Perhaps they do this by observing our smiles; perhaps they do it by listening to our declarations of happiness. Assume finally that outside observers have the capacity to compare the amount of happiness experienced by one person with the amount of

happiness experienced by another. Let us agree, for the time being, that none of these assumptions is now in question.

Perhaps Layard cites Davidson's research merely to support the thesis that amounts of an observable, objectively measurable brain state correspond pretty closely to amounts of happiness. The brain state, of course, would be electrical activity in the LH area. The research would not be relevant to the question whether happiness exists, because that would be a presupposition of the research. Nor would it be relevant to the question about the objective measurement of levels of happiness, because the research methodology presupposes that we can make such measurements prior to the use of MRI machines. All it would show is that variations in one observable, measurable, interpersonally comparable phenomenon (happiness) correspond to variations in another observable, measurable, interpersonally comparable phenomenon (electrical activity in the LH area).

Of course since I am a philosopher, I am interested in philosophical questions. When I read Layard's remark that 'we can use physical measures to compare the happiness of different people', I thought he was claiming that Davidson's research was relevant to a familiar philosophical question. On the present interpretation, that would be a mistake. The claim here is not that Davidson's research has any relevance to any philosophical question. It's interesting, presumably, simply because it shows that there is a correlation between happiness and a certain kind of brain activity.

It's not clear to me why anyone would care about this. Surely no one would claim that it paves the way toward an easier way to measure happiness. Surely no one would think that it would be easier or more convenient to measure happiness indirectly by the use of a machine that weighs 13,000 pounds and costs more than a million dollars when it is possible to measure happiness more straightforwardly just by asking the subject how happy he is.³⁰ There is no need for a million dollar machine to measure

³⁰ Information about the weight and cost of a Toshiba MRI recently purchased by Bellevue Hospital in New York can be found here: http://www.bellevuehospital.com/new_mri_moves_in.htm

indirectly what can be measured more straightforwardly just by observing the behavior or listening to the reports of subjects.

A somewhat deeper worry is that it is not clear that in fact the subjects studied by Davidson did have degrees of happiness that were proportional to their degrees of LH activity. As I noted above, some of them may have been experiencing some other “positive emotion” and not happiness at all. Furthermore, for all Davidson has shown, it remains possible that some subjects were experiencing more intense positive emotions than others even when they were found to have equal amounts of electrical activity in the LH area. In other words, I think the problem of interpersonal comparisons of happiness is a legitimate problem.

4. Happiness as a Natural Kind

There is yet another way to understand Layard’s claim that “there really is such a thing as happiness”. There is not much in Layard’s lecture or book that would substantiate the claim that this is what he had in mind when he wrote those words; but I suspect that many philosophers will assume that something like this provides an interesting and plausible reinterpretation or extension of his idea.

The thesis in question essentially involves the notions of “folk psychology”, “mature psychology”, and “natural kinds”. Thus, we should begin by saying a few words about these things. I start with an analogy.

Consider a Just So Story about “the sniffles”. In an earlier era, and perhaps even today among the naive, there is the concept of “the sniffles”. Naive people might say that a person had the sniffles if that person had a runny nose, some inflammation of the nasal passages, perhaps some irritation of the eyes, etc. Associated with the concept of the sniffles there might be some naive views about what would cause the sniffles (e.g., a cold, the flu) and some naive views about what could be done to relieve the sniffles (e.g., blow your nose, put on a warm sweater, take a shot of whiskey). As time went by,

researchers discovered that some sniffers really had colds, while other sniffers had allergies. These have completely different causal histories and completely different methods are appropriate for their relief. What works for one will not work for the other.

As the insights of the researchers trickled down to the people in the street, they came to see that cases that they had lumped together under the title ‘the sniffles’ were really of two distinct kinds. In some cases people are suffering from a runny nose due to a cold, and in other cases they are suffering from a runny nose due to allergy. Instead of speaking of “the sniffles”, people began to speak instead of “infectious rhinitis” and “allergic rhinitis”. People stopped talking about the sniffles. Eventually the word ‘sniffles’ will drop out of our vocabulary and the concept will fade into oblivion. It does not carve nature at a joint. It lumps together cases that are in fact of two different natural kinds.

In the earlier era, when people spoke confidently of “the sniffles”, they had a whole collection of naive views about colds, runny noses, infections, cures for colds, etc. This whole body of information, misinformation, superstition, urban legend, etc. may be understood to be a component of “folk medicine”. Later, when serious researchers discovered the underlying biological facts, they replaced those naive views with a whole collection of sophisticated views about infectious rhinitis, allergic rhinitis, the causes of each, the remedies for each, etc. This body of information is a component of what may be called “mature medicine”. The concept of the sniffles is not a component of mature medicine. It has been discarded since it was discovered that no thing in nature corresponds properly to it.

All this suggests another way to interpret Layard’s remarks about happiness. We can imagine that the concept of happiness might have turned out to be like the concept of the sniffles. Here’s a way in which that could have happened: it might have turned out that when psychologists studied happiness closely, they discovered that there are really two importantly different phenomena currently lumped together under the name of “happiness”. For example, they might have found that on some occasions when people

are declared to be “happy” they have increased activity in the LH area, whereas on other occasions the “happy” person is found to have no such change in the LH area, but instead increased activity in the J area. They might also have found that LH-happiness has a certain causal history and functional role, and that it presents itself in consciousness in a previously not noticed distinctive way, whereas J-happiness is different in all these ways. Such discoveries, if they had happened, might suggest that in the future people will stop talking about happiness, and will instead talk about LH-happiness and J-happiness. The naive concept of just plain happiness will disappear.

Although Layard does not say anything quite like this, it is not too far-fetched to imagine that he may have thought that Davidson’s research supported the notion that happiness is not a soon-to-be-abandoned figment of mere folk psychology. Since he found that all instances of happiness have the same underlying neurophysiological basis, his research shows (or at least begins to show) that happiness is a natural kind. The moral of his research is that the concept of happiness will persist in a mature psychology. So the statement that “there is such a thing as happiness” might be taken to mean that happiness is a natural kind – the concept of happiness will persist in mature psychology.

If this is the correct interpretation of what’s going on here, then the argument should be revised as follows:

Argument E

1. There is a high correlation between increased activity in the LH area and reported positive thoughts, being reported as happy, seeing cute babies, sucking on something nice, and exploring.
2. If (1), then there is a high correlation between increased activity in the LH area and increased levels of happiness.

3. If there is a high correlation between increased activity in the LH area and increased levels of happiness, then happiness is a natural kind; the concept of happiness is not merely a component of naive folk psychology but will persist in mature psychology.
4. Therefore, happiness is a natural kind; the concept of happiness is not merely a component of naive folk psychology but will persist in mature psychology.

It is important to see that this line of thinking is confused.

One focus of difficulty can be seen in premise (2). Suppose that in fact Davidson's research had established that there is a certain kind of increased brain activity that can be found in all the sucking and crawling babies, all the subjects seeing pictures of cute babies, all the subjects reporting "positive thoughts", etc. Still it would not follow that there is a correlation between that sort of increased brain activity and *happiness*. The problem, as I have already pointed out, is that it is not clear that all of these subjects are in fact happy. In order to establish that point, we'd need a correct theory of happiness and an independent way to determine how happy the subjects were while undergoing their MRIs.

Suppose the research subjects were not all really happy. Suppose they were just experiencing various kinds of "positive emotion". Then Davidson's research might lead us to think that the cluster of "positive emotions" has a uniform neurophysiological basis. In this case, we might also suspect that this cluster should be viewed as a natural kind. Perhaps as our folk psychology matures, we will stop talking about happiness and start to talk about this cluster of positive emotions instead. Under these circumstances we would likely say that Davidsonian research had no relevance to the question whether happiness is a natural kind. For all he showed, happiness might be a mere folk psychological concept that will not persist. His research, it might be claimed, had relevance only to the question whether "the positive emotion cluster" is a natural kind.

Another important point would remain even if all of Davidson's subjects were happy while undergoing the tests, and even if the degrees of their happiness was

proportional to the amount of electrical activity in their brains. This point concerns the notion that if we have a single underlying neurological state for all these different instances of happiness, then we should view happiness as a natural kind. We must recall that Davidson's research did not discover a single underlying neurological state in all the cases he studied. In fact, he says that he discovered one underlying state in the case of right-handed subjects, and a different underlying state in left-handed subjects.

Suppose that happiness counts as a natural kind only if it has a single underlying neurological basis. Then (granting all the assumptions just mentioned) Davidson's evidence would suggest that happiness is not a natural kind. Rather, there would instead be two natural kinds – “right handed happiness” and “left handed happiness”.

What may be the most troubling feature of the proposed line of argument concerns an apparent presupposition. To bring this out, I'd like to reconsider a variant of a possibility mentioned earlier. Suppose that Davidson's research had uncovered a surprising fact: even in right-handed people, there are two different areas of the brain that may be correlated with happiness. In many cases when right-handed people are happy, area LH lights up (just as Davidson discovered). But on other occasions when right-handed people are happy, area J lights up. Assume that the brain is wired in such a way that increased activity in one area yields happiness in some case; in other cases the activity is in an otherwise unrelated area. That would be an interesting and unexpected result.

But it seems to me that even if his research had this surprising finding, the concept of happiness would not go away. It would not be discarded in the trash-bin of naive concepts of mere folk psychology. I suspect that even if people were to come to accept this interesting fact, they would go on describing themselves and others as being “happy”. They would continue to wish each other a happy birthday and a happy new year. No one (except as a joke) would say “LH happy, or J happy, as the case may be, new year”. Thus it is hard to see how the actual findings bear on the question whether happiness is a soon-to-be-discarded remnant of mere folk psychology.

So my conclusions about Argument E are these: (1) in fact it is not clear that Davidson's research is actually about happiness. Perhaps it is better construed as being about a cluster of "positive emotions". Thus I have doubts about premise (2). (2) But even if the research is about happiness, it does not tend to show that happiness is a single natural kind. It suggests that there are at least two different natural kinds of happiness (right handed and left handed). (3) And finally, even if the empirical research had yielded completely different findings about the neurological basis of happiness, our conviction that "there really is such a thing as happiness" would not have been shaken. So I have doubts about premise (3) as well.

5. Concluding Warnings, Clarifications, Disclaimers

In closing, I want to say a few words about the main points have I tried to make here. I especially want to emphasize some things that I have not even attempted to establish.

Richard Davidson has been doing a lot of empirical research into what's going on in the brains of people who are in various emotional states. Some of his subjects were experiencing (or were reported to have been experiencing) "positive emotions". Richard Layard strongly suggested that Davidson's research supports some conclusions that are of philosophical interest. First, there is the ontological thesis that 'there is such a thing as happiness, as Bentham believed.'³¹ Second, there are some methodological doctrines about the measurement of happiness. Layard suggests that this research provides evidence that happiness corresponds to an 'event that can be objectively measured'.³² He goes on to say that this corresponding phenomenon is a 'cardinal variable' and the 'correlation [between it and happiness] holds strongly across people, confirming our view that happiness can be compared between people'.³³ This suggests that Layard thinks that

³¹ Layard 2003, p. 11. In the corresponding passage in Layard 2005 he says, 'I hope I have now persuaded you that happiness exists and is generally good for your physical health.' p. 24.

³² Layard 2003, p. 8.

³³ Layard 2003, p. 8.

Davidson's research has some bearing on the problem of interpersonal utility comparisons. Readers may suppose that Layard thinks that Davidson's research supports the view that happiness is a natural kind.

I have attempted to show that none of these claims would be correct. In fact, far from establishing that happiness is real, Davidson's research seems either to presuppose that happiness is real, or to be neutral on this point. Davidson's research may suggest that there is some correlation between levels of electrical activity in the brain and levels of emotions from some vaguely defined set, but the research methodology either presupposes that happiness (or positive affect) is measurable on an interpersonally valid cardinal scale or it makes use of an undefended assumption. In either case, it does nothing to establish that happiness is measurable. Finally, so far as I can tell, Davidson's research has no bearing at all on the question whether happiness is a natural kind.

My conclusions are limited to these relatively small points. I have not said that Davidson's research is confused or pointless or a waste of time. Some readers will surely find it interesting to learn that there is a correlation between levels of a certain kind of brain activity and levels of certain kinds of emotion. For all I know, Davidson's discoveries might have great value. At present I cannot see what this value might be, aside from the fact that it is kind of interesting to know that there is a physiological commonality among cases of positive affect.

Furthermore, I have not said that Davidson's research is of no philosophical interest. For all I know, it might be relevant to some philosophical question. Again, at present, I cannot think of any philosophical question to which that research would be relevant.

Furthermore, I have not said that the empirical research of others in the "positive psychology" field is either pointless or irrelevant to philosophical questions about happiness. Maybe there is some other researcher who has discovered something that bears on some philosophical question. In spite of the fact that I have looked, I have not

found any such research. I doubt that it will be found. However, I have not argued for that thesis here.

My point is that the research described by Layard does not have any relevance to the three philosophical issues discussed (or suggested) by Layard (viz., the ontological question about the existence of happiness; the methodological questions about the measurement of happiness; and the metaphysical question about the status of happiness as a natural kind). My claim is that insofar as those questions are concerned, Davidson's research is irrelevant.