

PHIL 5983: Rationality Seminar

University of Arkansas, Fall 2004

Topic: Introductory distinctions and points

Readings: None

*Theoretical vs. Practical Rationality (and others)

First, let's distinguish varieties of rationality by the types of things that are evaluated for rationality. Philosophers commonly focus on two such varieties—the rationality of *belief* and the rationality of *action* (and intention). (You might wonder what other types of things can be rationally evaluated—perhaps our *goals* (or desires) and *emotions*?) The study of the rationality of belief is called *theoretical rationality*. Some main questions here are: What is the method for determining if a given belief set is rational? What is the method for determining if a given psychological inference is rational? How rational must believers be? The study of the rationality of action (and intention) is called *practical rationality*. Some main question here are: *Assuming* that an agent has certain beliefs and goals, how do we determine what is rational for that agent to *do*? Can one's goals be rationally evaluated? How should we characterize the weak-willed?

Formal systems are relevant to both theoretical and practical rationality. For example, formal systems of deductive and inductive logic, as well as probability theory, seem relevant to the rules we should follow in order to be rational in our beliefs. The norm of truth, it seems, is the standard for theoretical rationality, and these formal systems aim at preserving truth. More controversially, mathematical decision theory (which assigns utilities to different possible outcomes of alternatives, as well as probability of success) has offered various formal systems of rational action/intention. Various norms have been offered for practical reasoning—maximizing expected utility is one such candidate.

In this course we are concerned with theoretical rationality.

*Varieties of Theoretical Rationality

Here are some concrete applications of formal systems of logic and probability theory to belief. Let's go through these, and make some distinctions.

Bill believes that his son Tony is a convicted felon. Bill also believes that if someone is a convicted felon, then that person is no longer trustworthy. Yet, Bill believes that Tony is still trustworthy.

It seems that Bill is irrational, and his irrationality involves something like a failure to appreciate *modus ponens* (or, perhaps, an acceptance of contradictory beliefs). Logic tells us that from 'a' and 'if a, then b' then we can validly conclude 'b'. Given the premises, it is *impossible* that not-b. The story about Bill fits this form, as we can substitute in 'Tony is a convicted felon' for 'a' and 'Tony is no longer trustworthy' for 'b'. If Bill were theoretically rational, he would then

conclude (and believe) that Tony is no longer trustworthy. But Bill does not believe this—instead, he believes that Tony is still trustworthy (roughly, not- *b*). In this regard, Bill is irrational.

Aside #1: When we describe someone as irrational, we are not *merely* describing the person. We are also evaluating them. ‘Rationality’ and ‘irrationality’ have *normative force*. Being rational is supposed to be some kind of success, and being irrational is supposed to be some kind of failure. Bad Bill!

Aside #2: Logic tells us (perhaps) that Bill shouldn’t have the above three beliefs. Bill is being *logically inconsistent*. But logic doesn’t tell Bill how to rectify this situation. There are various ways in which Bill could modify his beliefs so that they are logical, or at least consistent, and logic alone does not specify one of these alternatives over the others. For example, Bill could either come to believe that Tony is no longer trustworthy (while retaining his other two beliefs), or Bill could give up his belief that if someone is a convicted felon, then that person is no longer trustworthy (again, while retaining his other two beliefs).

Aside #3: I have claimed that Bill is guilty of theoretical irrationality. But it may be that, in some broader (or simply *different*) sense of ‘rationality’, Bill is rational. E.g., for Bill’s overall psychological well-being, it might be “rational” for him to believe that his son is still trustworthy, while not compromising his beliefs on the criminal facts and his general belief about the trustworthiness of felons. This is *not* to say that Bill is no longer theoretically irrational, however.

Let’s change the story a bit:

As before, Bill believes that his son Tony is a convicted felon. And Bill also believes that if someone is a convicted felon, then that person is no longer trustworthy. But now Bill consciously reflects on these beliefs and concludes, on the basis of these beliefs, that Tony must no longer be trustworthy.

The new ingredient to this story is that Bill is now actively reasoning and making a psychological inference based on what he already believes. (By ‘psychological inference’ I mean a transition from belief(s) to belief(s).)

Aside #4: These two stories illustrate that we can distinguish between the *static rationality* of belief sets (which we can evaluate for consistency), and the *dynamic rationality* of psychological inferences (which we can evaluate for validity, in the case of a deductive reasoning).

Another example of static irrationality: *Becky believes that she has a free will. Becky also believes that she lives in, and is a part of, a completely deterministic world, and that determinism is incompatible with free will.*

An example of dynamic irrationality: *Phil works in human resources. It is his job to assign a ‘probability of success’ value to job applicants based on various cue values. Jane is a female applicant with a degree from the University of Arkansas. Only 50% of female applicants prove to be successes, while 90% of University of Arkansas graduates prove to be successes. On the basis of these two factors, Phil concludes that Jane’s probability of success value is 70%. This is below his 75% threshold, so he discards her application.*

Aside #5: The formal systems of logic and probability apply, in the first instance, to propositions or states of affairs. Let’s say that the rules of deductive logic apply to propositions. That is, deductive logic tells us what *propositions* logically follow from other *propositions*, and which *sets of propositions* are logically consistent. It is not immediately obvious that deductive logic carries over from propositions to beliefs. That is, it is not immediately obvious that deductive logic tells what *beliefs* logically follow from other *beliefs*, and which *sets of beliefs* are logically consistent. Minimally, we can distinguish between rationality as applied to propositions and rationality as applied to psychological states.

Aside #6: Various authors have made a distinction between rationality and *reasonableness*. Let’s say that rational beliefs are those that meet the formal requirements of rationality (e.g., consistency, simplicity, etc.). A set of beliefs can meet all the formal requirements for rationality, and yet still be unreasonable in a very intuitive sense. Leibniz’s monadology might be one such example.

***Features of Belief**

Since we are talking about *theoretical* rationality, I should say a thing or two about belief. My statements for this week will be *very* general, however. Here is my very general characterization of what it is to believe something:

A belief is a sincere way of taking the world to be, which affects one’s actions and what else one believes.

Most everyone has given up on a behaviorist analysis of ‘belief’, instead holding that a belief is an internal representation of some sort that is caused by certain experiences and, in turn, causes behavior and other mental states in a *content-sensitive* manner. So, while behaviorism has been widely rejected, there is wide agreement that there are some sorts of content-sensitive conceptual connections between belief and action. We can assume that our behavior is a strong indicator of what we believe.

One kind of behavior is *linguistic* behavior. We know a lot about what people believe by what they say, where this includes *avowals* of their beliefs. But, one can sincerely avow that *p*, though not believing that *p*. As with most things, so too with belief—saying does not make it so. (Here, contrast belief with speech acts like oaths.) We will *not* assume that people are infallible when it comes to reporting their belief states.

Many hold that belief is a *propositional attitude*. This means different things to different people. For some, it means that the object of belief is a proposition. For others, it simply means that we can characterize the content of belief propositionally. The latter seems very plausible. I have already used the locution ‘belief that *p*’ to characterize belief, on the assumption that beliefs can be individuated by different substitutions of propositions for ‘*p*’. The proposition is supposed to capture the *content* of the belief, where the content is *what is believed*.

We will often talk about contradictory beliefs when discussing delusions, self-deception, and issues of rationality more generally. Be careful to distinguish among the following:

- Believing that *p*
- Believing that not-*p*
- Not-believing that *p*
- Not-believing that not-*p*
- Believing that *p* and believing that not-*p*
- Believing that *p* and not-*p*

***The Ideally Rational Agent**

Most philosophers of mind and psychology conceive of folk psychological agents (i.e., agents with beliefs) as necessarily rational to some degree or other. In other words, you cannot be a believer unless you are rational (to some extent)—rationality is partially constitutive of believing. In its extreme form, this view holds that folk psychological agents i) believe all (or some “easily derivable” subset of) the *implications* of other propositions they believe, and ii) the set of propositions they believe is *logically consistent*. This extreme form conceives of folk psychological agents as *ideally rational agents*. Ruth Barcan Marcus provides the following definition:

“An ideally rational agent, narrowly defined, is one who would believe all the logical consequences of his beliefs and would not believe a conjunction of propositions that make up an inconsistent set.” (1983, p. 327)

You may be wondering why anyone would ever think that believers must be this rational. If you think, like Robert Stalnaker (1984), that the objects of belief are possible worlds, then we cannot believe a logically inconsistent set of propositions as there is no possible world corresponding to such a set. (It should also be clear why, on this view, we would also believe those propositions entailed by our other beliefs.) More generally, if you think of our beliefs as marking off *possibilities*, it should be obvious that we cannot believe *impossibilities*.

But, we can also think about the matter more intuitively. How would someone who supposedly believes ‘*a*’ and ‘not-*a*’ view the world? Suppose someone avows “I believe that God is good” and also avows “I believe that God is not good”, where this is not a change in mind but a supposedly sincere report of their beliefs at a common time. We are also supposing that there is no equivocation, so that this person is denying that God is

good in the same sense of ‘good’ in which they are affirming God’s goodness. Can somebody *really believe* that one and the same thing (e.g., God) both has some property (e.g., goodness) and does not (*especially* when they *know* they are talking about the same thing)? Furthermore, any reason or behavior they could offer in support of attributing the one belief to them, it seems, would detract from attributing the other.

Or think of belief as a mental picture of the world. Imagine drawing (e.g., with ink and paper) a picture depicting a logical impossibility. I doubt that you can do it. But can you “draw” such a picture in your mind? (See Sorensen, 2002)

It should be noted that these idealizations of rationality are not found only within psychology/philosophy. Many economists have developed (and been criticized for developing!) economic theories according to which individual economic agents are ideally rational. And evolutionary biologists who are adaptationists work under the assumption that species are “rational” in that there is some fitness-conducive reason for the traits members of that species now possess.

Suggested readings:

*There are lots of logic and probability textbooks, of course. Here’s a link to an encyclopedia entry on some issues concerning probability:
<http://plato.stanford.edu/entries/bayes-theorem/>

*For an introduction to the philosophical study of rationality, you can also check out:

Stein, Edward. 1996. *Without Good Reason* (New York, NY: Oxford University Press).

Nozick, Robert. 1993. *The Nature of Rationality* (Princeton, NJ: Princeton University Press).

Harman, Gilbert. 1986. *Change of View: Principles of Reasoning* (Cambridge, MA: MIT Press).

Harman, Gilbert. 1999. *Reasoning, Meaning and Mind* (New York, NY: Oxford University Press).

*Also mentioned above were:

Marcus, Ruth Barcan. 1983. “Rationality and Believing the Impossible”, *The Journal of Philosophy*, Vol. 80, No. 6 (June, 1983), 321-338.

Sorensen, R. 2002. “The Art of the Impossible”, in *Conceivability and Possibility*, eds. Tamar Gendler and John Hawthorne (New York, NY: Oxford University Press).

Stalnaker, Robert. 1984. *Inquiry* (Cambridge, MA: MIT Press).