



THE DIFFERENCE OF MAN AND THE DIFFERENCE IT MAKES

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(Part 2 of 2)

It is in this situation that we find ourselves in the middle of the twentieth century. We must turn to science for a resolution of this issue. However, the decisive scientific evidence cannot be provided by the neurologists. No matter what the neurologists discover about brain processes, even with all the recent knowledge that we have of the chemistry as well as of the electrical action of the brain, all that we will ever find out is that the brain is *a necessary condition*. This everyone already admits. Neurological evidence will never by itself answer the question whether, in addition to being necessary, the brain is sufficient.

Nor will zoological evidence answer the question. Let us consider the kind of work that Dr. Lilly has done on dolphins, and others have done on dogs and chimpanzees. Dr. Lilly has written two delightful books on the subject of dolphins. The reason he went to work on dolphins is that the relative brain weight is very near to the relative brain weight of man. All other mammals, even the highest apes, have a body-brain weight ratio far below the body-brain weight ratio of man; only the dolphins have a brain weight relative to body weight that is almost the same as man's. Hence, if relative brain weight is a decisive factor, one might expect to find propositional speech and conceptual thought in dolphins. That is what Dr. Lilly is trying to discover; and he thinks he is going to succeed. He thinks he is going to be able to learn Dolphinese and speak with the dolphins, or to teach the dolphins English and have them speak to him. He expects to go beyond signalling in communication with dolphins. He expects to engage in communication by means of questions and answers.

Now let us suppose that Dr. Lilly succeeds. What would it prove? It would prove only that the brain weight of the dolphin is very significant factor; that the dolphin's brain weight may be above a critical threshold for propositional speech and conceptual thought; but we can still ask whether that decisive relative brain weight is only a necessary, or also the sufficient condition of conceptual thought. It is possible, in *both* the dolphin and man, that a certain magnitude of brain is only a necessary condition. An immaterial non-physical factor may be operative in the dolphin as well as in man.

Even though neurology and zoology will never resolve the crucial issue, we are not left totally helpless. What makes me so excited about this whole problem is that I think that we are going to get a decisive answer, one way or the other, in the next fifty or one hundred and fifty years. That is a short time, considering how long we

have been concerned with this problem. Let me now try to tell you whence and how the answer will come.

To do that, I am going back to the great French philosopher, René Descartes, who thought that all organisms other than man—all other animals—were automata or machines. Only man had a rational soul; only man had an immaterial or non-physical factor in his makeup. (In the diagram, by the way, M stands for material and I for immaterial.) Descartes' position can be summarized in a single sentence: "Matter cannot think." For Descartes, that proposition was self-evident. Hence he did not attempt to prove it by direct arguments, but only to defend it by indirect argument in the form of a *reductio ad impossibile*. In effect, Descartes challenged his opponents as follows: "If you think I am wrong in maintaining that matter cannot think, you produce for me a machine that can think and I will admit that I am wrong. If it is a machine, made of material parts in motion, and it thinks, I will have to admit that matter *can* think." Descartes went a step further. He said: "I will tell you what the machine must do to convince me that it can think. It must engage in conversation with me, in exactly the same way that men engage in conversation with one another. I observe in men this capacity to converse. It is a highly flexible process; the questions can be of any sort; the answers can be of any sort; you never can predict the course of the conversation; and so if a machine can ever engage in conversation with such flexibility, then I will admit that machines can think. In short, I propose the conversational test to discover whether conceptual thought can or cannot be explained by material factors alone."

We now jump from the seventeenth century to the twentieth century. In England, about fifteen years ago, there was an extraordinary young mathematician by the name of Turing, an extraordinary genius. Unfortunately, he died very young, but he lived long enough to write some brilliant essays on the subject of machine-thinking. There has been endless talk about this, as you know, and much of it is loose and empty talk because the word "thinking" is such a loose word. Nobody can define precisely what he means by it. Turing avoided this morass by taking up Descartes' challenge. To explain how he did this, I must tell you about Turing's game and Turing's machine. (Again note that in the diagram T stands for Turing, and TS means Turing success; TF Turing failure.)

Turing's game is nothing but an adaptation of an interesting old game. That game goes as follows: Behind a screen are a man and a woman; in front of it, an interrogator. The interrogator can ask the persons behind the screen any question. They must answer the

question in typewritten form, so that tone of voice will not betray them. They are allowed to lie. Their whole aim is to escape detection. Given equal intelligence on the part of the interrogator and the two persons behind the screen, can the interrogator ever detect which is the man and which is the woman? The answer is No. Guesswork on the interrogator's part would produce detection in 50% of the trials. To show that the interrogator is not guessing, he would have to succeed 90% or 85% of the time. Given equal intelligence on the part of all persons involved, the interrogator can never do better than mere guesswork.

Now, says Turing, let us substitute for either the man or the woman, a machine. The machine must answer questions just as the human beings answer questions, in typewritten form. Turing claims that it is now mathematically demonstrable that a machine can be constructed, with only *infant programming*, that will *learn* to use English and be able to play this game and play it well enough to take the place of a human being. If that is the case, you would have a machine behind the screen along with a person, and the machine will lie as well as a human person can lie, so that the interrogator can only guess which is the machine and which the person. If the Turing machine succeeds in thus passing the conversational test, then you will have clear decisive evidence that matter can think—unless you want to believe, as some people have said to me, that a spook crept into the machine while no one was looking. Otherwise, knowing, as you do, that the machine is built wholly of wires and transistors, and that it is only a thing of matter, you know that matter *can* think, and think *conceptually*, as man thinks.

There is no question that the technologists are going to try to produce a Turing machine. They may try many times, and fail or succeed. As we go into the future, there are just two possibilities. Either some day they will build a Turing machine that succeeds in playing the Turing game and passes the conversational test, or try as they will, again and again, no Turing machine will ever succeed.

Success on the part of a Turing machine (TS) means that matter can think (TS-M), and that means a decisive resolution of the issue: man differs only superficially in kind and is continuous with the rest of nature. Failure on the part of Turing machines, after repeated efforts is not as decisive. It only increases the probability that matter cannot think (TF-I), and that tends to support the view that man differs radically in kind and is discontinuous from the rest of nature.

II.

The one thing that we can be sure about is that sometime in the not too remote future, we are going to find out which is the case—*either* a decisive answer in favor of man's differing in kind only superficially, or an ever increasing probability that man's difference in kind is radical. With that in mind, and with the further possibility that we may yet discover that man differs *only in degree*, let us now consider what difference it makes which of these three possibilities is the case.

There are two types of difference it can make—two types of consequences: (1) *practical consequences* in the world of action, either directly affecting conduct or affecting the principles that underlie conduct and that are appealed to in order to justify conduct; (2) *theoretical consequences* in the world of thought, affecting our beliefs or our commitments to this or that theory or doctrine.

Let us first consider the consequences in the world of action—the differences it will make whether man differs *only* in degree, or *superficially* in kind as well, or also *radically* in kind.

If man differs only in degree, then there is no tenable distinction between person and thing. Right now most of us assume that we are persons and that everything else is a thing, not a person. On man's being a person, not a thing, rests the whole doctrine of natural rights, the doctrine of the dignity of man, the basic injustice of slavery and of human exploitation. Further, the equality of men consists in their equality as persons, and their superiority in kind to animals and machines as mere things. If our present treatment of animals is justified by our superiority to them merely in degree, then superior men or superior races of men would be equally justified in treating inferior men or inferior races of men as men now treat animals. This point is so important that I hope you will forgive me for reading an expansion of it from my forthcoming book.

If in the future we should discover that man differs from other animals only in degree, the line that divides the realm of persons from the realm of things would be rubbed out, and with its disappearance would go the basis in fact for a principled policy of treating men differently from the way in which we now treat other animals and machines.

Other practical consequences would then follow. Those who now oppose injurious discrimination on the moral ground that all human beings, being equal in their humanity, should be

treated equally in all those respects that concern their common humanity, would have no solid basis in fact to support their normative principle. A social and political ideal that has operated with revolutionary force in human history could be validly dismissed as a hollow illusion that should become defunct. Certain anatomical and physiological characteristics would still separate the human race from other species of animals; but these would be devoid of moral significance if they were unaccompanied by a single psychological difference in kind. On the psychological plane, we would have only a scale of degrees in which superior human beings might be separated from inferior men by a wider gap than separated the latter from non-human animals. Why, then, should not groups of superior men be able to justify their enslavement, exploitation, or even genocide of inferior human groups, on factual and moral grounds akin to those that we now rely on to justify our treatment of the animals that we harness as beasts of burden, that we butcher for food and clothing, or that we destroy as disease-bearing pests or as dangerous predators?

It was one of the Nuremberg decrees that ‘there is a greater difference between the lowest forms still called human and our superior races than between the lowest man and monkeys of the highest order.’ What is wrong in principle with the Nazi policies toward Jews and Slavs if the facts are correctly described and if the only psychological differences between men and other animals are differences in degree? What is wrong in principle with the actions of the enslavers throughout human history who justified their ownership and use of men as chattel on the ground that the enslaved were inferiors (barbarians, gentiles, untouchables, “natural slaves, fit only for use”)?

What is wrong in principle with the policies of the American or South African segregationists if, as they claim, the Negro is markedly inferior to the white man, not much better than an animal and, perhaps, inferior to some?

The answer does not consist in dismissing as false the factual allegations concerning the superiority or inferiority of this or that group of men. It may be false that, within the human species, any racial or ethnic group is, as a group, inferior or superior. But it is not false that extremely wide differences in degree separate individuals who top the scale of human abilities from those who cluster at its bottom. We can, therefore, imagine a future state of affairs in which a new global division of mankind replaces all the old parochial divisions based upon

race, nationality, or ethnic group—a division that separates the human elite at the top of the scale from the human scum at the bottom, a division based on accurate scientific measurement of human ability and achievement and one, therefore, that is factually incontrovertible. At this future time, let the population pressures have reached that critical level at which emergency measures must be taken if human life is to endure and be enduring. Finish the picture by imagining that before this crisis occurs, a global monopoly of authorized force has passed into the hands of the elite—the mathematicians, the scientists, and the technologists, not only those who make and control machines of incredible power and versatility, but also those whose technological skill has mechanized the organization of men in all large-scale economic and political processes. The elite are then the *de facto* as well as the *de jure* rulers of the world. At that juncture, what would be wrong in principle with their decision to exterminate a large portion of mankind—the lower half, let us say—thus making room for their betters to live and breathe more comfortably?

That it seems to me is in the picture, if we find out that man differs only in degree.

Let me turn to the next possibility: that man differs *only superficially* in kind. Dr. Lilly, for example, thinks that if he is able to communicate with dolphins in propositional speech, he will then show us that the dolphins are persons. Dr. Lilly then goes on to say:

The day that communication is established, the dolphin becomes a legal, ethical, moral, and social problem. At the present time, for example, dolphins correspond very loosely to conserved wild animals under the protection of the conservation laws of the United States and by international agreement, and to pets under the protection of the Society for the Prevention of Cruelty to Animals.

But if they achieve a bilateral conversation level corresponding, say, to a low-grade moron and well above a human imbecile or idiot, then they become an ethical, legal, and social problem. They have reached the level of humanness as it were. If they go above the level the problem becomes more and more acute, and if they reach the conversational abilities of any normal human being, we are in for trouble. Some groups of humans will then step forward in defense of these animals' lives and stop their use in experimentation; they will insist that we

treat them as humans and that we give them medical and legal protection.

In similar vein, the philosophers—for example, Professor Sellars, Scriven, and Smart—maintain that a robot would be entitled to be regarded as a person if it can engage in conversation in an ordinary language such as English or French, not computerese. If they were right, then the distinction between person and thing would seem to be preserved, even if man differs only superficially in kind, because all these gentlemen, I assure you, are materialists, saying that the presence of propositional speech and conceptual thought in man can be adequately explained by brain action.

Against them is the traditional view of other philosophers who insist that being a person involves more than just having the power of conceptual thought. It involves freedom of the will, for only with such freedom can a person have moral responsibility. You cannot have moral responsibility without freedom of choice; and you cannot have freedom of choice if the brain is the *sufficient condition of conceptual thought*, because according to the best understanding of what is involved in free will, free will involves a non-physical or immaterial type of causality. The kind of freedom that occurs in free choice does not occur in a physical world. If man is wholly physical or material, man cannot have free choice; and consequently, man is not a person, in the full sense of that term, with *moral responsibility*. Only if it turns out that man is radically different in kind; only if experiments with Turing machines fail, time and time again, and so tend to confirm the immaterialist hypothesis against the materialist hypothesis, only then would we have a basis in fact for the equal treatment of men as persons and for the quite different treatment accorded by men to animals, *because men as persons are superior in kind, radically superior in kind, to animals as things*.

Now let us turn to the theoretical consequences. Here we need only be concerned with what follows if, on the one hand, man differs superficially in kind, or if, on the other hand, he differs radically in kind. In each case, I am going to deal first with the difference it makes in science and philosophy; later, I will deal with the religious or theological consequences.

What are the consequences for philosophy and science if man differs only superficially in kind, if Turing machines succeed, and the materialist hypothesis about man is confirmed? If this turns out to be the case, then the principle of the continuity of nature is upheld, and especially the principle of phylogenetic continuity; and there is

no question about man's evolutionary origin by natural processes and causes exactly the same as those at work in the case of all other cases of speciation. But it also follows, if this is the answer, that man has no freedom of choice, with all the serious moral consequences that follow from that conclusion.

What are the philosophical consequences of the opposite: failure on the part of Turing machines, again and again, with the result that the immaterialist hypothesis becomes more and more probable, and with it the conclusion that man differs radically in kind? First of all, we would then be confronted with the thorny problem of man's origin; for if man differs radically in kind, the principle of phylogenetic continuity is violated, and we cannot explain the origin of man on earth by the same natural causes that are at work in all other cases of speciation. Anyone with an open mind who is able to think would then have to consider seriously a new argument for the existence of a transcendent God, for only God's creative action could then explain man's origin. If purely natural causes will not explain man's origin, then we must look to supernatural causes. It is as simple as that.

What are the consequences of these same alternatives for religious beliefs and for theological doctrines? Let me consider, first, the tenets or dogmas of orthodox Judaism and orthodox Christianity. There is no question that the central beliefs of these religions would be undermined if a Turing machine succeeded, the materialist hypothesis were confirmed, and we found that man differed *only superficially in kind*. Consider the following dogmas of orthodox Christianity.

- (1) The dogma of man's personality: that man and man alone is made in the image of God, and has this special character among all terrestrial creatures by virtue of his having a spiritual aspect, or a non-material component in his nature.
- (2) The dogma of man's special creation: that the origin of the human race as a whole, and the coming to be of each human individual, cannot be adequately accounted for by the operation of the purely natural causes that are operative in the biological processes of reproduction or procreation, but requires the intervention of divine causality.
- (3) The dogma of individual immortality or of a life hereafter for the individual human person: that the human soul unlike the souls of other living things, is capable of subsisting apart from the body, even though for the perfection of hu-

man life, it needs to be re-united with the body that God resurrects from the ashes of this earthly life.

- (4) The dogma of free will and moral responsibility: that man is morally responsible for his compliance with or transgression of God's will by virtue of his having the power of free choice between good and evil, between loving God or turning away from him.


These four dogmas would have to be rejected if a Turing machine succeeds. In addition to undermining these dogmas about man, Turing success would lend support to atheistic disbelief, for the orthodox religious conception of God is closely integrated with the religious conception of man as made in God's image.

However, if Turing machines fail, and if the immaterialist hypothesis is thus confirmed or strengthened, atheism would be challenged; atheistic disbelief would become weaker just in proportion as the immaterialist hypothesis becomes stronger, because the existence in man of a non-physical or immaterial factor increases the credibility of the existence in the universe of a purely spiritual being—a transcendent, infinite God.

Finally, I come to the new or radical theology of the present day—the views of Tillich, Bultmann, and Bonhoeffer, the views summarized in Bishop Robinson's *Honest to God*, and the views of the promoters of the "God is dead" movement. If the position these writers take reduces to old-fashioned atheism dressed up in Madison Avenue slogans, then what I have already said about atheism applies. Their position is strengthened with Turing success, weakened with Turing failure. However, these writers sometimes try not to appear to be atheists. They do so by attributing to man a kind of divinity, whereby man transcends the rest of nature. They attribute this divinity and transcendence to man while at the same time denying it to God, denying, that is, a transcendent supreme being above man.

If that is the position they take—that there is no God in the old-fashioned sense, but that man has a kind of transcendence over nature—then the views of these new theologians *will be invalidated no matter which way the Turing experiment turns out*. On the one hand, it will be invalidated if man is found to be *only superficially different in kind*; and, on the other hand, it will be invalidated if man is found to be *radically different in kind*. Why? Because, on the one hand, if man differs only superficially in kind, then man does not transcend nature, and there cannot be even the slightest

spark of divinity in man. And because, on the other hand, if man differs radically in kind, man may have the divinity that consists in his being made in the image of God; but, in that case, there is strong ground for believing in God—the transcendent supreme being Who made man in His image. Thus we see that the new theologians are so confused that no matter which way the ultimate question about man’s difference is resolved, they can only be the worse confounded.

This is the only thing that is now completely clear. On all other points, we must look to the future, for we do not yet have a decisive answer to the question of how man differs from everything else on earth, nor do we really know how we will adjust to the difference it will make when, in the not too distant future, we finally find out. 

LETTERS TO THE EDITOR

Dr. Adler’s argument rests, in part, on the assertion that no animal engages in propositional speech. How does an observer identify “propositional speech” assuming they don’t speak the language fluently?

Are there any ethical implications to the competing propositions that humans are or are not part of a continuum with the animal kingdom?

If either of these general questions intrigues you and you would like to discuss them, please visit the Great Ideas Forum under the Philosophy and the Ethics forums. In both cases the topic title is “Man and the difference”.

Dr. Sean Ross

We welcome your comments, questions or suggestions.

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