

MASTERS

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PRODUCER, ENTREPRENEUR, AND THE RIGHT TO PROPERTY*

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“THE institution of property,” John Stuart Mill remarked, “when limited to its essential elements, consists in the recognition, in each person, of a right to the exclusive disposal of what he or she have produced by their own exertions, or received either by gift or by fair agreement, without force or fraud, from those who produced it. The foundation of the whole is the right of producers to what they themselves have produced.”¹ The purpose of this paper is to point out the ambiguity of the phrase “what a man has produced”, and to draw attention, in particular, to one significant, economically valid, meaning of the term,—a meaning involving the concept of entrepreneurship—which seems to have been overlooked almost entirely.

Precision in applying the term “what a man has produced” seems to be of considerable importance. The ethical views associated with widely disparate ideologies, relating both to the justifiability of private rights to property, and to the problem of justice in the distribution of incomes, appear to involve in some form the notion of “what a man has produced”. Thus the Lockean theory of private property—which came, to serve as the source of the moral case for capitalism²—has been understood as depending on the view that man has the right to the “fruits of his work”³. As Friedman has pointed out, the capitalist ethic (which he identifies as holding that “a man deserves what he produces”⁴) is shared by Marx, since Marx’s view on the exploitation of labor, resting on the premise that labor produces

*This paper was presented at the Symposium on the Origins and Development of Property Rights, Institute of Humane Studies, University of San Francisco, January 1973.

the whole product, is valid "only if labor is entitled to what it produces"⁵.

Without ourselves necessarily accepting, therefore, any one of these ethical positions, it seems worthwhile to achieve clarity by seeking to understand what exactly the notion "what a man has produced" is to mean. The literature seems to have perceived production *insofar as it flows from factors of production*, so that by the statement "what a man has produced" has been intended "what has been produced by those *factors of production* identified with the man with whom we are concerned". Briefly, a man is a producer insofar as he is himself considered a factor of production, or as he is the owner of factors viewed as responsible for output. Thus Friedman seems to further identify the "capitalist ethic" cited above, with the view that "an individual deserves what is produced by the resources he owns"⁶. J. B. Clark rested "the right of society to exist in its present form" on his marginal productivity theory of distribution, seeing it as satisfying the requirement that each man gets what he produces.⁷ Locke's labor theory of property begins from the premise that "every man has a property in his own person . . . The labor of his body and the work of his hands we may say are properly his".⁸ Production is made possible only by the ownership of agents of production.

It follows, that if we perceive production as flowing from factors of production, and if we correspondingly relate the ethical implication of "what a man has produced" strictly to that which derives from the factors of production which that man owns (including, of course, his own labor capacity), then the exercise of pure entrepreneurship in production (i.e. seen as involving no element of factor ownership) carries with it none of the favorable ethical connotations attached to "that which a man has produced". This conclusion, the questioning of which is the purpose of this paper, requires some elaboration.

FACTOR-OWNERSHIP AND ENTREPRENEURSHIP

It is well-known that economic literature suffers from insufficient attention paid to the entrepreneurial role, so that we find few careful attempts to define precisely wherein this role

consists. In the more sophisticated discussions of entrepreneurship, a fairly sharp distinction has emerged between the factors of production on the one hand, and entrepreneurship on the other. In Schumpeter's classic discussion, for example, the means of production include *all* agents required to produce the product in the state of circular flow (equilibrium). In equilibrium there is the tendency "for the entrepreneur to make neither profit nor loss . . . he has no function of a special kind there, he simply does not exist"⁹. In disequilibrium, on the other hand, innovations in product quality and in methods of production are attributable to the initiative of pioneering Schumpeterian entrepreneurs. Although, that is to say, the new products or the new productive techniques require *no* resources beyond those consistent with the state of equilibrium, these new products and techniques would not have appeared at all in the first place, had it not been for entrepreneurial daring and drive.

It follows that there is a built-in ambiguity, therefore, concerning the sense in which pure entrepreneurship can be considered a resource necessary for the emergence of the product. And it is this ambiguity which is no doubt partly responsible for the disagreement among economists as to whether to treat entrepreneurship as a factor of production.¹⁰

On the one hand, as we have seen, until a product or technique has in fact been introduced, possession of all necessary means of production (including relevant knowledge) guarantees nothing without the presence of entrepreneurial initiative. So that even Schumpeter recognizes that entrepreneurship "may be conceived as a means of production"¹¹. On the other hand if a would-be producer asks the question: "Supposing I decide to produce product X (or to utilize production technique Y), what means of production will it be necessary for me to obtain?", then it is clear that the answer will not include "the decision to produce product X (or to use technique Y)". And this is undoubtedly why Schumpeter states that "ordinarily" he did *not* conceive of entrepreneurship as a factor of production.¹²

Clearly a sharp distinction must be drawn between means of production ordinarily conceived, and entrepreneurship. The latter is *not* similar to factors of production insofar as concerns

the theory of marginal productivity.¹³ More fundamentally, entrepreneurship even if considered a means of production, *cannot be purchased or hired by the entrepreneur*, i.e. it is never perceived by the potential entrepreneur as either an available productive factor, or as a necessary productive factor. Either the entrepreneur is prepared to take the initiative or he is not.¹⁴ If he is not prepared to take the initiative, the would-be entrepreneur simply sees the project as, on balance, one not worth undertaking—he does not see it as a project for which a needed resource is unavailable. If he is determined to take the initiative again, then all he needs to obtain are the factors that would be required in the entrepreneurless state of equilibrium. Or, to put the matter in a slightly different form, the engineer asked to identify the productive agents to which a product is to be attributed, may indeed include intangibles such as “knowledge”, but will *not* list “initiative”, (since the very notion of attribution presupposes the decision to produce). Accordingly, since the entire product can be attributed to the “other” means of production, it follows that entrepreneurship is in fact not a means of production at all, and cannot be credited with having contributed anything to the product.

To sum up, the literature revolving around the ethical implications of “what a man has produced”, is concerned with what has been produced by the factors of production which a man owns (or even more narrowly, by the man himself seen as a factor of production). If one perceives pure entrepreneurship as not being a productive factor, it follows that it cannot share in the favorable ethical implications of being responsible for the product. On the other hand, if one views entrepreneurship as a productive factor, attributing some portion of the product’s value to the initiative of the entrepreneur, parallel with the contributions made by the other factors, then that portion (however calculated or evaluated)—but *no more than that portion*—may be considered as having been produced by the entrepreneur, and relevant, therefore, to the corresponding ethical implications.

We will, in the following pages, draw attention to the possibility for a position almost precisely opposite, in all respects, to that just presented. In the position to be offered for considera-

tion, the favorable implications of the phrase "what a man has produced" *do not apply at all to factors of production*. Rather, on this position, pure entrepreneurship is responsible—in the sense relevant to the ethical connotations of "what a man has produced"—to the *entire* product. (Moreover this way of seeing matters is only helped by insight into the sense in which entrepreneurship is *not* to be considered a factor of production. In other words, paradoxically enough, the entrepreneur is to be considered the sole "producer" of the entire product—in the ethically relevant sense—precisely because he makes *no* contribution to production in the sense relevant to the theory of marginal productivity). A sentence from Knight presents, I believe, the essence of what this paper is all about. Much of this paper can be viewed as a commentary on the following: "Under the enterprise system, a special social class, the business men, direct economic activity: *they are in the strict sense the producers, while the great mass of the population merely furnish them with productive services, placing their persons and their property at the disposal of this class; the entrepreneurs also guarantee to those who furnish productive services a fixed remuneration*".¹⁵

SOME OBSERVATIONS ON THE LOCKEAN THEORY OF PROPERTY

A philosopher-critic of Locke's theory of property has summed up the theory as follows: (1) Every man has a (moral) right to own his person; therefore (2) every man has a (moral) right to own the labor of his person; therefore (3) every man has a (moral) right to own that which he has mixed the labor of his person with.¹⁶ This summary will serve us conveniently in our discussion.

Apparently Locke takes it for granted that, since a man has a moral right to his own labor (in the sense of "working"), he has also a moral right to that which his labor produces. This view, which we call proposition (3a), (and which we have cited above as an example of the ethical values attached to the notion of "what a man has produced"), seems implicit in proposition (3)¹⁷. However proposition (3) goes beyond the view that what a man has produced is morally his own. Proposition (3) asserts

that when a man mixes his labor with unowned natural resources, in the "natural state" in which there is "still enough and as good left",¹⁸ he is to be considered as the natural private owner of what results from the mixing. Clearly it is the ambitious proposition (3) which is of the greatest importance for Locke's own thesis. It is however with the more modest proposition (3a) that we are ourselves concerned.

That in proposition (3a) Locke has in mind labor-as-factor-of-production seems clear from his often-cited extension of his proposition (3) to include hired labor. "Thus . . . the turfs my servant has cut, and the ore I have dug in any place where I have a right to them in common with others, become my property without the assignation or consent of anybody".¹⁹ A man's own labor is his own in a sense no different from that in which the labor of his servant is an employer's. That which has been produced by a man's own labor is his own in the same sense in which that which has been produced by an employee's labor is the employer's.

It is true that Day is sharply critical of Locke, denying that one can talk significantly of owning labor (in the sense of "working"). Laboring, Day contends, is an activity, "and although activities can be engaged in, performed or done, they cannot be owned".²⁰ However, economists will find Locke's use of terms quite familiar and acceptable. Economists speak of agents of production (in the sense of *stocks*), and of the "services" of agents of production (in the flow sense). A man who "owns" an agent of production is considered by economists to own, by that token, also the services flowing from that agent. Again, by hiring the services of a productive agent, a producer is considered by economists to have acquired ownership of the service flow, by purchase from the previous owner of that flow (i.e. the owner of the agent "itself"). In speaking of owning the services of an employee, therefore, the economist does not in fact have in mind the ownership of the *activity* of working, nor the ownership of that which the activity of working produces, nor even the ownership of the *capacity* for working.²¹ Rather the economist is perceiving the employee as a stock of human capital, capable of generating a flow of services. So that, to the various different meanings Day discovers to be attached to the word

"labor", should be added: "labor" viewed as the flow of abstract productive service generated by a human being.

Viewed in this "economist's" sense, therefore, Locke's theory seems to say, quite understandably: (1') Every man has a (moral) right to own the human capital represented by his person: therefore (2') every man has a (moral) right to own the flow of labor services associated with his person; therefore (3a') every person has a right to the product produced by these labor services. (Just as he has the right to the product produced by the labor services he has hired from an employee).

Clearly, therefore, proposition (3a'), with which we are ourselves concerned, relates to labor viewed as a physical factor of production. It appears moreover that even the notion of labor as *sacrifice*,—a notion which might permit one to regard the product as being deserved by the laborer in the sense of reward for sacrifice—is foreign to Locke's theory. Thus as Myrdal has pointed out, Locke's view "that labor is the source of property has nothing to do with pain and sacrifice but follows from the idea of labour as a natural property of the worker and as the cause and creator of value".²² So that Locke, at any rate, is not arguing his proposition (3a') on the basis of any ethically merited *reward* for the pain or sacrifice of labor. Instead, it appears, Locke's proposition (3a') rests on the ethical view that the product *physically derived from a man's property* should belong to him in the same sense that the natural growth from a man's property may be deemed to belong to him naturally.²³ This is entirely consistent with the usual interpretation of Locke-type ethical arguments, as presented by modern economists, in terms of the language of the theory of marginal productivity.²⁴ We shall see below that there are grounds for discovering, however, elements of an alternative perception of the ethical meaningfulness of production in Locke.

HUMAN WILL AND THE ACQUISITION OF PROPERTY

Contrasted with the notion of the product as *physically* produced by man (with or without the use of other productive resources), is the perception of the product as resulting from

the *human will*. As discussed briefly above, we shall be arguing that for the purposes of ethically justifying property in products, it may be of relevance to draw attention to the sense in which the product finds its source in entrepreneurial decision making rather than to the sense in which it is derived from factor ownership. While explicit recognition of this insight is almost entirely absent from the literature, it is possible to discover a number of remarks and views which suggest an "entrepreneurial" approach to a justification for property.

Thus in Locke's own century Pufendorf emphasized the distinction between an action which is forced and that which is performed freely. Only the latter is properly a *human* action, involving "an element of subjective spontaneity" and a "free project of the self".²⁵ A century later Kant's theory of the acquisition of property through labor saw the labor itself as almost irrelevant to the act of acquisition. "When it is a question of the first Acquisition of a thing, the cultivation or modification of it by labour forms nothing more than an external sign of the fact that it has been taken into possession . . .".²⁶ It is not the mixing of labor with an object which makes it one's own, but "the transcendental operation of directing (one's) will upon (it)".²⁷ Hegel too, saw in the human will the true source of property rights, and moreover saw it as providing a justification for the acquisition of natural resources which is superior to that depending upon the mixing of labor.²⁸

Moreover it has seemed to some writers that Locke's labor theory of property, too, (as well as the labor theory of value of the later classical economists)²⁹ cannot be properly understood unless one recognizes the special character of labor, the *human* factor, as compared with other factors of production. So that, if one accepts their view, it turns out to be not quite correct to interpret Locke's theory of property as depending on the view that the product arises physically from an owned factor of production which happens to be labor. Thus Weiskopf in his psychological analysis of classical economics, viewed as deriving from Locke, emphasizes labor as *an activity of the person*. Following on Myrdal,³⁰ Weiskopf points out that in the classical view nature is seen as dead, with only human labor seen as the *active* agent. Petty's dictum comparing labor to the father, the

active principle of wealth, with land seen as the mother, is used by Weiskopf to explain the Locke-Classical treatment of labor as the sole origin of wealth for purposes of justifying property rights and of explaining the determination of value.³¹

If Weiskopf's view of the matter is correct, then Locke's labor theory does not relate to that aspect of labor in which it is seen merely as a physical source of the product, but rather to the aspect of labor in which it is seen as inseparable from the active, human will of the laborer. Plausible though Weiskopf's view may be for an understanding of the classical preoccupation with labor, it seems difficult to reconcile it with Locke's treatment of hired labor as being as complete a justification for property rights in the product, as one's own labor. If Locke's treatment of hired labor envisages the employer as hiring not only the physical labor services of the employee, but also the active, spontaneous, human elements associated with these services, then, of course, he is not understanding these elements in their purely entrepreneurial sense (in which, by definition, they cannot be hired at all).³² We shall return to offer further brief remarks on Locke later in this paper.

Finally, we notice that more recently Oliver, in drawing attention to the inadequacy of Marxian labor theory for a doctrine of "earned-income" (in which a man is entitled to what he has produced), argues that Marx leaves no room for the role of the free will exercised by the laborer in his work,—when such a role is essential for the very concept of "earning".³³ We have thus an example of the recognition of the role of the human will in ethical evaluation of "What a man has produced".

PRODUCTION-AUTOMATIC GROWTH OR HUMAN CREATION?

From the foregoing discussion it will have become apparent that we are confronted with two quite different views on the nature of production. We turn now to spell out explicitly what these two views are, and to consider briefly their plausibility to serve as foundations for the ethical view that what a man has produced ought to be his.

(a) *Production as Automatic Growth from the Factors of*

Production: The one view of production sees production as it would occur in the state of equilibrium. In such a state each producing firm has already been fully adjusted to the conditions of the market. The services of necessary inputs (including the services of managers) flow smoothly into the firm in synchronized fashion, with the corresponding output flow emerging with equal smoothness. The market value of the input flow corresponds exactly to that of the output flow; alternative uses for input services offer no higher factor prices, alternative sources of input supply promise no savings. Certainly one can say that the output has been produced by the productive input services. But because there has, in such a state, been no room for entrepreneurship, output must be seen as emerging automatically, as it were, from the combined input flow, exactly as fruit might grow from a tree without direction from the owner of the tree. To rest an ethical case for ownership in a product on the circumstance that a man's productive resources have produced it, in *this* sense, is to claim that the product is his not on the grounds that *he* has permitted his factors to create the product, but on the grounds that the product has grown—as it were automatically—from the factor services he owns.

(b) *Production as a Human Creation:* The alternative view refuses to see the product as emerging automatically from a given combination of factor services. In this view the product has come into being only because some human being has *decided* to bring together the necessary productive factors. In deciding to initiate the process of production, this human being has *created* the product. In his creation of the product this entrepreneur-producer has *used* the factors of production which his vision has brought together. He has not cooperated jointly with these factors (so that this view does not see the entrepreneur's contribution as consisting of a portion of the value of the product, with the remaining portion being the contributions of "other" productive agents). He has produced *the whole product entirely on his own*, being able to do so by his initiative, daring and drive in identifying and taking advantage of the available productive factors. In this view, an ethical case for ownership in a product based on one's having "created" it, depends strictly on one's *not* having been the owner of one of the cooperating input

factors. (To the extent that an entrepreneur was also a factor-owner he is credited with the creation of the product only in the sense that he "purchased" his factor services from himself, so to speak, rather than permitting them to serve alternative purposes).

If one uses the first of these two views on production as the basis for an ethical case for property in the product, or in the distribution of income, it is entirely relevant to use a Clarkian marginal productivity approach. The contribution of a factor of production must somehow be disentangled from the contributions of other factors, and the theory of marginal productivity may, with greater or lesser success, be called upon for this purpose. But if it is the second ("creation") view which is to be used, then marginal productivity is entirely irrelevant (except in a sense to be discussed below). On this second view the (necessarily indivisible) entrepreneur is responsible for the entire product. The contributions of the factor inputs, being without any entrepreneurial component, are irrelevant for the ethical position being taken.

Of course, it is true that also on this second view, the entrepreneur-producer must, in order to "create" the product, acquire the services of the necessary productive factors. (And in fact competition may force him to compensate them to the full extent of their respective marginal products). However, it should be plain, this view does not claim rights in the product for the entrepreneur on the grounds that, since he has fairly purchased these factor services, production has now been carried on with *his* factor services. In this view the entrepreneur's rights rest strictly on the vision and initiative with which, at the time when he owned *no* productive resources, he undertook to marshal them for his purposes.

It is not the purpose of this paper to choose between these two interpretations of the ethical implications of "producing". Our purpose has been rather to draw attention to the existence of the second view and to emphasize its diametrically opposed character as compared with that of the first view. In choosing which of these views to endorse (if, indeed, one wishes to endorse either of them at all) or which of them to ascribe to particular writers, it is necessary to consider carefully whether it is the

active, human, *creativity* of the producer which should be underlined, or whether it is rather the ownership of the physical or other *ingredients of production* which it is wished to recognize.

FINDERS, KEEPERS, AND SPECULATIVE PROFITS

The points made in the preceding section may perhaps throw light on certain matters raised in discussions concerning the ethics of property and income distribution. Oliver³⁴ has noted that sometimes writers presenting ethical positions based on "what a man has produced", introduce the notion of "finders, keepers". "The man . . . that first discovers and claims title to natural resources thereby gains ownership." Oliver points out that Locke's position bases ownership in natural resources (with which one has mixed one's labor) partly on "discovery". For Oliver "finders, keepers" is a rule which bears no relation at all to the ethical deservingness associated with having produced something. Our insight into the "entrepreneurial" view on production may perhaps be of some help in this respect.

Briefly it seems that Locke's labor theory of property rights is best understood as involving a combination, possibly a confusion, of *both* the "factorial" and the "entrepreneurial" views on production. We recall our earlier reference to Myrdal's and Weisskopf's understanding of Locke in terms of the contrast between active, live labor and passive, dead nature. This certainly supports the theory that Locke viewed labor as not merely a factor of production, but as also involving the uniquely human element which we have identified with entrepreneurship. Again, the initially puzzling view which Locke presents, in which title to natural resources is acquired by the mixing of labor, assumes immediate intelligibility when the mixing of labor with the natural resource is perceived as the grasping of the "entrepreneurial" opportunity offered by the available, as yet unappropriated, resources. The "finders, keepers" rule which Oliver discovers in Locke thus represents essentially the same ethical view as that underlying the entrepreneurial view on production. In this view a producer is entitled to what he has produced not because he has contributed anything to its physical fabrication, but because *he perceived and grasped the*

opportunity for its fabrication (by utilizing the resources available in the market). This is clearly an example of "finding, keeping".

These insights appear relevant to some comments by Samuelson on the normative aspects of speculative profits. Where a crop failure generates speculative profits, Samuelson points out that the successful speculator need only be a trifle quicker than his rivals in order to make his fortune. In his absence, the socially advantageous consequences of his speculation (i.e. the curtailment of relatively less urgently needed consumption at earlier dates, making possible some more urgently needed consumption at later dates) would occur seconds later through the activities of other speculators. Even if one accepts "a Clarkian naive-productivity theory of ethical deservingness", Samuelson remarks, one can hardly justify the capture of all the profits, by the successful speculator who saved society from no more than a few seconds of unwise consumption. Without commenting on the substance of Samuelson's normative criticism of speculative profits³⁵, it seems useful to remark that, as we have seen, a Clarkian ethical approach is wholly inappropriate anyway in dealing with entrepreneurial profits. What *might* be of greater relevance would be the entrepreneurial view which, as we have seen consists essentially in precisely a "finders, keepers" ethic. On such an ethic an opportunity perceived and grasped confers ethical deservingness. Necessarily this perceives the gain from grasping the opportunity as having been deserved, despite the possibility, or even the likelihood, that others might have perceived and grasped the same opportunity seconds later. No one is bound, of course, to subscribe to this entrepreneurial ethic; in fact one may reject it precisely on Samuelson's grounds, if one chooses. But it does seem appropriate to judge the deservingness of one particular example of entrepreneurial profit on the approach relevant to a defense of the deservingness of entrepreneurial profits in general.³⁶

THE ENTREPRENEURIAL ELEMENT IN FACTOR-OWNERS' DECISIONS

Although we have been at pains to accentuate the distinction between the factor-of-production view on production on the one hand, and the "creation", entrepreneurial view on the other,

it seems wise to point out a circumstance which operates to blur, to some extent, the sharp line we have drawn between these views. This circumstance is the presence of an entrepreneurial element in *every* human action and decision, including especially, for our purposes, the decisions of factor owners.

The isolation of a purely entrepreneurial element in production is, of course, an analytical device. Human action in its totality is made up of an "entrepreneurial" element (to which is attributable the decision maker's awareness of the ends-means framework within which he is free to operate), and an "economizing" element (to which we attribute the efficiency, with respect to the perceived ends-means framework, of the decision taken).³⁷ Analytically we conceive of factor-owners as pure "economizers", operating within an already-perceived market framework. Entrepreneurs, on the other hand, we perceive as becoming aware (with no resources of their own at all) of changed patterns of resource availability, of technological possibilities, and of possibilities for new products that will be attractive to consumers. But flesh and blood resource owners are, of course, also to *some* extent, their own entrepreneurs, (just as flesh and blood entrepreneurs are likely to be owners of some factor services themselves).

It follows that when a producer hires the services of productive agents, entrepreneurship has in fact been exercised, not only by "the" entrepreneur, but also by the factor owners in deciding to sell. While productive services may be viewed as flowing "passively" from the productive agent, it is the factor owner's decision (from which all elements of entrepreneurship cannot be entirely absent) which permits the flow to proceed in the adopted channel, rather than in alternative processes of production. In the case of labor, in particular, the factor owner's decision to permit the service flow, is required at every minute of his service. So that when we say in an apparently "factor-of-production" view of the matter, that a factor has produced a product, we are, *in real-world cases*, referring *both* to the factor as producer and to the factor owner as, at least to some extent, entrepreneur. Now, it seems of great importance to emphasize the two quite different senses of production so involved. It seems, at the same time, helpful to notice how easily the two

views on production can become combined and/or confused. This will perhaps account not only for the view which our interpretation has ascribed to Locke, but also for the circumstance that the literature has failed almost entirely to notice explicitly the possibility of an entrepreneurial, factorless view of the ethical implications of producing. An outstanding exception is the sentence in Knight cited earlier, in which it is the entrepreneurs who are seen "in the strict sense" as "the producers", with the factor owners merely furnishing them with productive services.

¹ J. S. Mill, *Principles of Political Economy* (Ashley Edition, London, 1923), p. 218.

² See G. Myrdal, *The Political Element in the Development of Economic Theory* (Harvard, 1954) p. 71f; R. Schlatter, *Private Property, The History of an Idea*, (Rutgers University Press, 1951) Chapter 7; C.B. Macpherson, "The Social Bearing of Locke's Political Theory", *Western Political Quarterly* (1954); A. Ryan, "Locke and the Dictatorship of the Bourgeoisie" *Political Studies* (1965).

³ Myrdal, *ibid.* Strictly speaking, Locke did not actually assert that, by mixing his labor with a nature-given resource, he has thereby "produced" the result. However he has certainly been understood as having implied as much. Thus, commenting on the notion "that, if a man 'makes' something, it is his," Oliver cites Locke as having given expression to this idea in his labor theory of property rights. (H.M. Oliver, *A Critique of Socioeconomic Goals*, Indiana University Press, 1954, p. 27). See further later in this paper.

⁴ M. Friedman, *Price Theory, A Provisional Text*, (Aldine, 1962), p. 196.

⁵ M. Friedman, *Capitalism and Freedom* (University of Chicago Press, 1962) p. 167. On this see also Oliver (*op. cit.* p. 37). In an extensive critique of Oliver's discussion, Rothbard (*Power and Market, Government and the Economy*, Institute for Humane Studies, 1970, p. 183) makes it clear that he supports the same underlying ethic.

⁶ *Price Theory*, p. 196.

⁷ J. B. Clark, *The Distribution of Wealth*, (1899), p. 3.

⁸ J. Locke, *An Essay Concerning the True Original, Extent and End of Civil Government*, paragraph 27.

⁹ J. A. Schumpeter, *The Theory of Economic Development* (Harvard, 1934), p. 76.

¹⁰ On this, see for example the discussion in F. Machlup, *The Economics of Sellers' Competition* (Johns Hopkins Press, 1952), pp. 226-228.

¹¹ Schumpeter, *op. cit.* p. 143.

¹² *Ibid.*

¹³ See Schumpeter, *op. cit.* p. 153; Machlup, *op. cit.* p. 226; F. H. Knight, *Risk, Uncertainty and Profit*, p. 271.

¹⁴ On all this see the writer's *Competition and Entrepreneurship* (University of Chicago Press, 1973), Chapter 2.

¹⁵ F. H. Knight, *Risk, Uncertainty and Profit*, p. 271; emphasis on the central clause supplied. Similar statements are to be found in F. B. Hawley, *Entreprise and the Productive Process* (New York, Putnam, 1907) pp. 85, 102, 112, 127.

¹⁶ J. P. Day, "Locke on Property," (*Philosophical Quarterly*, 1966) reprinted in G. D. Schochet, (Editor) *Life, Liberty, And Property, Essays on Locke's Political Ideas*, (Wadsworth Publishing Company, Belmont, California) p. 109. (All page references will be to this reprint.)

¹⁷ See Day, pp. 109-110; and see above note 3.

¹⁸ Locke, *op. cit.*, paragraph 33.

¹⁹ Locke, paragraph 28.

²⁰ Day, *op. cit.*, pp. 113f.

²¹ On all this see Day, *ibid.*

²² G. Myrdal, *The Political Element in the Development of Economic Theory*, p. 74. It should be noted, however, that just as the later classical economists used expressions like "trouble", "sacrifice", "pain" synonymously with "labor"—and are for this reason described by Myrdal as having viewed labor strictly as the "trouble caused by effort" (Myrdal, *ibid.*)—so too does Locke occasionally (see paragraph 30, 34) seem to identify the justification for ownership of the product of one's labor as resting on one's having been he "who takes pains about it".

²³ See the reference in E. Halévy, *The Growth of Philosophic Radicalism* (Boston: The Beacon Press) p. 45, to Hume's view that "we are the proprietors of the fruits of our garden, and of the dung of our flock by virtue of the normal operation of the laws of association".

²⁴ See Oliver, *A Critique of Socioeconomic Goals*, p. 33; see also the sources referred to above notes 4, 7.

²⁵ See A. C. Outler, "Some Concepts of Human Rights and Obligations in Classical Protestantism", in A. L. Harding (Editor) *Natural Law and Natural Rights* (Southern Methodist University Press, Dallas, 1955) p. 16.

²⁶ I. Kant, *Philosophy of Law* (Edited by Hastie, Edinburgh, 1887) p. 92.

²⁷ R. Schlatter, *Private Property* p. 256.

²⁸ See Schlatter, *ibid.*

²⁹ On the question of the impact of Locke's labor theory of property on the later classical labor theory of value, there has been controversy. Myrdal (*The Political Element in the Development of Economic Theory*, pp. 71f), Halévy (*The Growth of Philosophic Radicalism*, p. 44), and W. A. Weiskopf (*The Psychology of Economics*, University of Chicago Press, 1955, pp. 22ff, p. 145) all assert a direct influence. See however J. A. Schumpeter, *History of Economic Analysis* (Oxford University Press, 1954) pp. 120, 310-311; see also I. M. Kirzner, *The Economic Point of view*, (Van Nostrand, 1960), p. 25, and p. 190, notes 8, 9.

³⁰ Myrdal, *The Political Element*, p. 72; see especially Myrdal's reference to Rodbertus.

³¹ Weiskopf, *The Psychology of Economics*, pp. 25, 145.

³² For further discussion of the entrepreneurial element in the decisions of factor owners, see below pp. 13ff.

³³ Oliver, *A Critique of Socioeconomic Goals*, p. 37.

³⁴ *Op. cit.* p. 42.

³⁵ Samuelson's discussion is in his "Intertemporal Price Equilibrium: A Prologue to the Theory of Speculation", *Weltwirtschaftliches Archiv*, (December, 1957), p. 209. For further comment see the writer's *Competition and Entrepreneurship* (University of Chicago Press, 1973), Chapter 6.

³⁶ See Schlatter, *Private Property*, p. 191, note 2, for references to use made of Locke's labor theory to condemn the ethical status of entrepreneurial profit.

³⁷ See further the writer's *Competition and Entrepreneurship*, Chapter 2.

A DUAL-ASPECT APPROACH TO THE MIND-BODY PROBLEM

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DOWN through the ages, numerous scientists, theologians, and philosophers have wrestled with the puzzle as to the ontological status of man's consciousness, or mind. It is a difficult, persistent, but fascinating problem; witness the volume of literature on the subject.

Two principal concerns of those who work in this area are what can be referred to as the problem of *mentality* and the problem of *intentionality*. The latter, which is beyond the scope of this paper, is the problem of the nature of the relation between man's consciousness and reality, especially that between knower and known.

The former, also better known as the Mind-Body Problem, is the issue on which this paper focuses: the problem of the nature of the relationship between man's consciousness and his body.

The view of mind upheld in this paper is a particular version of the Dual-Aspect theory of mind, which may be briefly stated as follows: *any given process of the mind is actually one and the same process as some particular electro-chemical process of the brain, so that what appear to be two distinct processes are actually just two aspects of one and the same brain process, i.e., they are actually just one and the same brain process viewed from two different cognitive perspectives.*

This paper does not aim at a complete survey of all the various mind-body theories. Other theories of mind will be considered mainly in virtue of the problems they leave unsolved and which give rise to consideration of the Dual-Aspect theory. The primary task of this paper is rather a presentation of the Dual-Aspect theory of mind, the solution it offers to the mind-body problem, and defense of it against some major objections.

A second crucial thrust of this paper is a development of the implications of the Dual-Aspect theory of mind for the free will problem, concerning the nature of human action. It will be shown that the Dual-Aspect theory leaves room for a conception of human action which is radically different in normative implications from that conception which is widely promulgated in the social sciences today.

I. THE DUALITY OF MIND AND BODY

Throughout history, some sort of distinction between the mind and the body has been maintained by the vast majority of men. But there is and has been considerable difference of opinion about the *nature* of that distinction.

Some propose that we view mind and body as two radically different *entities* somehow coexisting and interacting in the same living person. This Cartesian view of mind as an irreducible primary, an immaterial sort of 'substance' or entity, fails to explain how such a substance and its interactions with the body can be detected, let alone how something immaterial can interact causally with something material, like the body.

Others propose that we instead view mind as *process* (or as a cohering group of processes). Some process theorists further assert that there is no such thing as an entity, that the body, like the mind, is instead a set of processes.¹ This view is based upon a straw-man conception of 'entity' as absolutely static and unchanging, and the consequent false dilemma which that sets up.²

Certain other process theorists, rejecting this extreme position, more plausibly maintain that the mind is a cohering set of mental processes, somehow distinct from physical brain processes, yet intimately related. A brief consideration of their respective difficulties will set the stage for the Dual-Aspect theory.

Process-Epiphenomenalism, or one-way process interaction, is the view that mind or mental processes have no "causal efficacy" with regard to the body, (that the mind cannot contact

the body), and that the mind is merely a passive by-product and concomitant of brain activity, like the shadow of one's body or the echo of one's voice.³ This theory is caught in the cross-fire between Interactionism and Parallelism. If either part of its thesis is true, then its other half cannot be, and it thus reduces to one of the other two theories: (a) If the evidence supports the claim that physical brain processes cause (contact) mental processes, then it also supports the claim that mental processes have a reciprocal causal power with respect to physical brain processes, as maintained by Interactionism; (b) If on the other hand one denies the causal efficacy of mental processes, the same reasons also support a denial of the ability of brain processes to cause (contact) mental processes, as Parallelism contends.⁴

Process-Interactionism, or two-way process interaction, is the view that there are mental processes distinct from all other bodily processes, and which cause physical brain processes, and vice versa.⁵ In literal form, this view meets two fundamental problems: (a) First, it asserts that a process causes another process, which is based upon the logically untenable mechanistic model of causality as a relationship between *actions*.⁶ Instead, causality is the cause-effect relation between substances (or entities) and their activities.⁷ All processes are processes of entities, being carried out by an individual entity as a whole, by part of an individual entity, or by part or all of a number of individual entities. And whenever entities (or parts, or groups of them) act so as to produce by their actions a change in some other entity (or part, or groups), they are said to be causally *interacting* with the other one. Actually, then, Interactionism is properly concerned with a human organism whose various parts interact so as to cause a physical brain process, and interacting with other parts of the organism, consequently cause a mental process; and vice versa. In other words, Process-Interactionism collapses into Substance-Interactionism, albeit a more plausible variant than the Cartesian view, since both substances here are of the same type (*viz.*, material parts of the same living organism). But, short of identifying the mind with the body or brain, this new position has nothing to say about interaction of *mind* or *mental processes* with the body or brain. (b) Secondly,

the Process-Interactionism view contends that a process located in space (the physical brain process) causally interacts with a process *not* located in space (the mental process). The difficulty lies in the fact that processes do not have spatial locations, except in a secondary sense, owing to the fact that the entities undergoing those processes themselves possess spatial locations.⁸ Thus, the question arises: Where is the part of the human body or brain which undergoes a mental process, separate and distinct from all physical brain processes? This location apparently has not yet been found, nor is it clear how it might be. The high degree of correlation established between these allegedly distinct processes by neurophysiological experiments seems to indicate that perhaps they are generated by one and the same part of the brain, for any given pair of mental and physical brain processes.⁹ If so, then to view them as actually distinct processes is not the simplest explanation of their relation.

Process-Parallelism is the view that there is no causal interaction between mental and brain processes, that they co-exist parallel to one another in the same person without acting upon each other in any way.¹⁰ But this view is not more likely to be true merely because processes are not the kind of things which can interact. Demonstrating the conceptual error in Process-Interactionism does not thereby establish the existence of such distinct processes occurring parallel to one another. It only proves that *if* such distinct mental processes exist, they do not interact with physical brain processes. If they do exist, furthermore, they must be processes of some part of the human body which does *not* interact with the part carrying out the physical brain process—at least at that moment in time. And again the problem of how and where to locate the part of the brain carrying out the allegedly distinct mental processes seems insurmountable.

The way out of this impasse is to reject the common premise of Interactionism and Parallelism: that there is any such thing as a mental process, distinct from any and all physical bodily processes, or a mind distinct from the body. This is the central point of the Dual-Aspect theory: a mental process and the physical brain process correlated with it are one and the same

brain process, as viewed from different cognitive perspectives; i.e., the mental and the physical are but two distinct *aspects* of one and the same process, as viewed through two different cognitive modes.

Despite their common rejection of the claim that there are actually two distinct entities, organs or processes involved in the mind-body relationship, Dual-Aspect theories differ considerably as to *which* aspects (of an entity, organ or process) share the duality. In the section which follows, a clear distinction will be made between the version of the Dual-Aspect theory this paper supports and earlier, more vulnerable forms of that theory.

II. THE DUAL-ASPECT THEORY

The simplest version of this theory maintains that mind and body are not two distinct entities, as Cartesians claim, but rather two aspects of one underlying entity, the human organism, or human being.¹¹ A second, similar version holds that mind and brain are two aspects of one and the same organ of a human being.¹²

Both the mind-body and mind-brain Dual-Aspect theories, however, are open to the same objection. What evidence is there for the existence of this mysterious "underlying" organism or organ? Merely postulating its existence in order to provide its attributes with a metaphysical "foundation" is insufficient. If we are not directly aware of this organism or organ, but merely of its "aspects" (the mind and body, or brain), and cannot prove that it exists, then we have no logical right to assert that it exists.¹³

Such a dilemma is fostered by the ontological and epistemological pre-suppositions of Locke's representative realist theory of knowledge. With the medievals and the naive realists, Locke held the position that an entity is a unitary, unknowable substance, external to and supporting its various qualities. This assumption that an entity must be *ontologically* simple in its nature was built upon an illicit interpretation of observations about the *logically* simple subject of which many different properties were predicated.¹⁴

The error was to hypostatize this logical relation between a unitary subject and its many predicates, and thus to assume that the epistemological distinction between an entity and its properties was actually an ontological distinction between a unitary, simple entity and its numerous properties.¹⁵ The direct unknowability of such a unitary, simple entity follows once it is pointed out that no such simple-natured entity is presented to our perception: if it exists and "supports" its properties, it must be external to them and beyond the range of our direct awareness.

Thus, because of a confusion between language and logic on the one hand and reality on the other, Locke is led to assert his representative realist theory: we are not directly aware of entities in the external world; we are only directly aware of their aspects or qualities which we apprehend as mental contents or 'ideas'. To gain knowledge of the external world, Locke maintained, it was necessary to proceed by inference from one's 'ideas' to their unseen sources.

Berkeley's idealism is thus not so radical a departure from Locke's position as it might appear. Idealism accepts the Lockean premise of our having direct awareness only of 'ideas' and of the necessity of inferring the external world's existence from those 'ideas'. It merely denies the *possibility* of such an inference and, consequently, the existence of an external world.

Hume's skeptical position grants that we *are* directly aware of the external world, in opposition to both Locke and Berkeley. He placed external reality not in entities, however, but in aspects or qualities, which somehow "bundle" together to form the material objects we encounter. Hume viewed entities in the same way Berkeley viewed the external world: as unnecessary, unjustified, unjustifiable notions. We are directly aware only of aspects, not entities, Hume says; and since inferring the existence of entities from their aspects is impossible, entities do not exist.

This "bundle" theory of things in the world has application to the mind-body problem, too, particularly to the versions of the Dual-Aspect theory now under scrutiny. To repeat (and Hume and Berkeley would probably concur): if we are not *directly* aware of this organism or organ, but merely of its

“aspects” (the mind and body, or brain), and cannot prove that it exists, then we have no logical right to assert that it exists. But now, with Hume, we face a fundamental mystery: how do the mind and body manage to cohere in a “bundle”, if there is not some entity tying them together, so to speak, of which they are both aspects?

The way out of this blind alley is to reject the premise shared by Locke, Berkeley, Hume, the Dual-Aspect theories just discussed, and many of the key figures in modern philosophy: the assumption that we are not directly aware of the organism and organ “underlying” the mind, body and brain. Quite the contrary, *we are directly aware of the organism and the organ*: the organism is the human body with all its processes and other aspects, including the mind; the organ is the human brain with all its processes and other aspects, including the mind.

One is no longer compelled, as Locke, to claim the existence of an invisible, mysterious, directly unknowable organism or organ, in order to satisfy his metaphysical bias as a realist, who holds that entities are in some sense the primary existents. Nor is one saddled with the form of direct realism known as “naive realism,” which fails to account for the physical and physiological processes mediating between the known object and the knowing subject, and which fails to distinguish between object and content of cognition.

There is a third alternative, which is neither the indirect, intuitive apprehension of a copy of external reality (as held by representative realism), nor the direct, intuitive apprehension of external reality itself (as held by naive realism). Instead of these, we must use as the basis for the Dual-Aspect theory *the direct, referential awareness of Critical Realism*. To quote Roy W. Sellars, an outstanding proponent of this form of realism: “Knowledge should not claim to *be* being, nor *like* being. It is *of* being and reflects being”.¹⁶

That is, our cognitive contents should neither be confused with the objects of cognition, nor should they be regarded necessarily as being copies of the objects of cognition. Instead they should merely be regarded as having been causally generated from the object of cognition, and thus bearing some discoverable correlation to that object, a correlation which

permits us with sufficient justification to cognitively *identify* the contents with the object of cognition.¹⁷ With such an epistemological foundation, we can proceed beyond these more naive forms of Dual-Aspect theory.

A problem arises, however. If we accept the view of the mind as an aspect of the brain (and of the body), the simple *dual*-aspect view being considered has dissolved, leaving only a single aspect, the mind. We now must find some other aspect to pair with the mind, if we are to formulate a Dual-Aspect theory involving the mind as one of *two* aspects. There is such an aspect and such a theory, but they can be discussed more coherently after first considering individual processes.¹⁸

In this context, consider the solution to the apparent impasse at which we arrived in the previous section. This Dual-Aspect theory holds that a so-called mental process, and the physical process of the brain with which it is intimately associated, are not two distinct processes, but rather are two aspects of one and the same brain process. The two aspects of that brain process are the mental aspect and the *physical* (electro-chemical) aspect.

Such a formulation avoids the error of many of the Identity theorists,¹⁹ whereby the two aspects held to be identical are the mental process and the *brain* process, a view which entails the same difficulties as the previously discussed Dual-Aspect theories. How do we know that there is a single, underlying process? The process in question is in fact the brain process, so it cannot be one of the aspects.

We are aware of the brain process extrospectively when we view its physical aspects scientifically, and we sometimes equate it with those aspects. But the term "brain process" contains different information from the term "physical process of the brain".

The former refers to a process in terms of the *part of the entity* which carries it out, while the latter refers to a process carried out by that entity in terms of the *kind of process* being carried out. Thus, it is the term "physical process of the brain" (or "*physical brain process*") which is properly paired with the term "mental process" (or "*mental brain process*").

It is true that we are unable to view the mental aspect of

brain processes by extrospection, just as we are unable to grasp the physical aspect of brain processes introspectively. We shall never be able to do these things, any more than we could ever see the length of a table with our hands, or feel the length of a table with our eyes.

Yet, just as a child identifies seen length with felt length, through a combination of evidence and (at least implicit) reasoning, so too does the Dual-Aspect theory propose that we identify mental processes and physical brain processes (though by a more explicit reasoning process). The common factor here is the presence of *data which are correlated across different cognitive modes, and the decision to economize by regarding the data as coming from a single source.*

A good question to ponder at this juncture is this: If a child's seen-and-felt length identification is so similar to our introspected-and-extrospected brain process identification, then why has the latter identification taken so long to suggest itself, and even then, to adults, not children?

The answer appears to lie in the location of our cognitive organs, and the practical importance in obtaining correlated information from them. The sensory organs being located on the periphery of our nervous system, provide us our first cognitive contact with reality. They are of crucial importance in our learning how to deal discriminatively with the world in our locomotion of body or limbs (to run, to grasp, etc.). From a very early age, the coordination of these senses is simply vital.

On the other hand, even though men have for ages utilized their organs of conceptual extrospection and, to a lesser degree, introspection (which we may reasonably presume to be certain parts of the brain), the study of the physical processes of the brain has begun only recently in history. For only recently have the religious taboos and the inadequate conceptual and technological developments in psychology been successfully overcome to permit the inauguration of such studies. Furthermore, once the study of these processes did get under way, along with the study of the introspective reports of mental processes, it was for highly specialized purposes (medical, neurophysiological, etc.), which to this point at least have been held to be of far less than universal practical importance to men.

It is these special circumstances which suggest that only within the past century or less has the possibility of a mental-physical Dual-Aspect theory, and the *ontological parsimony* it provides, seemed a scientifically and philosophically tenable alternative to the traditional Interactionist and reductionist theories. The fact that the Dual-Aspect theory is a genuine alternative to reductionism, however, needs further clarification.

III. THE NON-REDUCTIVE STATUS OF THE DUAL-ASPECT THEORY

There are a number of interesting consequences following from the acceptance of the Dual-Aspect Theory. Conclusions which once seemed absurd or wrongheaded now take on a new light, in view of the thesis that a mental process and a physical brain process are actually both merely aspects of one brain process.

One such conclusion is that *a mental process is actually a physical process*. That is, since the term "mental process" actually refers to a mental brain process also possessing physical (electrochemical) aspects, a mental process is also properly referable to as a "physical brain process".

A number of philosophers have rejected this conclusion in the past, for it was previously associated with a position referred to as "reductive materialism". As did the Dual-Aspect theorists, the reductive materialists maintained that a mental process is actually a physical brain process; but here the resemblance between reductionism and the Dual-Aspect theory ends.

The reductive materialists seek above all to deny the reality of anything other than "matter" (material entities) and actions and interrelationships thereof. As such, they maintain that spiritual or mental phenomena do not really exist, that they are illusory, mere appearance, a distortion, etc.; and that what *appears* to be a mental phenomenon is *really nothing but* a physical phenomenon. They seek to strip away the illusory, to shrink or *reduce* our view of reality so that it excludes the realm of mental or spiritual "appearances".²⁰

As a logical corollary, the reductionists also seem to obliterate the distinction between different species of physical brain

processes. Since there is no real basis upon which to distinguish certain brain processes from other brain processes (except the "unreal appearance" of their being "mental"), the reductionists have *reduced* the number of conceptual classifications we must retain when thinking about brain processes. They have said there is not really a separate group of brain processes which we call "mental processes". We are mistaken if we fail to realize that they are *really nothing but* brain processes.²¹

In neither of these senses is the Dual-Aspect theory guilty of reductionism. Like other anti-reductionists, the Dual-Aspect theorists maintain that mental phenomena are *real*, and that there is no illusion or "mere appearance" involved. And they also share the belief that mental processes are a special subcategory of natural processes, distinguishable from all others by some valid (reality-derived) criteria. In short, they agree that mental processes are not simply *nothing but* physical processes. But here again is where the similarity ends.

First, the Dual-Aspect theory holds that mental processes are actually certain physical brain processes *as we are aware of them introspectively*, i.e., that "mental" refers to the fully real, introspectable *aspects* of those particular physical brain processes. Our awareness of them is the form in which we are aware of certain brain processes introspectively, just as our awareness of the physical aspects is the form in which we are aware of those brain processes extrospectively.

It has been the error of reductionists to grant a cognitive monopoly to extrospection. In correcting this error, we must realize that one must be aware of reality (viz., brain processes) in *some* form, but may be aware of reality in *any* form (and not just some one particular form exclusively).²² Just as both visual perception and tactual perception are different but equally valid forms for apprehending real aspects of entities (such as their length), which can be correlated with one another, so too the Dual-Aspect theory maintains, are extrospection and introspection different but equally valid forms for apprehending real aspects of brain processes.

Secondly, the Dual-Aspect theory holds that mental processes are actually *mental* physical brain processes. As such they are not merely *nothing but* physical brain processes, but rather

physical brain processes of a certain special *kind*, distinguished from all other physical brain processes by virtue of their introspectable, mental aspect. Since this mental aspect is a *real* aspect of those brain processes, it provides a *valid* basis for making the distinction, a basis derived from reality.

Thus, it is that the Dual-Aspect theory avoids the stigma of reductionism. Even as it insists that mental processes are actually physical processes, it equally steadfastly denies that they are *nothing but* physical processes. The Dual-Aspect theory is thus basically opposed not only to traditional anti-reductionist alternatives, but to reductionism as well.

In pushing the claim, however, that mental and physical brain processes are identical (i.e., one and the same brain process), Dual-Aspect theorists (and Identity theorists) have invited attacks which point out that the equation of perception or thought with the brain activity accompanying them is unempirical and illogical.²³

In response to such attacks, this much must be granted: it is unempirical and illogical to equate the mental and physical *aspects* of a given brain process, to say that they are *one and the same aspect of that brain process*. But the Dual-Aspect theory does not do this. It says merely that a mental process and an electrochemical brain process, however different they may *appear*, are actually *one and the same process*.

The reason why a single process can be presented to our awareness in two forms so radically different is provided by the Dual-Aspect theory. In the one case, we see its mental aspect, because we are apprehending it through introspection; and in the other case, we see its physical aspect, because we are apprehending it extrospectively.²⁴ Since, however, the mental process and the physical process are the same process, and in that sense are identical, we are aware of the same unique process in both cases.

What we are actually saying is that *a given brain process*, which happens to be both physical and mental in character, *is itself*. This is far from a failure to recognize the basic *difference* between the two *aspects* of that brain process' identity.

As for the relationship between a mental process and a *brain* process, they too may well be one and the same process. That is, there is no absurdity in identifying them, any more than in

saying that a given moving physical entity and a given physical entity are identical. Here, as before, we are merely seeking to affirm the fact that when we apprehend the process' (or entity's) identity, we are apprehending the process (or entity) itself.

People who reject the identity of mental processes with physical brain processes often do so because such a Dual-Aspect or Identity theory seems to entail reductive materialism. Admittedly, such materialists do maintain some sort of Dual-Aspect or Identity theory, but that is not the essential part of their theory. The component of reductive materialism distinguishing it from the Dual-Aspect theory is its view that anything other than physical aspects of reality is *unreal*, particularly, mental aspects. This, together with the consequent rejection of introspection as a valid means of knowing reality, is its essential characteristic.

Thus it is not necessary to deny the identity of mental processes and physical brain processes in order to reject the reductive materialist hypothesis. All one need do is reject the view of the physical as the sole reality, and the view of introspection as a distorting noncognitive form of awareness. This is precisely what the Dual-Aspect theory does.

If the Dual-Aspect theory is clearly a non-reductionist theory, however, it is still far from clear in light of earlier remarks whether a view of man as a non-deterministic free agent can be consistent with it. The remaining two sections will deal with objections to and implications of the fact that mind and mental processes lack the causal efficacy often ascribed to them by those maintaining a doctrine of freedom of the will.

IV. THE CAUSAL INEFFICACY OF MIND

The non-Humean conception of causation developed earlier in this paper provides a clear justification for maintaining that mental processes and mind have no causal efficacy. Even if mental processes and mind actually were processes and process-complexes *distinct from* physical brain processes and complexes of such processes, *they could not cause physical brain processes, any more than physical brain processes could cause them.*

The only causal agent involved is the human organism—

specifically, its organ, the brain—more specifically, those parts of the brain which interact, engaging in processes, some of which have conscious or mental aspects. Only entities, or parts thereof, may be said to cause actions or processes. And mental processes (i.e., mental brain processes) and “mind” (the complex of mental brain processes, as viewed introspectively) are simply *not* entities.

But if, in fact, the Dual-Aspect theory is correct, mental processes and mind are *not* processes and process-complexes *at all*, distinct from the physical brain processes and complexes of such processes. They instead are one and the same as the physical processes and process-complexes. They *are* those physical processes and process-complexes as known introspectively; our awareness of them is our awareness of the *mental aspect* of those physical processes and process-complexes.

How, then, shall we understand the seeming causal interaction between mental processes and other brain processes *below* the level of conscious awareness? Simply by recognizing that various parts of the brain carry out processes by which they interact with each other. One part of the brain, carrying out a process which may or may not be of sufficient complexity and/or intensity to possess a mental aspect, causes another part of the brain to carry out a process, which itself may or may not possess a mental aspect.

Thus, it is not the conscious or mental aspect of any such brain processes which causes other brain processes, or vice versa. It is the various parts of the brain carrying out processes possessing those aspects, which are the causal agents. (Similar remarks can be made regarding what seem to be mind-body interactions.)

This causal inefficacy of mental processes and of mind has led many people to protest in the following manner: What if consciousness (or mind) never existed? How could you claim human history would have been the same without consciousness or mind? How can you claim that consciousness has no role to play in the course of human events?²⁵

The error in such an objection is what I call the “what if” fallacy, or the fallacy of “logical possibility”. Its proponents ask us to *imagine* what a phenomeon would be like without

certain of its attributes.²⁶ The reply is that there simply is no *evidence* that it is possible for conscious-level brain processes to exist without the attribute of consciousness.

Brain processes and their attribute of consciousness are metaphysically inseparable. Consciousness is a necessary aspect of brain processes at a sufficiently high level of complexity and/or intensity. It can no more exist apart from those processes than can the color, mass, or volume of the human body, or the incandescence of an iron rod of certain high temperature;²⁷ nor can those brain processes exist apart from consciousness.

Thus, to speculate on how such brain processes might proceed without the attribute of consciousness is an exercise in futility. Consciousness is a natural, necessary attribute of those brain processes at or above that particular level. Those brain processes would not be those brain processes, were they not also possessed of their attribute of consciousness. Had consciousness never existed, it would be because brain processes of a sufficiently high level of complexity and intensity had never existed—otherwise, consciousness would *have* to have existed.

Without consciousness, human history could *not* have been the same, simply because humans would not have been able to carry out brain processes of a sufficiently high level to direct actions we would characterize as “human” (let alone, as “animal”). But the course of human events is not directed by consciousness *per se*. It is directed by *conscious human beings*, i.e., by human beings whose brains engage in processes possessing the attribute of consciousness.

Thus it is that consciousness (or mental processes) and mind are causally inefficacious. Moreover, they are *uncaused* as well (except in the derivative respect whereby the brain processes of which they are aspects, are themselves caused). What remains to be established, though, is whether man, whose mind is impotent with regard to his actions, can be said, in any meaningful sense, to be “free”.

V. MIND, SELF, WILL AND “FREEDOM”

We have established that the mind, considered as *activity* or process, is not a set of mental processes distinct from a set of

accompanying physical brain processes. Instead, it is that set of physical brain processes, as viewed introspectively.

From the standpoint not of activity, but of *capacity* to act, we also employ the term "mind" in common parlance, as if it were a capacity distinct from the capacity of the brain to carry out its processes. But the mind, qua mental capacity is merely the capacity of the brain to carry out *mental brain processes*. As such, it is one and the same as the brain's capacity for carrying out physical brain processes of a sufficiently high degree of complexity and/or intensity that they take on a mental aspect.

The *direct experience* of the brain's capacity to carry out mental brain processes is the awareness of one's *ego*. That is, one's ego is one's capacity to carry out mental processes, as viewed introspectively. One is aware of a feeling that one *can* carry out certain mental brain processes.

From such direct, introspective data—the awareness of one's ego—one eventually *infers conceptually* that there is a persisting, abiding capacity of the organism to carry out such mental processes. This inference is how one arrives at the concept of *mind qua capacity*.

Entailed by the awareness of the ego, moreover, is the awareness of *self*—i.e., of one's self. The concept of 'self' *per se* does not necessarily imply a self-conscious being. It merely implies a being which is the *object* of some action which that same being has taken.

When the action is introspection, a mental brain process which is cognitively directed toward another mental brain process in the same organism, then that organism is being *aware of* its self. It is aware that, as an organism, it is introspectively viewing *that same organism* while it is carrying out another mental brain process.

So self is not some mysterious personalizing accompaniment of the human organism. It is the human organism, considered insofar as it is both the agent and the object of some action. Self-awareness (awareness by an organism of that same organism) occurs when that action is introspection.

One's conscious self is the human organism which one is, considered insofar as it is both the agent and object of consciousness (mental brain processes). Thus, one's ego is to one's

conscious self as a human organism's mental capacities are to that organism—namely, in a relation of capacity to organism, known directly in the former instance, and inferentially in the latter.

Like the ego, the will also exists in a specific relation to one's conscious self, and more generally to oneself as a conscious, minded organism. This can best be seen by considering the nature and cause of human action, in the context of the specific way in which it exemplifies the action-principles common to all living organisms.

Like all living organisms, a human being "... is a complex integrate of hierarchically organized structures and functions ... controlled in part by their own regulators and in part by regulators on higher levels of the hierarchy". In order to remain alive, an organism's component parts must "function in such a way as to preserve the integrity of that structure ...". This functioning is *self-generated*, generated by the organism and its components—not by the outside physical factors impinging upon it.²⁸

The continued life—i.e., the continued structural and functional integrity—of the organism, is the principle which is the ultimate regulator and director of the organism's life functions. In other words, an organism's actions are *self-regulated* toward its continued existence.²⁹

Thus, life is an attribute of certain entities: the capacity to engage in self-sustaining and self-generated (and regulated) activity—activity which *results in* the continuance of the structural-functional integrity of those entities, and which is *caused by* those entities (and directed toward that end).

A distinction is implicit here between the capacity to act so that a certain goal is achieved, and the capacity to direct that action, monitoring it and correcting for deviation from (or obstacles to) the goal of that action. These capacities for self-generated and self-regulated action are not, however, separate capacities for separate types of action, but rather two analytically distinguishable aspects of one and the same capacity and action. (This in turn indicates how the nature of the will is to be characterized shortly).

The higher the complexity of the function carried out, the

