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THIS PAPER PRESENTS AN APPROACH TO THE VERY DIFFICULT PROBLEM OF HANDLING VALUES IN THE EDUCATIONAL PROCESS, PARTICULARLY IN THE PUBLIC SCHOOLS. IT DISCUSSES THE AUTHOR'S POSITION ON THE FOUNDATIONS OF ETHICS AND THE METHODOLOGICAL BASIS FOR MORAL JUDGMENTS IN RELATION TO VALUE ISSUES IN THE SOCIAL SCIENCES. ITS PURPOSE IS TO PROVIDE AN UNDERSTANDING OF THE NATURE OF VALUE JUDGMENTS AND OTHER CLAIMS ABOUT VALUES. REASONS ARE GIVEN FOR THE VIEWS THAT VALUE JUDGMENTS ARE INESCAPABLY INVOLVED IN ALL SCIENCES AND THAT IN THE SOCIAL SCIENCES MORAL VALUE JUDGMENTS ARE SOMETIMES INVOLVED. THE DISCUSSIONS ARE PRESENTED UNDER SEVEN GENERAL AREAS--(1) ELEMENTARY EXAMPLES OF VALUE CLAIMS, (2) COMMON FALLACIES AND THEIR RESPECTABLE RELATIVES, (3) CONSTRUCTIVE ACCOUNT OF THE FACT/VALUE RELATIONSHIP, (4) EFFECTS OF EMPIRICAL UNCERTAINTY, (5) EFFECTS OF VALUE-ALLERGY, (6) REAL-VALUE CLAIMS WITHIN EVERY SCIENCE, AND (7) MORAL VALUE CLAIMS IN THE BEHAVIORAL SCIENCES. TWO OTHER PAPERS ARE INCLUDED IN THE SERIES--(1) "MORALITY" (AA 000 272) AND (2) "STUDENT VALUES AS EDUCATIONAL OBJECTIVES" (AA 000 274). THIS PAPER WAS WRITTEN AS PART OF THE SOCIAL SCIENCE EDUCATION CONSORTIUM, A CURRICULUM PROJECT DESIGNED TO OUTLINE THE CONCEPTS, METHODS, AND STRUCTURE OF SEVERAL OF THE SOCIAL SCIENCES FOR USE BY TEACHERS AND CURRICULUM WORKERS AT ALL GRADE LEVELS. (RS)

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IN THE SOCIAL SCIENCES

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Publication #123 of the
Social Science Education Consortium.

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FOREWORD

The research for, and writing of, this paper was supported in part by a contract of the United States Office of Education with Purdue University for the Social Science Education Consortium.

The paper is one of several done under this contract, which develop a particular approach to the very difficult problem of handling values in the educational process, and particularly in the public schools. The first report, "Morality", is a position paper on the foundations of ethics and the methodological basis for moral value judgments. This paper, the second, brings that position to bear on value issues in the social sciences. A third paper, "Student Values as Educational Objectives", deals with the role of values in the curriculum. Further work is planned on specific methods of handling values in the curriculum and in the classroom.

Michael Scriven

March, 1966

VALUE CLAIMS IN THE SOCIAL SCIENCES*

Michael Scriven

0. Introduction.

The aim of this paper is to provide a sound understanding of the nature of value judgments and other claims about values, and to attack a number of common fallacies about the relationship of value judgments to factual and scientific claims. In particular, reasons will be given for the views (i) that value judgments are inescapably involved in all the sciences, (ii) that in the social sciences moral value judgments are sometimes involved. There is nothing very novel about these conclusions. They have often been maintained, as have their denials, usually for very bad reasons. The reasons are usually bad because they begin with an oversimplified conception of the nature of a value judgment. It is essential that any discussion of these issues begin with an extremely careful analysis and classification of simple value judgments for they are one of the slipperiest species in the whole logical zoo. The reader must therefore bear with some elementary nature study before we can pass judgment on the more exciting stories in the bestiaries. It should perhaps be mentioned in advance that there will be no discussion of supernatural foundations for value claims, in particular moral value claims, for the twofold reason that such foundations are neither required nor available.

*Revised for and read at Political Science Department Symposium, Northwestern University, February 1966. I am especially indebted to Kurt Baier for valuable discussion on this topic over the past fifteen years, and to the U. S. Office of Education which supported work on this paper through a grant to the Social Science Education Consortium. Robert McLaughlin, Larry Wright, Paul Dietl, G. H. von Wright, K. Baier, Diane McGrath, and others made useful comments on earlier drafts.

1. Elementary Examples.

Value claims obviously include judgments about the worth, value, merit, goodness, fineness, quality, etc. of things, people, actions, thoughts, attitudes, etc. For example, "Kirmans and Kashans are two of the most valuable contemporary Persian rugs on the U. S. market"; "An accurate long-passing quarterback would probably be the most valuable man a college team can have, as the game is at mid-century". These examples are different in certain respects; the first is essentially a factual remark about price-level in a particular market ('valuable' here roughly means 'expensive'); the second is an appraisal of the merits of a hypothetical individual. But they share a crucial similarity, for each has an implicit reference to a market, i.e. to a group with certain needs or wants. Indeed, it is clear that value is attached to the object appraised because it possesses those properties which the market wants or needs.

The distinction between "wants" and "needs" is important: wants (or demands) are what people believe they would like or benefit from and may not be needs at all, while needs may not be recognized at all, but must actually produce basic benefits. Either or both can produce valuations. In the first example, the value of the rugs would not be as claimed unless the consumers did recognize that these types possess the desired properties. In the second example, however, the player described could be shown to be valuable whether or not there were consumers in the relevant market who believed this. Partly for this reason, we are inclined to say that the second claim is a claim about 'the true value' of the appraised entity (i.e. its demonstrable value whether or not recognized as such)--by contrast with the first claim's reference to 'market value' or 'what it will bring'. True and market value may vary quite rapidly as time and conditions change. Both can be expressed in monetary terms or in exchange terms or in general

evaluative language. In some contexts, this distinction is absurd, but the second example shows it is not always absurd. In fact, when we make a more careful or more skillful analysis of the merits of various options than that made by the bulk of consumers (who determine the market prices) we are quite often able to find something whose true value is greater than its market value. We call this a "good value" (meaning "a relatively good return for the money spent") or a "Best Buy". Kirman rugs are at times vastly overpriced in terms of their wearing quality, mothproofing and resale value--a mere fad. At such times, they would be said not to be a good value, for the average consumer. To say they are 'overpriced' is to stress the contrast between market value and real or true value (both here being referred to a monetary scale).

This distinction is an absolutely crucial one and must be made whenever possible. A used Lincoln is always much less expensive than a used Cadillac (of the same year and type, and in the same condition), although more expensive when new, and since this is largely due to the status value of the Cadillac it can be argued with some point that a used Lincoln is a better real-value than the used Cadillac, since we do not usually try to defend aesthetic or status appeal as part of 'the true value' of a functional object. Of course, sometimes we do, by explicitly including such considerations as a consideration of importance to us, and sometimes it is not necessary for us to defend our purchases as having an intrinsic worth that justifies their cost. Sometimes we buy things just because they catch our eye, or we want to take our minds off something unpleasant that we should be doing. But when we are spending someone else's money, and it is in short supply, or so much money out of a small budget that reason requires us to justify spending it on this brand rather than that, in terms of basic needed qualities, then a potentially objective process of comparative evaluation, or 'rating', comes

in. Such evaluation is, in general, in terms of defensible wants and needs rather than whims and weaknesses, for the very good reason that the former are usually--indeed, almost definitionally--more important. Market values are always subject to fashions, real values are, supposedly, not.*

So far we have distinguished two kinds of value claim, while insisting that there are many borderline examples. There is a third kind, once again clearly distinguishable in its pure form, but capable of hybridization with the preceding types. Apart from directly assessing the market-value of something, one may also directly assess the values of the population that makes up a market, i.e. of an individual consumer or group of consumers. Thus we may say, in discussing union contract negotiations, that the UAW seems to value job security more highly than the Steelworkers, or that small colleges often place a high value on geographic diversity as well as on purely scholarly indicators in their selection procedures. There is clearly a close connection between this kind of value claim and a market-value claim: both kinds identify something as being of value in a certain market. (They contrast with the real-value claim in avoiding any commitment to the justifiability of the evaluation.) The difference between the two is that one is using this fact as a way to talk about the market and the other is using it as a way to talk about the item being evaluated. Normally, this difference manifests itself in the kind of values mentioned in the two contexts. In talking about the market, we try to give the basic value factors from which all others can be derived--that is, we mention the qualities that are valued. (For this reason we shall often call the third type of claim a 'claim about the value-base' of the market.) In talking about the valued

*Except where the aim of the valuer is to make money by resale of the valued item: in such cases, the real value to him depends on the market value and hence on the tastes of the times.

entities, on the other hand, we nominate them individually. In general, getting to the market valuation of an entity from knowledge of the values of the market requires additional factual information, about the individual entities being evaluated and about other characteristics of the market besides their (or his) values. You may know what Jones wants in a car (his value-base), but you need to know a good deal about the properties of particular makes of cars, and about Jones' impulsiveness, etc., before you can come up with an estimate of the 'market value' to Jones of any particular make, i.e. what he would pay for it. So market-value claims typically represent the product of a more complex process than values-of-the-market claims. In a particular case, however, where we were talking about the market value of the qualities themselves, the processes would coincide. 'Judgments of preference' may be either value-base claims or market-value claims, then, depending on the kind of thing being preferred. Roughly speaking, if it's qualities, it's value-base; if it's items or specific states, it's market-value.

With respect to another kind of process the relationship of market-value claims and value-base claims is reversed. In the investigative process, it is often much easier to discover market-values of particular objects than the underlying values of the consumers that produce this observable choice behavior. For we may have good clear data about market behavior. Similarly, we may sometimes find it easier to determine the real value of a product than its market value, as when we develop a highly effective new drug.

There is a fourth type of claim which completeness requires us to include. Its position is less secure in a typology of value claims, as far as its internal logic goes, but usage demands a place for it. Consider what happens if you decide to mortgage property--a house, jewelry, a boat.

An expert is called in who is referred to as an assessor, appraiser or evaluator. The most important information he is supposed to give us is the market-value of the property he examines. But he will often do more than this, partly as a way of justifying his appraisal. He will point out areas of dry rot in a house or boat, the use of base metal or cavities in the settings of jewelry, etc. He mentions these facts because they bear directly on the value of the property. Such 'purely descriptive' remarks are often referred to as part of the evaluation and not just as part of the basis for the evaluation. Similarly, when a quality control engineer takes an automobile at random from a production line to make what is known as an evaluation of it, this is simply a report on its performance and manufacturing tolerances in a large number of detailed categories. Essentially the same process goes on in many school systems when a course is 'evaluated'. The justification for calling this kind of activity evaluation is simply that the standards of merit or value have already been settled and the 'performance' data now being gathered constitutes the evaluation because it is all that is now required. We would not normally say that a listing by the engineer of the car's color or installed accessories is part of the evaluation, since these are simply owner options: but the presence of crazing or orange peel in the paint coat, or malfunction in the accessories, just like gross deficiencies in the acceleration, would be included.

In short, the nature of certain claims can be determined only if we consider the context in which they are made. Where the stage has been correctly set, an assertion that is 'intrinsically' (i.e. in many or in the usual contexts) non-evaluative may properly be said to be an evaluation. We shall call such claims "valued-performance" claims. Of course, if we do not know that (and usually how) the performance bears on merit it is a travesty to refer to the measurement of it as evaluation: and exactly this

travesty is involved in a great deal of curriculum evaluation where no defensible conclusions about merit can be drawn from the kind of data that is so earnestly gathered. Good conceptual analysis (of the relevant concept of merit in terms of the qualities involved in it) and good experimental design are essential presuppositions of any performance-testing in an evaluation process.

It is thus only because we normally value intelligence that one can ever call assessments of intelligence value judgments; the inclination to do so often reflects the careless tendency to add any debatable issue to the category of value judgments. Value judgments are no more and no less debatable than factual judgments and indeed not distinguishable from judgments of fact. (In case it may be thought that at least real-value claims can be distinguished from factual claims we shall shortly examine the possible criteria for such a distinction.) Similarly, it is clear from the above examples that value claims in general are not mere expressions of opinion or taste although they are often about or dependent upon matters of opinion or taste.

Our basic typology, then, consists of four classes of value claim: real-value (Type A), market-value (Type B), value-base (Type C), and valued-performance (Type D). And the criteria for distinguishing them involve consideration of the context in and intent with which they are used. To stress the importance of this it is probably sufficient to reflect that the remark about the rugs might be intended, in certain contexts, to express a claim about the true (aesthetic and/or practical) worth of these rugs. Conversely, the remark about the football player might be intended, in certain contexts, to tell us what kind of player is getting the largest illegal bonuses. It is certainly true that this context-dependence of value judgments is

the key to understanding the term "good" and its correlatives. And it is absolutely fundamental for identifying D-type claims. Intelligence is usually taken as a positive value to the individual. But if we are assessing men as possible husbands for a beautiful but quite exceptionally stupid girl, it will be a drawback, a negative value. In either of these contexts it is still value-loaded but only because of the context. For in yet another context, where we are simply inventorying the characteristics of draftees, we may regard high intelligence as simply a distinguishing fact about some of the men, like their unusual height or weight, which will suit them for some jobs, and handicap them for others where unquestioning obedience to perverse-seeming orders or the discharge of extensive repetitive tasks is involved. The assessment of intelligence is not intrinsically an assessment of value. This point is obscured by the linguistic fact that the term "evaluation" is frequently used as if it were equivalent to "assessment" or "determination" or even in some situations "measurement". Now the full process of evaluation involves comparing and combining performance data with independently identifiable desiderata. This combination or comparison of two scales--the actual and the desired or needed--is what distinguishes evaluation from simple measurement or determination. But we have seen how, in certain contexts, measurement or observation may be called (because it then amounts to) evaluation. And measurement, observation, etc. are typically involved in the more complex process because determining the actual characteristics of the performance is typically necessary before we can combine it with the values-base.

2. Common Fallacies and their Respectable Relatives.

We are now in a position to assess and reject or refine some of the usual arguments about value judgments and the social sciences.

1. The relationship between our term 'value-claims' and the term 'value judgment', which has been used in a great many different ways, should be clarified. 'Value judgment' is often used pejoratively, particularly by those whose views we are considering, to mean 'mere matter of opinion or taste'. This usage does not coincide with any one of the types of value claim we have distinguished. The nearest approach is to our 'real-value' judgments. But to suggest that such claims are not scientifically decidable has the immediate consequence of denying the legitimacy of a very valuable kind of report from the National Bureau of Standards, the Food and Drug Administration, Consumers' Union, and other testing organizations. When one of these reports that a certain battery additive, depilatory, reducing pill, or knife-sharpener is absolutely worthless they are surely producing a scientifically substantiable claim. And exactly the same situation applies to reports by a commission of economists on the efficacy of a recent tax change in achieving its objectives, or to any of the hundreds of similar situations in the social sciences. In brief, judgments of the true merit of something are readily supported when the intent of the entity is clear and undebatable and when its performance with respect to those goals is also clearly very deficient or very effective. In one way or another we shall be going over this point again, but its importance can hardly be over-stressed. No type of value judgment is by its nature unverifiable. Real-value claims, like the others, are sometimes hard to verify, sometimes easy, just like factual and theoretical claims throughout all sciences.

The final defensive position of the value-free enthusiast is the claim that moral value judgments must be kept out of the social sciences. To identify value judgments with moral value judgments would be a grotesque blunder and hence the characterization of this position as the claim that the

social sciences should be value-free or free of value judgments is indefensible. For other reasons, the position itself is indefensible: it will be discussed below.

2. Almost any property can become valuable (or harmful) in some context and hence almost any factual assertion may figure in, or be the deciding factor in establishing a value-claim. As we have seen already, this means that a very wide range of scientific claims can, in such contexts, be called evaluations, in one sense. (In such contexts, we have suggested calling them valued-performance claims.) This provides no grounds for concluding that science is permeated with value-claims of the allegedly objectionable 'real-value' type. It simply reflects the fact that evaluation involves a purely factual component, and that a very widespread use of facts is for the purpose of evaluation, in science as well as outside it.

3. It is often thought that one can establish the value-impregnated nature of science by pointing out that some kind of value judgment is made by the scientist when he decides to work in a particular scientific field. But making that value judgment may be just part of the personal activity of a scientist and not part of science. It may be simply based upon consideration of his own talents, interests, or opportunities and it may be rational or irrational, but it is still typically a personal decision about how to spend his time and resources.

On the other hand, his deliberations might involve general considerations about the kind of research that would be best or most valuable for the subject at that particular stage of its development, and that kind of evaluation is not a personal matter. Although such judgments are quite different from the kind of judgment that is usually thought to be the main concern of a practicing scientist, it is an inescapable necessity for a

scientist to make such judgments about his field. He must be able to assess the merit of work by others, peers and students, and one cannot meaningfully assess merit without any consideration of significance for the subject. Even if one could, a value judgment would still be involved. So the fact that a scientist must make choices of problems to work on does not show that science involves value judgments; but the kind of considerations he should (perhaps morally as well as scientifically) take into account in such deliberations do involve value judgments.

4. A third argument aimed to attack the value-free conception of science, but fallacious in its usual simple form, originates from consideration of the applications of science. A pharmaceutical manufacturer, for example, must decide on methods of quality control, not only by reference to the statistical chances of defective products in an output population for which samples of a certain size are taken, but also by taking account of the kind of consequences that would result from marketing a defective product. These consequences range from the destruction of a valued life, where the defect is the toxicity of a standard medication, or the creation of an unvalued life, where the defect is in a contraceptive product, to less serious examples. Obviously, more extensive sampling, or higher acceptance standards in the samples taken, will be called for in cases where the consequences of error are serious, and obviously the question of seriousness is a question of the value of human life (or health, etc.). But it is not obvious that the decision to be made can legitimately be said to be part of science itself, even applied science. It is more plausible to regard it as a human decision about how to use the results of applied science. Similarly, the decision whether to use the atomic bomb can hardly be said to be part of applied physics though it is certainly a decision about how or whether to

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apply (applied) physics. Once the point has been made, it seems entirely proper to distinguish problems of applied science from problems about the application of science, and this distinction armors science against the intrusion of value judgments of the kind just described. Once again, however, we find that there is a special family of cases where the argument does work--examples from applied science where the value judgment seems to be inseparable from the subject itself. But these deserve a section to themselves, for they also concern the problem of the involvement of moral value judgments in the social sciences.

5. We now turn to a family of claims that are often thought to be just rephrasings of one view. It is commonly said that one should 'distinguish facts from values', or 'empirical claims from value judgments', and that the (social) sciences are legitimately concerned only with facts and not values (or with means and not ends). It is said that their task is 'to describe and not to recommend', to tell us 'how the world is, not how it ought to be'. The conflation of these claims is very confusing since some are hopelessly mistaken, others quite plausible or partly true. Some of them we have already discussed, directly or indirectly, but we must now discuss an argument which is probably the most powerful force behind these 'value-free' positions, an argument whose effect has been enormous, especially in the form due to Hume. There is a crucial logical distinction, so it is argued, between the vocabulary of description (the vocabulary of "is") and the vocabulary of recommendation (the language of "ought"), and there is no way to proceed by valid inference from one of these languages to the other. Only a personal commitment to bringing about certain ends can give a factual statement about means any impact on our actions, and that personal commitment obviously does not show that the ends we have chosen are right. In general,

therefore, value judgments cannot be wholly grounded in factual judgments-- they must also involve personal commitments, which it is surely no business of science to endorse or criticize.

The first objection to the fact/value dichotomy must be made on straight terminological grounds. The usual interpretation of this alternation between facts and values takes it to imply the existence of an intrinsic distinction. But the distinction is merely contextual. There are many contexts where factual value judgments can be made--the examples of value judgments discussed above are surely properly called statements of fact. Of course, they are by no means always simple statements of fact, or statements of observable fact. To say that something is a statement of fact is usually only to say that it is definitely true, and for this reason we certainly cannot concede the existence of a general distinction between factual statements and value statements. It is a statement of fact that the universe is expanding, or that electrons increase their mass when they travel near the velocity of light; yet neither is a report of a simple observation but the conclusion of a very complex chain of inference. We can work out the values of others from their behavior, and the values of objects (with respect to a certain market) from their properties and the demands of the market, as every consumers' union does, and the results can often be stated as facts. It can often be established as a fact that Brand X is a better value than Brand Y, that Brand Z is a very good value, and so on. We have already indicated how analogous value judgments occur in every social science. It is not possible to defend the position that claims like this are in any way dubious.

What can be said for the facts/value distinction? If made in a particular context, one can distinguish the fact-gathering stage from the fact-combining process that eventuates in a real-value judgment. Claims

about the value-base and claims about valued-performances are combined to produce the comparative or absolute rating. If one could restrict the term "value judgment" to real-value judgments and if one could ignore the implicit suggestion that the valuation is not properly called a matter of fact, and if a fixed context is presupposed, then the distinction between facts and evaluations is possible. But these 'ifs' are crippling, and unnecessary: a better alternative is simply to distinguish between the evidence and the evaluation based on it--a special case of the general distinction between evidence and conclusion. If we wish to use the catchphrase facts/value distinction, it must be used to carry no implication of a difference in objectivity or certainty.

The argument now moves into its final and what seems to be its only challenging form. The sophisticated social scientist will point out that from the premises:

1. Group G values the properties XYZ, in products of type p (e.g., forms of government), and gives them relative ratings as follows...
2. Product P, of type p (e.g., democracy), exhibits a better performance with regard to XYZ, rated as Group G rates them, than any of the other products between which Group G is going to choose. I.e., it is the most valuable one for them.

one cannot legitimately obtain the apparently plausible conclusion

3. Group G should (rationally) choose Product P.

For this conclusion unconditionally endorses the selection of P, by G, and hence involves the assumption that it is perfectly all right for Group G to have just the values it has. But the premises do not guarantee this, and to do so they would have to include a real-value claim about Group G's values,

namely that they are the right ones to have.* So, it is usually concluded, facts alone cannot lead to value-conclusions.

It should by now be clear that the formulation of the last sentence is still grossly misleading. It is obviously false about some types of value-claim. For example, the facts about the union contracts and the situation in the industries lead to the conclusion about the unions' values. The domains of market value, value-base and valued-performance claims are immune to the present dispute. What is meant is better put as 'facts alone cannot endorse or justify a particular course of action', that is, cannot support a real-value recommendation. But is this really true? Recall the quarterback example; an analysis of the college game as it stands and as it could be, might surely reveal that an overwhelming role would be played by an accurate long-passer. And surely this would justify selecting such a candidate if one appeared.

No, says the purist: it only justifies such an action if one can justify trying to win at football. The point of his objection becomes much clearer, he says, if we consider the more practical question whether the quarterback should be awarded a scholarship and not merely 'selected' in the abstract. We cannot conclude from the admittedly factual high valuation of his skill relative to other players we could select, and our admittedly factual interest in the values on which that valuation is based, and the admitted fact that we can't get him any other way, that we should award him a scholarship. To do so, we would have to justify the whole malodorous business of athletic scholarships, which is obviously no mean undertaking.

*Technically, it also requires the real-value claim that one should (rationally) choose the alternative which is most valuable for one. But this is a definitional truth, i.e. it involves no extra and possibly questionable assumptions.

At this stage we have arrived at a clear formulation of the valid point in the anti-values position. Before discussing it further, we should see what it does not prove. In particular, we should note that the latest formulation of the argument, the one just given, involves a further and most important concession. For it allows that a well-based comparative real-value claim about a product, for a certain market, may be factual: the accurate long-passing quarterback is a better choice (a more valuable player) for the present college team than any other kind of player one might reasonably hope to find. Dishwasher X is (really) a better value than Dishwasher Y (because of superior performance on all relevant dimensions and lower price, let us say). The main reason why comparative evaluations are often immune to the source of worry that pervades the absolute evaluation is the reason that makes an ordinal scale of measurement (like the hardness and loudness scales) easier to construct than a cardinal scale (like those for length and mass): the avoidance of any need to say how far each measured (or evaluated) entity is from a fixed zero-point. It is often easy to identify relevant performance dimensions (and the directions along them which indicate superiority) and to see that X does better than Y on these-- as long as one doesn't have to say that X does very well (is very good, etc.). Doing better than Y may not be doing very well at all--a further analysis is required to establish the absolute claim. We shall show, however, that this further analysis can often be given. And there is a very close connection between absolute real-value claims and recommendations; the latter are absolute real-value claims about one of the alternatives between which one must choose. Of course, choosing presupposes motivation, i.e. goals or ends, i.e. values in the most general sense. So perhaps it can still be maintained that the social sciences are only concerned with means rather

than ends? The answer is negative, although there is a misdescribed grain of truth in this.

Obviously, as far as reporting values is concerned, the social sciences are at least as concerned with people's ultimate ends or values (if they have any) as with their means to these, i.e. their intermediate or instrumental values since these motivate human behavior most powerfully. But even with respect to direct, endorsed, evaluation, the social sciences may be able to demonstrate the absurdity of one--or the inconsistency of several--important values (e.g., the 'pure Aryan race'). So direct evaluations can certainly be falsified by scientific and logical investigations. The grain of truth in the 'means but not ends' program for social sciences is this: the kind of concern that the social sciences properly have with values does not always include the whole business of evaluating them. This task is conventionally and superficially regarded as a task for philosophy or perhaps religion. In fact it is a task which (a) sometimes can be done within a science, by pointing out fatal factual errors; (b) sometimes can be done outside the sciences, as when a purely logical proof of inconsistency is given; (c) nearly always is a hybrid task requiring both scientific knowledge and logico-philosophical skill. In general, the evaluation of ends cannot be done without the social sciences, for life ideals, or recommendations, based upon errors about human capability are certainly futile. Finally, and this is perhaps the most important misdescribed point lying behind the means/ends position, (d) the evaluation of ends sometimes lies outside the social sciences because sometimes they lie beyond rational evaluation, as when they are simply matters of taste. But this is not true in general, for it is very rarely that the consequences of tastes, let alone attitudes and their associated beliefs, have no consequences for other tastes, and the discovery of these consequences is a major task of the social sciences.

6. Quite apart from the considerations just listed under 5, the general claim that the social sciences can 'only describe and not recommend' is a mistake for simple grammatical reasons. Problems often arise about means when the ends are not in dispute, where the social sciences can perfectly well make recommendations. Recommendations are nonetheless recommendations because they presuppose goals. The recommendations made by a doctor treating you for cancer presuppose your interest in life or at least in the reduction of pain, but it would hardly do to say that because these values are not determined by medicine, doctors should not, or do not, prescribe. Similarly, the social sciences can and do recommend, even when they do not verify all the values which lead to the need for the recommendation. But should they? Yes, as long as there are no grounds for rejecting the presupposed values.

At this stage it may occur to the reader that recommendations should be given a completely separate category in our classification of value judgments. But there is no essential difference, for our purposes, between an 'absolute' (i.e., non-comparative) evaluation of real merit and a recommendation: a recommendation is simply a real-valuation of one of several alternative possible actions. To say "You should do X" or "You ought to do X" is not importantly different from saying "X is the best thing for you to do", or (sometimes) "X would be the most worthwhile choice or course of action for you".

No, the basic problem is the same for any real-value claim. Before one can support real-value claims one must have or assume some values (in the extended sense which includes any desires or needs). Moreover, one's evaluations can scarcely be proven right if the values on which they are based are wrong, whether one is evaluating knife-sharpeners, wives or lives,

true from the trivia of housekeeping to the further reaches of morality. It is surely the embarrassing prospect of having to establish the validity of ultimate moral standards that has led many people to general scepticism about the possibility of substantiating any value judgments. But it is often easy to establish the validity of the ultimate values in the non-moral cases, since they are then only the wants or needs relevant to the choice of a knife-sharpener. The moral case is quite separable; and, independently, quite solvable.

7. Should the social sciences be concerned only with telling us 'how the world is' and not 'how it should be'? One answer is implicit in the answers to the preceding questions. It is very often (though not always) the case that 'how it should be' with respect to one particular issue can not only be discovered by the social scientist but can only be thus discovered. For with respect to a particular issue it is (i) often perfectly clear (or can be objectively determined by the techniques of value-base investigation) what goals are desired by the interested parties; (ii) clear that there are no grounds for rejecting these goals; and (iii) clear from empirical research and logical analysis that these goals can best be attained by a certain course of action. The analogy with the doctor is again appropriate: to argue that prescription, indeed objectively supportable prescription, is impossible in the applied social sciences, is as inappropriate as it would be with respect to the applied medical sciences. There may be differences of degree, but there are none of principle. There is nothing more personal about a physician's prescription than about a clinical psychologist's; nothing more general about an economist's than about an epidemiologist's.

The careful reader of the last few sentences will have noticed a possible loophole for the value-free sympathizer. We said that a prescription

can be entirely justified when the best means to certain goals can be identified, when it is clear that these are the goals of the participants, and when 'there are no grounds for rejecting these goals'. But surely this is not enough--surely one must also be able to justify these goals. Otherwise the only conclusion one can reach is that certain action may be proper or right. This very rational argument is based on a failure to recognize the essentially derivative nature of valuation. We shall explain in the next section how this feature of recommendatory value judgments enables one to proceed from the absence of prohibition to the presence of justification. But first we must mention one more argument which is used to support the value-free position and which involves a conception of value judgments to which any alternative account must pay very close attention.

8. A certain mental picture of the relation between value judgments (as opposed to their intrinsic nature) dominates much methodological discussion of values and distorts the reality. It is widely supposed that a man's system of values can be thought of as a pyramidal hierarchy, or, conversely, as a tree-structure. These have, at one end, a large number of specific practical values (liking today's issue of The Times, preferring one's nephew James to the neighbors' Johnny, etc.) which are explicable (or justifiable or derivable) from a smaller number of more general values (liking the most compendious paper in the country and not caring that it also has the most typographical errors, liking little boys who are intelligent but rather quiet, etc.), which are themselves instances of still fewer and more general values (liking the qualities of being well-informed, intelligent, secure), etc. Now if this were a realistic account, all one's values would derive from a relatively small number of 'highest' (or 'most basic') values, which by definition are not derived from any other values. Where do they come from? It seems very plausible--if one is thinking in

terms of this model--to suppose that they must be simply a free choice by the individual. The model cuts them off from any visible means of support, and in doing so it misrepresents the extensive interaction between values and experience that actually exists. In the next section we shall discuss a more appropriate model.

3. A Constructive Account of the Fact/Value Relationship.

Values consist in or arise from needs and wants. The primary type of value is something that is directly needed or wanted.* Secondary values arise because we have to set up certain intermediate goals if we are to achieve the primary goals, so the most important secondary or instrumental value is rationality, a method which maximizes the efficiency of our attempts to achieve our primary goals. Optimization requires that we also be prepared to adjust our primary goals, where this is psychologically possible, in the light of the constraints of external and internal reality limitations. External limitations arise from unavailability of goods, the opposition of others, etc., internal ones from conflict between different goals, or difficulties due to character defects. The whole vocabulary of value is generated by the attempt to communicate about, and to structure and refine communications about, this interaction of means and ends, and means that become ends, and the facts about them. The language and logic of value can be applied to any situations exhibiting the characteristics we have just described--thus, we may talk of good and bad, better and best, ought and should and is, in a context of grading examination papers, bassoons, chess openings, The Alexandria Quartet, and the nobility of actions. The relevant

*Only in the extended psychologist's sense would we be inclined to call all needs values; hence the suggested compromise of calling them a type of value.

criteria in each case are different--what makes a bassoon good is not what makes an act noble--but it is inappropriate to describe this variation as a sign that the word "good" is ambiguous or being used in a different sense or with a different meaning. "Good", like the other terms of the evaluation vocabulary, is a function word and not a labelling word like "red". We do not say that the word "conclusion" (of an argument) is ambiguous because quite different kinds of statements can be conclusions, or because what would count as a sound conclusion in the context of legal evidence would not so count in the context of mathematical logic. The point about the term "conclusion" is that it stands for any consequence that may legitimately be inferred, by whatever standards of inference are justifiable in the particular context of the discussion. It no more has to stand for deductive implications alone than the word "dog" has to stand for poodles alone. And similarly "good" has no primary commitment to the moral use; it always serves the same function, that of indicating entities which score well on the relevant evaluation criteria, whatever they may be. The process of evaluation, being simply the combination of goal-criteria with objectively determined performance measures, in general involves only empirical and analytical procedures, though certainly it involves more than simple observation.

In the special case of moral evaluation, special criteria are involved. The only defensible set of such criteria are complex compounds of the welfare variables of the population on which the morality is based. The ultimate foundation of morality is the most basic needs and wants of men. Although the utilitarian formula for compounding the individual welfare-functions is both crucially ambiguous and mistaken in being too limited in its range of application,* the spirit of its approach is the right one, in its concern

*See "Morality" chapter in Primary Philosophy, McGraw-Hill, 1966.

with utility, though it is deficient in its safeguards for justice. But these conclusions about morality, which are controversial amongst moral philosophers, are not crucial for what has been said about value judgments in general, and indeed, if we make certain plausible assumptions, are not even essential in order to justify the use of the same approach in the field of morality. For the above analysis leads to basic principles that are very similar to those in several more traditional ones, and the practical applications of all should thus be closely similar, if applied equally rationally. If one is prepared to accept, on whatever metaethical basis, the proposition that morality definitionally or even fundamentally involves the notion of equality of rights, then one need accept no other independent principle or criterion, for the other standard moral principles and values (justice, honesty, etc.) can be derived therefrom with the assistance of some rather simple facts about human nature. And moral evaluation simply becomes evaluation of acts, etc. directed by the ultimate criterion of equality of consideration, or by the proximate criteria of justice, honesty, etc. when these are more readily applicable and not in dispute. The morality of particular practices, such as monogamy or polygamy, then emerges as defensible in certain environments and not in others, whereas the more general principles of morality derive from more nearly universal features of the human situation. Accepting the equality criterion as defining or generating morality--or any other criterion--does not entail accepting the legitimacy of moral claims upon one's attention. But it does make it possible to see moral value judgments as just one group in the range of evaluating processes, which may or may not be of any personal interest, from that of driving skills to that of male ballet-dancers, each based on comprehensible and applicable criteria--though these criteria can only be

applied by exercising hard-earned skills. The question of justifying the principle of equal rights, or attention to it, is a different question, and one that will not be taken up in detail here beyond remarking that attention to comparative anthropology, or to those problems of game-theory which can only be solved by cooperative strategies, provides us with strong grounds for supposing that enforcement and even acceptance of morality can serve a valuable function in improving welfare. It should be clear from these analogies that the question of justification is itself largely a question for the social sciences, whether or not it has previously been accepted as part of their province.

An important consequence of the preceding account of value judgments is their previously mentioned derivative character: they only arise from the interaction of pre-existing wants or needs with external and internal restraints. There is nothing intrinsically good or bad about the original wants or needs, although the constraints and the interactions may lead one to a subsequent overall evaluation in terms of which some of the original goals must be regarded as less important, not feasible, or disadvantageous and hence devalued. No outside source of values is necessary for this to occur; we rightly regard heavy smoking as a bad habit to acquire because we know that life is more important to most people than the pleasures of inhaling smoke. It follows that whenever there are considerations of welfare to be served by an action, there are automatically good reasons for doing it without any need for a proof that it is good to serve welfare in this way. It isn't intrinsically good or bad to serve welfare (one's own or that of others), it's simply something one has a good reason to do. One may subsequently discover overriding reasons to do otherwise, but at this stage there exists a good reason in favor of this particular action.

Consequently, the tendency of the value-allergic social scientist to withhold a value judgment which is clearly indicated by the evidence in his possession, because of his frequently voiced worry, "Who can be sure what is right or wrong?", is an overblown scepticism. Welfare-promoting is self-justifying until shown wrong, i.e. shown to be inconsistent with other values derived from welfare-promoting. Wholesale scepticism about value judgments is as absurd as wholesale scepticism about observation claims. One does not have to believe that any particular ones are indubitable in order to be confident that many are true.

Even if we assume that value judgments are logically more complex than observations (which is certainly false of some primary, first-person value claims), total scepticism about value judgments is just as absurd as the suggestion that one can only be sure of observations and hence should never make assertions about the explanation of eclipses or atomic explosions. Explanations may be, typically, a little more fallible than observations, but they are still often strong enough to stake one's life on, and the same is true of value judgments. It is important to see that the variables bearing on a value judgment are quite often, in a practical situation, undeterminable for the time being, just as the facts needed to settle on the right explanation may be unavailable, and not to conclude that this is always or necessarily true. Where the variables are indeterminate, an interim evaluation of various actions in the light of the uncertainty of this evaluation is not in the least diminished by the uncertainty about the hoped-for evaluation. Before turning to an example to illustrate this point, we shall conclude the general discussion of the value-system with an alternative to the pyramidal or tree-structure account of the relation between values.

The best model for a value-system is a web or net of webs stretched across the ground of experience, serving as one of the structures that unifies it. The intersections or terminations of strands represent values, the strands represent empirical or logical connections. The more important values serve as the focus for many strands of the web, and are not necessarily anchored to the ground. The peripheral strands--and some internal ones--terminate in points of attachment to the ground which represent the most specific applications of the value system. The net is extended by the enlargement of experience, which brings with it the need for new choices and new orderings of the alternatives, i.e. new tie-points at the periphery. The selection of these is governed by the general principle of organization of the net, which is roughly the principle of maximising strength by minimising strain. A particular series of choices at the periphery can set up a considerable asymmetrical strain on the net which will either leave it in a weakened condition or lead to substantial readjustment of the internal organization. Similarly, reflection on the internal structure may uncover purely internal strains that can be relieved by altering the relationship, i.e. the interconnections of the internal nodes. This model is deployed in a very different way from the tree/pyramid. There is no single apex/trunk: but there is recognition of the fact that some values are considerably more general than others. The impact of experience is felt throughout the system and not just at one end. The constant process of adjustment is represented more realistically, with experience operating on values at all levels; after all, experience sometimes obliges us to make choices between alternatives couched in very general terms. The connections between values of different levels of generality in the net model, as in reality, are not always through the same intermediary values. The more crucial values can

be seen as deriving their status from the attempt to reduce the tensions imposed by particular choices rather than being the primary source from which the particular choices flow; but the element of truth in this view is preserved in the description of the way in which a new anchor-point is selected.

4. The Effects of Empirical Uncertainty.

It is important to realize that even uncertainty about certain crucial facts does not entail a corresponding uncertainty in the relevant recommendation. It may mean that a final recommendation cannot be made, but typically an interim recommendation of great reliability is possible, e.g. the recommendation that no action should be taken until more data is available.

On other occasions, uncertainty may be swamped by other considerations and even a direct recommendation may still be possible.

A good example is the tariff problem in economics. There are many occasions when the decision whether to increase a tariff barrier properly depends on a very complicated estimate of the relative importance to the potential domestic consumer of lower prices for a useful imported commodity and the attendant consequences of increased international trade, on the one hand, and on the other, greater stability in the domestic economy with its attendant gains of a better long-term guarantee of the availability of the (admittedly more expensive) domestic product and a better short-term employment situation, etc. The attempt to give a definite and demonstrably correct answer to such a problem is indeed a formidably difficult one, further clouded by the dependence of an answer upon unreliable long-range predictions as to the political repercussions of the alternative actions. But there

are plenty of engineering and medical phenomena for which explanations cannot now be given with any reliability--for example, many of the crashes of the big jets, or the more general phenomenon of the efficacy of Graafian ring contraceptives. No one concludes that explanations, or even these explanations, are essentially inaccessible or essentially matters of opinion. In certain tariff disputes, the balance of known advantages for a particular decision simply swamps the alternative in the sense that none of the probable values of the unknown variables would provide enough weight to alter the balance of consideration. In such cases the proper conclusion is simply that on the evidence available, so-and-so must be recommended. The provisos that the evidence may change, and that this conclusion is less than mathematically certain, are superfluous because they are footnotes to almost any scientific conclusion.

5. The Effects of Value-Allergy.

A typical instance of such a conclusion arises where a small industry, absolutely vital for defense purposes, is faced with certain extinction unless competition from a foreign source is reduced sharply--the precision optical industry has been in this situation in the past. In a world where the possibility of war is quite significant, there can be no doubt of the proper answer. There are many situations where the trained eye and the analytical tools of the economist will uncover an equally certain decision from a mass of figures that the lay government official cannot interpret. It is nonsensical for the economist to turn shy at this point and refuse to draw the obvious conclusion. Indeed, standard government practice is increasingly to call him in as a specialist to make recommendations in such cases. The power and legitimacy of these is currently masked by the value-free myth, the mystique of the managerial decision. Of course, the 'decision',

where this means the responsibility, must be managerial--or presidential, or legislative--but the fact that only the executive can legitimately make the decision in no way supports the view that only he can legitimately recommend.

A clear example of the improprieties consequent upon these misunderstandings arises in the tariff issue over the fact that direct subsidy to the affected industry is nearly always preferable to a raised tariff barrier. It is more specific, it is more honest (the taxpayer knows just how much aid is costing him), it is more easily modifiable (usually unaffected by international treaty), etc., etc. But the lobbies continually pressure the executive and legislative branches into tariff changes that are contrary to the best interests of the population as a whole, and their success in doing so is to a considerable extent due to the passive acceptance by the populus, not publicly rejected by the professional economists in solemn conclave, of the idea that such issues of policy are somehow best decided by the government. Of course, they must be executed by the government, but in cases like the one just described, it is sometimes simply a sign of incompetence if not malfeasance for the executive branch to evaluate the issue and in this sense decide what is best. For none of the relevant considerations are inaccessible to the economist and some are too technical to be easily appreciated by someone without training in economics.

There are indeed many areas of decision where the representatives of a government are best able to determine the values of those with whom it is negotiating and where the decisions it must make are crucially dependent upon those values. In such areas, the government is the specialist. But the advances of the social sciences and the techniques of communication, with the consequent diminution in the role of the Foreign Service as

privileged informants, have shrunk those areas from their vast 19th century expanse. Yet the consequences of this change in the real situation have been masked by the professional confusion over the facts/value distinction. Of course, it is still often the case that 'experts' will give conflicting testimony about, e.g., the attitude of the Chinese government towards the war in Viet Nam, and the executive must adjudicate between them. In such matters we have not yet achieved substantial reliability. The conflicting recommendations of legal experts called on by a large company are probably no more consistent, yet the company does not suppose it should not use legal experts. There is a tendency to think that if a field of allegedly scientific study cannot produce a single, provably right answer it can't be a science, and if it isn't a science then anyone's judgment is as good as anyone else's. But a narrowing down or an enlarging of the possibilities, or a re-evaluation of the probabilities can be a very great step forward and this kind of step is the characteristic unit of progress in the social sciences. But it is increasingly the case that the executive will simply do a poor job, even of adjudication, unless he has an expert's training. The conception of the ideal executive as someone uncontaminated by the partisan disputes of the specialists must be set against the conception of the incompetent executive as someone unable to assess the significance of the arguments of the experts. To put the situation bluntly, the best executive is an unprejudiced expert. To the extent that expertise in all the relevant fields is an unrealistic goal, the executive must possess the habit of mind of the expert--the needle-sharp critical skills and the aseptic synthesizing capacity of the first-rate scientist--and all the general tools of the methodologies of the social sciences--he must understand the role and significance of matched controls, pilot studies, practice and Hawthorne and

halo effects, survey errors and sampling procedures, minimax and maximin, the voter's paradox, and a hundred more. The executive without scientific training sometimes attains the first criterion, never the second. Social scientists often attain the second, very rarely the first. So a good executive or a good legislator ought to be a good social scientist, and since executives and legislators certainly should make decisions it follows that social scientists should.

6. Real-Value Claims Within Every Science.

Independently of this line of argument--which is a kind of back-door route to the conclusion--there is another way of supporting the conclusion at which we are aiming. We have so far proceeded by exhibiting the weaknesses in the attacks on it and showing how a better understanding of the nature of value judgments makes it clear that they are wholly composed of elements which the social scientist is best equipped to determine, combined in a way which he is again best equipped to understand. This does not show that making value judgments already falls within the presently accepted domain of the social sciences, only that there is an overwhelming case for including it within that domain. We now expand on earlier hints that it is also possible to show that social scientists must make one very important kind of value judgment just because they are scientists, and some of them must make moral value judgments, because of the particular kind of social science with which they are concerned.

That science, whether pure or applied, necessarily involves non-moral value judgments follows immediately from an examination of the scientific procedure of evaluating hypotheses, explanations, theories, experimental designs, lab and field procedures. This is the heart and soul of science,

and training the student to good standards and practices in these matters is widely held to be the most important aspect of his scientific apprenticeship. Moreover, there is no way to eliminate the procedure of theory-evaluation, for example, in favor of the routine application of some standard test. This is not just valued-performance investigation, but full-scale evaluation with the value-base itself open to debate. For the merit of a theory is not equivalent to the number of true predictions it generates, or the number of true explanations, or the extent of the simplification of the data it facilitates (even if there were some useful way to measure such quantities). It is a variably weighted combination of all of these, with the successful predictions, explanations and simplifications themselves weighted according to importance, and the grand total offset by a weighted measure of the erroneous assertions or impressions. Even to talk in this imprecise way is misleading because it suggests one could discover a precise formula, by some kind of empirical or logical research. But there is no such formula because the weights are themselves variable, being--rightly--affected by the relative success of different kinds of theories in the rest of science. And even at one particular time, the notion of establishing 'the exact quantitative measure of the merit of a theory' is unrealistic because of the many dubious methodological presuppositions that would have to be built into any such measure. Good and bad estimates are possible, but precise ones are not.

The evaluation of theories (or experiments, or interpretations), like the evaluation of used automobiles, can be done expertly or ineptly; it is a skill and not a matter of taste. The scientist, qua scientist, must make real-value judgments.

7. Moral Value Claims in the Behavioral Sciences.

There are also many areas of applied science, for example psychotherapy, social work with delinquents, curriculum construction, public health planning, penology and pedagogy, where moral value judgments are unavoidable and the only choice lies between making them rationally and making them haphazardly. (Related considerations apply to the history of war, for example.) There will often be room for important differences of opinion on these issues, but that does not mean that neither opinion can be falsified by the facts or the future turn of events and--more importantly--it does not mean that there are no cases where the correct value judgment is demonstrable, and alternative opinions indefensible. The best treatment for juvenile delinquents and their parents, on the one hand, is debatable; but, on the other, the death penalty, for any crime, is indefensible. There is no point in beating about the bush here; with respect to every relevant argument, the abolitionists have long since won and only prejudice or ignorance keeps the change from the statute-books. The situation might change, as more refined statistics become available, or as a result of more general abolition; but the case for abolition at the moment is better than the case for the special theory of relativity. This is a straightforward real-value judgment conclusion, against which it would be hard to find a single voice raised by anyone with a thorough knowledge of the evidence. Is it not part of the province of penology to draw such a conclusion? If not, why not--when the claim is substantiable and of obvious relevance to the subject-matter? If it is replied that there are moral presuppositions and implications of such a claim, the contention cannot be denied. But why deny it? There is nothing subjective about the moral claim that killing is morally undesirable; it follows immediately from the human desire to live and the defining axiom of morality--the equality

of rights. If someone argues that a murderer has broken this moral rule and hence forfeited his own right to life, he must show how this piece of homeopathic naiveté is to be supported, a task at which his predecessors have labored unflaggingly and failed unfailingly for some millenia.

These moral issues appear again and again in the social sciences. We cannot assess forms of government adequately without commenting on the extent to which they arrange, tend, or neglect to preserve the basic freedoms. Why do we consider such matters? Not just because our culture happens to value them. Our culture happens to value baseball and TV soap opera, but we do not regard concern for these as an appropriate standard to apply to a real-value judgment of another type of government. It is because there are excellent practical grounds for regarding these freedoms as necessary for or very conducive to the facilitation of the general welfare, whatever the particular tastes of the people. That is, moral considerations determine our choice of criteria for comparison between governments, ideal and actual. The arid escapism of the so-called 'empirical' school of political science produces pristine but pointless evaluations, with crucial criteria omitted or present but unexplained. It's easier but it's scientifically incompetent.

Similar points can be made about the process of psychotherapy, where the criteria for improvement or well-being must include reference to the way in which the patient treats others, such as his family, subordinates, peers and superiors. This is not just because unfavorable reactions from them may otherwise lead to a deterioration of his own welfare, but because moral obligations on the therapist require that he take account of the welfare of those who are affected by his patient's behavior. His professional task, in short--not his extraprofessional role as a citizen--requires that he be concerned with moral criteria of behavior. He is an executive--and an applied behavioral scientist.

It is sometimes thought that if the therapist did restrict his criteria to the present and future well-being of the patient, he has avoided moral considerations. But this supposition would only be true if the morality of behavior were wholly divorced from considerations of the welfare of those who manifest it, i.e. if it were cut off from the most obvious and in fact the only workable rational basis for morality. One can avoid appealing to moral considerations as such, but one cannot avoid recommending behavior that is moral.

It is a crucial feature of morality that it involves a commitment to discharge one's obligations, etc. even when selfish ends will not be served by such action. But it is a logical slip to suppose that this implies that the moral attitude is not the optimal solution to the problem of maximising personal welfare. The slip is a subtle one, but fatal. The case for morality rests on the fact that the unselfish attitude provides sources of rewards that are not available to the selfish man, and are more easily available and enduring than those which the latter requires. It follows that considerations of the welfare of a particular individual (the patient) can rationally lead to the recommendation that he adopt a less selfish attitude, i.e. a more moral attitude. So the therapist is not avoiding considerations of morality if he makes a truly thorough examination of the forms of behavior available to his patient and bases his recommendation on the patient's welfare, for there is an asymptotic convergence between this and morality. (Indeed he, perhaps more than any other behavioral scientist, provides the empirical foundation for morality.) The gap widens with the nearness of death, the extent and stability of the power of the patient, and the rigidity and profundity of his selfishness. For an omnipotent and wholly evil Devil, on the eve of his final demise, there would be no chink for the rational wedge to introduce moral considerations.

It is always the case, however, for the reason previously mentioned, that the therapist himself must apply moral criteria to the assessment of his patient's condition since they are relevant. As an applied behavioral scientist, in his particular field, he has no option. One may intellectually distinguish medical ethics from medicine, but one cannot justify disregard of one in the practice of the other. In particular, one cannot exclude defensible moral criteria from the judgment of the patient's social-psychiatric condition on the grounds that they are 'not scientific'. There's nothing scientific about insomnia or psychosomatic dermatitis; they are simply undesirable conditions and that is precisely the status of sociopathic behavior. The moment a patient whose behavior can seriously affect other people begins an interaction with a therapist he has entered a situation on which moral considerations bear and for a practitioner to ignore them is as unrealistic as ignoring the fact that a pregnancy is due to incest or rape when considering abortion. It is not merely a question of bringing in the welfare of others currently affected by the practitioner's behavior, but also that of those who will be--the spouse of the patient, the unwanted and resented child. Morality requires that their welfare be considered equally with the patient's, and good practice requires that the future interactions with them be taken into account in selecting a course of treatment for the patient.

In the design of new schools or new curricula, the adoption of new teaching techniques or arrangements for student government and discipline we find the same necessity for the fusion of moral and non-moral criteria into the overall estimate of the merits of a proposal or practice. Nor is there any difference in the role these criteria play, in the way they are established (as those held, or as those that should be held), in the extent

to which they are 'imposed from without' that significantly distinguishes them from considerations of cost or availability or reliability or performance.

As a final example, it may not be inappropriate to indicate the way in which confusion about the fact/value issue has handicapped research in the social sciences via its acceptance by eminent social scientists and the National Science Foundation. That august institution has laid it down, as a condition on work on any curricular improvement that it supports, that no measures of changes in values are to be used in assessing the results of the new curriculum. This condition was accepted without dispute, by, for example, the committee of the American Sociological Association that was charged with developing secondary school materials in sociology (not without protests from some individuals, notably their executive secretary, Robert Feldmesser).

The condition is both ludicrous and vicious. One can defend, in a particular context, a distinction between the facts (about performance and the value-base) and the evaluations which result from combining these, and one might put this by saying that valuations are something over and above mere performance facts. We have endeavored to show that one should not conclude from this that value claims cannot be regarded as factual. Such a conclusion is unwarranted, but at least it is not as ludicrous as the position implicit in the NSF stand, which is that value claims should not be affected by facts. Even those who believe that values originate from some divine insight never deny the need for some facts about particular cases before they can apply their values. It follows that, even on such a theory about values, changes in knowledge affect specific value judgments. Moreover, sociology is a discipline whose discoveries are particularly relevant to many of the most important value disputes in our society,

concerning attitudes to race, sex, crime and work. Surely the profession of sociology has an obligation to see that any educational enterprise it undertakes contributes towards the clarification of issues like this, and if it attempts to do so it must surely have the right to test the effects of its contribution on the beliefs of students. If some context-free line could be drawn between value judgments and factual claims, a possible defense against this complaint would be that the sociologist could teach and test for just those facts* which affect students' values. But the whole category of valued-performance claims destroys this possibility. When a white Southerner says that negroes are naturally stupid, dirty, dishonest and sexually immoral, he is both evaluating them and making several factual claims about them. Of course we need to clarify what he means by 'sexually immoral'; he usually thinks it is equivalent to some testable-in-principle concept such as 'significantly deviant on scales of promiscuity, use of 'non-standard' (i.e. non-white?) sexual practices, amount of sexual activity', etc. Even if this complex predicate did apply to negroes as a group, it would not follow that they are sexually immoral. To establish that it would be necessary to demonstrate that such behavior destroys more welfare than that which it obviously generates. But, without getting into that issue, who would deny that the remark quoted about negroes is part of the white's evaluation of the negroes, and what sociologist would deny that it is a legitimate concern of his profession and any curriculum presenting his subject to examine such claims?

Of course, one could interpret the NSF's prohibition in a very different and more optimistic way. Value-claims that are being distinguished from facts must be non-factual value claims. Very well, let us by all means

*presumably discovered from other research

neither teach nor test for value claims that cannot be given a complete ultimate foundation in fact, i.e. let us not teach arbitrary, indefensible values. Unless it can be shown that the doctrine of equal rights is arbitrary or incorrect, the pragmatic arguments for it as a foundation for a society of moderately intelligent citizens seem impressive. For rights must be allocated on some basis, or entirely disregarded. Only the very strong can hope to do better under such alternative arrangements, and so the rest have excellent reasons for combining forces against any strong-man moves. An intelligent group of repressed people wield far more destructive power than any elite group can guard against, because destruction is very much easier than defense against it. In the past the exploitation of superstition and fear has enabled power elites to survive for some time, but the lesson of recent history is that revolutions are easy. Extrapolation of this lesson points to the ultimate stability of only one arrangement, a reasonable approximation to democracy. Within the realm of personal rather than political relations, a similar argument points to morality, which is internalized democracy. Whether these particular arguments are accepted or not is unimportant. The challenge to the value-allergic social scientist is straightforward. Either show that every such argument is unsound, or accept the incorporation of the sound conclusions in the social sciences. For the arguments are based on facts from the social sciences and logic-- and on nothing else. The purpose of this paper has been to show that none of the traditional a priori arguments provide an escape from this conclusion.