Reason Papers

A Journal of Interdisciplinary Normative Studies

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Reason Papers is published at the Department of Philosophy, State University College at Fredonia, New York 14063, U.S.A. Its purpose is to present studies concerned with interdisciplinary normative and related issues. All editorial correspondence and orders (\$4/copy or \$3/preorder) should be sent to the editor at the above address. Manuscripts should be accompanied by return postage and envelope.

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THE INTERTEMPORAL DIMENSION OF DISTRIBUTIVE JUSTICE*

Kaj Areskoug New York University

ALL political ideologies somehow involve economic distribution. Even if they do not specify any distributional norms but primarily deal with questions of resource control and use, the socioeconomic system each of them envisions will inevitably affect the distribution of income, wealth, and economic welfare among different members of society; and that distribution, if not explicitly aimed for, is at least regarded as an acceptable side effect. Each comprehensive ideology thus, explicitly or implicitly, has a built-in norm of "distributive justice" — a term that has aroused new interest because of the works of John Rawls and Robert Nozick but remains muddled and controversial.

At first glance, the connotations of "distribution" appear to be entirely static, involving conditions at unspecified points in time. Yet to characterize a durable social system, we need a broader, more time-sensitive perspective that acknowledges interrelations between conditions in present and in the future and provides a common yardstick for their measurement. Distribution, and distributive justice, has an intertemporal dimension - which has so far been insufficiently appreciated in the literature on economicpolitical ideology. Thus we ought to ask the question, What do different distributive schemes imply in regard to the intertemporal socioeconomic positions of different members of society? If distributive justice is defined in terms of opportunity, or in terms of outcome, what intertemporal opportunities, or outcomes, are just? To what extent can current and future opportunities be "traded off" against each other? Or, to put the issue in its more specific, conventional economic context: What do these schemes entail with respect to opportunities to postpone consumption

— via saving and the accumulation of wealth — or, conversely, to augment current consumption through borrowing against future income? A brief examination of major ideologies yields some interesting results. And since intertemporal choice and planning is an important aspect of individual economic freedom, it seems worthwhile to clarify what, exactly, different ideologies have to offer in this regard.

I

The one social science that is specifically devoted to the analysis of intertemporal problems is finance, or, more precisely, financial economics. This discipline has supplied the main theoretical constructs needed to analyze the various acts that determine the intertemporal allocation of economic resources. Each individual is assumed to have a set of intertemporal preferences, which, together with existing rates of interest and return and risk considerations, determine his desired time pattern of consumption (which is assumed to be the ultimate purpose of his economic behavior). By deliberately weighing his opportunities and selecting what is to him the preferred consumption path (perhaps after allowing for gifts and bequests), he maximizes his lifetime utility, or "welfare." Or, in comparable static terms, he can be said to maximize his total initial "wealth," conceptualized as the present (capitalized) value of his prospective lifetime consumption opportunities discounted at market rates of interest and corrected for changes in the general price level.² At a particular moment, a person's wealth is thus an ex ante evaluation of his welfare prospects throughout his remaining life (for the infant, his entire life). This is but a special application of the general theory of utility maximization - special only in that the "commodities" involved (i.e., consumption levels) are defined exclusively by their temporal attributes and in that substitutions among them depend on the rates of interest (the prices of credit) rather than on ordinary commodity prices.

This basic theory derives from the tradition of classical liberal economics, within which the issue of distribution is at best secondary to that of efficiency. Yet, despite its origins, the fundamental logic of intertemporal substitution in consumption applies equally well to governmental or other collective decision making. Consider first a dictatorship or other type of totalitarian regime. If its primary objective is, say, conquest or a domestic restructuring of society, some lesser-order socioeconomic sacrifices, or costs, undoubtedly will have to be incurred along the way. The desired future end-results can be regarded as collective consumption commodities, while any intervening sacrifices of current consumption are in the nature of national saving. From the standpoint of the rulers, intertemporal distributive justice will simply consist of the chance to share in this collective trade-off. It will, of course, not matter much to them that all citizens do not attach the same values to the associated costs and benefits, whether because of different intertemporal preferences or because of different economic circumstances.

At the other ideological extreme, the classical liberal norm of laissez faire can be viewed as an implicit standard for a just distribution of income and wealth. One might, of course, insist — with Havek, Acton, and Rothbard — that the whole distribution issue is irrelevant or antithetical to free-market system. 3 Nevertheless, unless all distributional values are rejected, strict laissez faire seems to require an acceptance of the proposition that the free, competitive market is just, as well as efficient (although perhaps only if initial opportunities are somehow equalized). Under the latter view, interpersonal differences in intertemporal consumption patterns must also be considered just if they have been effected in the markets for intertemporal exchange - i.e., the financial markets - and if these, as well as all other, markets are perfectly free and competitive. In this world each individual is free to optimize his intertemporal choice through appropriate decisions regard to saving, investment, lending, and borrowing. In the absence of any centralized intervention, the market is the sole distributive norm and the sole, impersonal standard of justice. Furthermore, if there were compensations for all

net differences attributable to heritage and family environment, the system might be said to produce equality in initial personal wealth, everybody having the same "start-up-capital" and hence identical opportunities to satisfy his lifetime consumption desires. Any apparent differences in wealth observed at particular moments in time would then simply reflect differences in prior saving and consumption levels, i.e., in the intertemporal allocation of the identical initial wealth.

But market opportunities depend on the aggregate behavior of all other economic units, which is subject to variation over time. In this context, capital accumulation in excess of the growth of the labor force would tend to reduce the productivity of each added unit of capital and to put downward pressure on the rates of return, with relative consumption benefits through time to borrower-dissavers and below-average savers, despite their unchanged initial wealth. Thus, if one judges "equality" by initial wealth positions, it has to be admitted that the meaning of this term will vary with market conditions, especially with rates of return and interest. The invisible hand is never steady, distributively or otherwise. If we do accept it as distributively just, we tacitly admit that justice is a function of the temporary consensus of the marketplace. Yet we could surely do much worse. And it is worth noting that all welfare comparisons are subject to the same inherent relativity and that the search for a fixed and permanent welfare measure, applicable both interpersonally and intertemporally, will always be futile.

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The intertemporal-distributive aspects of contemporary U.S. liberalism are particularly ambiguous. Again, the fundamental difficulty lies in accounting for the interrelationships between the present and the future in each person's economic life. Consider, for instance, the general liberal "time-slice" principle (in Nozick's terminology) that the distribution of income or wealth at each point in time should be more egalitarian than that which would be

achieved under laissez faire. "Equality" is then conceived with little or no concern about different individual time preferences. Typically, frugality is punished, as through progressive income-tax scales, and this is true whether savings are placed in financial or physical assets or in human capital (i.e., in income-producing education and training). Instead, the eager, "impatient" consumer is subsidized, both through relatively lower lifetime taxes and through possible receipts of transfers ("welfare" in the more popular sense).

If schemes for liberal income redistribution are financed in part through government borrowings, the intertemporal consequences may be slightly different. Government demands for borrowed funds will tend to put upward pressure on interest rates and "crowd out" some potential private borrowers. As a consequence, past accumulators of financial savings - most immediately, holders of fixed-interest assets - will experience capital losses and reduced consumption opportunities. If the central bank tries to offset these tendencies through monetary expansion, similar losses will ultimately result from the accelerated inflation and the erosion of the purchasing power of all nonrenegotiable financial savings. By comparison, those who have placed their savings in real assets (real estate, education) will tend to be better protected; so will those who can take advantage of special tax breaks on particular types of income (from oil, cattle, etc.).

The general conclusion stands, however. Among individuals otherwise economically equal, those with high (i.e., present-biased) time preferences will be subsidized, through the combined effects of tax and transfer programs, at the expense of the more thrifty. The advantage for the former is also evident in that their wealth positions, calculated through a capitalization of their total future consumption opportunities, will be superior in the early stages of their lives. It is hard to believe that the makers of such liberal policies actually have aimed at such results or that they have regarded them as desirable side effects.

In self-defense, a liberal might point to some of the restrictive assumptions underlying laissez faire doctrine.

The latter postulates definite, consistent preferences, an ability to acquire knowledge of market conditions (prices). and a "rationality" reflected in efficient (optimizing) market behavior. What if, contrariwise, people are not sure what they want or capriciously change their minds? What if they fail to act in their own best interests? For instance, it might be suggested that some individuals underestimate the value they will ultimately attach to a comfortable retirement and, if left to their own devices, will regret their previous lack of thrift. Or they may not, without undue effort or cost, be able to acquire the rate-of-return and risk information needed for them to weigh the intertemporal consumption opportunities they actually have. Conceivably, a benevolent and wellinformed government could protect them from their own potential financial follies and help them achieve more nearly optimal intertemporal consumption paths.

In reply, a free-market advocate can question whether liberal distribution schemes would resolve these problems. If, in a democracy, some people have difficulty articulating their preferences individually in the market, there seems to be little chance that they could do so collectively through the political process; and elected representatives can hardly claim to be able to second-guess the intertemporal preferences of their various constituents. The liberal would be on firmer ground if he could point to specific capitalmarket imperfections that distort private financial behavior and that call for compensatory government action. But in the United States, observed poverty surely cannot generally be attributed to a prior lack of market opportunities for saving or investment. Rather, it reflects a combination of unfortunate heritage and substandard upbringing (i.e., belowaverage "initial wealth"), as well as inadequate savings conditions between which broad income-transfer schemes differentiate. cannot In actuality, modern liberalism appears to be geared primarily toward reducing the most glaring inequalities socioeconomic circumstances and to have little interest in the individual achievement of longer-run personal welfare, and hence in the intertemporal consumption problem.

Rawls's concept of distributive justice further illustrates some of the theoretical problems inherent in contemporary liberal ideology. His "difference principle," which stipulates the maximization of the welfare of the worst off, is unclear both in its general definition of the "goods" and "rights" that are the objects of his distribution scheme and in their time aspects. 5 Is it a matter of *current* welfare. current and future welfare estimated at each point in life. or total actual, or potential, lifetime welfare? Current welfare is best approximated by current consumption, difference principle so interpreted will inevitably be a time-slice principle. Consistently applied, it will require penalties or restrictions on both income- and borrowingfinanced consumption, whenever these restrictions permit the consumption of the worst off to be raised. And because of interpersonal differences in income paths over time, some economic groups will see their roles reversed from that of transfer payers to that of transfer recipients during the course of their lives. To put it crudely, the decumulating rich will at first have to subsidize the accumulating poor, only later in life to have a chance to receive return subsidies from the latter. If the sizes of the transfers were identical, both groups would experience a net reduction in their potential lifetime welfare, reflecting their reduced abilities to optimize their time patterns of consumption - an odd result of a policy with humanitarian aspirations. Nozick's criticism that Rawls's distribution rule "fails to yield a process principle" (required to preserve the legitimacy of exchanges, gifts, and other processes) is then quite appropriate. 6 Moreover, by specifying such a rigidly defined end result, Rawls is forced to sacrifice processes (here, intertemporal trade) that could at once satisfy his "first principle of justice" (equal rights to mutually compatible liberties)7 and raise the lifetime welfare of the participants in these processes (lenders and borrowers), rich or poor,

The interpretation of Rawls's scheme will be somewhat different if the object of distribution is to be *income* rather than consumption. In this case, there will be no penalty on

current borrowing-financed consumption, but future interest payments on such borrowings may, as conventional, be construed to reduce future net income, potentially giving rise to claims for subsidies. Conversely, some high savers will be penalized in the future through the obligation to give up part of their increased incomes, augmented by interest receipts, in favor of impoverished high spenders. Again, the distribution scheme will reduce the freedom of financial processes, with a consequent forgoing of the efficiency gains from free intertemporal trade and a potential loss in the lifetime welfare of both rich and poor.

There are hints that Rawls may have been aware of some of these implications. In his brief discussion of time preferences, he declares that "rationality implies an impartial concern for all parts of our life" and that "pure time preference is irrational" and without "intrinsic ethical appeal." If this is meant to exclude intertemporal trade from the areas of basic economic liberties, one can only ask why preferences in the intertemporal dimension should not be accorded the same legitimacy as those in the ordinary intercommodity dimension; are individual preferences less legitimate when they involve, say, the timing of an extended vacation or recreation period than when they involve the choice between a steak dinner and an extra shirt?

If, instead, Rawls means to make an assertion about actual consumer psychology and tastes, that assertion remains to be proven (a futile task), and such an assertion would in any case not suffice to restore the consistency of his scheme. Technically, the absence of "pure" (or intrinsic) time preference refers to a kind of consumer neutrality in the comparative evaluation of the present and the future whenever consumption levels in actuality are identical; it then implies that a one-to-one intertemporal trade-off would keep lifetime welfare unchanged. 9 But as far as we know, this does not describe all or even most consumers' actual tastes. In any case, successive reductions in current (future) consumption typically would require increasing compensations in the form of additional future (current) consumption, for approaching relative starvation in one period tends to involve a greater sacrifice, or overall welfare reduction,

than could be offset through comparable additions consumption volumes in more comfortable times. Yet these desired trade-offs vary among individuals, as do their needs and preferences generally, and each "rational" consumersaver will adjust his particular consumption path to the prevailing interest rate. It is therefore impossible to estimate the true welfare effects of a simple distribution scheme without considering its implications, via the interest-rate mechanism, on the entire life spans of the socioeconomic groups involved - a difficult task, indeed. And those who seem worst off at a particular moment in time may well seem rather better off in the full intertemporal context. In short, Rawls's ostensibly egalitarian distribution scheme may produce new inequalities, as well as inefficiencies, that stem from interpersonal differences in intertemporal preferences and opportunities.

From Rawls's perspective, the best theoretical approach would be to take the total initial wealth position as the key welfare measure for each generation and define the distributional strategy accordingly. The "worst off" - those with the smaller total wealth, say, at age 18 - might accordingly be entitled to receive financial (or in-kind) transfers from the better off; and the former, while disadvantaged in terms of human capital, might as a result become comparatively well off financially. They, as well as all others, could retain their basic freedom to optimize their own individual consumption paths over time by taking the appropriate economic-financial steps. With more individual freedom and a higher minimum level of lifetime welfare, both of Rawls's principles of justice could be satisfied more fully than if the focus was on current consumption or income. Even so, the freedom of exchange processes would still not be completely honored, inasmuch as the improvement of the wealth positions of the worst off would necessitate a forcible negation of some of the wealthgenerating acts that had favored the better off, including bequests and a superior upbringing. Thus Nozick's charge that Rawls' "difference principle" is incompatible with accepted process principles would still retain some of its force. 10 But this limitation is inherent in any scheme attempting to predetermine the extent of individual lifetime opportunities.

In conclusion, there is no easy way to compare the lifetime consumption paths of different individuals and unequivocally rank them in terms of overall utility or welfare. Whether the thrifty saver or the impatient, early consumer is in the end better off hence becomes a moot question. Similarly, since personal preferences vary in regard to timing, particular intertemporal consumption trade-offs will have different welfare consequences for different individuals, and so will all schemes for an egalitarian income distribution. This realization greatly complicates the definition and interpretation of "distributive justice." Temporary deprivation may thus be a worthwhile price for the prospect of a better future, and there seems to be no obvious injustice in any phase of an intertemporal consumption path of this type. One would also hesitate to so characterize a situation in which a person has deliberately preempted some of his current consumption opportunities through past borrowing and spending.

Theoretically, the best standard for comparing lifetime consumption opportunities is total personal wealth, defined broadly enough to include both tangible and intangible assets and adjusted for such wealth as may already have been consumed. An equalization of initial wealth, so conceived, could approximately satisfy a requirement for equal opportunity and obviate the need for further interference with intertemporal choice. Any consumption or income path might then be regarded as distributively just, even though the decisions made would be subject to human error or the risk of later regrets.

Modern liberal distribution schemes are ambiguous and contradictory, and so are Rawls's principles of justice. In particular, his apparent willingness to restrict intertemporal choice via his 'difference principle' implies both a loss of economic efficiency and a loss of individual freedom—problems that could be substantially rectified by the use of the suggested wealth concept. Nevertheless, there remains an underlying, insoluble problem of completely reconciling free-market processes with extramarket requirements as to

their outcomes through time. The flexibility, and efficiency, associated with free individual opportunities for mutually beneficial exchange can never be retained within the straitjacket of rigid distributional norms, and this holds for intertemporal as well as intercommodity exchange.

*Helpful comments from referees are gratefully acknowledged.

- 1. John Rawls, A Theory of Justice (Cambridge, Mass.: Harvard University Press, 1971); Robert Nozick, Anarchy, State, and Utopia (New York: Basic Books, 1974).
- 2. Wealth, so defined, can be viewed both as an "outcome" of past events and as anticipations of "opportunities" in the future. "Opportunities" in this sense are equivalent to the "outcome" of the circumstances that created such opportunities, and the two terms cannot, as often done, be contrasted; in the context of financial analysis and valuation, the anticipated future is always part of the present. Such an interpretation of these terms facilitates comparisons of lifetime, as opposed to temporary, socioeconomic positions. It presumes that all economic behavior is deliberate and "rational," and failure to take advantage of a particular opportunity simply implies that an alternative one has been preferred.
- 3. F. A. Hayek, The Constitution of Liberty (Chicago: University of Chicago Press, 1970), pp. 95-102, 231-32; H. B. Acton, The Morals of Markets (London: Longman, 1971), pp. 61, 79-80; and Murray Rothbard, Power and Market (Menlo Park, Calif.: Institute for Humane Studies, 1970). Both Hayek and Acton use the term commutative justice to suggest the legitimacy of market transactions, whereas to them distributive justice implies the superimposition of collective or other extramarket standards. But of course, markets also "distribute."
- 4. Current U.S. tax laws do, however, make a minor distinction here: the maximum personal income-tax rate on income from nonhuman capital is higher than that on income from human capital, i.e., wages and salaries. (The two categories of income are often referred to as "unearned" and "earned," respectively, but this distinction is misleading.)
 - 5. Rawls, pp. 14-15, 60.
 - 6. Nozick, pp. 207-9.
 - 7. Rawls, p. 60.
 - 8. Ibid., pp. 293-98.
- 9. An absence of "pure" time preferences (a special intertemporal demand structure) does not in itself define the rate of interest in either monetary or real (price-deflated) terms, since the rate of interest also reflects the stock of accumulated capital and its productivity (intertemporal supply). Positive risk-adjusted rates of return on capital tend to produce positive market rates of interest and induce consumption and saving shifts that, in the consumer's utility evaluation, create a relative premium on current, as against future, consumption. Of course, positive interest rates also make current consumption relatively costly in terms of forgone future consumption. Rawls seems to overlook these interrelationships. Or possibly he wishes to dictate society's time preferences so that, at any combination

of current and future consumption for each individual, the ideal trade-off shall always be deemed to be one-to-one. To induce private behavior consistent with such a norm, the government would have to couple its income transfers with interventions in financial markets that insured an invariant zero real rate of interest. Such interventions would in turn produce further losses in potential individual lifetime welfare across all income and wealth groups.

10. Nozick, pp. 207-9.

A CRITIQUE OF MORAL VEGETARIANISM

Michael Martin Boston University

VEGETARIANISM is an old and respectable doctrine, and its popularity seems to be growing.¹ This would be of little interest to moral philosophers except for one fact, namely that some people advocate vegetarianism on moral grounds. Indeed, two well-known moral and social philosophers, Robert Nozick and Peter Singer, have recently advocated not eating meat on moral grounds.²

One job of a moral philosophy should be to evaluate vegetarianism as a moral position, a position I will call moral vegetarianism. Unfortunately, there has been little critical evaluation of moral vegetarianism in the philosophical literature. Most moral philosophers have not been concerned with the problem, and those who have, e.g., Nozick, have made little attempt to analyze and evaluate the position. As a result, important problems implicit in the moral vegetarian's position have gone unnoticed, and unsound arguments are still widely accepted.

In this paper, I will critically examine moral vegetarianism. My examination will not be complete, of course. Some of the arguments I will present are not worked out in detail, and no detailed criticisms of any one provegetarian argument will be given. All the major provegetarian arguments I know will be critically considered, however. My examination will be divided into two parts. First, I will raise some questions that usually are not asked, let alone answered, by moral vegetarians. These questions will have the effect of forcing the moral vegetarian to come to grips with some ambiguities and unclarities in his position. Second, I will consider critically some of the major arguments given for moral vegetarianism.

VARIETIES OF MORAL VEGETARIANISM

Moral vegetarianism will be understood as the view that because of some moral principles one ought not to eat certain edible animals and perhaps animal products. Two varieties of moral vegetarianism can be distinguished: lactovo moral vegetarianism and vegan moral vegetarianism. On the lactovo variety, eating animal products, e.g., milk and eggs, would not be considered morally wrong, although eating certain animals would be; on the vegan variety, eating animal products would be morally forbidden as well.

Lactovo and vegan moral vegetarianism can be subdivided into what might be called new and old or traditional moral vegetarianism. On the traditional position, justification of vegetarianism was in terms of animal welfare, happiness, rights, and so on. In recent years another type of justification has been given: vegetarianism has been justified in terms of human suffering, rights, etc. There is, of course, nothing incompatible with using both kinds of considerations in justifying vegetarianism. What seems to be absent in some recent vegetarian arguments, however, is any consideration of animals. (Arguments for the new moral vegetarianism will be considered later.)

It is clear that in order to have any plausibility moral vegetarianism must be construed as the view that there is a prima facie duty, rather than an absolute duty, not to eat meat or animal products. Suppose a mad scientist will blow up the world unless you consume a beef steak. If the duty not to eat meat were an absolute one, you should not eat the steak. But surely this is absurd. So the duty not to eat meat cannot be an absolute one. The important question, then, is when this alleged prima facie duty can be overruled.

In old moral vegetarianism one can distinguish at least two positions (a hard-line and a moderate position) on this question, and these can be illustrated by the following example. Suppose you are marooned on a desert island inhabited by edible birds. Suppose there is no edible plant life on the island and you have a gun. For nonvegetarians the choice is easy. You should survive as best you can, and killing the birds and eating them is the only way, given the situation as described. But what does the nonvegetarian assume in arguing in this way? Presumably that a bird's life is less valuable than one's own. This is exactly what strict moral vegetarians would question.

Consider a different situation. Suppose that instead of birds the island contains people. Would it be morally permissible for you to kill some people and eat them? It is certainly not clear that it would be, unless perhaps all the people on the island agree to some form of cannibalism and draw lots to decide who is to be sacrificed for food. The question that would be asked by the hard-line moral vegetarian is why there is a difference if there are birds on the island instead of people. It would be argued that to suppose that a bird's life is less valuable than a human life is a form of speciesism, a doctrine of prejudice analogous to racism and sexism. On this hard-line view one ought never to kill any nonhuman animal unless it were right to kill a human being in the same circumstance. Clearly in our second hypothetical situation, it would be said, it would not be right to kill a human being for food. Consequently it would be wrong to kill and eat a bird.

A vegetarian holding a moderate position might argue that it is prima facie wrong to kill an animal for food but that certain human rights, e.g., the right to life, can override this prima facie wrong. On this view there are cases in which it would not be right to kill a human being but it would be right to kill an animal. One such case would be where human life depended on the nourishment that animals give when killed and eaten. Note that this would not justify the killing and consuming of animals in contemporary society where various meat substitutes are available. An important question for the moderate is: On what plausible moral principle can the distinction between animals and human beings be made?

SOME PROBLEMS OF MORAL VEGETARIANISM

With respect to traditional moral vegetarianism some problems immediately come to the fore. Who exactly is not supposed to eat animals or products of animals? This

problem is especially acute with respect to carnivorous animals. What animals is it morally wrong to eat? The answer to this becomes problematic with respect to microorganisms but also with respect to animals that might be capable of consenting to being eaten. If animals could be created by genetic engineering, could they be created so that there were no moral objections to eating them? Depending on the answer to this question, moral arguments for vegetarianism could be undercut by technology. What exactly is an animal product, and how does an animal product differ morally from an animal part? This brings up the question of how one can distinguish between what is forbidden by lactovo moral vegetarianism and vegan moral vegetarianism. Let us consider some of these problems in more detail.

Who Should Not Eat Meat, or What Does a Vegetarian Feed His Dog?

Vegetarians certainly cannot think that only vegetarians have a prima facie duty not to eat animals or animal products. For if they base their beliefs on a moral position it must be universalizable. But what is the extent of the universal moral principle? Presumably it would include all human beings, whether they are in the habit of eating animals or not. But why would it not extend to all animals, including carnivorous animals?

One might be inclined to say that this question is beside the point. Since animals cannot be judged morally praiseworthy or blameworthy, the question of whether it is morally wrong for *them* to eat meat cannot be raised. But this reply is based on a confusion between the praiseworthiness or blameworthiness of a moral agent and the rightness or wrongness of the action of an agent. Although animals may be free from blame in eating meat since they are not moral agents, animals in eating meat may still be doing something that is prima facie wrong.

Does this mean that a vegetarian would have to feed his dog some meat substitute? Not necessarily. The vegetarian might argue that there are other considerations that outweigh the prima facie wrong. For example, he might maintain that dogs need meat to live or at least to be healthy; that it would be more morally wrong for him to deprive the dog of life or health than morally wrong to feed it meat. In the case of human beings, the situation is different. Human beings can do without meat.

Now whether dogs can live and thrive without meat I do not know. It is certainly not self-evident that they could not live on meat substitutes. But even if dogs needed meat to live, it is not obvious that it is prima facie less wrong to eat meat than wrong to sacrifice a dog's health or life. This becomes especially true when one realizes that vegetarians often argue that a reason that it is prima facie wrong to eat animals is that animals must be killed to provide the food. So in order to save the dog's life or health, another animal must die.

The vegetarian with a dog might also argue that, even if a dog could survive on a nonmeat diet, to refuse to give the dog meat would not be in keeping with the dog's right to eat what it wants and what dogs want is meat. This argument cuts too deep, however. Many humans want to eat meat, but this does not stop vegetarians from saying that it is wrong for people to eat meat. Moreover, it is unclear why the dog's wants should overrule the alleged prima facie wrong of eating meat, especially when this wrong is based on the alleged prima facie wrong of killing an animal.

The issue of what the vegetarian should feed his dog is just the beginning of the problem. What should the attitude of a vegetarian be toward "nature red in tooth and claw"? The vegetarian knows that some animals in the wild eat other animals. Should he oppose this eating? If so, how? What other values should be sacrificed in order to prevent the killing and eating of wild animals by other wild animals? Suppose it were discovered that with proper training lions and tigers could live on zebra-flavored soy products. Should vegetarians promote a society that trains lions and tigers to eat such meat substitutes? This training would involve interfering with the freedom of lions and tigers, with the ecological balance, and so on. Many morally sensitive persons would look with disfavor on this interference. How

much should the disvalue of this interference be weighed against the prevention of the killing of animal life?

What Meat Should Not Be Eaten?

What is forbidden meat? Most moral vegetarians list fish and fowl as animals one should not eat. But what about microorganisms? Vegan vegetarians who eat only vegetables, fruit, and nuts do not completely remove all microorganisms from their food, even with repeated cleaning. Has the vegetarian who eats microorganisms along with his salad sinned against his own principles? Vegetarians may attempt to justify the eating of microorganisms in three different ways.

First, it may be argued that only animals who can feel pain are not to be eaten. Since it is unlikely that microorganisms can feel pain, the vegetarian can eat them without scruples. But this suggestion has a peculiar implication. If beef cattle who could not feel pain were developed, then it would be permissible to eat them. The ability to feel pain is not an obviously plausible way of morally distinguishing microorganisms from other organisms.

Second, it might be argued that although it is wrong to kill microorganisms, it is not obvious that eating them kills them. Neither is it obvious, however, that eating microorganisms does not kill them. Scientific research and expertise are needed here.

This brings us to the third attempt at justification. Let us suppose that some microorganisms that are eaten are killed, e.g., by the digestive workings of the body. The question can be raised: Why should these organisms be killed and others not be killed? What is the *moral* difference between killing a microorganism in the digesting of other food and killing a hog, e.g., in order to eat and digest it. Some vegetarians might argue that there is a difference. Killing a hog can be avoided. We do not need meat, let alone pork, in order to live. But we do need to digest food in order to live. If some microorganisms must be killed in the process, this is unfortunate but necessary for human life. But the question remains. Why should microorganisms be sacrificed rather

than humans? Why is human life more valued than the life of microorganisms?

One might be inclined to say that human beings are more valuable because of their intelligence. One might first ask, "Why does higher intelligence mean that one species is more valuable than other species?" Second, there are other species besides human beings that have high intelligence, e.g., chimpanzees and dolphins. What should our moral attitude be toward eating members of these species? This problem becomes crucial when the notion of consent is brought in.

Suppose there is a man who wishes to end his life but regrets never having given his poor and hungry family any pleasure. He requests that after his death his wife prepare a lavish dinner with him as the main course. The members of his family have no objections; on the contrary, they rather relish the idea. Putting aside any moral objections to his suicide, what moral objections would there be to a family having Papa for Sunday dinner if it is okay with Papa? In a word, what is wrong with cannibalism among consenting adults?

Whatever one thinks about voluntary cannibalism among humans, it may be argued that the situation is very different with animals. After all, we cannot communicate with them in any meaningful way, and besides, from their behavior it seems clear that they don't want to die. (Animals in the wild try to escape from hunters.) But recent experiments with chimpanzees suggest that the day may be near when we can ask trained chimpanzees if they want to be eaten for food. Suppose some of them say yes (in American sign language). Suppose there is good reason to assume that they understand the question. Indeed, some of them might express enthusiasm for the idea. Would not eating these animals be morally permissible? If not, why not?

Even if no chimpanzee would consent to being used for food, one can certainly imagine animals that would consent. In his comic strip, Little Abner, Al Capp created an animal called a shmoo whose greatest joy was to be eaten. We may smile at the absurdity of this idea. But shmoo-type creatures may not just be creations of cartoonists in the next century;

they may be creations of genetic engineers.

Suppose a shmoolike animal were developed, a creature programmed to want to be eaten for food. Would there be anything wrong in eating it? One might object that the act of creating such animals was morally wrong and consequently that eating them would be morally wrong. It is not clear, however, that the creation of shmoos would be morally wrong. But even it it were, it does not follow that eating them after they were wrongly created would be morally wrong. After all, shmoos want to be eaten and are unhappy if they are not eaten. It may be wrong to create creatures with such a desire, but once such creatures exist it seems cruel not to fulfill their desire.

Still, one might argue that eating such animals is wrong because it is necessary to kill them in order to eat them. And killing animals is wrong, since (1) killing involves inflicting pain and inflicting pain is wrong and (2) animals that have a self-concept have a right to life and killing animals with a right to life is wrong. But recall that shmoos want to be eaten. If they have a right to life because they have a self-concept, they surely also have a right to die and the right to suffer pain in the process if they desire.

Furthermore, genetic engineering may develop animals that lack all of the properties that vegetarians usually associate with the wrongness of killing animals for food: (1) the ability to feel pain, (2) consciousness, (3) having a self-concept. Suppose that by genetic engineering we could develop beef cattle that were born unconscious and remained unconscious all of their lives (they would be fed and bred artificially). Such animals would be incapable of feeling pain or having experiences of any kind. Would it be permissible to eat them? If not, why not?

Furthermore, genetic engineering might be able to produce meat-bearing animals that could be used for food without being killed. If so, no moral objection based on the killing of animals could be raised to the eating of meat. Suppose by genetic engineering it was possible to develop an animal that shed its legs periodically and grew new ones. Would it be morally permissible to eat such legs? If not, why not?

Now it might be argued that although such animals were not being killed they were being exploited. So it is still morally wrong to eat their meat. But it might also be possible to develop animals that periodically shed their legs and wanted to have their shed legs eaten, animals whose psychological health and well-being depended on such eating. Would these animals also be exploited? If so, would this be immoral? To be sure, we would be using the animals and in this sense would be exploiting them. But the animals would be happy to be used. Indeed, they would want their limbs eaten just as much as we would want to eat them. In this sense, they would not be being exploited.

What Is an Animal Part?

The last example suggests the difficulty of making a clear distinction between an animal part and an animal product. If a genetically engineered animal's legs periodically fell off, would not its legs be more like a product of an animal (analogous to eggs) than a part of the animal? If so, the lactovo vegetarian should have no qualms about someone's eating such legs.

This sort of question can also be raised without benefit of hypothetical examples from future genetic engineering. Suppose someone enjoys drinking the blood of cattle and hogs. Suppose further that such blood is obtained without killing the animal and without causing the animal pain. Would the blood drinker be sinning against the principles of lactovo moral vegetarianism or just the principles of vegan moral vegetarianism? Would the blood be analogous to milk or eggs?

Functionally, we might attempt to distinguish between an animal product and an animal part in the following way: X is a part of an animal A if X is derived or could be derived from A and A could not function well without X. X is a product of an animal A if X is derived from A and A can function well without X and X has some useful purpose for some Z. On this analysis, the shed legs of genetically designed leg-shedding animals would be a product, not a part; the blood of an

animal taken in small quantities would be a product and not a part.

But this account seems overly permissive in one respect. One can imagine the possibility of amputating the legs of animals and using them for food and fitting the animals with mechanical limbs that enabled them to function normally. Would we still wish to say that the amputated limbs were products rather than parts of the animals?

Moreover, this account also seems overly restrictive in one respect. Suppose there was a breed of sheep that became very ill when the sheep's fleece was removed; they did not function normally. Or suppose that by genetic engineering we could develop a milk-producing animal that became sick when it had the milk removed by members of other species, e.g., human beings. On the above definitions the wool and the milk of such animals would not be animal products.

These conceptual difficulties do not show that a distinction between parts and products of animals cannot be made in individual cases. But they do point up the difficulty of making any general distinction between parts and products and the correlated difficulty of making a clear distinction between vegan and lactovo vegetarianism.

The above problems and questions should give vegetarians some pause. They suggest that any simple moral vegetarianism is impossible. There are many complex problems connected with moral vegetarianism, and a fully articulate and comprehensive moral vegetarianism is yet to be produced.

Still, it might be maintained that this does not mean that moral vegetarianism is an unsound view. After all, it might be said, there are unsolved problems implicit in any moral position. Although there may be difficult problems at the core of moral vegetarianism, it may be maintained that there are sound reasons for taking the position.

ARGUMENTS FOR MORAL VEGETARIANISM

A variety of arguments have been given for vegetarianism. Sometimes they take such a sketchy form that it is not completely clear they are moral arguments. I outline two arguments of this sort in what follows in order to illustrate some of the difficulties in evaluating moral vegetarianism. Even when it is clear that a moral argument is intended, however, exactly what the premises of the argument are is not always clear. There appears to be a gap in some of the arguments that it is difficult to fill with plausible premises.

The Argument from Monkeys

According to Gerald Carson, Dr. John Harvey Kellogg, a well-known advocate of vegetarianism and inventor of some eighty ready-to-eat breakfast foods, used to persuade people to adopt vegetarianism in the following way:

Dr. Kellogg, a superb publicist, kept a morose chimpanzee, which he used for a stunt. The doctor would toss a juicy beefsteak to the suspicious animal. The chimp would examine it and quickly slam the meat right back at him. Then Dr. Kellogg would offer a banana, which the ape munched with evident enjoyment. Kellog drew the conclusion "Eat what the monkey eats — our nearest relative." 8

I assume — although this assumption may not be justified — that Dr. Kellogg was using this stunt to show the moral superiority of vegetarianism. But it is unclear what premises Dr. Kellogg was presupposing to get his conclusion, "Eat what the monkey eats." Is he assuming that man's meat eating is a perversion of his natural instincts, which are inherited from monkeys? But even if this is true, what moral import does this have unless one also assumes that what is natural should be done? Yet this further assumption is surely unjustified. After all, it may be quite natural for both chimpanzees and men to perform acts of violence. But it is questionable whether they should perform them.

Perhaps the assumption is only that one should eat what man's nearest relative in evolutionary development eats. But aside from the fact that the truth of this ethical assumption is not obvious, it is not true that monkeys are man's nearest relatives. Scientists have discovered closer relatives of homo sapiens than monkeys, e.g., homo erectus.

There is little reason to suppose that all of these near relatives were vegetarians.

Finally, one cannot resist asking the question: What would Dr. Kellogg's chimp have done if Dr. Kellogg had tossed it a bowl of corn flakes? The animal's response and the conclusion "Eat what the monkey eats" could have ended Dr. Kellogg's breakfast-cereal empire.

The Argument from Glass-Walled Slaughter Houses

Mel Morse, former president of the Humane Society of the United States, once remarked: "If every one of our slaughter houses were constructed of glass this would be a nation of vegetarians." One might assume — although again this assumption may not be justified — that Mr. Morse was using this consideration as a moral argument for vegetarianism. But what exactly does the argument construed as a moral argument amount to? Perhaps it can be unpacked in this way: the blood and gore of slaughter houses is disgusting and is enough to turn many people's stomachs; so if people saw what went on in slaughter houses, they would not eat meat; consequently one should become a vegetarian.

But the argument so construed is weak. Even granted the premises, the moral conclusion does not follow from the factual premises. The general premises about natural reactions do not yield ethical conclusions. Furthermore, the argument cuts too deep. It should be noted that people might have strong negative gut reactions to large-scale food preparation having nothing to do with meat or animal products. One suspects that there would be fewer peanut butter lovers if the walls of peanut butter factories were made of glass, for it has been reported by Consumer Reports (May 1972) that rodent hairs and other disgusting materials were found in many of the jars of peanut butter they tested. Conditions inside peanut butter factories may be less than appetizing, yet this hardly provides moral grounds for refraining from eating peanut butter. Even if sanitary conditions were improved, the sight of tons of peanuts being ground and large vats of peanut butter being processed

might have a depressing effect on one's desire for a peanut butter sandwich. But again this is hardly moral grounds for not eating peanut butter.

The Argument from Speciesism

If there is some doubt whether the arguments from monkeys and from glass walls should be considered moral arguments, there can be no doubt about the moral import of the argument from speciesism.⁵ According to this argument, the view that eating the meat of nonhuman animals is morally permissible but eating the meat of human beings is morally forbidden is analogous to racism or sexism. Just as racism and sexism are to be morally condemned, so is speciesism. Although there are differences between races and sexes, there are no morally relevant differences that justify differences in treatment. Similarly, although there are differences between human beings and other animals, there are no moral differences that justify human beings' killing and eating animals but not killing and eating one another. Moreover, since it is morally wrong to kill and eat human beings, it is morally wrong to kill and eat animals.

This argument of the vegetarian has a point. Animal species per se is not a morally relevant distinction. Consequently, nonvegetarians are not on firm ground if they justify killing and eating animals simply on the ground that the animals are not humans. On the other hand, the animal kingdom per se (in contrast to particular animal species) does not provide any morally relevant grounds for the positive content of vegetarianism. To suppose otherwise would be a form of kingdomism, no different in principle from the speciesism, racism, and sexism that this argument condemns. After all, what is the justification for eating plants and not animals? Is there a morally relevant difference between the two? The vegetarian, to make his case, must draw a line - a morally relevant line - between the plant kingdom and the animal kingdom. For this another argument is needed.

The argument usually provided by vegetarians to fill the void created by the argument from speciesism is this:

Animals are sentient creatures; they feel pain and have other feelings. But no plant is sentient; no plant can see, hear, or feel. 6 Consequently, it is wrong to eat animals but not wrong to eat plants.

Two questions can be raised about this argument from sentience. First, is it really true that plants feel no pain? The recent bestseller, *The Secret Life of Plants*, and other less well known studies may give us some pause. To be sure, most biologists have not taken the thesis of the mental life of plants seriously, and in the light of our present evidence they are undoubtedly justified. But what if new biological findings were to indicate that speculations about the mental life of plants should be taken seriously? Should we then stop eating plants as well as animals?

Without new discoveries in synthetic food made from inorganic material, our refraining from eating plants would spell the end of the human species. But is species suicide really necessary? After all, why should the discovery that plants feel pain have any effect on whether we eat them or not? Presumably this discovery should have some effect on how we kill plants. If we knew that plants felt pain, our killing them would, or at least should, take a humane form. We might somehow anesthetize grain before it was harvested, and so on. But it is completely unclear why the knowledge that plants feel pain should prevent our eating them.

This brings me to the second point. Even if animals but not plants feel pain, why should this make any difference to whether we eat animals or not? One would have thought that an animal's ability to feel pain would be morally relevant, not to whether it should be killed and eaten, but to how it should be killed if it is to be eaten. Because animals feel pain they should not suffer. But so long as they are not made to suffer it is unclear what relevance their sentience has for vegetarians.

The Argument from Actual Practice

Still, it may be objected that this is to overlook actual practice. In fact, animals used for food do suffer a great deal.

Not only are they killed in cruel ways, but it is well documented that they are raised in ways that cause them great discomfort and agony. Consequently, one ought not to eat meat until actual practice is changed.

Now there is no doubt that the actual treatment of animals used for food is immoral, that animals are made to suffer needlessly. The question that must be raised, however, is how the conclusion not to eat meat follows from this. One argument is this: The present practice of treating animals used for food is immoral and should be changed. So, if one wants to change the present practice, the best means is to stop eating meat. One ought to adopt the best means. Consequently, one ought not to eat meat. This seems to be one of Singer's basic arguments.

Becoming a vegetarian is not merely a symbolic gesture... Becoming a vegetarian is the most practical and effective step one can take towards ending both the killing of non-human animals and the infliction of suffering upon them.⁸

There is at least one premise in this argument that seems questionable, namely, that the best means to change this practice is to stop eating meat. First, it is dubious that becoming a vegetarian would have much effect on present practice. Unless vegetarians were a large movement it would have little appreciable effect on the economic market. Surely the idea suggested by Singer that if only one person becomes a vegetarian he or she can *know* that his or her actions will contribute to the reduction of the suffering of animals is absurd.⁹

Second, even if it did have an economic impact, it is unclear whether this would cause a reduction in animal suffering. Knowing the irrationality of the market on the one hand and the cunning of meat producers on the other, one may well have doubts. Cattle might be overproduced because of government subsidies and new markets found for meat. Meat-packing companies might encourage, for example, an increased dog population to take up the slack.

In other contexts a similar phenomenon has occurred. It has been recently reported in the *Boston Globe* (Jane O'Reilly, "The Bottle and the 3rd World," July 8, 1976, p.

26) that in order to compensate for a declining birth rate in the U.S., infant formula producers expanded their market to Third World countries, saturating some of these countries with mass advertising. This advertising *created* a need; it did not fill any need. It is certainly likely that a similar phenomenon would occur if vegan vegetarianism became a widespread movement in the U.S. causing a decline in U.S. milk production.

More important, it might be a much more efficient means of changing practice to stage protests at meat-packing companies, put pressure on congressmen, and work through existing humane organizations. One suspects that the SPCA and the American Humane Society have done more to stop cruelty to animals than vegetarians ever could. That these organizations have not gone far enough and that wide areas of animal cruelty still exist does not show that their methods are wrong. In any case, which various political strategies would be most efficient for achieving humane treatment of animals is an empirical question. Vegetarianism is not obviously the best strategy, and its worth would have to be shown.

A different argument from actual practice can be made, however. It need not be claimed that refraining from eating meat is the best way to change the situation. It can be argued instead that by eating meat one is giving one's tacit consent or approval to the present situation, that the only way to be true to one's moral conviction that the present treatment of animals is inhumane is not to eat meat.

But is it true that by eating meat one is giving one's tacit consent to the cruel treatment of animals? It is certainly not clear what one gives one's tacit consent to in following a practice. If I visit Arlington Cemetery, do I give my tacit consent to the various wars that produced the graves? Certainly not. If I pay my taxes during the Vietnam war, does this mean I am tacitly supporting the war? It certainly is not clear that it does. What if I don't eat meat? Do I tacitly approve of Hare Krishna? That is absurd. The argument from tacit consent becomes extremely implausible when one remembers that most of the greatest workers for the elimination of animal suffering down through history have

been nonvegetarians. According to the present argument, these people would be inconsistent: they would be explicitly advocating elimination of cruelty and tacitly approving of it. Such a supposition seems ludicrous to me.

The trouble is, of course, that it is not clear what tacit approval is supposed to mean. One suggested analysis that may capture part of what might be meant is this: One tacitly approves of a practice or institution X by doing A if and only if doing A is instrumental in keeping X in existence. Consequently, to say that by eating meat one is tacitly approving of cruelty to animals is to say eating meat is instrumental in keeping the practice of cruelty in operation.

Interpreted in this way, however, the claim is either false or dubious or without force, depending on how one interprets "instrumental." "Instrumental in keeping X in existence" could mean a necessary condition for keeping X in existence. But my eating meat is not such a necessary condition for cruelty to animals. It could mean a sufficient condition for keeping X in existence. My eating meat, however, is not a sufficient condition for cruelty to animals. A more plausible candidate is this: "Instrumental in keeping X in existence" could mean "being part of a sufficient condition for keeping X in existence." I am not at all sure that my eating meat is a part of a sufficient condition that brings about cruelty to animals in operation, but suppose it is. The question arises: Why should such indirect causal influence have any moral import? The effect of my not eating meat on the way animals are treated would be virtually nil.

There is another reason that could be given for not eating meat in view of the present inhumane treatment of animals. It would be a way of protesting present practice, a way of saying, "I disagree strongly with the treatment of animals used for food." Certainly, not eating meat could have this protest function. But so could lots of other things: wearing an animal rights button, picketing meat-packing houses, and so on. The important question seems to me to be: Which kind of protest will be most effective in educating people to the cruelties? It is certainly not obvious that not eating meat will have the greatest effect. Indeed, it seems to me that more effective protest techniques are available, for example,

advertisements in the newspapers and protest marches.

Although it might be argued that there is something of an inconsistency in persisting in eating meat while maintaining that animals are being treated cruelly in producing meat, it is hard to see why this is so. It does not seem to be true in general that one is inconsistent if one uses a product that is produced by some process that one believes violates one's moral principles. Am I inconsistent if I drink fluoridated water rather than buy pure water when I believe that the government has no right to fluoridate water? Am I inconsistent if I am opposed to exploitation and buy an automobile from a company that I believe produces cars by exploiting labor? (If I were, then there would be an inconsistency in a Marxist living in a capitalistic society or buying anything produced by that society.) The answer seems to be: not necessarily. It is not obvious why the case of eating meat is different. We do well to remember that inconsistency between an agent's moral principles and his practices can only be shown via the agent's other beliefs concerning the practice. Consequently, a moral principle and what might seem like an inconsistent practice can be consistent given other appropriate beliefs. 10

In sum, then, not eating meat may well be used as a protest against cruelty to animals. But there is certainly no moral duty to protest in this way even if one thinks animals are being treated cruelly, and indeed, such a protest may not be the best means available. So it would seem that the argument from actual practice is not strong enough to justify not eating meat.

The Argument from Animal Rights

A stronger argument is made by people who maintain that animals have rights. In particular, it has been argued that animals have a right to life. So, even if animals are killed painlessly and raised for food in humane ways, it is wrong to kill them.¹¹ The question is, of course, whether animals do have a right to life.

The answer to this question turns on what is meant by having a right. The subject is a large and controversial one.

On some very sophisticated analyses of rights it is at least debatable whether all animals have the right to live. For example, on Tooley's analysis, having a right to life is the same as being a person. A necessary condition for being a person is having the capacity for desiring self-continuation, and for this it is necessary to have a concept of the self. 12

Now, although it is plausible that adult animals of some very intelligent species, e.g., dolphins and chimpanzees, have such a concept, it is not clear that adult animals of other species do and it is very likely that young infants of any species do not. It is also probable that very subnormal adult human beings do not. On this analysis of right, then, many animals and some human beings may well not have the right to life although most human beings and some animals do have such a right.

This would not necessarily mean that animals have no rights. Presumably most animals — even infants — would have the right not to suffer. As Tooley puts it, although "something that is incapable of possessing the concept of a self cannot desire that a self not suffer, it can desire that a given sensation not exist. The state desired — the absence of a particular sensation — can be described in purely phenomenalistic language and hence without the concept of a continuing self." ¹³ Given this view of rights, then, many animals probably have no right to life, but all of them have a right not to have pain inflicted on them. Consequently, the killing of some animals for food, if done painlessly, is not morally objectionable. ¹⁴

Some vegetarians have argued that it is impossible for one to maintain without absurdity that animals have a right not to suffer pain and yet have no right to life. For it is argued that since every animal will suffer at least once in its life, we have a duty to kill all animals painlessly to prevent this future suffering. To avoid this absurd consequence, it is said, we must admit that animals do have a right to life. 15

I do not believe that this conclusion does follow, however. The absurd consequence would follow only if preventing animals from suffering was the only or at least the overriding factor to be considered. But this is surely dubious. After all, killing all animals would completely upset the ecological

balance of nature; it would destroy some creatures of great aesthetic value; it would destroy certain food sources for future generations; and so on. Consequently, any future suffering that could be prevented by killing animals now would have to be weighed carefully against other factors. It is certainly not obvious that these other factors would not tip the scale and allow many animals to live. Thus, humane nonvegetarians may argue that it is enough to try to prevent suffering to living animals as best we can without killing them in advance to prevent their possible suffering.

Some philosophers have disagreed with Tooley's analysis of person, and consequently with his analysis of right, and have given alternative analyses. But far from supporting moral vegetarianism, these alternative analyses seem to make moral vegetarianism even more difficult to support in terms of animal rights. S. I. Benn, in a critique of Tooley, has argued that a person is a moral agent, a being having "the conceptual capabilities of considering whether to insist or not on his rights, of manipulating, too, the 'pulls' it gives him on the actions of others, capable, in short of having projects and enterprises of his own."16 According Benn, only moral agents have rights. It is clear that few animals, if any, are moral agents in this sense. Consequently, on Benn's analysis, few if any animals have rights of any sort. Benn argues, however, that just because a being does not have rights it does not mean that it is morally permissible to treat it cruelly. In fact, he maintains that some actions are seriously wrong for reaons other than that they violate rights. The question remains whether it is seriously wrong to kill animals for food. Clearly, given Benn's analysis, in order to establish that it is wrong to eat animals for food, another sort of argument is needed, an argument that is not based on an appeal to animal rights. An argument of this type is in fact implicit in Benn's position, and I will consider it presently. 17

The Argument from Superior Aliens' Invasion

John Harris advances the following consideration to show the immorality of eating meat. Suppose that tomorrow a group of beings from another planet were to land on Earth, beings who considered themselves as superior to you as you feel yourself to be to other animals. Would they have the right to treat you as you treat animals you breed, keep, and kill for food? 18

The implication is certainly that it would be inconsistent for us to think that it is morally permissible for us to eat nonhuman animals but wrong for superior aliens to eat us.

But it is not clear that it is inconsistent if there is a relevant moral difference between animals and humans not found between humans and superior aliens. Our discussion above of the concept of person suggests a difference. Most human beings and presumably all of Harris's aliens are persons. Most animals are probably not persons. Consequently, if personhood is the ground for the right to life, there need be no inconsistency in maintaining that it is morally permissible for us to kill and eat most animals, given that we cause them no pain, preserve the ecological balance, and so on, and that it is wrong for the aliens to kill and eat us, even though they kill us painlessly and so on.

The Argument from Human Grain Shortage

All of the clearly moral arguments for vegetarianism given so far have been in terms of animal rights and suffering. New moral vegetarianism, however, rests on moral arguments couched in terms of human welfare. It is argued that beef cattle and hogs are protein factories in reserve. In order to produce one pound of beef, cattle eat approximately sixteen pounds of grain; and in order to produce six pounds of pork or ham, hogs eat approximately six pounds of grain. It is estimated that the amount of grain fed to cattle and hogs in the United States in 1971 was twice that of U.S. exports of grain for that year and was enough to feed every human being with more than a cup of cooked grain every day for a year. 19 Given the people in the world who are hungry or even starving, we should not eat meat, since in eating meat we are, as it were, wasting grain that could be used to feed the hungry people of the world. It only takes a little

imagination to suppose that every bite of hamburger we eat is taking grain away from a hungry child in India.

The difference between this argument and the arguments considered above should not be overlooked. Whereas those arguments maintain that grain-eating animals should not be slaughtered, this argument is at least consistent with the position that they should be: grain-eating animals, it might be maintained by a new moral vegetarian, should be slaughtered to prevent them from eating more grain and producing new grain-eating offspring. This argument also differs from traditional ones in its selective and restrictive moral prohibitions against eating flesh. The eating of nongrain-eating animals, e.g., fish and wild game, is morally permissible on this view. Indeed, it might even be encouraged in order to utilize all food sources as effectively as possible.

These differences aside, is the argument valid? Does it follow that because grain that could be used to feed hungry people is used to feed cattle, people should not eat the meat produced by feeding these cattle grain?

To see that it does not, one must be clear on what this argument assumes in order to arrive at its conclusion. First of all, it assumes that if many people in countries with surplus grain, e.g., in the United States, did not eat grain-fed meat this would cut down on the amount of grain used to feed animals that produce meat. Second, it seems to assume that not eating meat is the best way to conserve grain. Third, the argument assumes that if the grain used to feed cattle in the United States, e.g., was not fed to cattle, the grain would be used to feed the hungry people.

None of these assumptions seems plausible. Let us take the first assumption. It is useful to remember that grain was fed to cattle and other animals in this country in order to use our surplus; it was an economic move. Given a depressed demand for meat caused by widespread vegetarianism, other economic moves could be made. More grain could be fed to fewer meat-producing animals resulting in the same consumption of grain. Or the same number of meat-producing animals could be produced and fed the same amount of grain, but new markets could be found for meat

and new needs created. Or new markets could be found among the countries of the world where meat consumption is slight; more need for meat could be produced among nonvegetarians and dogs and cats.

The next assumption is no less dubious. It is doubtful that the best approach to conserving grain is to become a vegetarian. It is important to realize that beef cattle and other ruminants do not need to eat protein in order to produce protein. Indeed, beef cattle can be fed on a variety of waste materials, e.g., cocoa residue, bark, and wood pulp, and still produce quality meat. 20 Various lobby groups, world food organizations, and consumer and environmentalist groups putting pressure on meat producers to utilize these waste products to feed animals might be a much more effective way of conserving grain than vegetarianism. If beef cattle and other meat-producing animals were fed on waste products instead of on grain, there would be no reason not to eat meat in order to feed the hungry people of the world. Indeed, one might feel that there was an obligation to eat meat. Eating meat from animals fed on waste products would be a way of saving grain that could be shipped to the hungry people of the world.

The third assumption of the argument is also dubious. It is highly unlikely, given the present policy of the United States government, that surplus grain, even if it were available, would be shipped to the most needy people. The government's policy has been (and it is likely that it will continue to be) to sell grain to those countries that are able to pay and to those countries in whom we perceive our national security interest. In 1974 we shipped four times as much food to Cambodia and South Vietnam as to starving Bangladesh and Swahelian Africa.

To put it in a nutshell, without vast changes in the economic systems and the policies of governments with surplus grain, not eating meat in order to help the starving people of the world is an idle gesture. Such a gesture may make people happier and may make them feel less guilty, but it does no good. With vast changes in economic systems and governmental policy, however, not eating meat hardly seems necessary.

Singer also uses the argument from human grain shortage to support his provegetarian position, although he is aware of its limitations.

This does not mean that all we have to do to end famine throughout the world is to stop eating meat. We would still have to see that the grain thus saved actually got to the people who need it.²¹

Singer is no doubt correct that the problems in getting the grain to the people who need it are not insurmountable. But the economic and political changes that would have to occur in order to do so are very extensive — more extensive than Singer wishes to admit. In any case, as we have seen, changes in how meat-producing animals are fed, together with changes in political and economic policies, would enable us to feed the starving people of the world without a vegetarian commitment.

Frances Moore Lappé, in her fine book Diet for a Small Planet, also points out the simplistic thinking that is involved in supposing that going without meat is going to help the starving people of the world. But in the end she still advocates a meatless diet.

A change in diet is a way of saying simply: I have a choice. This is the first step. For how can we take responsibility for the future unless we can make choices now that take us, personally, off the destructive path that has been set for us by our forebears.²²

But if Lappé is correct in the major arguments in her book, such a first step is not really necessary. There are ways to feed the starving people of the world without forgoing meat, e.g., by changing governmental policy. Indeed, Lappé, in the next section of her book, recommends a list of organizations that one can join in order to change government policy toward hungry people of the world and to educate Americans about the food problem. None of these organizations requires a vegetarian commitment.

How can we understand Lappé's recommendation of a meatless diet as a "first step" toward changing the present situation? Perhaps in this way: Becoming a vegetarian is a very personal, symbolic act; it symbolizes one's commitment to a cause and goal: feeding the hungry people of the world.

But for many people such a symbol is not necessary; they do not need a personal symbolic act in order to work for a good cause. In any case, one has no moral duty not to eat meat as a symbolic commitment to help the hungry people of the world, although one may have a duty to help the hungry people of the world. One may have a duty to be committed to some worthwhile cause without having the duty to express that commitment in some particular symbolic way.

In fact, not only is expressing one's commitment to feeding the hungry people of the world by not eating grain-fed meat not morally necessary, it may not be the best way of expressing such a commitment. I suggest three questions that one should ask in evaluating any way W of committing oneself to some goal G.

- 1. How well does the regular use of W bring about G?
- 2. How well does W educate people to the value of G?
- 3. How well does W induce the person using W to continue in the pursuit of G?

Considering vegetarianism in the light of these three questions, one might suppose there are better ways of expressing one's commitment to helping the hungry people of the world. For example, protesting the government's food policies by wearing buttons, putting ads in the New York Times, or writing one's congressman would seem to have greater educational value than not eating meat (question 2). Supporting organizations that are devoted to the solution of world food problems would seem to be a better way to achieve the goal of helping the hungry people of the world than going without meat (question 1). It is difficult to say whether, for example, wearing a button that says "Help Starving Bangladesh" and signing petitions supporting food relief programs will induce the people who wear the buttons and sign the petitions continue in their humanitarian effort more than going without meat (question 3). But it is not implausible to suppose that, for many people, going without meat will have less psychological meaning and consequently strengthen their resolve less than wearing buttons and signing petitions.

The Argument from Brutalization

The previous argument was based on an alleged indirect effect on human beings of not eating meat. The argument from brutalization is basically of the same kind. It is argued that the killing and eating of meat indirectly tends to brutalize people. Conversely, vegetarianism, it is argued, tends to humanize people.²³

This argument can have a strong or weak form depending on what is meant by "brutalize" and "humanize." In the strong form, it maintains that eating meat (indirectly) influences people to be less kind and more violent to other people; conversely, not eating meat tends to make people more kind and less violent. In the weaker form of the argument it is maintained only that eating meat tends to make people less sensitive to people's inhumane treatment of other people and more willing to accept people's brutality and inhumanity to other people.

Whatever form the argument takes, it is important to understand its status. I have argued that there is no incompatibility between being a nonvegetarian and advocating the painless and humane treatment of animals. Consequently, there is no logical connection between being a nonvegetarian and the cruel treatment of animals, let alone the cruel treatment of persons (human or otherwise). Similarly, there is no logical connection between eating meat and being insensitive to the inhumane treatment of animals or humans.

The argument from brutalization, however, does not appear to postulate a *logical* connection between vegetarianism and inhumanity but rather a *psychological* one. Thus the strong form of the argument seems to assume the truth of the following psychological generalization.

1. People who do not eat meat tend to be less cruel and inhumane to persons than people who do eat meat. As far as I know, no good evidence has ever been collected to support or refute (1). Pacifists like Gandhi are often cited as examples of people who are vegetarians and who are opposed to violence. But Hitler was also a vegetarian. ²⁴ Indeed, Hitler's vegetarianism is a constant source of

embarrassment to vegetarians, and they sometimes attempt to explain it away. For example, the *Vegetarian News Digest* argued that "there is no information that indicates [Hitler] eliminated flesh food for humanitarian reasons." But the reason Hitler did not eat meat is irrelevant to the present argument. Here we are only concerned with whether or not eating meat tends to make people less brutal.

But perhaps the psychological generalization presupposed is a little different from (1). Perhaps the argument from brutalization presupposes

2. People who do not eat meat for moral reasons tend to be less brutal than people who do eat meat.

In terms of (2) the comments of the *Vegetarian News Digest* are not irrelevant. The case of Hitler need not count against (2).

The truth of (2) is by no means self-evident, however, and empirical evidence is needed to support it. Although I am not aware that such evidence is available at the present time, let us suppose that (2) is well confirmed. This by itself would hardly be a strong argument for vegetarianism, since the following generalization could also be true.

3. People who eat meat after reflection on the morality of eating meat are less brutal than people who eat meat without such reflection.

The bulk of the population has given no reflection at all to the morality of eating meat. Consequently, a comparison between moral vegetarians and meat eaters at large is hardly fair. Putting it in another way, supposing (2) to be true, moral vegetarianism per se might not be responsible for humanizing people. Rather, what might be responsible for such humanizing is simply moral reflection, reflection that might lead either to the acceptance or to the rejection of moral vegetarianism.

What would be significant is if the following generalization were true.

4. People who do not eat meat after serious reflection on the morality of meat eating are less brutal than people who eat meat after such reflection.

The truth of (4) would enable us to say with some confidence that something besides moral reflection is involved in becoming less brutal. At the present time, however, there is no reason to suppose that (4) is true.

Similar considerations indicate that the weaker form of the argument from brutalization also fails. The weaker form of the argument seems to assume

5. People who don't eat meat for moral reasons are less likely than people who do eat meat to be insensitive to people's inhumane treatment of other people.

Whether (5) is true or not is uncertain. But in any case (5) is not terribly relevant to moral vegetarianism. A relevant comparison would not be between moral vegetarians and nonvegetarians in general but between moral vegetarians and nonvegetarians who eat meat after moral reflection, that is between moral vegetarians and what might be called moral nonvegetarians. Thus, what needs to be established is not (5) but

6. People who don't eat meat after reflection on the morality of eating meat are less likely than people who do eat meat after such reflection to be insensitive to people's inhumane treatment of other people.

At the present time we have no more reason to accept (6) than we have to accept (4). And we have no reason to accept (4). Thus the argument from brutalization fails.

CONCLUSION

There is no doubt that moral vegetarianism will continue to be a position that attracts people concerned with the plight of animals and with humanitarian goals. If the conclusions of this paper are correct, however, moral vegetarianism cannot be separated from a number of ethical issues and questions, issues that need to be settled and questions that need to be answered if a comprehensive and considered moral vegetarianism is to be maintained: the problem of carnivorous animals; the moral status of eating microorganisms, consenting animals, and genetically engineered animals; the difficulty of distinguishing animal parts and animal products.

Although I have found no compelling moral arguments for vegetarianism, there still may be reasons why morally

sensitive people would wish to become vegetarians. As I have suggested above, vegetarianism may have a protest or symbolic function. Nevertheless there is, as far as I can determine, no moral duty not to eat meat, and one who eats meat is not thereby committing any moral error.

One final point. It might be suggested that although becoming a vegetarian as a protest against animal suffering or a way of committing oneself to helping the hungry people of the world is not a moral duty, it is still a moral act; it is a supererogatory act. This view is not implausible, but it needs to be qualified in certain ways. A supererogatory act, whatever else it is, is an act that is good but not obligatory. The question is whether becoming a vegetarian in order to protest animal suffering or as a way of committing oneself to feeding the hungry people of the world is good but not obligatory.

Suppose first that there is a moral obligation to protest cruelty to animals or to commit onself to feeding the hungry people of the world. Becoming a vegetarian in this case would not be a supererogatory act; nor would it be an obligatory act. It would be *one* way of fulfilling one's moral obligation, although not necessarily the best way.

Second, suppose that there is no moral obligation to so protest or commit onself. It is not implausible to suppose that doing so would nevertheless be a good thing. Then becoming a vegetarian would be a supererogatory act. If becoming a vegetarian is not the best way to do so, however, moral vegetarians would deserve some praise but not as much praise as some other people who protest cruelty to animals and commit themselves to feeding the hungry people of the world. Indeed, it is not implausible to claim that moral vegetarians deserve some criticism. Their moral idealism is in a sense wasted or at least used badly. One is inclined to say: "If you really want to protest animal suffering or commit yourself to helping hungry people, instead of not eating meat you should . . ." (see above for various suggestions).

There is, I believe, nothing paradoxical about the idea that a supererogatory act can be blameworthy. Jumping in a swift river and saving a drowning man when you are only a fair swimmer is a paradigm case of a supererogatory act and deserves praise. But such an act may deserve some criticism as well if the drowning man could have been easily saved by tossing him a life buoy.

- 1. Janet Barkas, The Vegetable Passion: A History of the Vegetarian State of Mind (New York: Charles Scribner's Sons, 1975); Judy Klemsrud, "Vegetarianism: Growing Way of Life, Especially Among the Young," New York Times, March 21, 1975.
- 2. Robert Nozick, Anarchy, State, and Utopia (New York: Basic Books, 1974), pp. 35-42; Peter Singer, "Animal Liberation," New York Review of Books, April 5, 1973, pp. 117-24; idem, Animal Liberation (New York: New York Review of Books, 1975).
- 3. Gerald Carson, Men, Beasts, and Gods (New York: Charles Scribner's Sons, 1972), p. 128.
- 4. Mel Morse, Ordeal of the Animals (Englewood Cliffs, N.J.: Prentice-Hall, 1968), p. 67.
 - 5. See Singer, both the article and the book cited above.
- 6. John Harris, "Killing For Food," in *Animals, Men, and Morals*, ed. Stanley Godlovitch, Roslind Godlovitch, and John Harris (New York: Taplinger Press, 1971), p. 108.
- 7. Peter Tompkins and Christopher Bird, The Secret Life of Plants (New York: Harper & Row, 1978); Lawrence, "Plants Have Feeling, Too -," Organic Gardening and Farming 64 (April 1971); Woodlief, Royster, and Huang, "Effect of Random Noise on Plant Growth," Journal of the Acoustical Society of America 481 (1969); Backster, "Evidence of a Primary Perception in Plant Life," International Journal of Parapsychology 250 (1968).
 - 8. Singer, Animal Liberation, p. 173.
 - 9. Ibid., p. 177.
- 10. But what about more difficult cases? Am I inconsistent if I am morally opposed to Nazism and use lampshades made by Nazis from human skin? Not necessarily. There may be no reason to suppose that the use of the lampshades in any way supports Nazism. Nor can my use of the shade be construed as an expression of approval of Nazism. Indeed, the lampshade may be used to remind me of the horror of Nazism, a more moving and concrete reminder than pictures of concentration camps.
- 11. Singer does not utilize this argument in Animal Liberation. He says, "I have kept, and shall continue to keep, the question of killing in the background because in the present state of human tyranny over other species the more simple, straightforward principle of equal consideration of pain and pleasure is a sufficient basis for identifying and protecting against all the major abuses of animals that humans practice" (p. 19). Nozick, however, seems to believe that utilitarianism vis-à-vis animals is not adequate. He raises but does not answer the question: "How much does an animal's life have to be respected once it's alive?" (p. 42).

- 12. Michael Tooley, "A Defense of Abortion and Infanticide," in *The Problem of Abortion*, ed. Joel Feinberg (Belmont, Calif.: Wadsworth Co., 1973), pp. 51-92. 13. Ibid., p. 73.
- 14. Tooley thinks that it may be possible that most animals are persons. Although this is possible, it is hardly very likely. See Tooley, p. 91. See also Joel Feinberg, "The Rights of Animals and Unborn Generations," in *Philosophy and Environmental Crisis*, ed. William Blackstone (Athens, Ga.: University of Georgia Press, 1974). Although he argues that animals have rights, Feinberg does not believe that humans have a duty not to kill animals, provided they are killed humanely and nonwantonly in the promotion of legitimate interests (p. 56).
- 15. Roslind Godlovitch, "Animals and Morals," in Godlovitch, Godlovitch, and Harris, p. 168.
- 16. S. I. Benn, "Abortion, Infanticide, and Respect for Persons," in *The Problem of Abortion*, ed. Feinberg, p. 99.
 - 17. Ibid., p. 103; see "The Argument from Brutalization" below.
 - 18. Harris, p. 110.
- 19. Frances Moore Lappé, Diet for a Small Planet (New York: Ballantine Books, 1971), pp. 13-14.
 - 20. Ibid., pp. 18-21.
 - 21. Singer, Animal Liberation, pp. 180-81.
 - 22. Lappé, p. 55.
 - 23. Benn (p. 102) gives a similar argument with respect to abortion.
 - 24. Barkas, chap. 7.
 - 25. Quoted in Carson, p. 134.

CONRAD'S EXPERIMENT IN NON-ABSOLUTE GOSPEL: NOSTROMO

Newton Baird Georgetown, California

THIS essay is a study of the philosophical issues in Joseph Conrad's Nostromo. It is an attempt to demonstrate that in this novel, as in his other work, Conrad was torn between the poles of selflessness and selfishness. It is not an attempt to demonstrate a schematically fixed allegory. The novel is an allegorical experiment. Its theme is imperfectly conceptualized. No doubt Conrad intended an obscurity. But the premise here is that while the content of the novel is not always technically or thematically consistent and clear, it does project a confused philosophy that Conrad held throughout his artistic life.

The essay presents a step-by-step analysis of only some of the structural and thematic methods of the novel and explicates selections from the text as evidence for its conclusions. It defines a philosophical relativism in the novel. The issues and conclusions argued are controversial - if for no other reason than that the essay discusses fiction in terms of philosophical conceptions in an antiphilosophical age. One of the premises of modern art is that abandoning philosophy removes the need for rational meaning and form in art. As a result, "conceptual art" has come to mean anything from a simulated soup can to a simulated 1920s gangland wedding. And to question the morality of altruism or to contrast it with rational self-interest as a morality is to court intellectual shudders. As this essay suggests, however, Joseph Conrad's philosophical dilemma rests upon the dichotomy between these two. It is, at base, a dichotomy between body and mind.

Nostromo is what modern critics say fiction should be: relevant. It pits man, the protagonist, against his environment (that is to say, his existence). Its plot-idea: man

seeking tranquility. The issue of man's happiness is as relevant today as, say, the survival of a rare species of rhino. The essay will have achieved its purpose if it demonstrates these points.

WORLD WITHIN WORLD

Joseph Conrad's most ambitious novel is Nostromo: A Tale of the Seaboard (1904). It ponders the struggles of imperialism in South America and the virtues of civilization. posed against those of the natural environment. It creates a detailed, microcosmic civilization, beginning in the first pages with a mythic, visual exhortation of the past, the genesis" of this experiment in non-absolute gospel. In its first half, it relates the history of Sulaco (a fictional city on the west coast of South America), dealing primarily with the rise of Charles Gould's silver mine. It is a parable of eternal hope through attempted righteousness. The last section deals primarily with the more natural ironic Christ-figure, Nostromo, his rise and fall, death and transfiguration. Conrad's subject, however, is not the spirit of God, but the spirit of reality. Hope and illusion are eternal. The hope for Sulaco's time of peace, portrayed in Gould's story, is disillusioned, to be revived in Nostromo's story, only to be disillusioned again and revived again in the "resurrection" of Nostromo. Thus, as critics have demonstrated. Conrad gives us his view of modern civilization, continually contrasting beauty with symbols of dread, continually portending tragic endings from haunted beginnings.

As opposed to the biblical Genesis, which describes creation and tells of man's original sin, his disobedience and fall from serenity, the genesis of Nostromo describes how the native people of Sulaco inherit a myth regarding original knowledge of material reality. According to this myth, man cannot overcome his 'fall' because it is the nature of the intelligent to have ambition and material desires. Man is doomed de facto by his awareness of reality. This is dramatized in the legend of the Azuera peninsula, situated across the gulf from Sulaco. The poor, 'associating by an obscure instinct of consolation the ideas of evil and wealth,

will tell you that [Azuera] is deadly because of its forbidden treasure" (p.4). The legend is about "Americano" sailors hunting treasure and camping on the peninsula with a Sulacon manservant and a mule. After their second night on the deadly spot they are never seen again. The manservant's wife paid for masses, and the beast was without sin, so the servant and the mule were "probably permitted" to die. But the gringos remain "spectral and alive" on Azuera, ghosts whose "souls cannot tear themselves away from their bodies mounting guard over the discovered treasure" (p. 5). They remain "rich and hungry and thirsty . . . heretics."

The legend is an ironic parallel to what Conrad referred to as "the absurd oriental fable from which Christianity starts."2 In Conrad's interpretation of existence there is only original knowledge of right and wrong: sin is a relative. non-absolute concept. Thus the myth is treated ironically, pointing up its shortsightedness regarding good and evil. Failure or success in finding the treasure is not the issue. Rather, the issue concerns man's moral perceptiveness and, reduced to first principle, man's faculty of volition, his ability to change existence. Any contact with material wealth (value) is productive of evil, because man's limited perception prevents him from coming to terms morally with the world of reality. The myth, because of the irony, has a dual concept. It instructs as much about envy as about greed. The Azuera genesis-myth questions man's perceptiveness and volition and his ability to civilize his existence.

The novel demonstrates that in the Sulacon world, paradise as such probably never existed, except as an ideal, an illusion. It may, however, be restored or regained in the mind, by way of sacrifice, renunciation, or resurrection, but only in the memory of those who live after the departed. Immortality, like all other human values, is an earthly concept. In the last part of the novel the creative leader fails, and an idol turned thief dies but is resurrected by an act of sacrifice as a martyr of both good and evil.

On its highest level, the novel is a broad, obscure, and abstract allegory of a microcosmic world, as Robert Penn Warren, in his excellent introduction to the Modern Library

edition of *Nostromo*, defines it: "a little world that comes to us complete — as a microcosm, we may say, of the greater world and its history" (p. xxxv). Conrad's allegorical method was experimental. Starting with a single plot-idea based on a true incident — the theft by a seaman of a lighter of silver during a South American revolution — he combined the visual and metaphorical to create abstract theme and subthemes on several levels, within a concrete narrative.

The conceptual theme, man seeking tranquility, is stated as a keynote in the fourth sentence, where Sulaco is referred to as the "inviolable sanctuary." It is stated again in several variations throughout. Charles Gould, king or saintlike half of the dual hero, states the theme, quoting from the History of Misrule by his friend and statesman, Don José Avellanos: "Imperium in imperio" - meaning, in the broadest sense, world within world. On the political level, of course, the phrase supplies the idea of contention for power, or imperialism. But, conforming to the benevolent philosophy of Avellanos and Gould, it would mean the establishment of a nation sanctuary. It is the "Inviolable Temple" concept that Conrad defined in his 1905 essay "Autocracy and War," calling for a "true place of refuge" but predicting man would never obtain such a peaceful existence until some long-distant future. 8

Conrad's concept of man's imperfect perceptual awareness ties into his theory of art, in which he states his intention of making us see.4 His method is to objectify reality through artistic invention and selection. His technique, supplying the reader with objective demonstration or "clues" from which to form his own concept or awareness of the event or character being portrayed, served to improve upon man's view of existence, a kind of literary ontology and metaphysics. But as many critics have correctly observed, a complete degree of certainty or perfection is never intended. The obscure and inexplicable is approached with only a measure of objectivity, man being measured in degrees of imperfection against his own ideals and against a mirror of existence. Each character fails to achieve security or reach a goal. Characters are disillusioned or destroyed or, in some cases, create new illusions. The plot dramatizes the failures of individual men, of politics, government, faith, and dogma, and of cooperation among men. All men are in a state of relative subservience, "world within world," sustained by idealism and hope, doomed to repeated disillusionment.

GOSPEL IN IRONY

The allegory is integrated with the plot through an intricate structure of symbol, imagery, and metaphor. The narrative is punctuated by integrated stories, usually past events told in retrospect, which resemble parables but stress the ironic, as well as the moral. Several parables are ironic commentary on the idea of envy and greed. One of the most significant is the "paradise of snakes" story, which might be called a parable of a devil-inhabited paradise (pp. 116-19). It begins as Charles Gould⁵ listens to the sound of the silver ore in the shoots coming down the mountain from the San Tomé mine. Its growling thunder sounds like a storm to a dweller in a nearby village, but to Charles Gould it seems like a "proclamation" of his "audacious desire." It brings back to his mind the time he and his wife rode with Don Pépé to the mine site and saw the "jungle-growth solitude of the gorge." Don Pépé had turned to the gorge with "mock solemnity" and said, "Behold the very paradise of snakes, senora." The waterfall of the gorge was later dried up when the mine was developed, and the torrent of water was diverted into flumes to the turbines working the ore stamps below. Gould remembers how his wife watched the day-by-day progress of the mine, until the day when "the first spongy lump of silver yielded to the hazards of the world by the dark depths of the Gould Concession." Then Emilia

had laid her unmercenary hands, with an eagerness that made them tremble, upon the first silver ingot turned out still warm from the mould; and by her imaginative estimate of its power she endowed that lump of metal with a justificative conception, as though it were not a mere fact, but something far-reaching and impalpable, like the true expression of an emotion or the emergency of a principle [p. 118].

As she held the silver, Don Pépé

looked over her shoulder with a smile that, making longitudinal folds on his face, caused it to resemble a leathern mask with a benignantly diabolic expression [P. 119].

The corrupt and violent history of the mine, its misuse by one dictator after another, and the earlier Gould's death (p. 67: "It killed him." all identify it as a place of evil, not paradise. The "growlings" and "thunder" that sound like storms to the villager personify a kind of curse; as in the Azuera myth. On the other hand, Charles Gould idealizes the sound into a proclamation of his real accomplishments. The word audacious implies the idea of disobedience. Thus Gould's mining in the jungle is made an ironic parallel with man's first disobedience in the biblical garden of Eden. Since Gould's philosophy is bound up with altruism, his self-endeavor becomes his disobedience. The parable is, in carrying out the novel's relativism, non-absolute in its dualization of earthly good and evil, of the hero in a dichotomous confusion of intelligence and superstition, illusion and reality.

The idealized sketch of the San Tomé done by Emilia before its opening contains the idea of the shared idealism of the Gould marriage, of regeneration and peace. The idea of the mine as an altruistic instrument is also contained in this ideal — Charles Gould's "capitalism" being, not capitalism, but a nearly explicit utilitarianism. Emilia is metaphorically the madonna of the mine holding the first silver in her "unmercenary hands." Altruism "endows" the metal with a "justificative concept" over and beyond the realm of "mere fact."

The true nature of silver — not good or bad, but neutral, in nature, to be used for good purpose or bad — disturbs false idealism. Conrad does not consider the value of silver in economic terms: that next to gold, silver is the most objective standard of value. (Despite the many interpretations of the novel's symbolism, this concept of silver is never mentioned by critics either.) The evil growls from the

mine's workings are personifcations suggesting wrongdoing and a warning to any intruder upon the darkness of the mine. Darkness symbolizes the unknowable in Conrad's scheme of the universe. Silver, symbol of uncertain moral value in reality, is feared as myth or superstition (as in the fear of a devil-monster) or, on the other hand, is idealized into a good, a faith. The difficulty, the novel says, is in seeing reality or material elements as they are — neutral — since the power of morality and principle rests in the minds and actions of men.

An episode that follows might be called a 'parable of the tax collector and a Robin Hood,' a parable of theft. This is a story told in retrospect about Hernandez, a Robin Hood or Joaquin Murieta-type legendary bandit, who forms his band after having been cruelly conscripted into the army. In the episode he makes a fool out of a tax collector who thinks Hernandez will betray his band in return for government amnesty. Hernandez instead sets up an ambush for the troops who attempt to trap his men, causing the troops to flee for their lives. The parable asks the question: Who is the greater thief, the bandit or the government? In a realistic comment, Don Pépé states that a thief is a thief and that it would be well to protect property, particularly the silver, from all thieves, thus portending Nostromo's theft of the silver.

The incident of the boundary bridge is one of several that carry out the idea of sanctuary, of the "inviolable temple." This is the story of the silver moving out of the San Tomé "Eden," moving "into the land of thieves and sanguinary macaques" (pp. 125-26). Don Pépé calls it a "crossing." The convoy of silver is described moving through Sulaco "as if chased by the devil." He assures Mrs. Gould that none will enter the sanctuary that lies past the San Tomé bridge. He is particularly on guard against the "macaques" (or monkeys), as he calls the politicians from the Costaguana capital. In the idealistic view of the Goulds, the mine is a temple of faith in the future. It must not be violated and must be protected from envy and greed, from within and without the province. Despite their precautions, it is repeatedly a source and subject of force and violence.

Religious idealism in the novel is represented in its extreme by Teresa Viola and Father Corbelàn. In 1902 Conrad told Edward Garnett that he had "disliked the Christian religion, its doctrines, ceremonies and festivals," from the time he was fourteen. In 1914 he wrote that Christianity was distasteful to him. He spoke of its origins in "the absurd oriental fable." And, although he recognized that it can be "improving, softening, compassionate," it also brought "an infinity of anguish to innumerable souls on this earth." 8

Conrad uses several parables to portray the false ideals of religious dogma. There is a parablelike story about Father Corbelàn, which is parallel to the Cain-Abel story. It is a keystone parable demonstrating that a dichotomy of self and selflessness can lead to betrayal. Father Corbelàn's "fierceness" is described as "all black - threatening" (pp. 208, 218), an image like a raven. He glittered "exceedingly in his vestments" (p. 207), symbolizing his egoism. The parable explains the "whitespot of a scar on bluish shaven cheeks," the scar a result of "his apostolic zeal with a party of unconverted Indians' (p. 214). He rode like a savage himself, suggesting "something unlawful behind his priesthood," as he traveled the outlands and wilderness converting the Indians to the Ribierist cause. The scar, a mark of Cain, symbolized the betraval of brotherhood. Corbelàn betrayed the Indians in converting them in a "selfish" or egoistic cause, while the unconverted Indians answered in kind with a swift blow to the cheek.

As man's moral certainty is shaken, his self-esteem is weakened and his ability to act rationally is impaired. The extreme of this condition is symbolized in the death of Señor Hirsch, the hide merchant, as he is tortured, suspended as on a cross, in the custom house. Hirsch, a weak man, betrays Nostromo by confessing everything at the first threat of force. Despite his quick confession, he is sacrificed (ironically, like Christ) when Dr. Monygham so angers Sotillo that the revolutionary continues to torture Hirsch to death. Monygham betrays Hirsch, who betrayed Nostromo. This circle of betrayal and self-deception is a complex and ironic Judas-pattern, demonstrating the complex cause-and-

effect moral confusion that arises out of inadequate moral principle. Monvgham betrays Nostromo by saving the silver is not lost but buried, an unconscious betraval. But clearly Nostromo first betrayed himself by surrendering to temptation. He is tempted by Decoud and his sainted adopted mother. Teresa Viola. Teresa's temptation of Nostromo is a wrathful deathbed testament of evil (pp. 280-85). Ostensibly a zealously Christian woman, as she is dving she perversely seeks to convert Nostromo to evil by undermining his faith and trust in his fellow men and himself. She urges him to steal from his employer. She demands his services for herself. Nostromo refuses to risk his life for Teresa in a futile search for a priest to whom she can confess as she is dving, though he has risked his life for the "material interests" of others. At his refusal of this "supreme test" of her power over him, she taunts him with the idea of stealing the silver. Confident of the virtue of his body, he warns her against tampering with the weaker area, his soul. Considering the symbolic archetypes involved. Teresa's temptation Nostromo is ironic — the tempting of an ironic Christ-figure (Nostromo, meaning "our lord") by a pained and angry "Mary" or "Magdalene" (her name reminding us of Saint Theresa).

Emilia Gould also plays the role of a temptress Eve, persuaded by Martin Decoud in the role of an intellectual serpent. Decoud approaches her with the idea of shipping a six months' working of silver out of Sulaco, so that it may be used for credit in arming the separatist forces. Emilia perceives that his plan should be a simple practical matter and asks him why he does not approach her husband. Arguing that Charles is too sentimental and idealistic, he asks her to persuade her husband to let the silver "come down'' (the phrase symbolizing moral value). She agrees with "an almost imperceptible nod." (Characters in Conrad take their moral falls evasively, failing to understand the self-causations involved.) When Decoud leaves, Mrs. Gould's mind turns to her "fear" of the mine. She sees her husband's interest now as a "fetish." But she evades even this irrational bent of mind by turning to thoughts of the "poor" (p. 246). Hidden beneath her evasion, however, is

the decision to act in deceit. She agrees to give some of the silver to Decoud's "revolutionary" cause. Thus she secretly uses her husband's wealth against his better interest. Subconsciously she hopes to bring her husband back to their previous state of innocent, shared idealism. But she wants his reformation to be of her own design.

To Emilia, spirituality is the only "real" side of life, so her idea of prosperity is on the "the immaterial side" (p. 63). This view of "reality" is summed up in her watercolor sketch of the mine. She depicts it in its temporal Eden-like wilderness state, which afterwards exists only in her imagination and in the painting (p. 231). The flaw in the Goulds' shared idealism is not only their individual evasions but their misunderstanding of each other. Each assumes his or her ideal is seen the same way by the other. Assuming my goal is altruistic, each says, how can what I do be selfish?

Charles Gould's fall from self-esteem progresses as he retreats from spiritual or intangible concerns into the purely material or tangible concerns of the mine. He becomes more "inscrutable," subconsciously drifting into a renunciation of his ambitions. In the last scene in which we are shown his point of view (he is depicted only from his wife's point of view thereafter), he enters his home after a difficult interview with General Montrero. The remnants of the government of the Ribierists is collected in and around his house, a last-ditch sanctuary. He lowers his eyes, as they avoid looking at him. This is in contrast to earlier scenes when he had always been the center of their admiration. He had left Montrero, "passing his hand over his forehead as if to disperse the mists of an oppressive dream" (p. 451). As he passes the members of the Provincial Assembly he is "struck with a strange impotence in the toils of moral degradation He suffered from his fellowship in evil with them too much '' (P. 452) Impotence, tied to the idea that Emilia later refers to Charles as the last of the Goulds. implies sexual impotence: he has given her silver to bear (to suffer or hold), but no heir.

Charles Gould is nearly, but only to a degree, a contrast to John Holroyd, the American banker-financier. In bribing governments and buying favors, both use deception instead

of free and open agreement and honest exchange, violating basic premises of capitalism. Holroyd is a "Great Personage," somewhat like Sir Ethelred in Conrad's The Secret Agent, misusing power for the sake of power and, in this case, using silver in a deluded and ludicrous "Christian" crusade. Holrovd is "manifest destiny" personified, cooperating in the deification of theft by government force. Gould, on the other hand, is not a taker, but a creator. After the irrational "spoilation" of the San Tomé by government (pp. 57-58), Gould develops the mine into the fountainhead of the "Treasure House of the World" - an allegorical symbol outdoing, as a demonstration of an economicpolitical-philosophical concept, any "dream" of the organizers of the Great Exhibit of 1851 in the Crystal Palace in London (an example that Conrad criticized strongly in his essay "Autocracy and War").9

Many of the characters in the novel are in a state of inaction or frustration. Mrs. Gould's good works seem valueless to her in her growing frustration. Dr. Monygham, Teresa Viola, and Martin Decoud all succumb to the gulf of inaction. In their anxieties regarding the future they share a psychological neurotic view. Since nothing in the present seems right or successful, nothing in the future can be better, and will probably be worse. Thus both Monygham and Mrs. Gould anticipate the mine's becoming the cruelest tyrant of all, not because it has any supernatural or mystic power, as the Azuera legend in the minds of superstitious, but because their minds have turned from reality and focused upon inner frustration and self-hatred. Yet it is not the silver that is, in reality, a tyrant, but the men in government who attempt to loot it by force or those who seek power through government to do the same.

Nostromo's fall upon the virgin sanctuary of the Isabels, his swim (symbolic, as in Lord Jim, of an immersion in the "destructive element," that is, reality, after his "fall"), his corruption, death, and resurrection, are allegorical and (ironically) parallel to the Christ story. The final events at the lighthouse conclude the theme of sanctuary, of "world within world." Linda is entrusted with the care of the light. Captain Mitchell calls the island "private property," and

Giorgio Viola is now "king of the Isabels," as Gould has been called "king of Sulaco." Viola is pictured as "heroic... all alone on the earth full of men" (p. 594). He will defend the island against all trespassers and thieves. Nostromo, secretly visiting Giselle and his cache of silver, is mistakenly shot by Viola, who calls Nostromo "thief." Old Giorgio fires "the first shot ever fired on the Great Isabel" (p. 617). Another temple, or part of a temple, has been violated; security is lost again, just as revolution has destroyed it on the mainland, the "world within world."

The scene in which Nostromo's memory is evoked in the light of the lighthouse by Linda, standing with her arms upraised (p. 631), is an obscure counterpart to the description, earlier in the novel, of a painting, given to the chapel of the mine by Mrs. Gould:

representing the Resurrection, the gray slab of the tombstone balanced on one corner, a figure soaring upward, long-limbed and livid, in an oval of pallid light, and a helmeted brown legionary smitten down, right across the bituminous foreground. "This picture, my children, muy linda e maravillosa..." [P. 114]

The evocation of the Spanish linda, the feminine form, points to the allegorical scene of Linda, all in black in the lighthouse, her figure itself assuming the attitude of the resurrected Christ, a rising spirit, as she calls the name of Nostromo. But there is another side to this resurrection scene. Nostromo had attended a speech given by a Marxist, "an indigent, sickly, somewhat hunchbacked little photographer, with a white face, and a magnanimous soul dved crimson by a blood-thirsty hate of all capitalists, oppressors of two hemispheres" (p. 599). The Marxist, comparable to the agitator, Donkin, in The Nigger of the Narcissus, his "soul dved crimson by a blood-thirsty hate of capitalists," is in the room where Nostromo lies dying after being shot by old Giorgio Viola. The Marxist is described as "the weird figure perched by his bedside," as Nostromo only glances at him with "enigmatic and mocking scorn." The image of the Marxist as a bird, perched by the bedside, evokes the idea of a vulture, and Nostromo seems his prey. Symbolic of a captured spirit or soul, the bird-image also

may be seen capturing or resurrecting Nostromo as a martyr in the spirit of hate or evil, as Linda evokes Nostromo's spirit in love or goodness. Either way, immortality is earth-bound.

The meaning of this concluding portion of the novel is as obscure as its plot is apparently overly simple. The obscurity arises partly from the complexity and abstractness of the allegory and symbols and partly because a great deal of the plot rests on two very minor and briefly involved characters, Ramirez (Giselle's suitor, for whom Nostromo is mistaken by Viola in the shooting) and the Marxist. The two are both called "vagabonds," which may indicate that they are part of the chance element in Conrad's scheme of causation. They lack the capacity to carry out climactic meaning, however.

THE DICHOTOMY OF BODY AND MIND

Conrad corrected an early critic who identified Nostromo as the hero of the novel, stating, rather, that silver "is the pivot of the moral and material events, affecting the lives of everybody in the tale." 10 Two central characters carry the action and, as Claire Rosenfield points out, are integrated. 11 The two are a duo-hero. Gould's story and Nostromo's story overlap; each has its own "obscure beginning" "unfathomable denouement." 12 Charles Gould's story represents courage and leadership in an ambitious search for peace and righteousness by controlling "material interests," rather than by obedience to God's commands as in the Old Testament. Nostromo's story shows man closer to nature, moving from a state of moral unconsciousness to an act of disobedience, death, and resurrection. Conrad sees promise as illusion (as the promise in both stories is disillusioned) and sinister foreshadowing in the repetition of error. Error pivots on the symbol of material interests: the inexorable value in reality - silver.

Gould and Nostromo, as duo-hero, depict the established virtues of the nineteenth century (Gould) integrated and fused into the fresh naiveté of the twentieth century (Nostromo). Gould epitomizes the man of intelligence, a man of the mind rather than of the body. The sacred and profane,

tangible and intangible, struggle in the characterization, but it is nevertheless a portrait with the motives and capacity for intelligent action. Gould dismisses myth, ignores religion, and is interested in facts, even those he cannot fully understand, those not completely tangible to him. He inspires confidence but says, "I don't know why I have; but it is a fact" (p. 80). Deluding himself about "what makes everything possible," he makes himself prey to the uses and misuses of his ability, as silver is used and misused. Both his ability and the silver, being intangible values, are illusory to him. He falls victim to his own errors, the errors of Holroyd, of his community, and of his wife. The instrument of his error is the instrument of his achievement — his mind. That fact, which he does not understand, makes whatever is possible, possible.

Nostromo, the contrasting part of the duo-hero, epitomizes a man of physical action of the body, not of the mind. Physically confident, he attempts to ignore intangibles. His limitations and values are integrated with his actions, his cold self-conceit, idealism, and imaginative pleasure in self (p. 461). Nostromo's heroism, his actions and behavior which make him an idol of the poor, is based largely on illusion, since until his "fall" his illusions allow him to act with both integrity and heroism. But when the whole man is put to the test, his ethical ignorance makes him vulnerable to self-betrayal; the illusion collapses, and with it the easy self-confidence. The character of Nostromo is also probably intended to represent the fraternal man of the people, the man of the sea, where purpose, direction, and ethics are unified in the imperative of the voyage. But on the seaboard where Nostromo arrives, like driftwood, by chance, the rights and wrongs are not determined - they are open to debate and dispute. The morality of altruism, which purportedly creates a bond and direction in self-sacrifice and service, sacrifices the individual's volition and self-interest. Nostromo cannot reconcile these conflicts; his "soul" — as he states it — is vulnerable. He says to Teresa, "Leave my soul alone . . . and I shall know how to take care of my body'' (p. 284). Both kinds of men, Gould and Nostromo, are divided between body and mind in their conception of

themselves. They lack a fixed principle that will integrate their purpose, creating the whole man. Unlike the gringos of the Azuera legend, whose bodies are locked with their souls in eternal damnation, the Sulacon duo-hero is tormented in life by a separation of body and soul, the damnation of a relativistic existence, a hell on earth.

CONCLUSIONS ON A CONVENANT OF EXISTENCE

Conrad did not believe that man could; morally or ethically, conquer either the material or immaterial world. A paraphrase of a biblical metaphor voiced by the engineer of the railroad at Sulaco is no longer physically valid: "We cannot move mountains" (p. 45). The phrase expresses Conrad's idea of causality and volition. The meaning in ethical terms is a revision of the religious meaning, which teaches that "faith can move mountains." meaning, in its extension, that faith can conquer giant evils. The engineer applies it to Gould's ability to influence men, which seems to him easier than tunneling through a mountain. But Conrad. in dramatizing that the problems of the novel rest in the mind of man, demonstrates that influencing or changing man is the more difficult problem. In the causality of existence, it is existence (symbolized in the silver) that triumphs over man, just as in Conrad's "Heart of Darkness" it is the ivory of the jungle that triumphs over Kurtz. In each case it is a moral, philosophical collapse. Conrad's conception of man's relationship to existence, in comparative power, is reflected in a view that Mrs. Gould sees on her ride to the mine. She sees wooden ploughs, "small on a boundless expanse . . . as if attacking immunity itself' (p. 96). It is man's moral self-esteem that makes him feel small. Conrad demonstrates. Thus the world of value seems as the physical world did to the first man upon earth — boundless. To modern man it seems a moral darkness.

It is a struggle between the evasion of consciousness ¹³ and the attempted "maturing of our consciousness" ¹⁴—the first step toward moral responsibility—that Nostromo dramatizes. It is the internal struggle, the "world within world" struggle of man's perceptiveness, a seeming state of

chaos, that makes Conrad's microcosm seem disordered, for he deliberately makes it so. There is no fixed, given morality. If there is a law of causality, it is yet to be revealed to life in Sulaco, for Conrad is predicating a time of universal skepticism. But each character struggles with his own particular devil. Each is an individual, with the multiplicity of virtues and vices, abilities and liabilities, that Conrad recognized as the diversity of life. It is the diversity that no government, no matter its power, can control humanely, as the Sulacon experience demonstrates.

It is man's ability to see in order to make the best choices that is Conrad's first concern. What are the principles, the ideal values? He saw relativism in everything: "Egoism is good, and altruism is good, and fidelity to nature would be best of all." ¹⁵ And: "Abnegation and self-forgetfulness are not always right. . . . the balance should be held very even, lest some evil should be done when nothing but good is contemplated. . . ." ¹⁶ The choice is between self-interest and self-sacrifice, egoism and altruism, self and the collective. This is where the dichotomy of body and mind originates. It is the dilemma of a relativistic existence. What is the value of an existence in which the highest moral condition is silence or death?

Nostromo was, typically, both a success and a failure for Conrad. There is an important technical problem that he did not solve, the problem of unity. Had he written only Nostromo's story, he would have had a very limited work. Placing the individual hero aside, he substituted the symbol of silver. This symbol, however, does not replace the coherence that a hero provides. Even a passive central character with a capacity for some volition provides more strength of organization than an inanimate, abstract symbol. Again, the problem of unity might have been solved with the more interesting character, Charles Gould, but this would have required solving a problem Conrad was unable to resolve. Even so, the novel is Charles Gould's story, because it is Gould who makes the strongest challenge to the central, pivotal element of silver as the symbol of value in reality. Nostromo merely reacts, choosing to become a thief, a choice unequal and peripheral to the main issue. Gould's

part as a creator-producer is in the cause; Nostromo's as a reactor is in the result. Yet both are victims. There is a villain that is unchallenged — corrupt government. Gould, although demonstrating his weakness in his subservience to government, is the strongest challenger to existence.

Gould is a materialist disarmed by the morality of antimaterialism. His story is the search for a moral world by means of creating the moral world. He is the one who faces the issue of sanctuary, of how man can protect himself morally, and he makes the effort to create a good result. In reality, he succeeds. In the non-absolute state of perpetual dissatisfaction in the novel, however, neither he nor the other characters see his success realistically. There is no objective success, not even relative success, because there is no objective judge. Just as Conrad acknowledges over and over in his writing the perceptual limitations he saw in art, he gives Gould a handicap, has Gould perceive what he falsely believes to be a power superior to his own to guide his actions, to overcome risk and chance. Gould looks for something superior in reality (though he does not specifically define this power) to provide him with faith in himself. The characterization demonstrates the collectivism endemic to the utilitarian. In the last scene he casts his eyes to the ground rather than look at his fellow Costaguanans, feeling a "fellowship in evil with them" (p. 452). Compromising with evil was his greatest error and the key to the failure to achieve his goal. He compares himself to a bandit. Failing to conquer evil, he lowers himself toward evil. His attitude is one of fearing disapproval from others, a higher collective judgment, rather than analyzing his relative failures. Had he realistically sought self-esteem, he might have discovered a more objective principle of self-interest, a necessary condition of reality. Seeking to demonstrate his ideal in a microcosm, a world within world, he failed to understand that first he had to find certainty in the first microcosm - the self. Moral principles that cooperatively serve men must of necessity first serve the moral requirements of individuals. Without self-confidence in moral principle - as Dr. Monygham says (p. 571), "a continuity of principle" - the deck is stacked and there can never be permanent peace and security.

But is honest error sufficient reason to feel degradation? Gould's worst transgression, as Conrad sees it, is his intention to use violence - the destructive power dynamite - to destroy his own mine rather than allow looters to have it. What is immoral in that decision? Since he had cooperated with corrupt government in the first place, the likelihood of force eventually leading to force was part of his risk. The mine was his property by right. His father was destroyed by the property's being forced upon him. Gould did what no one else had been able to do before: develop and make prosperous something everyone desired but had been unable to achieve. His ability and the silver - both of rare and useful value - produced a state of prosperity. To produce "law, good faith, order and security" as well, he would have had to deal with intangibles and a realm of principles his philosophy denied. Conrad has Gould feel, in unearned moral failure, a degradation for associating with evil that rightly belongs with the evil itself, but not with its single, most virtuous foe.

Gould comes closer than anyone else to achieving an ideal in this novel. On balance, his ability, not the silver, is the highest 'ideal value of things, events and people' in *Nostromo*. The novel is a profoundly disturbing experiment because it presents us with "gospel that counsels our very souls''¹⁷ and because of the brilliance with which Conrad solved 'the most difficult technical obstacles.'' ¹⁸ But it is not completely satisfying because of its irresolution, which, in this novel, Conrad allowed to overcome his art. Thus the novel is an imperfect conception. Avoiding a choice between altruism and self-interest denies the choice of purposeful moral positions, in art, as in life. A balance between the two brings the very results Conrad found in *Nostromo* 'inexorable'' and 'inexplicable.''

Taking a position would risk the true value of self. Conrad was struggling to find the principle that would provide clearer perception in order to see the conceptual value of man in existence. He was on the side of the creator, but he could not give him the principle to win. What of the possibilities of a single combination of the virtues of Gould and Nostromo — the unrealized integrated hero of body and

mind? Perhaps the reason that Conrad felt the novel was "not the thing" he tried for 19 was that he underestimated the value of what is potentially one of his greatest characters. Why silence a creator and resurrect a thief? The enduring tragedy of Nostromo, the answer to this enigma, may have been locked in the author's underestimation of the value of Charles Gould's creator: the magnificent mind and ability of Joseph Conrad.

- 1. All quotations from *Nostromo* come from the Modern Library edition (New York, 1951).
- 2. Conrad to Richard Curle, July 14, 1923, The Works of Joseph Conrad, Life and Letters, ed. G. Jean-Aubry (Garden City, N.Y.: Doubleday, Doran, 1928), 1:332-35.
- 3. "Autocracy and War," in Notes on Life and Letters (Garden City, N.Y.: Doubleday, Page, 1921), p. 107.
- 4. Preface to "Nigger of the Narcissus," in A Conrad Argosy (Garden City, N.Y.: Doubleday, Doran, 1942), p. 32.
- 5. Conrad seems to have created or selected many of the names of characters and places in his works from historical, mythological, or religious sources. A few examples of the more important characters from Nostromo: Charles Gould (Carlos Gould, meaning gold man or good man), Nostromo (a contraction of the Spanish words nuestro, meaning our, and amo, meaning overseer, boss, or Lord Teresa Viola calls the name Nostromo "no proper word"). Emilia (industrious), Holroyd (holy or royal king).
- 6. Utilitarianism is based on the idea of benevolence, or a "useful" form of altruism. Laissez faire capitalism separates economics and government and is based on the idea of free trade between individuals. It has never been practiced by a whole society. The idea of individual freedom, it should be noted, is not among those developed in *Nostromo*.
- 7. Conrad to Edward Garnett, December 22, 1902, in Letters from Conrad, 1895-1924, ed. Edward Garnett (Indianapolis: Bobbs-Merrill, 1928), pp. 68-69.
 - 8. Conrad to Edward Garnett, February 23, 1944, in Garnett, pp. 79-80.
 - 9. In Conrad, Notes on Life and Letters, p. 106.
 - 10. Conrad to Ernst Bendz, March 7, 1923, in Jean-Aubry, 2:296.
- 11. Claire Rosenfield, Paradise of Snakes, An Archetypal Analysis of Conrad's Political Novels (Chicago: University of Chicago Press, 1967), p. 44.
 - 12. Conrad to Arthur Symons, August 29, 1908, in Jean-Aubry, 2:84.
- 13. Conrad to R.B. Cunninghame Graham, January 31, 1898, in Jean-Aubry, 1:225-26.
 - 14. Conrad to H. G. Wells, Monday [1903] in Jean-Aubry, 1:323.
- 15. Conrad to R. B. Cunninghame Graham, January 31, 1898, in Jean-Aubry, 1:225-26.

- 16. Conrad to Miss Watson (fiancee of E. L. Sanderson), June 27, 1897, in Jean-Aubry, 1:205.
 - 17. Conrad to John Galsworthy, 1908, in Jean-Aubry, 2:77-78.
- 18. J. H. Retinger, Conrad and His Contemporaries (New York: Roy [1942]), p. 107.
 - 19. Conrad to John Galsworthy, September 1, 1904, in Jean-Aubry, 1:834.

THE ECONOMIC EPISTEMOLOGY OF LUDWIG VON MISES

Lewis E. Hill & Gene C. Uselton
Texas Tech University
Clemson University

ROFESSIONAL economists make policy recommendations that are diametrically opposed. We produce conflicting economic forecasts. Someone, at least, must be wrong. We prescribe fiscal and monetary treatments that are designed to promote simultaneously full employment, price stability, balance-of-payments equilibrium, and sustainable economic growth. Yet the economy continues to suffer from inflation or recession (or both, a condition we call stagflation). That the policymakers and the public have begun to question our credibility is not surprising. The renewed interest in epistemology and methodology is an encouraging development, because it suggests that economists are beginning to question the ultimate foundation of their science.

One economist who wrote extensively about the epistemological problems and the ultimate foundation of the discipline of economics was Ludwig von Mises. We believe that now is the appropriate time to look beyond the unpopular political views of von Mises to his considerable contribution to the field of economic analysis.

THE EPISTEMOLOGY OF VON MISES

The study of human action comprises, according to von Mises, history and praxeology. History deals with the facts of human activity, hence is a diverse and changing record. Praxeology is the theoretical approach to human action and, as such, treats only the formal relationships between incentives and individual actions. Economic analysis (or catalactics) derives from this more general theory of human action. The economic epistemology of von Mises, then,

begins with an inquiry into the nature and origin of man's knowledge about individual human actions.

What, if anything, do we know about individual actions that is true for the actions of all individuals at all times? How do we know what we know? How did we acquire this knowledge? What is the nature of this knowledge? History records the actions of men under specific circumstances, but different men act differently at different times. Von Mises concludes that empirical data tell us nothing about the underlying consistency, if it exists, in human action. Introspection, according to von Mises, is the only valid source of knowledge of universal truths concerning human action. This knowledge precedes experience, hence is a priori.

Any theory of human action, hence any economic theory, must derive from fundamental self-evident truths that are known to every human being. These universal truths, because they hold for all individuals in every conceivable society and at every possible time, are absolute; therefore, the theorems or economic laws derived therefrom are also true absolutely. Empirical observations that seem to contradict such general theory are evidence, not of the theory's defects, but of the violation of one or more of the conditions of the theory. (For example, the assumption of an inverse relationship between the price of a normal good and the quantity demanded is not invalidated by the existence of inferior goods.)

Economic predictions are unreliable, not because economic laws sometimes do not work, but because the forecaster cannot know all of the conditions under which human choices are made and because the goals toward which individuals strive vary from person to person or from time to time for the same person. Economists can, in fact, often predict correctly the directions of changes of some economic variables (qualitative predictions), but they can never predict the magnitudes of these changes (quantitative predictions). This limitation, von Mises argued, is primarily due to the lack of constant coefficients for the generally assumed economic relationships. Only by what he called "understanding," von Mises claimed, can we hope even to approximate a reliable

forecast of future economic conditions. This process of understanding involves an effort to anticipate the choices of other individuals by introspection and through the common ground of our humanity.²

But the discipline — much less an economic forecast — is not perfect.³ Human knowledge is imperfect. Economists, like those in other professions, suffer from the limitations of humanity.

The general theory of human action presented in von Mises's book by that name is derived entirely from one universal axiom: "the axiom of action," as Murray Rothbard called it. This axiom states that men act purposefully. That von Mises considered this fundamental premise to be an a priori truth is less important than the fact that he viewed it as a self-evident universal proposition. Furthermore, he held that the axiom of action is substantive — that meaningful economic theorems could be deduced from it and that analysis of empirical data could be done. (The criteria for developing what Martin Bronfenbrenner has termed an "applicability theorem" will be discussed later.)

Every science has its ultimate "givens." To confirm this fact one has only to ask a physicist to explain electricity. The outcomes of electrical experiments are predictable, but the ultimate explanation is unknown. The ultimate "givens" of economics, according to von Mises, are the actions of human beings. But the simple observing and recording of actions is the task of history — not of praxeology. 7 Similarly, the explanation of the value judgments of individuals is the province of psychology.8 Economic analysis deals with the essence of human action itself. The goal of economic analysis is to understand and to explain the ultimate data: human actions. Von Mises wrote, "For the comprehension of action there is but one scheme of interpretation and analysis available, namely, that provided by the cognition and analysis of our own purposeful behavior." We know how our own thought processes work, and we can assume that other human beings think in the same way. According to von Mises, "There is only one logic that is intelligible to the human mind, and . . . there is only one mode of action which is human and comprehensible to the human mind."10

The "mode of action" mentioned involves the identification of appropriate means to achieve desired ends. In the words of von Mises, "There are only two principles available for a mental grasp of reality, namely, those of teleology and causality." In fact, "acting requires and presupposes the category of causality," and "teleology can be called a variety of causal inquiry." It is clear that von Mises considered an individual action to be both a reflection of the value judgments of the actor and an indicator of the individual's perceptions of the relevant cause-effect relationships. We are in a position to understand human actions because we are human.

The fact that man does not have the creative power to imagine categories at variance with the fundamental logical relations and with the principles of causality and teleology enjoins upon us what may be called *methodological apriorism*. ¹³

According to von Mises, three conditions are prerequisite to human action. First, the individual must be in some sense dissatisfied with the existing state of things. Second, the potential actor must have some conception of a more satisfactory state of affairs. Finally, he must believe that some purposeful behavior can improve things. Without these conditions, no action would be taken. 14

Concerning the action axiom, von Mises wrote,

The starting point of praxeology is a self-evident truth, the cognition of action, that is, the cognition of the fact that there is such a thing as consciously aiming at ends. 15

Every action, according to von Mises's system, involves a conscious effort to achieve some objective. The means selected by the actor must be regarded as those considered by the actor to be appropriate for the purpose. It follows that human beings must universally recognize the category of causality. ¹⁶ This fact has led to some confusion among economists who have adopted the scientific methods of the physical sciences in an attempt to isolate the cause-effect relationships underlying human actions. "The natural sciences are causality research; the sciences of human action are teleological."

Individuals act in order to exchange the status quo for conditions that seem to them to be more desirable. The choices of ends are a reflection of subjective valuation; the choices of means are an indication of the individual's understanding of the cause-effect relationships. These choices depend upon the ideas of the individuals involved. ¹⁸ Every action is rational in the sense that the actor utilizes the means that he believes will achieve the ends at which he is aiming. ¹⁹ It was this teleological aspect of human action that von Mises regarded as the appropriate subject for economic analysis and the basis for the distinct methodology of economics. ²⁰

THE METHODOLOGY OF VON MISES

If all knowledge of human action is a priori and if the universal axioms on which our economic theory rests are absolutely true, then the methodology appropriate for economic analysis is deductive logic. Only by the axiomatic method can an economist build a theoretical structure that is absolutely true for all of the actions of all persons in all societies at all times. So argued von Mises.

Any valid economic analysis must begin either with a universal, self-evident truth or with a consistent set of theorems derived from self-evident truths. Economic reasoning must be discursive in the sense that the analyst proceeds logically, step by step, from the initial assumptions to the final conclusions. Conclusions so derived can be questioned only if the reasoning can be shown to be faulty or if the assumptions can be questioned. The theory derived by the axiomatic method may or may not be applicable to a specific set of historical data. If some of the actual conditions are significantly different from those assumed, then the theory is not applicable; but it is nonetheless true.

According to von Mises, "The first task of every scientific inquiry is the exhaustive description and definition of all conditions and assumptions under which its various statements claim validity." He believed that economists should not specialize but that they should approach all problems from the perspective of the complete system. (Comparative

advantage is perhaps inoperative within the discipline.)

Some of the assumptions made by von Mises are application oriented and culture specific. These assumptions are combined with the universal a priori propositions for the purpose of analysis of a particular economy. For example, von Mises's economic system includes the proposition that human beings would prefer leisure to work. Leisure is considered 'an end of purposeful activity, or an economic good of the first order.''²² This does not mean that a society in which labor is preferred to leisure is inconceivable. It only means that von Mises believed that the overwhelming majority of individuals on earth would prefer leisure to labor. This assumption must have been based upon observation.

Another major premise in his system holds that all men are mortal, a proposition with substantive content. ²³ Economists could develop a rational system dealing with a world populated by immortal persons, but the system would not, in von Mises's view, be of any practical value. ²⁴ The point in citing such experience-based propositions is to show, first, that von Mises considered applied economic analysis to be quite legitimate and, second, to illustrate what constituted, for him, a self-evident empirical truth.

An example of the economic theory that can be deduced from the basic principles of human action is the whole structure of monetary theory. An individual living in isolation would have no need of money or credit. Self-sufficient family units would have no such need. But in a system based upon specialization and trading, a medium of exchange is necessary to facilitate exchanges between parties who would trade goods only if the acquired goods could be exchanged for other goods. The theory of money and credit follows, therefore, from the existence of specialization and trade.

In The Theory of Money and Credit, originally published in 1911, von Mises used the axiomatic method consistently. He began by defining the concepts of direct and indirect exchange and specifying the conditions under which a medium of exchange (money) would be required. He explained how the common media of exchange came into being due to their marketability. In challenging the

economists who considered the use of money as a medium of exchange to be only one of its many functions, von Mises showed that the other functions (store of value, standard for deferred payment, etc.) could all be deduced from the medium of exchange function.²⁵ His theory of money and credit was propounded as a completely general theory, i.e., always correct, though not necessarily applicable to every society.

One area in which the views of von Mises are likely to be misunderstood is the application of mathematics to economic analysis. His vehemence when writing about the subject is, in part, responsible for the misunderstanding.

The mathematical method must be rejected not only on account of its barreness. It is an entirely vicious method, starting from false assumptions and leading to fallacious inferences.²⁶

One who reads no further would probably conclude that mathematical methods would necessarily lead to conclusions conflicting with those of von Mises. In the section following the preceding quotation, however, the meaning of the term "mathematical economics" is explained. For von Mises it meant either (1) a scheme for quantifying economics through statistics and measurement, or (2) an attempt to explain prices and costs by means of algebraic equations and functional relationships but without reference to the market process and the use of money, or (3) a treatment of economics as if it were mechanics. Of course, not everyone would agree with von Mises's rejection of these approaches to the study of economics, but at least his viewpoint on the matter seems more reasonable, given the explanation. 27

Most of the debates among those professionals who specialize in econometrics may be traced to the fact that they are applying to empirical data statistical tests developed for the laboratory sciences. If two econometricians perform statistical manipulations on the same set of data and draw conflicting conclusions (a not uncommon development), how should a professional economist decide who is correct (if either is)? Von Mises argued that the approach itself is illegitimate because the "experiment" is unique; it cannot be repeated. If either researcher were right it would be in spite of the method.

The second part of the definition of the term "mathematical economist" is not so clear as the first, but it can be interpreted in the light of von Mises's overall methodological approach. For example, if one specifies a functional relationship between real consumer expenditures and real income such that the average exceeds the marginal propensity to consume for all levels of real income, one can build a simple equilibrium model that supports a policy aimed at increasing the share of net national product accounted for by the government's budget. Von Mises's objection to such methods was that they obscure the essence of the market process and ignore the function of money in an exchange economy.

The third part of the definition deals with the mathematical economists who treat economics as if it were classical mechanics. They build simultaneous equations models of economic phenomena, basing their theoretical constructs on statistical (historical) series, then estimate the coefficients of the "behavioral" equations using the same empirical data. From such econometric models are generated the quarterly and yearly forecasts so familiar to everyone. The fact that these forecasting models do not predict very well is usually explained by reference to exogenous impingements, stochastic variations, policy intervention, and politics. Von Mises would have argued that quantitative forecasts are impossible because individuals change their preferences over time, because not individuals are alike, in short, because the economy is not a machine.

Now, what about mathematical symbols, symbolic logic, and mathematics as an efficient, scientific language for expressing relationships and maintaining consistency? Would von Mises have objected? The answer is a qualified no. He admitted that correct assumptions expressed symbolically could imply only correct conclusions. But he believed that the process is, in fact, usually reversed: that mathematical economists first develop their economic theories by the axiomatic method, then translate them into a form that appears ''more scientific'' in order to 'impress the guillible layman.''²⁸

CRITICISM

The epistemology and methodology of von Mises have been briefly summarized. What about his economic analysis? Was it consistent with his stated views on epistemology and methodology? These questions are suggested by a comment of Fritz Machlup's.

It would be an interesting undertaking to show how little the methodological propositions stated by a writer are related to his own research and analysis. Many do the things they pronounce impossible or illegitimate, and many fail to do what they declare to be essential requirements of scientific method.²⁹

We find only one apparent inconsistency in von Mises's complete system. It has to do with the application of economic theory to specific empirical data. While carefully adhering to his own axiomatic methodology in most of his work, von Mises occasionally bridges the gap between theory and empirical data without a clear explanation of the process. For example, he wrote:

This [Western] civilization was able to spring into existence because the peoples were dominated by ideas which were the application of the teachings of economics to the problems of economic policy. It will and must perish if the nations continue to pursue the course which they entered upon under the spell of doctrines rejecting economic thinking.³⁰

This conclusion — true or false — attributes the material abundance and political freedom of the peoples of Western Europe and North America to the adoption of a nineteenth-century classical liberal philosophy. If the conclusion can be deduced from self-evident axioms, then there can be no disagreement among rational scholars. But, of course, many scholars do disagree, and von Mises failed clearly to demonstrate that this affluent segment of the world's population owes its material wealth to the implementation of laissez faire economic policies.

The second sentence of the quotation constitutes an economic forecast: our highly developed, wealthy, Western civilization will inevitably perish unless its leaders and its

peoples again espouse the nineteenth-century liberal economic philosophy. The prediction, like many of those of Nostradamus or Jean Dixon, is too vague and abstract to be tested. Those who agree with von Mises can point to the economic problems of the United Kingdom or New York City as confirmations of the prediction. Those who disagree can observe that the average American — even in the midst of an economic recession — is far wealthier in terms of material goods and services now than at the time von Mises wrote Human Action. The economic forecast, in fact, was not operational and not testable. And it seems to violate the Misesian dictum that the future cannot be known with certainty.

The important issue here is both epistemological and methodological. How did von Mises know that the implied cause-effect relationship existed? By what mehod did he establish the specific connection?

Our criticism is not that the conclusion is incorrect or that the theory does not apply in the specific instance but that the criteria for applicability are not specified. We need an "applicability theorem" by which to transform the pure economic model into a relevant theory for analysis of empirical data. 31 As von Mises wrote, "The main question that economics is bound to answer is what the relation of its statements is to the reality of human action whose mental grasp is the objective of economic studies." 32

A scientific analysis should be replicable by any other competent analyst. The results should always be identical. This sort of scientific evaluation of von Mises's work would be possible only if we were clearly instructed in his criteria for the application of the theory to empirical data.

Von Mises's certainty concerning the underlying causes of the greatness of Western civilization is puzzling in view of his pointing to

the vexatious impasse created when supporters of conflicting doctrines point to the same historical data as evidence of their correctness. The statement that statistics can prove anything is a popular recognition of this truth. No political economic program, no matter

how absurd, can, in the eyes of its supporters, be contradicted by experience. Whoever is convinced a priori of the correctness of his doctrine can always point out that some condition essential for success according to his theory has not been met. ³³

Although von Mises was not attempting to establish the nexus between nineteenth-century liberalism and material prosperity by appealing to empirical data, he was doing the reverse. His conclusions that the civilization "was able" to develop because of liberal ideas and policies is equivalent to specifying liberalism as a sufficient condition for the production of material wealth and individual liberty. His prediction of the fall of western civilization "if the nations continue to pursue the course which they entered upon" implies that a laissez faire doctrine is a necessary condition for the survival of that civilization.

Another more fundamental type of criticism questions the validity of von Mises's epistemology and the usefulness of his methodology. Does praxeology constitute a valid epistemology and a useful methodology? The answer to this query must be affirmative. Professor von Mises dealt with matters that are both relevant and important. Teleology and causality, objectives and methods, and ends and means are certainly among the basic concepts in any economic epistemology and methodology. Moreover, the use of deductive logic to proceed from his action axiom through propositions to conclusions and implications appears to be an entirely valid approach to formulating economic theory.

But is praxeology the only legitimate approach to economic epistemology and methodology? Our answer is that von Mises has found an important part of the truth but something less than the whole truth in at least two respects. First, von Mises erred in rejecting the logical validity of inductive reasoning. Second, he was mistaken to the extent that he denied the need for and practical usefulness of verification procedures in economic analysis.

That von Mises excluded induction as a legitimate tool of economic analysis is evident in the following passages.

The science of human action that strives for universally valid knowledge is the theoretical system

whose hitherto best elaborated branch is economics. In all of its branches this science is a priori, not empirical. Like logic and mathematics, it is not derived from experience; it is prior to experience. It is, as it were, the logic of action and deed.

We can comprehend action only by means of a priori theorems. Nothing is more clearly an inversion of the truth than the thesis of empiricism that theoretical propositions are arrived at through induction on the basis of a presuppositionless observation of "facts." It is only with the aid of a theory that we can determine what the facts are. 34

Subsequently, Sir Karl Popper reinforced the already substantial authority of von Mises and extended his ban to exclude inductive logic from the empirical sciences.

According to a widely accepted view — to be opposed in this book — the empirical sciences can be characterized by the fact that they use "inductive methods", as they are called.

It is usual to call an inference "inductive" if it passes from singular statements (sometimes also called "particular" statements) such as accounts of the results of observations or experiments, to universal statements, such as hypotheses or theories.

Now it is far from obvious, from a logical point of view, that we are justified in inferring universal statements from singular ones, no matter how numerous; for any conclusion drawn in this way may always turn out to be false: no matter how many instances of white swans we may have observed, this does not justify the conclusion that all swans are white.⁸⁵

Popper failed to note that exactly the same objections can be raised to the conclusions or implications from deductive logic: no matter how many times they are corroborated empirically, the next test may contradict them. Future evidence yielded by some subsequent test may always contradict any general statement regardless of whether the statement was derived inductively or deduced from supposedly self-evident propositions.

The major reason, however, why Popper rejected inductive logic was his conviction that the principle of induction cannot be established through the use of inductive logic. He contended that if inductive logic were valid, then it could be used to establish the logical principle upon which it is based. 36 It is in terms of this issue that Popper presents the demarcation problem, which he has defined as the question of the suitable criterion for distinguishing the empirical sciences from metaphysical speculation. believed that the "Vienna Circle" positivists had incorrectly accepted the use of inductive logic as the identifying criterion of empirical science. The correct demarcation criterion, according to Popper, is that all scientific hypotheses are capable of being falsified by empirical tests. He therefore appealed to the international scientific community for the acceptance of a conventional agreement that the correct demarcation criterion of the "falsifiability hypotheses' should be used to distinguish between science and metaphysics.37

The point that should be emphasized is that Popper accepted a conventional solution of the demarcation problem. If the problem can be legitimately solved through the use of a convention, then it is equally legitimate to seek a conventional solution for the problem of induction. If it is right and proper for Popper to rely on a convention to solve the demarcation problem, it must be equally right and proper to use a convention to establish the principle of induction. All epistemologies and methodologies require the acceptance of certain conventions or agreements concerning basic methodological principles and procedures. 38 That the principle of induction cannot be established by inductive logic is no reason for its rejection. There are other ways to establish this principle, including a simple convention or agreement among philosophers and scientists to use inductive logic.

Martin Bronfenbrenner has made a "plea for methodological tolerance." Because the case against inductive logic appears to remain unproved, his tolerance seems to have a great deal more merit than methodological dogmatism. The truth is a many-faceted complexity. In order,

therefore, to achieve maximum understanding of truth, there is a legitimate, even urgent, need to use both deductive and inductive approaches and to seek both rationalistic and empirical insights into the truth.

In our judgment, Ludwig von Mises's other major methodological error is that he seems to have rejected all positive verification procedures. He explained his position in the following.

New experience can force us to discard or modify inferences we have drawn from previous experience, but no kind of experience can ever force us to discard or modify a priori theorems. They are not derived from experience; they are logically prior to it and cannot be either proved by corroborative experience or disproved by experience to the contrary. 40

Murray Rothbard has summarized the basic principles of von Mises's praxeological method very well:

(a) that the fundamental axioms and premises of economics are absolutely true; (b) that the theorems and conclusions deduced by the laws of logic from these postulates are therefore absolutely true; (c) that there is consequently no *need* for empirical 'testing,' either of the premises or the conclusions; and (d) that the deduced theorems *could not* be tested even if it were desirable.⁴¹

We agree, of course, that purely formal logical relationships are not proper subjects for empirical research. If A is greater than B and B is greater than C, then A is greater than C in the same sense. The problem with von Mises's system, it seems to us, is that his legitimate distrust of empirical verification of formal economic models led to an illegitimate rejection of all empirical work.

In order to analyze the verification problem, it is helpful to distinguish (as Bronfenbrenner has done) between "models" and "theories." ⁴² A model is a closed system of logic proceeding from assumptions to conclusions, but a model is not necessarily related to reality. A valid model can be absolutely true; no empirical verification is required to establish its absolute truth. But, according to Bronfenbrenner, a model is not a theory unless one or more

"applicability theorems" are appended to it. An applicability theorem is a hypothesis that suggests some relationship between the model and reality. Applicability theorems, in our judgment, must be verified before they can be accepted as reliable descriptions of these relationships between models and reality. Reliability of applicability theorems cannot be assumed unless it has been demonstrated; there is no other way to demonstrate reliability than through some verification procedure.

It may be that some of the praxeologists' criticisms of verification procedures result from a misunderstanding of the nature and purpose of scientific verification. It is sometimes supposed that the purpose of verification is to prove or to disprove a hypothesis, but this supposition demands that verification procedures perform an impossible task. Both Popper and Milton Friedman agree that no amount of empirical testing can ever prove a hypothesis conclusively. 43 Professor Emile Grunberg has persuasively suggested that empirical testing is equally impotent to disprove hypotheses. False prediction, according to Grunberg, does not disprove a hypothesis because the reasons for predictive failure can never be specified. The failure to predict might have resulted from the inaccuracy of the implied ceteris paribus assumption, rather than from the inaccuracy of the substantive hypothesis, in which case the hypothesis would not have been disproven.44

Indeed, it is probably impossible either to prove or to disprove a hypothesis by any conceivable verification procedure. The purpose of verification procedures is always more limited than the proof or disproof of hypotheses in any final or absolute sense; the purpose is always limited to the corroboration or contradiction of a hypothesis through a test of its empirical relevance. To contend, therefore, that verification procedures cannot and do not prove or disprove hypotheses is not a valid criticism of these procedures; it is merely a recognition of their limited, but legitimate and proper, purpose.

It may also be that praxeologists are directing their criticisms more at faulty verification procedures that at good ones. Many statistical tests presuppose assumptions that are

so very restrictive that they become unreliable verification procedures for most applicability theorems. For example, parametric statistical methods are frequently applied to cases in which the implied assumptions concerning the parameters are entirely false. These criticisms are well founded. Unreliable procedures should not be used to test the reliability of applicability theorems. Such criticisms do not, however, constitute valid attacks on sound verification procedures; they only constitute an argument for the improvement of statistical techniques and verification tests. All of us can agree with such arguments for improvement.

Our call for methodological tolerance applies to praxeologists, pragmatists, and positivists alike. Each approach can be useful in the broad field of "political economy." And the impersonality, objectivity, and scholarly persistence so characteristic of Professor von Mises are qualities that would enhance the contribution of every researcher.

CONCLUSION

Economic epistemology and methodology, in our opinion. should be conceived as a flow of activity from pure theoretical models, through applicability theorems, verification procedures, policy formulation, and the solution of economic problems, to the achievement of economic objectives and goals. The function of praxeology is to provide pure deductive models as inputs into this process. Empirical research should provide equivalent inputs in the form of inductive models. The function of positive economics is to process these inputs through the formulation and verification of applicability theorems. Pragmatic and institutional economics performs a dual function. In addition to providing inductive inputs, the function of pragmatism and institutionalism is to formulate and to implement economic policy, to solve economic problems, and to facilitate the achievement of economic objectives and goals.

Fortunately, economists practice what they preach with respect to specialization and the division of labor. It is therefore unnecessary for any one economist to perform all of the activities that are included in the process. "Extreme apriorists' (to use a term coined by Murray Rothbard) formulate pure deductive models; empiricists formulate inductive models. Positive economists hypothesize and verify applicability theorems. Most of these economists are academicians who work in the universities. Other economists, mostly in government and business, develop and implement economic policy, attempt to solve economic problems, and seek to achieve economic goals and objectives.

The relationship between deductive and inductive logic is symbiotic. Insights drawn from inductive logic can suggest assumptions that become inputs into deductive models. In a similar manner, the conclusions and implications of deductive logical models can suggest categories, classification systems, and procedures for the collection and processing of empirical observations that become inputs into inductive models. But it is in positive economics that deductive hypotheses and empirical verification are brought together and integrated into the process of economic analysis.

The theoretical economists in the universities usually start with the formulation of economic theories and then proceed through verification into policy implications. The pragmatic economists in government and business usually start at the other end of the process, with economic goals and objectives, and then work backward through economic problems into policy formulation and implementation. Here, also, the positive economist serves a mediating role between the pure theorists and the pragmatic policymakers. The pragmatic economist tends to be eclectic: eager to use any theoretical or analytical technique that he believes to be useful, without a firm commitment to any theory or school of economic thought.

Our conclusion holds that, to paraphrase a bit of folk wisdom, "it takes all kinds of economists" to do all of the things that economists need to do. These economists range from extreme apriorists to ultraempiricists and from pure theorists to pragmatic policymakers. Within this milieu of the theory and practice of economics, there is certainly a place for Ludwig von Mises and other praxeologists. In this place, their epistemology is valid and their methodology

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very useful. But there are also places for other economic approaches and techniques. In its place, each of these other approaches and techniques may be just as valid and useful as praxeology is in its place. Professor von Mises and some of his disciples have made very significant contributions to the economic science — so have many economists with very different epistemologies and methodologies. All of these contributions to the development of the economic science should be recognized and used wherever they are appropriate.

Epistemological and methodological pluralism is perhaps the major strength of professional economists. Anyone who reads a newspaper or watches the news on television must be aware that contemporary civilization is facing an economic crisis of very serious magnitude. If professional economists are to make an important contribution to alleviating this crisis, the maximum contribution from all economists with their varied skills and diverse approaches will be required. Let us hope that each of us can make his own contribution in his own way to the solution of these economic problems and to the alleviation of this crisis.

^{1.} Ludwig von Mises, Epistemological Problems of Economics, trans. George Reisman (Princeton, N.J.: D. Van Nostrand Co., 1960), p. 14.

^{2.} Ludwig von Mises, Human Action, 3d ed. (Chicago: Henry Regnery Co., 1966), p. 118.

^{3.} Ibid., p. 7.

^{4.} Murray Rothbard, "In Defense of Extreme Apriorism," Southern Economic Journal 28 (January 1957): 317 ff.

^{5.} Ibid., p. 318.

^{6.} Human Action, p. 17.

^{7.} Ibid., p. 47.

^{8.} Ibid., pp. 11, 12, 127.

^{9.} Ibid., p. 26

^{10.} Ibid., p. 25.

^{11.} Ibid., p. 25.

^{12.} Ibid., pp. 22, 23.

^{13.} Ibid., p. 35.

^{14.} Ibid., pp. 13, 14.

^{15.} Ludwig von Mises, The Ultimate Foundation of Economic Science: An Essay on Method (Princeton, N.J.: D. Van Nostrand Co., 1962), pp. 5, 6.

- 16. Epistemological Problems, p. 47.
- 17. Ultimate Foundation, p. 7.
- 18. Epistemological Problems, p. v.
- 19. Human Action, p. 17; Epistemological Problems, p. 35.
- 20. Epistemological Problems, p. v.
- 21. Human Action, p. 6
- 22. Ibid., p. 132.
- 23. Ibid., p. 101.
- 24. Epistemological Problems, p. 24.
- 25. Ludwig von Mises, The Theory of Money and Credit, trans. H. E. Batson (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1971), pp. 29-37.
 - 26. Human Action, p. 350.
 - 27. Ibid., pp. 350-57.
 - 28. Ibid., p. 353.
- 29. Fritz Machlup, "Operationalism and Pure Theory in Economics," in *The Structure of Economic Science*, ed. Sherman Roy Krupp (Engelwood Cliffs, N.J.: Prentice-Hall, 1966), p. 54.
 - 30. Human Action, p. 10.
- 31. Martin Bronfenbrenner, "A Middlebrow Introduction to Economic Methodology," in Krupp, pp. 9-10.
 - 32. Human Action, p. 6.
 - 33. Epistemological Problems, p. 29.
 - 34. Ibid., pp. 12-13, 27-28.
- 35. Karl R. Popper, The Logic of Scientific Discovery (New York: Harper & Row, 1965), p. 27.
 - 36. Ibid., pp. 27-30.
 - 37. Ibid., pp. 34-42.
 - 38. Ibid., pp. 53-56.
 - 39. Bronfenbrenner, p. 20.
 - 40. Epistemological Problems, p. 27.
 - 41. Rothbard, p. 27.
 - 42. Bronfenbrenner, pp. 9-10.
- 43. Popper, pp. 33, 40-42; Milton Friedman, Essays in Positive Economics (Chicago: University of Chicago Press, 1953), pp. 8-9.
- 44. Emile Grunberg, "The Meaning and Scope of the External Boundaries of Economics," in Krupp, pp. 148-65.

TRIVUS ON ECONOMIC VALUE

In his paper, "Dissolving a Muddle in Economics," Sidney Trivus has criticized the account of economic value put forth by von Mises, Böhm-Bawerk, and other members of the Austrian school. According to these theorists, value is not an objective property of commodities but lies, rather, in the subjective attitude of individuals as expressed through their exchange activities in the marketplace. Trivus has argued, however, that such a doctrine is open to the charge of circularity since the only evidence offered for the existence of these attitudes is the very actions they are supposed to explain. He suggests, therefore, that we would do better, on grounds of conceptual clarity, to define the economic value of a thing directly in terms of the actual goods for which it is exchangeable. In so doing, he goes on to point out, we will thereby partition the set of commodities into distinct exchange classes, each of which has the mathematical property of being an equivalence class with respect to the relation of exchangeability (a fact which admits of potentially fruitful theoretical development).2 In what follows I will criticize Trivus's account by arguing for the following theses: (1) exchange classes do not constitute equivalence classes with respect to the relation of exchangeability; (2) even if they did, it would not be important since the definition Trivus proposes is logically dependent upon and thus cannot be more fundamental than - the subjective use-value theory of the Austrians; and (3) there is reason to believe that we can modify the Austrian theory so as to render it immune to Trivus's objections.

I

The heart of Trivus's account is summarized in the following passage.

In general, at any time, the class of commodities is partitioned into subclasses such that all the members of any one such subclass are exchangeable, evenstephen, one with another. For the purpose economics, the exchange relation is an equivalence relation. For, (1) any commodity is exchangeable for some commodity or other, (2) if one commodity is exchangeable with another then that other is exchangeable with the one, and (3) if one commodity is exchangeable with a second and that second with a third, then the first is exchangeable with the third. From these conditions it follows, by a simple exercise in quantificational logic, that exchangeability is reflexive, symmetric. transitive, and hence that it is an equivalence relation. It is not unreasonable, therefore, to define the value of a commodity as that exchange class to which belongs, and to define the class of values in general as the class of all such equivalence classes. [P. 9]

The key question here, of course, is whether Trivus has succeeded in demonstrating that exchangeability *is* an equivalence relation on the set of commodities. To help determine an answer, let us consider a simplified example in which the universe consists of a set of seven commodities partitioned into the following exchange subclasses:³

$$\left\{c_{1},\,c_{2},\,c_{3}\,\right\} \qquad \left\{c_{4},\,c_{5}\,\right\} \qquad \left\{c_{6},\,c_{7}\,\right\}$$

If we then assume that nothing counts, by definition, as a commodity unless it is exchangeable for some commodity or other, we have, of course, trivally ensured the truth of the first of the three conditions Trivus cites. But what about the second condition, the symmetry requirement? Suppose $c_4 =$ an apple and $c_5 =$ an orange. For $\{c_4, c_5\}$ to constitute an equivalence class with respect to the relation of exchangeability, it must be the case that the apple is exchangeable for the orange and that the orange is exchangeable for the apple. But need this always and necessarily be the case? Surely not. It is entirely possible that the apple is exchangeable for the orange (i.e., that the owner of the orange is willing to trade for the apple)

but that the orange is *not* exchangeable for the apple (i.e., that the owner of the apple is *not* willing to trade for the orange). Nonetheless, the fact that the apple *is* exchangeable for the orange seems to require that we place the latter in the exchange class of the apple.⁴ Since equivalence entails symmetry, however, we must conclude that exchange classes are not *necessarily* equivalence classes with respect to the relation of exchangeability.

I am afraid, moreover, that we have no reason to think that transitivity is guaranteed to hold over exchange classes either. Suppose $c_1 = a$ ten-dollar bill, $c_2 = a$ flannel shirt. and c₈ = a steak dinner. Assume further that the shirt is exchangeable for the money and the money for the dinner. Does it follow that the shirt is directly exchangeable (at this time, under these circumstances) for the dinner? Certainly not - if it did, how would we be able to explain the desirability and necessity of, e.g., three-way baseball trades? We can, in fact, make an even stronger criticism. From the mere fact that my ten dollars is exchangeable for either the shirt or the dinner, we cannot justifiably infer anything concerning the mutual exchangeability of the latter two items. It would seem, therefore, that exchangeability may be both asymmetric and intransitive over exchange classes; 5 consequently it cannot always be an equivalence relation on such classes.6

II

Might it still be possible, however, to accept Trivus's basic idea of defining economic value in terms of exchange classes (even though we must acknowledge that such classes are not necessarily equivalence exchange classes)? One reason for thinking otherwise is that Trivus's definition is still an objective account of economic value and thus subject to Mises's criticism that it thereby precludes the possibility of a fair exchange in the absence of a prior determination of the value of each of the objects to be exchanged. Trivus, however, has replied that, on his proposal,

there is no need for such a prior measurement, for the consummation of the exchange is the required operation of "measurement." That is, the exchange itself is what puts the commodities in their several equivalence classes. [P. 13]

But, unfortunately, it is presumably the case that only *one* of the possible exchanges involving a given commodity will actually transpire. How, then, can commodities for which the exchange is *not* made nonetheless be placed in the same class with the item for which the exchange is made?

An obvious solution to this problem would be to adopt the following definition: the exchange class of any commodity X (at some given time t) is the class of all those commodities, each of which would be offered by its owner (at t) in exchange for X. How, though, are we to determine the truth (or falsity) of a counterfactual claim to the effect that an exchange offer for such and such an item would (or would not) have been made? Surely only by determining the strength and content of the desires and preferences of the other possible parties to the transaction. It therefore, that utilization of Trivus's criterion logically requires the successful completion of an inquiry into those very "subjective attitudes" whose significance he elsewhere deprecates, attitudes which, for Mises, are the locus of economic value. But where we have two competing definitions, one of which presupposes the application of the other, it is surely appropriate to regard the latter as the more fundamental of the two.

Ш

As noted earlier, however, Trivus has argued that Mises's definition is unacceptable because circular. Given that his own theory is necessarily even *less* satisfactory (as we have just demonstrated), is there any alternative but to begin a search for an entirely new account of economic value? Before accepting such an unwelcome conclusion, let us carefully consider Trivus's reasons for ascribing circularity to the Austrian view.

For, what more is discovered about value in exchange, on this view, other than that traders exchange commodities in various ratios? The circularity becomes

more patent upon recalling that what people do is not always what, in any reasonable sense of the term, they want to do. After all, people often act compulsively, impulsively, under duress, etc. Thus the Austrian school must concede that many exchanges occur in ways that do not necessarily reflect the subjective valuation of the principals, unless the term "subjective valuation" is being persuasively redefined as the notion it purportedly helps explain. [P. 5]

Although Trivus does not make this clear, there are two different objections being raised here. First is the claim that, contra the Austrians, it is not true to say that people always do what they want to do. I cannot, unfortunately, do justice to this issue here. It will have to suffice to point out that the matter is a controversial one and that many philosophers have argued otherwise and maintained that intentional action does entail the existence of appropriate behaviorgenerating wants (in a "reasonable" sense of the term).8 Some form of argument, at the very least, would therefore seem incumbent upon anyone who wishes to deny this.

The second and more important objection seems to be that the Austrian account is circular because the subjective attitudes that are invoked to explain exchanges are themselves explained in terms of those exchanges. But is this correct? What the Austrians do maintain is that, for the purposes of economics, the only desires or preferences that are of importance are those that are expressed in action and that their being expressed in this way is our only evidence for inferring their existence. This does not, I think, involve any circularity. For the claim is not that preferences and actions explain one another but, rather, that preferences explain actions while actions are our reason for believing that the appropriate explanatory factors — the preferences—exist 10

Even if the charge of circularity cannot be upheld, however, the theory certainly seems vacuous if our *only* evidence for hypothesizing the existence of an appropriate intentional state is the behavior it is supposed to have initiated. Fortunately, there is no reason to restrict oneself to such a narrow view. Our ordinary conception of a person's

mind or character, after all, is that of a systematically interrelated complex of dispositions, dispositions not only to behave in certain ways but to think and feel in certain ways as well. It is, moreover, only insofar as we have already (on independent grounds) formed an understanding of the content of those dispositions that we feel justified in attributing a person's behavior to some appropriate set of motivating factors. The important point I wish to emphasize. therefore, is that the mere fact that we have observed some external physical movement on the part of some agent does not license us to infer anything about the content of the wants and beliefs that behavior is an expression of (if, indeed, it is an expression of any motivational state) in the absence of an appreciation of the agent's character. It is precisely because acquiring the latter knowledge involves a great deal of careful empirical observation that we regard the explanation of human actions in terms of desires and beliefs as significant and valuable in facilitating our ordinary social intercourse.

If this sketch ¹¹ of the function of our "subjective attitudes" is satisfactory, there seems no reason why it could not be utilized for the purpose of helping to provide a foundation for economics, particularly an account of economic value. If the Austrians take such a step I contend that they will thereby avoid the charge of vacuousness implicit in Trivus's criticism. This, indeed, is a result Trivus himself should not find entirely unwelcome, given our demonstration of how his own definition is parasitic on that of the Austrians. ¹²

Brown University

MICHAEL GORR

^{1.} Reason Papers, no. 2 (Fall 1975), pp.1-14. All page references are to this essay.

^{2.} Something is an equivalence relation on a set if it is reflexive, symmetric, and

transitive on the members of that set. For any given member of such a set, its equivalence class is the subclass of members of that set that bear the relation in question to the given member. For more formal definitions, consult any standard account of elementary set theory (e.g., Robert R. Stoll, Sets, Logic, and Axiomatic Theories [San Francisco: W. H. Freeman, 1961], pp. 32-33).

- 3. It is a theorem in set theory that the distinct equivalence classes of an equivalence relation on a set provide us with a partition of that set (ibid., pp. 33-34).
- 4. This, at any rate, seems to be suggested by the most plausible interpretation of Trivus's assertion that "the economic value of a thing is just what it will fetch in the market" (p. 7, emphasis added). It is just possible, however, that Trivus intended to incorporate the symmetry requirement into his very definition of an exchange class. If so, his proposal is even less defensible. For it would now require, among other things, that we deny economic value to any object that someone is unwilling to exchange, regardless of what exchange offers others might be willing to make for that object. But this is absurd. My car has a monetary value of \$500 if someone is willing to pay such an amount for it my willingness or unwillingness to accept such a price is another matter entirely.
- 5. Although I have not attempted to show this, reflexivity also fails to be a necessary property of exchange classes (with respect to the relation of exchangeability).
- 6. Why, it might be asked, did Trivus ever come to even suppose that the notion of an equivalence class might be relevant to the analysis of the economic exchange relation? The answer, I suggest, is that he assumes the correctness of the Marxist claim that all exchange should involve the reciprocal transfer of equivalent commodities (Economists have always known that commodities that exchange evenly . . . are of equal value' [p. 10, emphasis added]). As the Austrians have long pointed out, however, no one would ever bother to exchange a good for one that was only valued equally; on the contrary, exchange occurs only when each party values what he receives from the other more than what he gives up. See, for example, Murray Rothbard, Man, Economy, and State (Los Angeles: Nash, 1962), pp. 72-73 ff.
- 7. Ludwig von Mises, The Theory of Money and Credit, trans. H. E. Batson (New Haven, Conn.: Yale University Press, 1953), p. 38 (cited by Trivus).
- 8. Two representative examples are Alvin Goldman, A Theory of Human Action (Englewood Cliffs, N.J.: Prentice-Hall, 1970) and D. M. Armstrong, A Materialist Theory of the Mind (New York: Humanities Press, 1968). This view is also defended in my doctoral dissertation, "The Structure of Human Action" (Brown University, 1975).
- 9. For a particularly explicit account of this "demonstrated preference" theory, see Murray Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise*, ed. H. Sennholz (Princeton, N.J.: Princeton University Press, 1956), p. 225 ff.
- 10. This distinction is forcefully emphasized (in another context) in an unpublished paper by Robert Nozick, "On Austrian Methodology."
- 11. And a *shetch*, of course, is all that it is. For an example of what a more developed account would look like, see any of the works cited in note 8.
- 12. I am grateful to Mark Weinburg for extensive discussion of the issues and arguments in this paper.

THE IRRELEVANCE OF THE SUBJECTIVE

Michael Gorr's construal of the notion of exchangeability is the main ground for his criticism¹ of my view that the economic value of a thing is just what it will fetch in the market.² I consider these issues in the first two sections below. Gorr is also anxious to defend the subjective use-value doctrine of the Austrian school and enters some reservations about my remark that what people do is not always what they want to do. I attend to these points briefly in the third and fourth sections.

I

Gorr considers an apple and an orange, supposed to belong to what he thinks of as one exchange class.³ Then he writes (pp. 84-85),

It is entirely possible that the apple is exchangeable for the orange (i.e., that the owner of the orange is willing to trade for the apple) but that the orange is *not* exchangeable for the apple (i.e., that the owner of the apple is *not* willing to trade for the orange).

He concludes from this that exchangeability is not symmetric, that it is therefore not an equivalence relation, and hence that my proposed definition of economic values as exchange-equivalence classes won't do.

In these remarks Gorr takes for granted his notion of exchangeability, made explicit farther on in his definition of the exchange class of a given commodity (p. 86). Gorr takes it as definitional that one commodity is exchangeable for another just in case the owner of that other is willing to trade it for the one. That is, Gorr equates willingness to trade this for that with exchangeability of that for this. Well now, however useful or entertaining this notion (Gorr-exchangeability, as I shall call it) may be, it is not what I had in mind, and not, I presume, what Adam Smith, Karl Marx, and the

other classical economists had in view either. I take it, moreover, that it is not the conception to which they ought to have attended.

Gorr-exchangeability is obviously not symmetric: I am willing to trade a pack of chewing gum for a new Rolls Royce, but it is beyond belief that any sane, adult owner of a new Rolls Royce would part with it for a bit of chewing gum. The chewing gum belongs to the Gorr-exchange class of the Rolls (i.e., the Rolls is Gorr-exchangeable for the chewing gum), but the Rolls does not belong to the Gorr-exchange class of the chewing gum. Hence, Gorr-exchange is not symmetric. Ergo, Gorr-exchangeability is not an equivalence relation. All that, however, has little to do with the actualities of exchange in the market, and nothing to do with the notion of exchange-equivalence as proposed in my paper.

What is of interest is not Gorr-exchangeability — the willingness or unwillingness to trade on the part of any particular persons — but rather the reality of what does or would exchange for what in the market. The classical economists noticed, what they could hardly have overlooked, that at a given time commodities do not exchange capriciously. Instead, they saw that commodities tend pretty nearly to exchange in fixed ratios. For example, contemplating a quarter of wheat, x blacking, y silk, z gold, &c., Marx observed that any one of these commodities could be disposed of in the market and replaced by any of the others. Anyone possessing z gold, say, could obtain y silk in place of it, and vice versa, either directly or indirectly.

What does or would trade for what is settled in the market. Thus, if AT&T is at 60 and GM is at 75, then 5 shares of the former can be exchanged for 4 shares of the latter, ignoring complications about commissions, transfer taxes and fees, and odd-lot differentials. This is so entirely apart from any one person's willingness or unwillingness to trade in those shares at the market. Moreover, if my typewriter is worth \$300, i.e., if that is what it will fetch in the market, then I can obtain in place of it (that is, I can exchange it for) 5 shares of AT&T, or 4 shares of GM, or..., and vice versa. The typewriter, those blocks of stock, and

many other things belong at this time to one exchangeequivalence class. In general, the collection of all commodities such that, at a given time, any one of them can be exchanged for (is exchangeable for) any one of the others is, by definition, an exchange-equivalence class.⁴

It is in this sense of exchangeability, of what can be got for what, that the class of commodities is partitioned into exchange-equivalence classes. In this sense it is trivially obvious that exchangeability is reflexive, symmetric, and transitive, the peculiar logical properties of Gorr-exchangeability notwithstanding.

The problem for the classical economist - Marx, for instance - was to find what, e.g., a quarter of wheat, x blacking, y silk, z gold, &c., had in common. It is a problem for which they supplied what pretends to be a substantive (but, in my opinion, incorrect) solution and one for which I offer an unabashedly trivial (but, in my opinion, correct) solution. It is trivial, and perhaps a trifle disappointing, much as Russell's definition of number is trivial. The notion in question (number, economic value) is formally defined by reference to the entities (sets of individuals, commodities) supposed to fall under the notion and nothing else. The definition does not call on some other thing (such as an "intuition of unity" for numbers, or "subjective attitudes" and "socially necessary labor" for economic value) to satisfy the craving for something substantial underlying, and so explaining, what was puzzling in the first place. The latter omission, of course, is why such definitions are disappointing to some: "You say the number three is just the class of all triples, like the Erinves? But I want to know the essence of threeness, and why the Erinyes are three and not something else."

The definition of economic values as exchange-equivalence classes is a purely mathematical, ideologically neutral device, useful for describing something important in economics. Besides, it is a device that fits very well with many uses of the term *value* in business and economics, that provides part of a rationale for quantitative discourse in economics, and that can clarify discussion by helping to keep distinct things distinct. At risk of boring the reader, I insist once more that what a thing is and what causes it to be what it is are different. An oak tree is not the same as an acorn, although acorns are undeniably (part of) the cause of oak trees. Analogously, though labor expended in production, and subjective attitudes of traders, and many other things besides may well be causally related to the economic values of commodities, those causal influences are not the same as the values they bring commodities to have.

II

In section 2 of his paper Gorr raises the issue of the value of commodities that are not actually traded. If the economic value of a thing is what it fetches in the market, what is the value of something that doesn't fetch anything because it is not in fact exchanged? The solution is implicit in my talk about the stock market. The present value of an economic good is discovered by consulting the market, whether one intends to trade or not.

The market may be looked into by reading the ticker at a brokerage house, examining auction records for rare wines and works of art, reading market reports in trade journals, or by inquiring of a variety of experts and authorities: used-car dealers, Kelley's Blue Book, real-estate agents, tax assessors, professional appraisers, pawnbrokers, auditors and accountants, &c., &c. Thus, if Gorr were to offer something, a car, a collection of gold coins, a house, shares in IBM, or whatnot, as collateral for a loan, a hard-nosed banker (the only kind there ought to be) would determine the economic value of that collateral by consulting the market in the ways I have suggested. What that banker most certainly would not do is inquire into "the strength and content of the desires and preferences" of potential buyers of that commodity (cf. Gorr, p. 86), unless such a consultation of the market is regarded as just such an inquiry into subjective attitudes. In that event I would have no argument with Gorr, but then he will have given the game away.

Where there is no market for a commodity, there that commodity has no value. For instance, imagine John Wayne, in a Western movie, with a herd of cattle on the way

to Dodge City. The formidable Mr. Wayne might be heard exhorting his cowhands, exhausted after fighting off an assortment of rustlers: "Ok, fellas, let's get ridin and drive this herd on into Dodge. These cattle ain't worth nothing out here on the trail." Allowing for his grammatical lapse, the grizzled hero is correct. Those cattle, at that place and time, are not worth anything (or not much, anyway). No one else in the neighborhood wants them, other than the rustlers who don't count because trade isn't what they have in mind, and the cattle are of no use to anyone there, except as bearers of potential value to be realized at the end of the trail. This potentiality, and uncertainty, of value in the absence of a market is part of the risk of enterprise. It may be, after all, that by the time the herd comes to market, prices will have dropped disastrously, or perhaps people will have stopped eating beef. In that case the cattle would have little or no value, or maybe even negative value. Farmers sowing wheat in the spring, publishers of new books, manufacturers of new products (or old ones for that matter), prospectors filing claims for gold or uranium mines, a producer readying a play for tryouts in New Haven and Philadelphia, and so on are all in the same position as those mythical cattlemen in the Western movie. The market decides the economic value of whatever it is they are about. (This, I cheerfully admit, is a truism of the view I advocate.)

III

In spite of what its defenders think, the subjective use-value doctrine of the Austrian school is not a conceptual analysis of the notion of value. Rather, these writers take for granted a conception of subjective valuation that they invoke in a causal or functional explanation purporting to show how it comes about that commodities exchange as they do. For instance, in his note 6 Gorr writes, "No one would ever bother to exchange a good for one that was only valued equally; on the contrary, exchange occurs only when each party values what he receives more than what he gives up." Clearly, Gorr is here explaining why goods are exchanged. None of that, however, is conceptually relevant to my

proposal, any more than Boyle's Law is relevant to understanding the concept of volume. My proposal is neutral with respect to all putative causal or functional explanations of how exchanges do or should take place.

Now, as an aspirant to the office of causal and functional explanation, the subjective use-value doctrine is open to the dangers that all such theories face. The fond belief of its advocates notwithstanding, the theory may turn out to be circular or vacuous. Alternatively, the theory may well be substantial enough but could turn out to be, unhappily, false. How stands it then, with the Austrian school's account?

According to Gorr (p. 87), that theory is not circular. On the Austrian view, he says, subjective preferences and economic activities are not mutually explanatory, but rather "preferences explain actions" while actions are the evidence that the preferences exist. Even so, Gorr allows that the theory would be vacuous "if our only evidence for . . . an intentional state is the behavior it is supposed to have initiated." Thus, Gorr continues, independent evidence for appropriate psychological states is, can be, or ought to be appealed to by the Austrian school to help "provide a foundation for economics, particularly an account of economic value." So, granting the nice distinction Gorr notes between circularity and vacuity, the debate reduces to the question whether the subjective use-value theory is vacuous.

To this I point out, first, that no matter how they may bear on the causal issue, empirical studies cannot possibly have anything to do with the purely conceptual problem addressed in my paper. Second, the subjective use-value theory in its present state does not in fact rely on such empirical investigations as Gorr recommends. This is evident from what is said by Gorr and the several sources both he and I have cited. Indeed, adherents of the theory seem to hold to it as stubbornly as a fundamentalist to belief in the Resurrection.

Anyhow, the outlook is not promising for a theory rehabilitated along the lines Gorr suggests. In its parlous, even disreputable, intellectual condition, contemporary

psychology is hardly a reliable support for that enterprise. Moreover, if the theory were to maintain, nonvacuously, that exchanges always occur in accordance with the preferences of all parties to the transactions, it would have to overcome prima facie evidence already available against it. For example. forced sales under foreclosure often are transactions carried out contrary to the preferences of the foreclosed-upon owners. There are, as well, transactions that do not accord with the subjective preferences of the owners because the owners don't have any preferences in the matter. Most shareholders in AT&T. I venture, are ignorant of, or indifferent to, the company's acquisition of this or that lot of electronic hardware. Similarly, a babe in arms obviously has no attitudes for or against transactions undertaken by trustees of its estate. Again, the theory would have to account for capricious, impulsive exchanges. It is not clear, for instance, that someone who says, "I don't know why I bought this kewpie doll: I really don't care for such things; I must have been carried away by the carnival atmosphere," is uttering a falsehood. People often do give in, even against their better judgment, to fast-talking salesmen, social pressures, passing fads, and so on. It would have to be an uncommonly subtle and intricate theory that could at once avoid vacuity whilst supplying the requisite number and variety of psychological causes. May I be permitted to doubt that such a theory, if one is forthcoming. would stand much chance of being true?

IV

Disputing my remark that what people do isn't always what they want to do, Gorr says (p. 87) that many philosophers maintain 'that intentional action does entail the existence of appropriate behavior-generating wants (in a 'reasonable' sense of the term).' Since the issue is controversial, Gorr says, argument is called for to support positions on one side or the other, and I agree.

But first, it ought to be clear what is in question. I am not arguing about the concepts of action, intention, and so on. That is Gorr's territory, upon which I do not care to trespass.

I am talking about what people do.

One thing people do is comply with governmental edicts. They pay taxes. They present themselves for induction into the army when so ordered by draft boards. It is my understatement to say that many who do these things don't want to do them.

Another thing people do is make mistakes. For example, in typing an early draft of this paper I spelled out waht in a place where I wanted to write what. I typed out waht, but I certainly didn't want to do that.

Again, people often do things unaware, neither wanting to nor wanting not to.⁵ Recently I was cited for speeding; my mind had been elsewhere. I had paid no attention to the speedometer, and there I was with a ticket. I had not wanted to exceed the speed limit, but neither had I wanted not to exceed it. Still, that is what I did, and I was properly fined for it.

Plainly, there are many such cases, and not all of them unimportant ones. Thus, it is false that what people do is always what they want to do.

California State University, Los Angeles SIDNEY TRIVUS

^{1.} Michael Gort, "Trivus on Economic Value," Reason Papers, no. 3 (Fall 1976). pp. 83-89. All page references in the text are to this paper.

^{2.} Sidney Trivus, "Dissolving a Muddle in Economics," Reason Papers, no. 2 (Fall 1975), pp. 1-8.

^{3.} Gorr's model-theoretic apparatus doesn't do what he wants it to do. To represent exchange classes in his sense requires a structure consisting of ordered pairs, the exchange classes of various commodities. That is, a Gorr-exchange class should have the form (X; a, b, c, ...) where X is the object of desire, the commodity for which bids are or would be offered, and a, b, c, ..., comprise the bid set for X, the commodities that are or would be offered for the object of desire. Ordered classes like these, however, cannot be the elements of a partition of the overall set of commodities, for such sets cannot satisfy the requirements for a partition. Even

if the bid sets alone are considered, they would not serve to form a partition, for they need not be disjoint: the set containing a and b could be the bid set for one object of desire while that containing b, c, and d could be the bid set for another object of desire. My chewing gum, for instance, is in the bid set for a Rolls Royce and it is also in the bid set for a dinner at Tadich's in San Francisco. Now, if the sets in Gorr's model are examples of exchange classes in the sense I have proposed, then his putative counterexample to symmetry is incoherent, for first he places his apple and orange in the same equivalence class and then in the next breath denies that each is exchangeable for the other. If, on the other hand, the apple and orange comprise the bid set for some other (unspecified) commodity, it is not surprising to find them not to be mutally exchangeable, for not all bids at an auction have the same economic value. In any event, I must point out that Gorr's recourse to the formalities of model theory is otiose, for nothing in his paper depends on it, and so soon as he introduces it, so quickly does he ignore it.

- 4. It should now be clear that Gorr's example, in his note 4, of a car that would bring \$500 on the market, though its owner does not care to sell, is not a difficulty for my view. It would be a difficulty if I agreed, which I do not, that exchangeability of this for that is the same thing as willingness to trade that to acquire this. On my view, Gorr's unwillingness to sell his car does not deprive it of economic value. Supposing that \$500 is the going price for Gorr's car, it follows that Gorr's car is exchangeable for \$500, as well as for any other commodity of equal value, whether Gorr is willing to strike a bargain or not.
- 5. Just this sort of thing gives Tom Sawyer the key to solving the mystery in Mark Twain's "Tom Sawyer, Detective."

ON UNIVERSAL IGNORANCE

Beginning his campaign for the presidency just twelve years ago, Senator Barry Goldwater proclaimed boldly, and more unforgettably than many of his supporters came to wish, that "extremism in the defense of liberty is no vice." In his book on the philosophy of knowledge, provocatively entitled Ignorance (Oxford: Clarendon Press, 1975), Peter Unger follows a similar precept in defense of skepticism against dogmatism. With great vigor and confidence he advances the view that there is no basis whatever for the claim on the part of anyone that he or anyone else knows anything whatever (chap. III). From this he derives the further conclusion that we are wholly debarred, not only from having knowledge, but also from the capacity to have reasonable beliefs, suppositions, or opinions, since to have reasonable beliefs, suppositions, or opinions, one must have reasons, and having a reason for something, say X, entails that there is something, Y, usually not identical with X, that one knows (chap. V). Similar grounds are advanced for the corollary conclusion that no one can actually adopt any attitude, be subject to any disposition, that presupposes knowledge on his part. No one, for example, can regret that he quit school, failed to study, or whatever, since to regret that one did X entails that one knows that one did, is absolutely certain that one did. And these consequent conditions cannot be satisfied (chap. IV). An analogous argument drawing upon an analysis of the concept of truth is advanced for the still more nihilistic conclusion that not only can no one reasonably believe that something is so, no one can believe, reasonably or unreasonably, or think, or assert, that something is so. For to believe that something, say P, is so, P must be capable of being so. This in turn entails that P be either consistent with or inconsistent with the whole truth about the world. But there is nothing that is the whole truth about the world; hence nothing can be consistent or inconsistent with that whole truth; hence nothing can be believed, or thought, or asserted to be so. (chap. VII).

The case for these and many other similar conclusions, sometimes characterized by Unger as "crazy," is based upon an extended analysis of our conceptions of knowledge, belief, certainty, truth, regret, and so on, as these are embodied in our common natural languages. The phrase "crazy conclusions"

appearing in the text enclosed in single quotation marks indicates Unger's contention that, though extreme and even paradoxical. these conclusions can be established by strict and certain reasoning from the relevant conceptions, the relevant features of the language in which we speak and think of these matters. Though the case is made with reference to one particular natural language. English, the supposition is advanced therewith that it is not likely that there is any natural language, present or past, rich enough to serve our purposes that does not in its deep grammar contain the grounds for substantially the same sweeping skeptical conclusions. Furthermore, since it is in our language and by means of such expressions and conceptions that we must think, when we think of knowledge belief, and the rest these conclusions naturally extend to any beings concerning whose capacity to have knowledge, belief, and so on we may have occasion to inquire. Knowledge being the sort of thing it is, having the logical connections it has in our language and thought, there are no loopholes through which exceptions might squirm, no favored beings who might be the beneficiaries of passover in this cognitive holocaust. Neither Descartes, nor Descartes's possible demon, nor the good God who eventually replaced the demon can possibly know anything whatever, even, for example, that he exists (p. 91).

As indicated, the case against the possibility of regret lies in the affirmed logical connection between regret and knowledge, and this in turn is disclosed to our logical intuition when we reflect that to say that John regrets that he quit school but does not know that he guit school is to say something that cannot possibly be true, is self-contradictory. And that John cannot know that he quit school, or even that there are schools to quit, is advanced on the ground that should John know either of these, or any other thing, then it would be all right for John to be absolutely certain of that thing, provided that there are no overriding considerations of a special nonevidential or nonepistemic kind that would make it not all right for John to be certain of that thing. The kind of overriding consideration contemplated is that in certain circumstances untoward and sometimes even severe consequences might follow from John's assuming the attitude of certainty toward some item P which he is supposed to know. Even though John should know P, even though the evidential or epistemic considerations taken by themselves might fully license his assuming an attitude of certainty toward P, there might be other considerations that should make him forbear. In an extreme, hypothetical case, for example, a powerful but eccentric god might decree that frightful

penalties would be exacted from mankind in case this one person should assume the attitude of certainty toward this particular item (pp. 100-101).

Since the possible overriding considerations are conceived to be only of this "external," nonevidential or nonepistemic kind, their possibility may be neglected in the case presented here against knowledge. What is important for the question whether there is knowledge is not that the right to be certain can be overridden in some cases of knowledge, but that this right is present, is a logically entailed feature of any case of knowledge that there may be. In all cases of knowledge there is a right to be certain based upon epistemic grounds. This right, which may be called an "epistemic right," is universal, even though, like many if not all rights, it is subject to override or defeat. Put in these terms, the case against knowledge advanced by Unger is that the very concept of knowledge is contradictory. Knowledge of any item P by any individual X confers upon X the right to be certain with respect to P; but this right, because it is an epistemic right, is one that cannot be conferred by knowledge of P. Therefore knowledge is impossible.

In a little more detail the case is as follows: We can see from the apparent inconsistency of such utterances as "He knew it, but he didn't know it for certain" that knowledge entails certainty (p. 99), and from the apparent inconsistency of such utterances as "He is absolutely certain that there are automobiles, but his attitude is that he really may change his mind should certain evidence come up," that certainty with respect to any item P entails assuming with respect to P a dogmatic attitude (p. 110). Being certain of P, as that is entailed by knowing P, itself entails assuming a certain attitude characterized by an absence of all doubt with respect to P; and this in turn entails a complete absence of openness with respect to P on the part of the individual knowing P. Henceforward this individual, having assumed the attitude, is committed to consider no new experience or information as relevant to the truth or falsity of P (p. 116). Also advanced to support the thesis that knowing entails dogmatism is an analysis of "knowing P" which explicates X's knowing P as being the same as its being absolutely clear to X that P. From this analysis it is argued that if X knows P, further information or experience may be disregarded by X with respect to P. For an increase in clarity is manifestly not possible, and any apparent decrease would apparently be illusory (p. 141). Finally, though Unger does not put the matter in this way, or at any place very clearly, the reason why an epistemic right to be dogmatic with

respect to P cannot be conferred by knowledge seems to be that, as an epistemic right, it is always relative to epistemic grounds or considerations. Consequently the notion of such a right, one that is epistemic and at the same time a right to disregard or be blind to the very kind of considerations that are essential to it, is fundamentally inconsistent.

One of the serious weaknesses of the kind of conceptual analysis exemplified in this book is its disposition to treat concepts as readily identifiable entities the character of which can be discerned by putting them through certain fairly simple, restricted linguistic paces. Can "knowledge" be combined with "uncertainty," or "certainty" combined with "openness to evidence," in certain forms of linguistic expression without producing thereby some kind of immediately obvious linguistic or logical dissonance? If not, does it not follow that knowledge logically entails certainty, that certainty entails dogmatism, and that hence we can now accept as an important philosophical conclusion that knowledge entails dogmatism?

As much philosophical work has illustrated in the last twenty-five years, it is easy to overestimate the significance of this kind of result. It is a kind which can be very partial and misleading unless it is combined with wider considerations reflecting, not just how we comfortably speak when we employ expressions like these in simple sentences, but how we act. What are the actual practices in which these conceptions are realized, in which we put them into effect? How do we act when we act according to these conceptions? How do these and other practices fit together; and, where they do not fit, what is a reasonable reaction to the kind of lack of congruence that there is among them? Before, on some limited linguistic basis, one concludes that, say, astronomy or chemistry is not knowledge, one needs to consider the consequences of assimilating, in this respect, astronomy to astrology and chemistry to alchemy. Are there not very great differences between these in respect to the validity of their claims to yield knowledge and reasonable judgment; and if so, must now whatever reasons abstract linguistic experimentation with the relevant terms discloses for assimilating them be evaluated with and perhaps tempered by whatever reasons further, broader philosophical examination may disclose for discriminating these from each other? We may, like C. S. Peirce two generations ago, be struck with the fact that what "vou do not at all doubt, you must and do regard as infallible, absolute truth" (Collected Papers, 5.416). But unless we close the books of analysis here, at the risk of

committing ourselves to one-sided, precipitate, and seriously misinformed conclusions, we must, like Peirce also, investigate how an insight like this may be combined, composed, and understood in relation to those other apparently strong reasons for maintaining that no single item of human knowledge is infallible, all of them being open in some degree to possible revision or correction.

If ignorance is as universal, total, and necessary (p. 94) as this book proclaims, no one could possibly know it. If no one can know anything, not even that there are rocks, then no one can know that skepticism is universal, total, and necessary. Not only can one not know it, one cannot reasonably believe it, cannot believe it reasonably or unreasonably, cannot assert it or attempt to show that it is so. Then what are we to make of these 319 pages of argument in defense of skepticism; of a book that professes to argue seriously and in detail for a conclusion from which it follows, and is recognized to follow, that argument is impossible?

The variety of ways in which Unger is thus open to ad hominem criticism in his defense of skepticism hardly needs to be elaborated upon. The openings for just and apparently devastating criticisms of this kind are many and glaringly obvious. Unger is not oblivious of this logical threat. He refers to it at several places in the book (e.g., chap. V, §11; chap. VI, §5) and urges that though the danger is real the criticism itself is not devastating. "To think that these charges of paradox devastate skepticism is," he says, "to miss the point of both skepticism and paradox." For the source of the trouble lies in our ideas or concepts of knowing, justification, reasonableness, and the rest; and the skeptic, like the fabled messengers bringing bad news, is not to be censured just because the news is bad. "The skeptic isn't the culprit, nor the position he advocates. It is the concepts themselves that mean the trouble." (P. 247)

Trouble? What kind of trouble? It is logical trouble, of course. The situation of a fervent skeptic like Unger at odds with himself in arguing that there cannot be argument, or in professing to believe that no one can believe anything, represents in simple, paradigmatic form the wider philosophical situation from which skeptical impulses derive and in relation to which they need to be appraised. Again and again, through over two millennia of Western philosophy, the seeds of possible skeptical conclusions about knowledge, moral principles, freedom, and responsibility have been exposed. There is now no novelty in their discovery. After Sextus Empiricus, St. Augustine, Descartes, Hume, and

others, no ingenuity is required in discerning certain features of our conceptions that, if seized upon and exploited with single-minded, narrow-minded fixation, will lead to the most extreme conclusions. For example, if we fix upon one of the ways of conceiving reason for which some basis can be found in our common conceptions and language — if we philosophize about reason solely on the basis of this truncated, detached aspect of our conceptions and ways of speaking — then, as the young Hume proudly demonstrated, we can derive such conclusions as that "if we believe, that fire warms, or water refreshes," our basis for this must be, not in reason, but "only because it costs us too much pain to think otherwise" (Treastise, bk. I, pt. IV, sect. VII), and that there is nothing "contrary to reason" in anyone preferring "the destruction of the world to the scratching of . . . [his] finger" (ibid., bk. II, pt. III, sect. III).

What makes such conclusions "troublesome," "crazy," or "paradoxical" is that they are opposed by contrary conclusions that likewise have grounds in our conceptions or language, grounds at least as strong and in most cases much stronger than those for the skeptical conclusions. So that the skeptic and the commonsense philosopher, each resting his case upon partial grounds, can demonstrate to his own and his own partisans' satisfaction that his opponent is in the wrong. That such demonstrations are possible is, though now no remarkable discovery, of the greatest significance for philosophy. But much of the significance is lost if both sides of the possibility are not recognized.

If only the dogmatic, commonsense side is recognized, then one is led immediately to conclude that we do have genuine knowledge of the future and the past, of moral principles, and so on and that those who argue to the contrary are being imposed upon by Scheinprobleme which can be dissipated by the "clarification of concepts," an honorific name now commonly given to the celebration of those aspects of our concepts and language that favor one's conclusions. If, on the other hand, only the skeptical possibilities residing in our language are exploited, what appear to be Scheinprobleme from the commonsense point of view now appear to be distressingly real. Concentration upon these aspects of our concepts and language, to the utter disregard of others, will yield conclusions such as Unger's; namely, that we do not know, or have good reasons for believing, any of the things we ordinarily take ourselves to know or reasonably believe. And supposing, in our preoccupation with these aspects of our language and

concepts, that the language and concepts are themselves essentially and fundamentally bad, we shall be led to conclude that the only hope for relief lies in the development of a radically different language, one either altogether new, or one achieved by effecting upon existing language changes of a "radical," "creative" kind (p. 317).

When a pen, a wagon, or even a kidney proves to be fundamentally imperfect or diseased, it is reasonable to consider either replacing it or performing upon it some radically corrective operation. In cases like this it is readily apparent that we have resources, independent of the facility or organ in question, which enable us to appraise its state and, having made an unfavorable determination, to set upon devising and effecting a remedy. That the wagon is imperfect, or broken down, or that some feature, even a most important feature, of the art of wagon making and wagon maintenance has given way, does not entail that all this lore, or all vehicle manufacture and maintenance lore, has likewise given way, is in a similar condition of disrepair. We are on occasion able to criticize and improve features of what constitutes our social capital only because there are other features of it which, at least at the time and for present purposes, do not stand in need of criticism and revision but are available for use. They are, at least for the time, instruments of scrutiny rather than subjects for it. In a most striking way this signal feature of the philosophical criticism of our intellectual resources - that some resources can be criticized only with the aid of others; that, in the language of an older philosophy, doubt implies belief - this signal feature is neglected by writers in the skeptical tradition. And this neglect, more than any other thing, constantly feeds that tradition by translating responsible doubts about specific features of our cognitive tradition into irresponsible, hyperbolic doubts, the kind that Peirce characterized as "paper" or "make-believe" doubt having "nothing to do with any serious business" (ibid.).

For reasons connected with the breadth and persistence of the kind of criticism we call philosophical, the tendency to transform reasoned, controlled doubts into unreasoned, hyperbolic ones is stronger in philosophy than in other, more restricted intellectual disciplines or enterprises. It is no secret, for example, that there have been and remain incoherencies, inconsistencies, problems, in our conceptions or theories of numbers, of motion, of freedom, of justice, as well as of knowledge. Zeno's paradoxes about motion long ago made plain some serious difficulties resident in the ways in which we are inclined to speak and think about this matter.

Similarly, for Greek mathematics the discovery of the incommensurability of the diagonal of the right triangle raised questions concerning how we think and talk about numbers. There were similarly sources of puzzlement concerning particles during the periods of the greatest success and acceptance of Newtonian mechanics and of the kinetic theory of gases. What these difficulties called for, and fortunately in the main received, was not hyperbolic responses to the effect that now it can be proved and told that there is no motion, no numbers, or no particles, but rather that there are here occasions for earnest effort to understand and resolve the difficulties which the skeptical response takes to be insuperable. There are corresponding difficulties in our language and concepts as applied to knowledge, for example, in the relation between "know" and "cannot be wrong," as the latter seems consequent to the former. These difficulties reach also to our conception of certainty, to the relations between this and both infallibility and incorrigibility, and to the bearing of these on responsiveness to evidence, as this latter is a feature of our conception of rationality. In contrast with the kind of sober, careful, analytic examination of these matters offered, for example, by Peirce and, more recently, by J. L. Austin, the reaction of those who conclude that because there are these difficulties we therefore cannot know, reasonably believe, or believe at all is eccentric and extreme. It is comparable to that of someone in the early years of the kinetic theory of gases concluding, because there were serious difficulties, amounting to inconsistencies, in the conception of the properties of the minute particles of gases to which the theory applied, that therefore there are no such particles. From this conclusions no quantum jump in skepticism is required to extend the denial to gases themselves, since the evidence for the motions of the particles that are hypothesized and utilized in the kinetic theory is all of a piece with the evidence that there are rarified states of matter composed of minute particles to which the statistical mechanical notions of the theory might be applied. If the conclusion that there are no particles, or gases, seems paradoxical and crazy, it is surely because it flies in the face of mountains of positive grounds attesting that there are. It is not an altogether outlandish way of speaking for one to refer to the difficulties in the kinetic theory of gases as evidence that there are no gases, i.e., gases of exactly the kind that the theory supposes, so long as one keeps in mind the vast weight of countervailing evidence that, though what we take to be gases may not be exactly as the theory supposes, there are forms of matter like this to which we properly

refer under this title. For many years now we have been aware of lacunae and inconsistencies in the accepted theory of the assassination of John F. Kennedy, as that is set forth in the report of the Warren Commission. The response of some writers true to the skeptical tradition has been the extreme one of denving, in the face of mountainous evidence, simply because there are these lacunae and inconsistencies in the whole story, that Oswald did fire the rifle that killed Kennedy, or that there was a single person such as Oswald whose career and finally death in the Dallas Police Station is traced with substantial accuracy in the Warren Commission's report. This is the kind of response which Attorney Louis Nizer, commenting on the report, called the "analytic syndrome," saying that to one in the grip of it no verdict in any court of law will retain credit. In the disposition to take any element of discrepancy in a view, even those attendant to its normal healthy subsistence and development, as signs of its imminent collapse, those afflicted by this syndrome remind one of that flustered band of animals in the story of Chicken Little who precipitately proclaimed the news that the sky was falling when all that had happened was that an oak tree had shed an acorn.

In addition to the above major matters of substance, a few minor matters of form in this book should not go unremarked. The book is somewhat marred by lapses and errors which one would have expected the editors of one of the most prestigious academic publishers to have easily detected for the benefit of the author and ultimately the reader. Illustrative of the lack of care in the making of this book are neologisms such as "evidence" used as a transitive verb, roughly the equivalent of support ("we may evidence this by noting . . ."), the use of the asterisk as a discriminating mark with certain linguistic expressions, with no explanation of the kind of discrimination intended, and, in a striking case of oversight, the verb "effect" let stand where "affect" is clearly intended, in no less than four separate instances in the space of four pages (pp. 76-78).

University of Illinois at Urbana-Champaign

FREDERICK L. WILL