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NORMATIVE ETHICS, NORMATIVE EPISTEMOLOGY, AND QUINE'S HOLISM

In this paper I make some comments and raise certain questions about what Quine has called his epistemological "holism".¹ My chief aim is to persuade Quine to agree with me that we may include sentences containing expressions such as "ought", "ought not", "may", "has a right to", and "is entitled to" in certain bodies of sentences that may be tested in a holistic manner that I shall soon characterize. In my view such sentences appear in normative ethics as well as in normative epistemology. For example, I regard the sentence "Newton had a right to defend his life" as a sentence in normative ethics whereas I regard "Newton had a right to accept the principle of universal gravitation" as a sentence in normative epistemology; and I hope to persuade Quine to agree that heterogeneous conjunctions of such normative sentences and descriptive sentences may be tested holistically. In my view these heterogeneous conjunctions of sentences are not tested for their capacity to link sensory experiences alone—as systems consisting of purely descriptive sentences do according to Quine—but rather for their capacity to link sensory experiences with feelings or emotions. In sum, I hope that Quine will accept two views of mine: the view that holistically testable systems of belief may contain normative beliefs of ethics and epistemology, and the view that such heterogeneous systems may link sensory experiences with emotions.²

I must admit that I have a suspicion that Quine may not agree with me, a suspicion prompted by certain things he has written about ethics and epistemology. Thus, in the one piece on ethics that Quine has published—so far as I know—he writes of what he calls "the methodological infirmity of ethics as compared with science" and then goes on to say: "The empirical foothold of scientific theory is in the predicted observable event; that of a moral code is in the observable moral act. But whereas we can test a prediction against the independent course of observable nature, we can judge the morality of an act

only by our moral standards themselves. Science, thanks to its links with observation, retains some title to a correspondence theory of truth; but a coherence theory is evidently the lot of ethics".³ Quine has also maintained that when empiricism reached its fifth and most recent milestone it assimilated epistemology to empirical psychology.⁴ So, on the basis of Quine's sharp separation of science and ethics as well as his insistence that epistemology is a branch of empirical psychology, I have some reason to think that Quine may not agree that normative ethics and normative epistemology as I conceive them may be tested holistically. But if he should not agree with my views before reading what follows, I hope that I can persuade him here to accept certain views that I advance in *What Is and What Ought To Be Done*. And if I do not succeed in persuading him, I hope that he will be good enough to say why.

One of my main purposes in this paper is to persuade Quine to abandon a dualism between the methods of testing normative and descriptive statements which is as untenable as that between analytic and synthetic statements. I also want to say that if Quine thinks that his assimilation of epistemology to empirical psychology requires epistemologists to refrain from making normative statements about what they ought to believe or have a right to believe, and therefore to limit themselves to description, then I disagree. I believe that we properly make normative statements in epistemology which are not assimilable to purely descriptive statements, that we test systems which contain these normative statements holistically, and that nothing to which we appeal in this process or in the process of testing systems that contain normative ethical statements should frighten Quine the empiricist or Quine the naturalist. There are no supernatural cards up my sleeve and I set up no suprascientific tribunals, to use his phrase,⁵ when I urge him to recognize that we may make ethical as well as epistemological statements about what we ought or have a right to do and that we appeal to feelings along with sensory experiences when we test the systems that contain such statements.

Before I begin my efforts to persuade Quine, I want to say something about his more recent comments on his holism in publications that appeared after my aforementioned book was published—comments that I had not known about while I was writing that book. First of all, I note with pleasure that he no longer insists—as he seemed to in his deservedly famous paper "Two Dogmas of Empiricism"—that "the *totality* [my emphasis] of our so-called knowledge or beliefs," or "the *whole* [my emphasis] of science",⁶ is what is tested by experience according to his version of holism. In my book I had taken him to espouse that view and had dissented from it, but upon reading his essay "Five Milestones of Empiricism" I now see that he has changed his mind in a direction that I applaud. That essay of his was first published in October of 1981 in his *Theories and Things*, the preface to which he had signed in February of 1981. In that essay Quine writes that "it is an uninteresting legalism . . . to

think of our scientific system of the world as involved *en bloc* in every prediction. More modest chunks suffice . . .".⁷ Although I do not fully grasp the reference to legalism, I infer from this passage that I should no longer dissent from Quine's views on this point as I did in my book, the preface to which I signed in August of 1980, well before I had learned of what he had said in "Five Milestones of Empiricism". I am pleased to find that Quine qualifies his view that our whole scientific system is involved *en bloc* in every prediction; I am also pleased to see that Quine says something else in "Five Milestones of Empiricism" that accords with something that I had written while I was understandably ignorant of what Quine had said in an unpublished version of "Five Milestones of Empiricism". I have in mind Quine's statement that we can make a conjunctive sentence of a whole theory and therefore regard a modest chunk of science as a single sentence even while subscribing to his holism.⁸

With these preliminaries behind me, I now want to begin my efforts at persuasion. Readers of Quine know that he acknowledges his debt to Pierre Duhem on the subject of holism,⁹ but neither Duhem nor Quine discusses what I call normative sentences or normative beliefs in this context. Both are preoccupied with descriptive sciences such as physics and therefore do not focus on the testing of heterogeneous systems or conjunctions that consist of normative as well as descriptive sentences. But, impressed as I am by Quine's use of Duhem's holism to bridge the traditional epistemic gap created by the distinction between the analytic and the synthetic, I try to use my own version of holism to bridge the equally traditional epistemic gap between the normative and the descriptive. In developing his version of Duhem's approach, Quine has sometimes distinguished (a) the descriptive scientific thinker, (b) the body of purely descriptive science that such a thinker uses as a tool for organizing or linking sensory experiences, and (c) those sensory experiences themselves.¹⁰ By analogy, when I deal with normative belief, I distinguish (a') the normative thinker, (b') the body of descriptive *and* normative beliefs that the normative thinker uses as a tool for organizing or linking sensory experiences with each other *and with emotions*, and (c') those experiences and emotions themselves.¹¹

To anyone who might say that normative sentences are reducible to descriptive sentences and would therefore try to assimilate the second element in my triad to the second in Quine's, I should reply that I cannot accept such reductionism if it rests on saying that all normative sentences are synonymous with descriptive sentences. Like Quine, I find the notion of synonymy excessively obscure; and no matter what other philosophers might maintain, I should certainly not expect Quine himself to use this route in assimilating my triad to his. Furthermore, because I include emotions in (c'), the third element in my triad is not the same as the third element in Quine's. And if someone criticized my triad by denying that there are normative beliefs to be included in (b'), I should have to disagree. It seems obvious to me that many people not only believe

that Newton had a right to defend his life but also that Newton had a right to, or was entitled to, accept the principle of universal gravitation; and I do not agree that they are mistaken when they say that they have such singular normative beliefs. Nor do I agree that they are mistaken when they say that they have beliefs such as those expressed by the normative ethical principle "One ought to keep one's promises"; or that philosophers are mistaken when they say that they have beliefs such as those expressed by the normative epistemological principle "One ought to (or has a right to) accept a system of descriptive belief that organizes one's sensory experiences in the simplest way and in a way that disturbs one's previously held system of belief less than any rival system". In what may be an untypical statement, Quine himself expresses a normative epistemological principle when he writes as follows of an "ultimate duty": ". . . the purpose of concepts and of language is efficacy in communication and in prediction. Such is the ultimate duty of language, science, and philosophy, and it is in relation to that duty that a conceptual scheme has finally to be appraised".¹² That there are ethical and epistemological normative beliefs is as evident to me as it is that physicists hold the descriptive belief that all bodies attract each other. I am aware that some philosophers may try to defend the view that people do not have such normative beliefs by arguing that the sentences which allegedly express them lack cognitive meaning. But here, as in the case of the appeal to synonymy construed as the relation of having *the same* cognitive meaning, appeal is made to a notion that cannot support so bold a philosophical claim. At any rate, I should not expect Quine, who has inveighed so effectively against philosophically tendentious use of synonymy and cognitive meaning, to employ such notions in an effort to refute my view of the testing of heterogeneous systems of belief.

Assuming that normative ethical sentences do express beliefs, I want first of all to present an example of ethical reasoning (that I have used elsewhere) and then to offer some comments on it.¹³ I ask Quine to suppose that the following argument is presented by a critic of abortion, bearing in mind that it does not make explicit any assumed logical truth that might be added by a holist who wanted to dramatize the fact that such logical truths were also elements of the system of belief in question:

- (1) Whoever takes the life of a human being does something that ought not to be done.
- (2) The mother took the life of a fetus in her womb.
- (3) Every living fetus in the womb of a human being is a human being.

Therefore,

- (4) The mother took the life of a human being.

Therefore,

- (5) The mother did something that ought not to be done.

I now ask Quine to imagine that the mother who is criticized does not have the feeling of being obligated *not* to have done what she did. In my view, she might be justified under certain conditions in denying statement (5). In denying (5) she would, I contend, do something analogous to what a descriptive scientist, say a chemist, might do upon failing to have a sensory experience that was predicted by some chunk of purely descriptive belief. The chemist might deduce from a set of premises the statement that a certain piece of litmus paper was red and add that any normal person in a normal state who looked at a red object in white light would have the sensory experience of redness. But then the chemist might go on to say that although he was normal, in a normal state, and looking at the piece of paper in white light, he did not experience redness but greenness. Thus the chemist would, to use Quine's language, have a recalcitrant sensory experience whereas I would say that the mother mentioned in my ethical example would have a recalcitrant feeling. Quine says that a descriptive scientist having such a recalcitrant experience might plead hallucination—in other words, plead that he was not in a normal state—but then he might not so plead.¹⁴ If he did not, and therefore denied that the litmus paper was red, other alternatives would be open to him, alternatives that have their analogues in those open to the mother. As soon as we grant that after denying (5) the mother may deny the conjunction that implies it, we may say that the mother, or anyone else engaged in such thinking, may amend or surrender a law of logic such as that which gets us from (2) and (3) to (4); an ethical principle such as (1); or a descriptive statement such as (2), (3), or (4). Any one of these moves will bring about what may be called a Duhemian alteration of the original body of beliefs in response to a recalcitrant feeling.

Because we need not deny or alter (1), our normative principle, we may deny or alter some other statement. If we deny (3), we exchange our conjunction of beliefs for a new one by denying a descriptive belief; but it should be emphasized that we deny that descriptive belief because we reject a normative conclusion that follows from our former assumptions. Thus the denial of (5), which denial expresses a normative belief, may play a part in determining what descriptive beliefs appear in our chunk of beliefs, since the denial of descriptive statement (3) is also descriptive. We have changed our chunk by adopting the descriptive statement that not every living fetus in the womb of a human being is a human being because we have adopted the normative statement that in killing the fetus the mother did not do something that ought not to be done. And this is similar in a certain crucial respect to a physicist's amending or rejecting a previously accepted logical belief because of certain data of quan-

tum mechanics—an example mentioned by Quine. In my view, the right to alter one's description of an act in response to certain feelings about an act is analogous to the right to alter one's logic in response to certain sensory experiences arising from physical experiments. Here we see an analogy between Quine's permitting a recalcitrant experience to lead to the abandonment of a logical statement and my permitting the abandonment of a descriptive statement because of a recalcitrant feeling.

Of course, I am not saying that the denial of (5) logically implies the denial of (3) and therefore do not hold that descriptive (3) itself logically implies normative (5). The statement "Every living fetus in the womb of a human being is a human being" does not imply "The mother did something that ought not to be done". The latter is implied by the conjunction of premises in the illustrative argument and not by any one of them taken by itself. Because some philosophers, for example, Hume, think it fallacious to deduce an "ought"-statement from an "is"-statement, I want to say that I do not license such a deduction. I merely assert that if a conjunction containing descriptive and moral statements logically implies a moral conclusion which is denied, we may alter the conjunction by surrendering *either* a moral or a descriptive statement. Just as a logical statement is rarely recanted in the light of the rest of one's theory, I am prepared to admit that a descriptive statement is rarely recanted in the light of a moral statement. Nevertheless, I want to emphasize that, rarity aside, such recantation is *permissible* according to my view and that its very permissibility is of great philosophical significance.

If Quine should grant the permissibility of such recantation, I think he should be led to reconsider a statement of his that I quote earlier in this paper. It will be recalled that after granting that the empirical foothold of scientific theory is in the predicted observable event and that of a moral code is in the observable act, Quine says that whereas we can test a prediction against the independent course of observable nature, we can judge the morality of an act only by our moral standards themselves; adding that science "thanks to its links with observation, retains some title to a correspondence theory of truth; but a coherence theory is evidently the lot of ethics".¹⁵ However, if Quine should accept my earlier comments about ethical reasoning, I think he would have to acknowledge, first of all, that even though our moral standards (principles) play some part in guiding us to singular statements such as (5) about the morality of an act, those moral principles do not do so without the help of descriptive statements. Secondly, he would have to acknowledge that heterogeneous chunks of belief are to be tested by seeing whether they organize sensory experience-cum-feeling. In that case he would have to withdraw his remark that a coherence theory is the lot of ethics. For if science—that is to say, descriptive science—retains some title to a correspondence theory of truth "thanks to its

links with observation", then ethics should retain some title to a correspondence theory of truth thanks to its links with *observation and feeling*. Like Quine, I think ethics has a foothold in the observable act which corresponds to descriptive science's foothold in the predictable observable event; however, just as we ought to test chunks of descriptive science by appealing to what is observed, we ought to test chunks of what I am prepared to call normative science by appealing to what is observed and what is felt. Once we let feeling play the part that I assign to it, a coherence theory is *not* the lot of ethics, and it does not suffer from the "methodological infirmity" of which Quine speaks. It may well have ills, but I do not think that the disease known as the coherence theory of truth is one of them.

Having assured Quine that I believe nothing that should scare a naturalist or empiricist, I should point out to other philosophers that I have not tried to reduce normative ethical statements to allegedly synonymous descriptive statements. My view may be termed naturalistic not because I advocate such reduction but rather because I do not assert or imply the existence of anything beyond the confines of nature as usually conceived. And yet, although I avoid naturalistic reductionism in ethics, I maintain that there are rationally testable ethical beliefs whereas I think that Quine sharply distinguishes between rationally testable beliefs and moral valuations. I think he holds that the typical moral situation is one in which a person believes scientifically that a certain action will cause a certain effect which the person merely values while not asserting anything scientific about that effect. Moreover, Quine accepts "the deep old duality of thought and feeling, of the head and the heart, the cortex and the thalamus, the words and the music".¹⁶ He appears to hold that we may value furthering our neighbor's welfare and that we may learn in a scientific way how to further our neighbor's welfare while we deny that the sentence "We ought to further our neighbor's welfare" expresses a belief.

In that case, what does Quine, an epistemologist who is anxious to present a general theory of how beliefs should be tested, say to people who believe that in asserting normative moral principles they express beliefs? Presumably that they are mistaken. But what reasons would he give them for saying that they are mistaken? I am not sure, but, believing as I do that Quine could not successfully argue for the non-existence of such beliefs, I think that it would be better for him to recognize that moral normative beliefs appear in systems which are holistically tested, and also to broaden the flux that normative thinking is supposed to organize by recognizing that such a flux contains feelings. In this way he would help us to hold on to the deep old belief that we have ethical beliefs and thereby disturb our view of the world as little as possible. Here I might remind Quine, who once abandoned nominalism because he thought that arithmetic was something to reckon with, that rational normative

ethics is something to conjure with. It permits us to defend singular moral beliefs about what we should do on specific occasions by appealing to heterogeneous conjunctions of beliefs.

Having said what I hope is enough on the subject of normative ethics, I now turn to normative epistemology. I believe that I make a statement in normative epistemology when I say that one who denies statement (5) is entitled to accept the denial of (3) and thereby to alter the body of statements from which (5) is deduced. I also make a statement in normative epistemology when I say that an ethical thinker ought to accept a system of belief which organizes his sensory experiences *and* his feelings with due regard to the demand for scientific simplicity and the demand that we disturb a prior system of belief as little as possible. Moreover, I think that Quine makes a statement in normative epistemology when he says: "A recalcitrant experience can . . . be accommodated by any of various alternative reëvaluations in various alternative quarters of the total system".¹⁷ I regard this "can"-statement as normative because I do not think it is a statement in formal logic or natural science. I think that Quine is here telling us that we *may*, that is to say, *have a right to*, accommodate a recalcitrant experience in different ways. I do not wish to discuss at length the question whether he is asserting a *moral* right. I have argued elsewhere that the generic notion of a duty or that of a right is neutral, thereby allowing that we may use the words "duty" and "right" univocally in moral and epistemological contexts even though moralists and epistemologists usually focus on different sorts of acts.¹⁸ This, in my opinion, is analogous to the univocal use of the word "exists" by mathematicians and physicists who assert the existence of things as different as numbers and electrons. But whatever view we take of an epistemic right or duty to accept a body of belief under certain conditions, I believe that a statement that every thinker has such a right or duty does not describe what every thinker in fact does under those conditions. For this reason I question Quine's statement that epistemology may be assimilated to empirical psychology if he thinks that empirical psychology does not contain normative statements of ethics or epistemology. Moreover, I think that the "assimilation" of normative epistemological statements to statements in descriptive psychology might require the use of the discredited notion of synonymy just as an analogous assimilation of normative ethical statements would. The unassimilated epistemological principle that a scientist *should* check a body of beliefs against experience is normative. It tells us what a scientist should do, as Quine seemed to think when he said that the "ultimate duty" of language, science, and philosophy is to communicate and predict efficaciously. It is a general normative principle to which we must appeal when we say that we ought to accept a given body of belief. We cannot justify such a singular epistemic statement without appealing to epistemic normative principles that contain the word "ought". We cannot answer the question whether

a given body of scientific beliefs ought to be accepted by fallaciously reasoning as follows: "This is a scientific theory; scientific theories *are* accepted if and only if they have characteristics A, B, and C; this has characteristics A, B, and C; therefore, this *ought to be* accepted". How can we defend deducing that a scientist ought to accept a given theory, or that he has a right to accept it, without deducing our singular normative epistemic statement from a conjunction which contains at least one normative epistemic rule as a conjunct?

After having asked this rhetorical question, I may well be asked how normative epistemic rules are to be tested so as to allay Quine's fear that I may be setting epistemology on too high a pedestal, converting it into a "supra-scientific tribunal". And my answer is that I view normative epistemology much as I view normative ethics because I believe that there are systems of normative epistemological reasoning which are analogous to the argument from (1) through (5), and that there is a flux of sensory experiences *and* emotions which may be organized by a normative epistemologist who argues in a manner that is analogous to the manner in which the moralist argues in statements (1) through (5). Accordingly, I think that Einstein the determinist believed that no physicist *ought* to accept as final a chunk of belief that is non-deterministic in the way that modern quantum mechanics is. And in stating this normative epistemic belief Einstein did not describe how twentieth-century physicists *do* think, for he was quite aware that they did not think as he believed they *should* think. By analogy with the ethical argument presented earlier, Einstein's reasoning might be represented as follows:

- (6) No physical system which is non-deterministic ought to be accepted as final.
- (7) Quantum theory is a physical system which is non-deterministic.

Therefore,

- (8) Quantum theory ought not to be accepted as final.

Now if (8) should be rejected, it is open to us to reject (6), (7), or the unexpressed logical principle of the above argument. Furthermore, the basis on which we may accept or reject (8) is analogous to the basis on which we may accept or reject (5) in our earlier illustration. In other words, we have what may be called epistemic feelings of obligation to accept or not to accept certain physical theories which are analogous to our moral feelings of obligation to perform acts of the kind treated in ethics. Moreover, one who describes a body of physical beliefs as deterministic or non-deterministic has sensory experiences that are analogous to the sensory experiences of a normative moralist who describes acts as mendacious. We must look at theories to discover whether they are deterministic. Therefore, the normative epistemological system represented by (6) through (8) should itself be tested by seeing whether it organizes a

relevant flux of experience-cum-feeling. For this reason, an opponent of Einstein who has a recalcitrant epistemic feeling may, like the mother in our ethical example, reject or alter a normative principle such as (6), a descriptive statement such as (7), or a principle of formal logic. To increase the likelihood that Quine will agree, I point out that, so far from making normative epistemology a "first philosophy" or a "supra-scientific tribunal",¹⁹ I let its acceptability depend in part on its capacity to organize such sensory experiences and feelings of obligation as Einstein might have had upon contemplating a non-deterministic system and deciding that he ought not accept it as final. In other words, one who is faced with deciding whether to accept a heterogeneous body of belief such as that represented by (6), (7), and (8) must do something analogous to what a moralist must do when faced with deciding whether to accept the set of premises used in the earlier discussion of abortion. When testing a hypothetico-deductive argument in ethics or in epistemology, we ought to appeal to sensory experience and feelings of obligation or entitlement.

In trying to persuade Quine, I have not used such terms of his as "surface irritations", "sensory receptors", and "nerve endings". I hope that Quine will not object to this in spite of a statement by him that his "non-committal term 'experience'" in "Two Dogmas of Empiricism" awaited his later theory that invoked surface irritations and other such entities.²⁰ I feel no qualms in not using the language of neurological psychology because I believe that the terms "sensory experiences" and "feelings of obligation" refer to things that I have, that Quine has, and that other human beings have. Since he has managed to his own satisfaction to construct a theory which avoids "phenomenalistic interpretation" by invoking surface irritations rather than experiences, he might—if he were to accept what I have said so far—be able to work a similar transformation on "feelings of obligation" if he finds that term too non-committal or subject to some defect of the kind he finds in "experience" because of its association in his mind with phenomenalism. Naturally, I am not urging Quine to direct his psychological talents toward this end if he does not find it desirable or possible to do so, but I hope that he will not reject my assumption of the existence of feelings of obligation merely because they are not incorporated in his neurological scheme of surface irritations or the triggering of sensory receptors.

I say this for a number of reasons of different kinds. For one thing, I think that an epistemologist should take account of what I shall call the typical situation of a thinker who seeks guidance from normative epistemology, just as a moralist should take into account the typical situation of a thinker who seeks guidance from ethics. When one is faced with the question whether to accept a certain body of beliefs, one asks: "Should I accept this body of beliefs", and one may rightly expect an answer that does not depend on one's knowing anything about neurology. Quine himself writes that when he referred to surface irritation in *Word and Object*, he was not supposing "that people are on the

whole thinking or talking about the triggering of their nerve endings; few people, statistically speaking, know about their nerve endings".²¹ Obviously, therefore, Quine would not require a physicist who is trying to decide whether to accept a physical theory to examine his nerve endings as well as the objects dealt with in the theory. And even if Quine were to discover neurological counterparts of the epistemic feelings of obligation that an Einstein might have in defending (8), Quine would not require Einstein to examine those neurological counterparts. Nor should I expect Quine to insist that the mother in my moral example engage in analogous neurological inquiry before deciding whether she should or should not have committed an act of abortion. Whatever merit Quine sees in moving to neurology, such a move would not—if I understand him correctly—eliminate the duty of Einstein and the moralist-mother to test their heterogeneous bodies of belief by discovering whether those bodies organized their sensory experiences and feelings.

However, even if Quine were to insist that the language of neurology produces much improvement in our description of the process of thinking, I should insist that the use of such language would not eradicate the difference between saying that one *ought to* accept a body belief under certain conditions and saying that one *does* accept it under those conditions. If Quine thinks that my reference to feelings is too noncommittal, he is welcome to handle my feelings by doing something analogous to what he does when he replaces his experiences by surface irritations. That is to say, he is welcome to produce a neurological term that would stand to the term "feeling of obligation" as "triggering of sensory receptors" stands to "experiences". But producing such a term would not assimilate normative epistemology to descriptive psychology, any more than it would reduce ethics to descriptive psychology. The production of such a neurological term might lead us to replace the word "feeling" by that neurological term in normative epistemological statements but it would not force us to eliminate the terms "ought" or "may" from such statements. If Quine's pre-neurological epistemological thesis was that scientists have a duty to accept only bodies of belief that link *experiences* to each other, his newer neurological thesis, as I see it, would be that they have a duty to accept only bodies of belief that link *sensory stimulations* to *sensory stimulations*. The survival of the word "duty" after Quine's move to neurology is related to the fact that there is a difference between saying that a thinker *does* accept a body of belief only if it has certain characteristics and saying that he *ought to* or *may* accept it only if it has those characteristics. I venture to say that even if every physicist were *in fact* to stop accepting bodies of statements that linked sensory stimulations to sensory stimulations according to Quine's view, and were to begin accepting only those bodies of statements that they were told by Ronald Reagan to accept, Quine would not revise his philosophy by surrendering some of his epistemological statements even though he might well revise his descrip-

tive psychological account of how scientists do behave. Why? Because I think that Quine's fundamental principles of epistemology express norms or standards which should be formulated in statements containing such words as "duty", "ought", and "may"; and such statements are not to be rejected merely by pointing out that physicists *in fact* support their theories on presidential authority.

I view Quine's epistemology as one that might conceivably be pitted, for example, against the view of those who advocate what Peirce called the method of authority. In other words, I believe that Quine's holism might be viewed as taking the following form: "Bodies of belief ought to be accepted if and only if they satisfy condition Q", in which case authoritarian holism would take the form: "Bodies of belief ought to be accepted if and only if they satisfy condition A", where "A" refers to a condition other than Q. Of course, this way of depicting the issue between two such epistemologies allows for the *possibility* that authoritarian holism is true whereas Quine's holism is false; and since Quine regards his own epistemology as a fallible and corrigible inquiry into reality, he would not be fazed by this consequence of my view of the contest between his holism and authoritarian holism. As I understand Quine, however, his own view of such a contest would involve pitting his fallible and corrigible *description* of the conditions under which bodies of belief *are* accepted against other fallible and corrigible *descriptions* of such conditions. Insofar as Quine regards his epistemology as fallible and corrigible, I agree with him; but I doubt that he can, by examining the activity of accepting beliefs in which all persons called scientists engage, establish that all these persons in fact accept bodies of belief if and only if such bodies satisfy condition Q. The point is that there are scientists who accept bodies of belief which do *not* satisfy condition Q. And, of course, if Quine were to reply that he is describing the behavior of scientists who do what they ought to do as scientists, he would import a normative element into his enterprise.

Furthermore, even if Quine were able to show that *all* scientists do accept those and only those bodies of belief that satisfy condition Q, he would leave open the question whether beliefs that are accepted on these grounds ought to be accepted on these grounds. And that open question, I believe, is the one to be answered by a philosopher who advises us to use the method of science rather than some other method in testing bodies of belief. Although Peirce did not attain the highest degree of clarity when he discussed this issue, he appears at times to see that what he presents as alternative methods of fixing belief—the method of tenacity, the method of authority, the a priori method, and the scientific method—are being assessed by him with the following question in mind: "Which of them ought to be used in the fixation of belief?". True, Peirce seems to think that he can describe the method of science by examining the behavior of scientists, but he does not stop after he has supposedly described that method; he seems to think that he should say why he thinks that it

ought to be used as the method of fixing beliefs.²² Now I do not urge Quine to accept the specific views that Peirce presents when singing the praises of the so-called scientific method. But I do urge Quine to recognize that even if he were able to tell us what scientific method is on the basis of an examination of the behavior of all scientists, there would be a further question to answer, namely, "Why should we use scientific method in fixing our beliefs?". If Quine were to adopt this view of at least one problem of epistemology, he would see himself as asserting principles explicitly couched in normative terms; and when testing heterogeneous bodies containing such principles he would, I hope, appeal to emotions as well as sensory experiences.

By now it will be evident that I do not advocate the abandonment of the distinction between normative and descriptive sentences. On the contrary, I advocate its retention insofar as I question the reducibility of ethical or epistemological "ought"-sentences to "is"-sentences. However, although I retain this distinction, I use holism to avoid drawing an epistemological distinction between the *testing* of normative statements and the *testing* of descriptive statements. In this way I do something analogous to what I think Quine does when he retains a distinction between logical statements and non-logical statements while using holism to avoid drawing an epistemological distinction between the testing of logical statements and the testing of non-logical statements. That is why I have conceived my task as two-fold: to show on the one hand that holistically testable systems of belief may contain normative beliefs of ethics and epistemology; and on the other to show that such systems ought to be tested by referring to their capacity to link sensory experiences and feelings.

If Quine were to agree with me, he could do so without any fear that he would be viewing the epistemologist as an infallible inquirer whose views are incorrigible. In my view moral principles are not a priori truths, not necessary truths, not analytic truths, not intuitively known. Nor can they be extracted by reflection on the so-called essence of man or on the so-called meaning of "man". By parity of reasoning, the normative principles of epistemology as I view them are not to be extracted by reflection on the so-called essence of science nor on the so-called meaning of "science". Chunks of belief containing them are to be tested holistically, just as chunks containing moral principles and physical principles are. If Quine were to accept my view of holism as applied to normative belief, he would travel to a new milestone of empiricism at which the deep old duality of thought and feeling is no longer used to support the deep old untenable dualism between the normative and the descriptive; he would help strike yet another blow for methodological monism.

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NOTES

1. I have in mind the view advocated by Quine in section 6 of "Two Dogmas of Empiricism" as reprinted in his *From a Logical Point of View* (Cambridge, Mass.: 1953), pp. 42–46. See also the remarks on holism in his "Five Milestones of Empiricism", *Theories and Things* (Cambridge, Mass.: 1981), pp. 71–72.

2. The views to which I seek Quine's reactions are defended in my book *What Is and What Ought To Be Done: An Essay on Ethics and Epistemology* (New York: 1981), esp. Chapters II–IV.

3. W. V. Quine, "On the Nature of Moral Values", *Theories and Things*, p. 63.

4. *Theories and Things*, p. 72.

5. *Ibid.*

6. *From a Logical Point of View*, p. 42.

7. *Theories and Things*, p. 71.

8. *Ibid.*

9. See Duhem's *La Théorie physique: son objet, sa structure* (2nd edition, Paris: 1914) pp. 278–89; also Quine, *From a Logical Point of View*, p. 41.

10. *From a Logical Point of View*, p. 44.

11. *What Is and What Ought To Be Done*, pp. 29–35.

12. *From a Logical Point of View*, p. 79.

13. *What Is and What Ought To Be Done*, pp. 30–35.

14. *From a Logical Point of View*, p. 43.

15. See note 3 above.

16. *Theories and Things*, p. 55.

17. *From a Logical Point of View*, p. 44.

18. *What Is and What Ought To Be Done*, pp. 82–83.

19. In "Five Milestones of Empiricism" Quine regards the fifth milestone as one at which empiricism abandons the goal of a "first philosophy" and sees natural science as not being answerable to any "supra-scientific tribunal". See note 5 above.

20. *Theories and Things*, p. 40.

21. *Ibid.*

22. See "The Fixation of Belief", *Collected Papers of C. S. Peirce*, edited by C. Hartshorne and P. Weiss (Cambridge, Mass.: 1931–1935), Volume V, paragraphs 358–387. This is a convenient place at which to note that when Duhem discusses the alteration of theories that face recalcitrant experiences, he says: "Le bon sens est juge des hypothèses qui doivent être abandonnées", *op. cit.*, p. 329. Note the explicitly normative part of this statement. Furthermore, he says that our choice here is dictated by Pascalian "raisons que la raison ne connaît pas", *ibid.*, p. 330. I do not cite these statements by Duhem in order to endorse obscurantism in epistemology but merely to show that the Ur-holist recognized not only the normative element in epistemology but also the role of feeling in it.

REPLY TO MORTON WHITE

White's concern to accommodate value judgments within epistemology dates back nearly three decades, to *Toward Reunion in Philosophy*. He would accomplish this by consulting the testimony of the emotions along with that of the senses. In my account of moral indecision, the bemused subject held various moral tenets which, along with his descriptive ones, formed an inconsistent conjunction. The descriptive part was supported ultimately, if at all, by the senses. What of his moral tenets? Some were singular, perhaps, others general; some innate, perhaps, others inculcated by precept or example, birch rod or sugar plum. But in any event, White observes, the substance of these moral evaluations—what they consist in, apart from lip service—is the subject's emotional response of approval or revulsion in each singular instance. Now White points out that if we pool these emotions with the sensations, we can view the inconsistent conjunction of descriptive beliefs and moral evaluations just as we might view an inconsistent conjunction purely of descriptive beliefs. In either case we restore consistency by casting out some component, chosen by considerations perhaps of simplicity, perhaps of minimum mutilation, and perhaps of direct experiential input, sensory or—now—emotive.

The reasoning is plausible in its own terms, but turns problematic when set over against a background of naturalized epistemology. We are saddled with three incompatible beliefs, say, two of them descriptive and one moral, and must eliminate one. White suggests treating all three as empirical, by treating emotions on a par with sensations. Ideally, then, we should critically assess the ultimate empirical evidence for each of the three. Holism warns us that none of the three will have its own isolable empirical evidence, but we might combine each with some adequate cluster of trusted kindred beliefs so as to get three critical masses, each capable of implying observable consequences. (See my reply to Vuillemin.) Schematically each such consequence would take the form of a conditional joining two observation sentences, one stating an exper-

imental condition and the other a prediction. Some of the observation sentences to which we would be thus driven, in the situation now imagined, would be moral ones. This is what I find problematic, as I shall explain.

Note first that my definition of observation sentence does not explicitly favor sensation over emotion. It mentions neither, and is predicated rather on publicly shared stimulation. An observation sentence is an occasion sentence that commands the same verdict from all witnesses who know the language. Consider, then, the moral occasion sentence 'That's outrageous'. In the hope of getting it to qualify as an observation sentence, let us adopt an unrealistic "best-case" assumption about our linguistic community, to the effect that all speakers are disposed to assent to 'That's outrageous' on seeing a man beat a cripple or furtively snatch a wreath off a door or commit any other evil that can be condemned on sight without collateral information. (The malefactor would be foreign, since our fellow speakers are assumed to deplore all such acts.) Would 'That's outrageous' then qualify as an observation sentence? It would still not, simply because it applies also and indeed mostly to other acts whose outrageousness hinges on collateral information not in general shared by all witnesses of the acts.

The sentence 'It's raining', in contrast, almost never hinges on information not shared by present witnesses, and the sentence 'That's a rabbit' does so only seldom. These two consequently qualify well enough as observational, a status that is somewhat a matter of degree. 'He's a bachelor', at the other extreme, depends on collateral information that is seldom widely shared. 'That's outrageous' is intermediate between 'That's a rabbit' and 'He's a bachelor'. Even our best-case assumption is insufficient, we see, to qualify it as an observation sentence. Moral judgments differ thus from cognitive ones in their relation to observation.

The difference is due to a difference between sensation and emotion, despite the aloofness of my definition of observation sentence. Sensation is nicely coordinated with concurrent, publicly accessible stimulation. Impacts on a certain range of surface receptors produce the sensation, and conversely, apart from occasional illusion, the sensation occurs only when thus produced. It is not so with emotions. The emotion of revulsion matches up only half way even under the best-case assumption, for the converse condition still fails: revulsion is commonly aroused also by acts that are visibly evil only in the light of collateral information not generally shared. Hence the lack of moral observation sentences. Natural science owes its objectivity to its intersubjective checkpoints in observation sentences, but there is no such rock bottom for moral judgments.

A word now about the status, for me, of epistemic values. Naturalization of epistemology does not jettison the normative and settle for the indiscriminate description of ongoing procedures. For me normative epistemology is a branch

of engineering. It is the technology of truth-seeking, or, in a more cautiously epistemological term, prediction. Like any technology, it makes free use of whatever scientific findings may suit its purpose. It draws upon mathematics in computing standard deviation and probable error and in scouting the gambler's fallacy. It draws upon experimental psychology in exposing perceptual illusions, and upon cognitive psychology in scouting wishful thinking. It draws upon neurology and physics, in a general way, in discounting testimony from occult or parapsychological sources. There is no question here of ultimate value, as in morals; it is a matter of efficacy for an ulterior end, truth or prediction. The normative here, as elsewhere in engineering, becomes descriptive when the terminal parameter is expressed. We could say the same of morality if we could view it as aimed at reward in heaven.

Moral values do occasionally intertwine with epistemological norms, but not inextricably. Falsification of an experiment is immoral, and also it is epistemologically inefficacious, however rewarding in respect of fame and fortune. When in a passage quoted by White I referred to "the ultimate duty of language, science, and philosophy" I was using the word somewhat as when we speak of a heavy-duty cable or tractor. It was what language, science, and philosophy are for, as eyes are for seeing.

W. V. Q.