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I. INTRODUCTION

Professor Adler has considered, in his admirable book,¹ two related topics, each of major importance in its own right. *The Difference of Man and the Difference It Makes* considers both certain aspects of the mind-body problem and the moral consequences of possible settlements of the mind-body problem.

In the interests of a relatively brief and unified discussion I shall here consider only the "Difference of Man," reluctantly postponing "the Difference It Makes" for another time. Moreover, I shall consider Professor Adler's views on the mind-body problem primarily with respect to the Identity Thesis.

Professor Adler has organized his work with such care and honesty that inspection of his presuppositions is easy. I shall begin by describing and discussing them; their importance for the force of his argument is considerable.

Next I shall very briefly indicate the logical structure of the argument as it leads to the consideration of the Identity Thesis; again, this task is made easy by Professor Adler's conscientious exposition.

My main effort will be expended on explaining Professor Adler's views on the scope and validity of the Identity Thesis, and evaluating his challenge to it.

¹Mortimer J. Adler, *The Difference of Man and the Difference It Makes*, Holt, Rinehart and Winston, N.Y., 1967.

II. DEFINITIONS: KINDS OF DIFFERENCE

DESCRIPTION

Since Prof. Adler poses his question in terms of the difference of man from other animals, he begins by distinguishing ways in which things may differ. Three important ways emerging from this discussion² are:

- a) difference in degree;
- b) superficial difference in kind;
- c) radical difference in kind.

Differences in degree are relatively easy to understand: *x differs in degree from y with respect to P*, if there is some feature *P*, capable of graduation into degrees, such that $P(x)$ and $P(y)$, but *x* possesses a greater degree of *P* than does *y*.³ *Warm, Bright, Strange, Fast*, are instances of properties susceptible to graduation.

A difference in kind exists when of two things *x* and *y*, for some *P* insusceptible of graduation, $P(x) \ \& \ \sim P(y)$ obtains. Examples of properties insusceptible of graduation are *Located in Space, Prime, Odd, Left-Handed*.⁴

There can be merely apparent differences in kind. These are differences in degree, where the measure of difference between instances is large and no instances of intermediates are available. Since intermediates are possible, however, such a state of affairs is *not* a real difference in kind.⁵

²His scheme of differences is more elaborate, but these are the relevant ones. See his Chapter Two, especially pp. 30-31.

³*Op. cit.*, p. 20. Adler specifies, indeed, that the property be susceptible of *continuous* graduation.

⁴It is worth noticing that properties of this sort tend to be formal properties (Odd vs. Even, Prime vs. Composite); one has to cast about for physical ones (e.g., Right-handed vs. Left-handed); even the latter are fairly formal. By contrast, graduated properties abound in everyday experience.

⁵*Op. cit.*, pp. 23-24.

The distinction of vital importance for us is between "superficial" and "radical" differences in kind.

A "superficial difference in kind" is one "based on and explained by an underlying difference in degree, in which one degree is above and the other is below a *critical threshold* in a continuum of degrees."⁶ That is, for some x and y , for some properties P and Q , for some values of $P:P_a$, P_b and P_θ ,

$$'P_a(x) \text{ and } P_b(y) \text{ and } P_a \geq P_\theta \text{ and } P_b < P_\theta'$$

explains ' $Q(x)$ and $\sim Q(y)$.' Professor Adler adduces as example the critical thresholds of temperature (and pressure) for which rigid ice becomes flowing water, and for which liquid water becomes gaseous vapour. Ice, water, and water vapour differ in kind, but only superficially, since the difference is explained by critical thresholds in the continuum of degrees of molecular activity.

I do not find that the assertion that there are properties with respect to which things differ superficially in kind amounts to emergentism, because a superficial difference in kind is by definition adequately⁷ explained by a difference in degree in which there are thresholds.

"Radical differences in kind" are differences in kind not adequately explained by thresholds in an underlying continuum of degrees,⁸ although an underlying continuum of degrees may be a necessary condition for a radical difference in kind. The assertion that there is a property P such that there are things x and y differing radically in kind with respect to P is emergentism with respect to P .

⁶*Ibid.*, p. 24.

⁷An 'adequate' explanation is a statement of sufficient condition. cf. *op. cit.*

⁸*Op. cit.*, pp. 25 ff.

DISCUSSION

Given that x and y differ in kind because for some nongraduated P , $P(x)$ & $\sim P(y)$, I cannot discover whether Professor Adler would maintain a real difference in kind between x and y with respect to P if it were possible that $P(y)$. Since paradigm cases of real differences in kind involve properties rather precisely defined, so that if $\sim P(y)$ then *necessarily* not $P(y)$ (e.g., odd and even, left and right, etc.), the question fails to arise until we have seen Professor Adler's application of the concept. In his applications, things differ in kind with respect to properties not, *prima facie*, necessarily lacked by one of the differing items (or, for that matter, necessarily possessed by the other). There is nothing logically wrong here; but it is well to be warned that the concept of a difference in kind is not as strong as at first sight it might appear to be. A man with two whole arms differs in kind from a man with only one.

A more serious question concerns specifically the notion of a radical difference in kind: it appears to be a universal relation as it stands. Every individual differs radically in kind from every other, by virtue simply of its individuality (cf. Leibniz' law); and, moreover, every physical thing will differ radically from every other by virtue of its spatio-temporal coordinates.⁹

This consequence can probably be avoided by suitably restricting the kind of property to be considered relevant to differences in kind. With such restrictions, we may still find apparent instances of radical differences in kind; for example,

⁹Which, although graduated, are uniquely possessable for material objects, and intermediates between possessing a given set, and *not* possessing a given set, of them, are impossible.

atoms possess chemical identity, and simultaneously certifiable position and momentum, whereas the particles of which atoms are made cannot be said to possess either. Aggregates of molecules possess temperature and colour, and the molecules of which they are aggregates cannot be said to possess either. In these generally acceptable instances, however, there is a semantic factor; it is not so much that a single molecule lacks temperature, for example, as that the concept of temperature simply is not defined for single molecules. Hence we return to the question whether differences in kind, particularly radical ones, are not peculiarly dependent on a model. I cannot resolve this question within the framework of Professor Adler's views; I can only repeat that his applications of the notion of differences in kind lack the flavour of necessity possessed by generally accepted examples.

III. STRUCTURE OF THE ARGUMENT

Professor Adler's avowed intent is to discover whether there is a radical, or only a superficial, difference in kind between men and other animals. However, I shall describe his strategy as though his aim were to show that there is a radical difference in kind. This will simplify the exposition and is not altogether unfair.

The steps of the argument are, in outline, as follows; they will be examined in more detail in Sec. IV.

- 1) There is a manifest (observed) difference in kind between men and other animals. This difference is men's use of propositional languages, something totally lacking in any degree in other animals.¹⁰
- 2) This manifest behavioral difference must be explained by an underlying psychological difference. The question now becomes: is the psychological difference a difference in degree; and, if it is a difference in kind, is it radical or only superficial? If it is superficial, then it is to be explained by reference to a critical threshold in an underlying continuum of degrees of neuro-physiological difference.
- 3) In order to answer the question in 2), Professor Adler distinguishes between "perceptual abstractions" and "concepts." He wishes to show that the explanation of animal behavior requires positing only perceptual abstractions, not concepts; whereas the explanation of human behavior requires both. If this is true, it will constitute a psychological difference in kind.

¹⁰*Cf.* Ch. 8, "The Pivotal Fact: Human Speech." I have obviously condensed Prof. Adler's patient, cautious discussion considerably.

- 4) To show 3), Adler distinguishes "signals" from "designators." The use of signals is tantamount to inference-making of the form 'If p, then q'; signals are like cues. Designators, by contrast, have meanings existentially independent of what they may denote, and understanding them is not like making an inference, but rather consists of grasping their meaning. Some signals are natural, but all designators are conventional.¹¹

The only way, it appears, to ascertain whether a sign is functioning as a designator is through observing linguistic behavior.¹² Consequently, the principle of parsimony denies to non-linguistic animals the use of designators. Since concepts are the meanings of designators,¹³ the explanation of human behavior requires positing concepts; parsimony denies positing concepts to explain the behavior of animals. Hence 3) is answered, and there is a psychological difference in kind, not in degree.

- 5) Now the second question in 2), whether the psychological difference in kind between men and other animals is radical or superficial, may be addressed. If the difference in kind is superficial, it must be fully explicable by reference to a threshold in an underlying continuum of degrees of some property--presumably, neurophysiological complexity. In order to show that the psychological difference in kind is radical, not superficial, Prof. Adler must find reason

¹¹Since I found no definition or very concise characterization of signals and designators, I have perforce given an interpretation of Prof. Adler's distinction, drawn from the discussion and illustrations, pp. 165-173 and elsewhere in the book.

¹²Cf. *op. cit.*, pp. 156, 177, 179.

¹³*Ibid.*, p. 186.

to believe that it *cannot* be adequately explained in neurophysiological terms. He sets out to show something even stronger: that the psychological difference in kind cannot be explained in material terms at all.

This brings him to the issue of materialism, and, hence, to the Identity Thesis. In the next section we shall examine his views on the Identity Thesis and, in so doing, see in somewhat greater detail his reasoning on the four steps outlined above.

IV. PROFESSOR ADLER AND THE IDENTITY THESIS

The Identity Thesis, in asserting the identity of psychological and neurophysiological processes, denies that there is a radical difference in kind between men and other animals. Supposing that Professor Adler desires to establish such a radical difference,¹⁴ he would find some fault in the Identity Thesis. It is astonishing that he finds so little. He is willing to concede without argument the probable truth of the Identity Thesis for what has been called sentience--a staggering gift, leaving one as non-plussed as a man who has charged an unlocked door. Professor Adler's view on sentience is:

. . . all the phenomena of the perceptual order--sensations and sensory affects, sensitive memories and memory images, perceptions and perceptual abstractions--can be adequately explained by reference to neurological factors and processes and, therefore, need no supplementary immaterial factor to complete the explanation . . .¹⁵

It is, then, on the issue of sapience that Professor Adler sees trouble for the Identity Thesis; specifically, on the issue of the explanation of conceptual thought in neurological terms.

The "difference of man" which causes Adler to suspect a radical difference in kind between men and other animals is, as we have seen, the capacity for propositional speech, requiring the notion of concepts for its explanation. We can best understand concepts in contrast to perceptual abstractions, which Professor Adler has said do not require

¹⁴A supposition indeed, but one that I think is justified by his opinions about the consequences of not establishing such a difference.

¹⁵*Op. cit.*, p. 196. See also *op. cit.*, pp. 197, 201, 202, 205.

to be explained by immaterial factors. A *perceptual abstraction* is

a disposition to perceive a number of sensible particulars (or, in laboratory parlance, stimuli) as the same in kind, or as sufficiently similar to be reacted to the same . . .¹⁶

He adds,

This disposition is only operative in the presence of an appropriate sensory stimulus, and never in its absence, i.e., the animal does not exercise its acquired disposition to recognize certain shapes as triangles or certain colors as red when a triangular shape or a red patch is not perceptually present and actually perceived.¹⁷

Contrasting with perceptual abstractions are concepts:

If we restrict ourselves for the moment to concepts that relate to perceived or perceptible objects, a concept can be defined as an acquired disposition to recognize the kind of thing a perceived object is and to understand what that kind of thing is like.¹⁸

He adds

The disposition to understand what dogs are like can be exercised when dogs are not actually perceived as well as when they are; whereas perceptual abstractions, as dispositions to discriminate between sensible similars and dissimilars, function only when sensible particulars are being perceived.¹⁹

Both concepts and perceptual abstractions are unobservable; concepts are no more introspectable than are

¹⁶ *Ibid.*, p. 153.

¹⁷ *Ibid.* I am a little puzzled how an animal *could* exercise a disposition, so defined, in the absence of the stimulus, which is by definition the occasion for exercising it.

¹⁸ *Ibid.*, p. 157.

¹⁹ *Ibid.* The 'exercise' of a non-occasional disposition (like understanding what something is like) is a touch mysterious to me; I assume he simply means that the disposition is non-occasional.

perceptual abstractions.²⁰ Both are viewed as theoretical constructs required to explain behavior. Perceptual abstractions are all that are needed to explain animal behavior;²¹ we must add concepts in order to explain human linguistic behavior.

Concepts, for Professor Adler, are meanings in the sense of connotations, intensions, or universals:

. . . the source of all meanings possessed by anything which has, gets, loses, and changes its meaning lies in concepts, for concepts *are* meanings.²²

The source, then, of Professor Adler's doubts about the Identity Thesis lies in intentionality--but not in intentionality *per se*. He allows that perceptual abstractions (which he takes as neurophysiologically explicable) have a kind of intentionality.²³ But they do not have the kind of intentionality which concepts have. The important difference, for him, is that the reference of perceptual abstractions never transcends particulars;²⁴ concepts, in contrast, are universal--they "consist in meanings or intentions that are universal."²⁵ But everything that exists physically is particular; as Adler puts it,

²⁰*Ibid.*, p. 156; see also pp. 148-149.

²¹The reason apparently being that only linguistic behavior, which other animals do not evince, requires the assumption of concepts in order to be explained (see p. 156 ff, pp. 177-179). Since my mission is not to stand up for animal conceptualizing, I do not care to debate whether there is, or is not, a radical difference in kind between man and other animals, in that men do, and other animals do not, possess concepts. The point at issue is whether human behavior is wholly physical or requires the assumption of immaterial factors for its explanation.

²²*Ibid.*, p. 186.

²³Cf. *Ibid.*, pp. 214-220.

²⁴Or, perhaps, their reference is to universals only as they are immanent in particulars--which seems more likely to me. He is not altogether clear on that point.

²⁵*Ibid.*, p. 220.

The argument in its bare bones hinges on two propositions. The first proposition asserts that the concepts whereby we understand what different kinds or classes of things are like consist in meanings or intentions that are universal. The second proposition asserts that nothing that exists physically is universal; anything that is embodied in matter exists as a particular instance of this class or that. From these two propositions it follows that our concepts are immaterial.²⁶

If I construe Professor Adler correctly, he does not think that there is a problem for materialism in intentionality or reference *per se*--which some of us have thought--but only in intentionality or reference involving universals. He says that if concepts "were acts of a bodily organ, such as the brain, they would exist in matter, and so would be individual. But they are universal. Hence, they do not and cannot exist in matter . . ." ²⁷

Again,

Our concepts are universal in the character of their intentionality. Hence they do not exist physically; they are not embodied in matter. Since our concepts are acts of our power of conceptual thought, that power must itself be an immaterial power, one not embodied in a physical organ such as the brain.²⁸

In contrast

Since, unlike concepts, perceptual abstractions do not have an intentionality that is universal in character, immateriality need not be attributed to the power of which they are acts It is *only* an intentionality which is universal in

²⁶ *Ibid.*, pp. 220-221.

²⁷ *Ibid.*, p. 221.

²⁸ *Ibid.*, p. 222. I find the last inference a *non sequitur*. If an immaterial cause (e.g., conceptual thought) can have material effects (e.g., utterances of a physical body), I see no obvious reason why a material cause or agent might not have "immaterial" effects or acts such as the production of concepts.

character and that is characteristic of conceptual acts but not of perceptual acts, which warrants²⁹ attributing immateriality to a cognitive power.

Although I am not entirely satisfied with the reasoning that leads to the assertion that men have concepts,³⁰ I agree with the conclusion that they have; and moreover I agree that universals, whatever they are, and in whatever sense they may be said to exist, are not material objects and do not exist in the sense in which material objects exist. However, I do not think it is necessary for universals to exist materially in order for brains to have concepts. When a man thinks of a universal, it would be odd to suppose the universal itself is somehow entering the causal order; and I do not think so, any more than I think that the abstract types of words are the wherewithal of individual utterances. I utter particular, material *tokens* of words; I think with particular, material *tokens* of universals, which are presumably individual processes or states in my material brain.

If intentionality *per se* is not a problem for Professor Adler, then neither, I should think, are universals.

Indeed, he does not seem altogether convinced of the soundness of his argument for an immaterial power in men; for he is willing to countenance the possibility of an empirical test³¹ which would falsify his conclusion, and obligate him "to re-examine the premises and reasoning to discover the source of the error."³²

²⁹*Ibid.*, p. 226. Emphasis added.

³⁰The "exercise" of a disposition to understand; the notion of a concept as an "act," and so on, bother me.

³¹The "Turing test," in which a robot shows the capacity to converse in a natural language as plausibly as a man. See *op. cit.*, Ch. 14, "The Third Prong: From Descartes to Turing."

³²*Ibid.*, p. 246.

V. SUMMARY AND CONCLUSIONS

Professor Adler granted three major boons to the Identity Thesis:

- 1) It is probably true for sentience.
- 2) Intentionality *per se* is not a problem.
- 3) If the Identity Thesis is true, then the mind-body problem (for sentience and sapience) is solved.³³

He furthermore is willing to submit the validity of his one objection to an empirical test, the success of which would, in his opinion, conclusively establish the Identity Thesis, and the failure of which would not conclusively falsify it. This is no small gift.

In the face of such unexpected generosity, one is hardly inclined to quibble. I can say only that I am troubled by problems that do not trouble Professor Adler, and the problem that troubles him--the immateriality of universals--does not appear to me as a problem for the Identity Thesis at all.

³³*Ibid.*, p. 198.