Desire, Belief and Expectation

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Teleology, let us suppose, says that a rational person desires a proposition to a degree equal to that proposition's expected goodness. This is not quite correct,[1] but in his paper `Desire as belief',[2] David Lewis takes it for granted, and let us do the same. Suppose there are a number of degrees of goodness, g_1, g_2, and so on, and let G_j be the proposition that our world is good to degree g_j. The expected goodness of any proposition A (the expectation of good from A) is

(1) $$g_1 P(G_1|A) + g_2 P(G_2|A) + \ldots,$$

where $P(G_j|A)$ is the probability of G_j conditional on A. (This conditional probability is defined as the ratio of probabilities $P(G_j \& A)/P(A)$.) Teleology, let us suppose, says a rational person desires A to a degree equal to (1). Let us call this the *Desire-as-Expectation Thesis*.

This thesis is common to Humean and Anti-Humean teleologists. Both groups can agree that one should desire something to a degree equal to the expectation of good from it. Where they differ is over what ultimately determines the goodness of a world. A Humean thinks goodness must ultimately be determined by people's desires; an Anti-Humean thinks this is not so.

In `Desire as belief', however, Lewis attributes to one sort of Anti-Humean teleologist the further thesis that a rational person `desires things just to the extent that he believes they would be good' (p. 326). He calls this the *Desire-as-Belief Thesis* (though it does not say that a desire necessarily *is* a belief), and he proves it false.

The proof, abridged, is this. Let us adopt Bayesian decision theory, in which a degree of belief is a probability. According to the Desire-as-Belief Thesis, the degree to which a rational person desires a proposition A is equal to the degree to which she believes another proposition $Å$, the proposition that A is good. Now suppose this person receives some evidence that makes her change some of her degrees of belief; she comes to believe some propositions more strongly and others less strongly. This change will affect many of her other beliefs and many of her desires. Decision theory – more specifically `probability kinematics' – specifies the manner in which her beliefs and desires will change. As it happens, they will change differently: degrees of belief will

change in a certain sense linearly with the force of the evidence she receives, and degrees of desire will change nonlinearly. Consequently, the degree to which the person ends up desiring A cannot in general be the same as the degree to which she ends up believing $\mathring{A}$. Yet according to the Desire-as-Belief Thesis, a rational person must always desire a proposition A to the degree she believes the proposition $\mathring{A}$ that A is good. So the Desire-as-Belief Thesis is false.

Lewis thinks this conclusion damages the Anti-Humean position, because he associates this position with the Desire-as-Belief Thesis. But actually an Anti-Humean is no more committed to the Desire-as-Belief Thesis than a Humean. Any teleologist (we are supposing) is committed to the Desire-as-Expectation Thesis. But an expectation is not a belief. In particular, the expected goodness a person assigns to a proposition A is not the same as the degree to which she believes A is good. To be sure, an expectation is a sort of *compound* of beliefs. Formula (1) shows it is compounded out of the conditional probabilities $P(G_j|A)$, which are ratios of probabilities $P(G_j \,\&\, A)/P(A)$. Since probabilities are degrees of belief, then, formula (1) is a sort of compound of degrees of belief. But it is not itself a degree of belief. The Desire-as-Belief Thesis is false, but the Desire-as-Expectation Thesis may be true.

Why does Lewis associate the Desire-as-Belief Thesis with Anti-Humeans? He begins by making an Anti-Humean say (p. 324): `Sometimes, . . . we do what will serve the good according to our beliefs about what would be good together with our other beliefs – no desire, other than desires which are identical with beliefs, need enter into it.' Here Lewis is imputing to his Anti-Humean a thesis of *identity* between desires and beliefs. But he takes this to be an extreme Anti-Humean position, and he next softens it. In doing so, however, he continues to make the Anti-Humean insist on quantitative *equality* between a degree of desire and a degree of belief. This brings him to the Desire-as-Belief Thesis. But an Anti-Humean who insists on either identity or equality is a straw man. Lewis's extreme Anti-Humean ought never to have said in the first place that a desire and a belief are identical. He ought to have said: `Sometimes, we do what will serve the good according to our beliefs about what would

be good together with our other beliefs – no desire, other than desires which result from beliefs alone, need enter into it.' No Anti-Humean need go further than that.

Unfortunately, Lewis concentrates initially on a special case that makes it easy to slip unawares from the Desire-as-Expectation Thesis to the Desire-as-Belief Thesis. This case has only two possible degrees of goodness, say 1 and 0. Think of 1 as good and 0 as not good. Let *Good* be the proposition that our world is good, and *Not good* the proposition that our world is not good. Then, according to the Desire-as-Expectation Thesis and formula (1), a rational person will desire a proposition A to a degree given by

$$P(Good|A).1 + P(Not\ good|A).0.$$

And this is simply $P(Good|A)$. In this special case, then, expected goodness happens to coincide with a conditional probability: the probability that the world is good, conditional on A. This conditional probability is actually the ratio $P(Good\ \&\ A)/P(A)$ of two degrees of belief. But it is tempting to identify it with a single degree of belief in the goodness of A – with, that is to say, a degree of belief $P(Å)$ in a supposed proposition $Å$ that A is good. Since, in this case, the conditional probability gives the degree to which a rational person desires A, and since it is tempting to identify the conditional probability with a degree of belief that A is good, the Desire-as-Belief Thesis may seem plausible as a result.

The temptation I have described must be resisted. It is an instance of a wider temptation. Take any two propositions B and C. It is tempting to think there ought to be some sort of a conditional proposition $C{\rightarrow}B$ whose probability $P(C{\rightarrow}B)$ is the probability $P(B|C)$ of B conditional on C. But this is not so; in earlier articles, Lewis has proved there is no such conditional proposition.[3] In our present context, there is no proposition $Å$ whose probability $P(Å)$ ('the probability that A is good') is the conditional probability $P(Good|A)$ (the probability that the world is good, given A). Indeed, Lewis's disproof of the Desire-as-Belief Thesis, which I sketched above, is no more than an application and an extension of the proofs contained in his earlier articles.[4]

Because of the temptation, Lewis's special case makes the Desire-as-Belief Thesis seem plausible. That may make it seem plausible to attribute this thesis to an Anti-Humean. But actually, nothing in the argument separates Humeans from Anti-Humeans. Both groups are equally subject to the temptation, and both equally must resist it. Both must resist the slide from the Desire-as-Expectation Thesis to the Desire-as-Belief Thesis. The former is tenable and the latter is not. This is an important lesson to be learnt from Lewis's paper. But the paper does no damage to the Anti-Humean position.

NOTES

My thanks to David Lewis for comments.

1. This formula commits teleology to *risk neutrality* about good: that two alternatives are equally good if they have the same expectation of good, even if one is more risky than the other. This is an implausible restriction. See my *Weighing Goods*, Blackwell, 1991, Chapter 6.

2. *Mind*, 97 (1988), pp. 323–32.

3. `Probabilities of conditionals and conditional probabilities', *Philosophical Review*, 85 (1976), pp. 297–315, and `Probabilities of conditionals and conditional probabilities II', *Philosophical Review*, 95 (1986), pp. 581–9.

4. It is an extension in that it allows for a slightly more general type of `probability kinematics'.