

The Consequences for Action

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AS AN initial step toward determining the consequences for action that flow from asserting or denying man's difference in kind, I propose to examine some contemporary views of the matter—the opinions of a number of scientists and philosophers who have faced up to this problem in one way or another.

Let me present first the warning given us by Dr. John Lilly with regard to the possibility that, in the not too remote future, we will be able to engage in a two-way conversation with the bottle-nosed dolphin. If and when this occurs, according to Dr. Lilly, we will have to attribute to dolphins the same kind of intellectual power that we attribute to men and deny to other non-linguistic or non-conversational animals. In other words, though men and dolphins may differ in the degree of their common intellectual power, they will stand on the same side of the line that divides animals that have such power from animals that totally lack it. Men and dolphins together will differ in kind from other animals. [1]

Would this possible state of facts, if realized, have any practical consequences? Dr. Lilly thinks it would. He writes:

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 con-

servation 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. [2]

Let us consider next the view expressed by Professor Michael Scriven of the University of California in his Postscript to an article on "The Mechanical Concept of Mind." He is concerned with the question whether a robot that is successful at playing Turing's game can also pass the test that would require us to attribute consciousness to it. "With respect to all other performances and skills of which the human being is capable," Scriven writes, "it seems to me clear already that robots can be designed to do as well or better." But with respect to this special performance—the one that would be the test of the robot's consciousness—Scriven says that he was not certain at the time of writing the article; however, in the postscript which he added, he tells us that he is, "upon further deliberation, confident that robots can in principle be built that will pass this test too, because they are in fact conscious." [3]

We need not agree with Scriven's prediction about the behavior of some future robot in order to take account of his comment on the practical consequences of his prediction's coming true. On the outcome of his prediction depends, in his judgment, "not only the question of matching a performance, but . . . also the crucial ontological question of the status of a robot as a person and thence the propriety of saying that it knows or believes or remembers. . . . If it is a person," Scriven goes on to say, "of course it will have moral rights and hence political rights." [4]

I turn next to the reflections of Professor Wilfrid Sellars on

what it means to be a person rather than a thing and on the criteria for drawing the line that divides persons from things. Sellars writes:

To think of a featherless biped as a person is to think of it as a being with which one is bound up in a network of rights and duties. From this point of view, the irreducibility of the personal is the irreducibility of the "ought" to the "is." But even more basic than this . . . is the fact that to think of a featherless biped as a person is to construe its behavior in terms of actual or potential membership in an embracing group each member of which thinks itself a member of the group.

Such a group, according to Sellars, is a community of persons. From the point of view of each of us as an individual, the most embracing community of persons to which we belong includes "all those with whom [we] can enter into meaningful discourse. . . . To recognize a featherless biped or dolphin or Martian [Sellars might have added, "or robot"] as a person is to think of oneself and it as belonging to a community"—the group of those who can engage in meaningful discourse with one another. [5]

I call the reader's attention to the criterion of being a person or a member of the community of persons. It is the same conversational test that Lilly and Scriven use for deciding whether dolphins and robots are persons or things. And that same criterion—conversational ability or ability to engage in meaningful discourse—also operates to differentiate man from brute. In other words, the same line that divides man from brute as different in kind also divides person from thing as different in kind. Furthermore, as Lily, Scriven, and Sellars all point out, how we treat a particular entity depends on which side of that line we place it. These authors would, therefore, seem to be maintaining that a difference in kind has practical—legal, ethical, and social—consequences.

I would like, finally, to add the testimony of another philosopher, Professor J. J. C. Smart. Professor Smart, like Professor Sellars, is a moderate materialist. Each in his own way argues that conceptual thought can be entirely explained in terms of neuro-

physiological processes. Hence, both would deny that man differs radically in kind from other animals or machines, and both would affirm the unbroken continuity of nature. But both also appear to maintain that man differs in kind rather than merely in degree from other animals, and that this difference, which is marked by the possession or lack of "conversational ability," also operates to draw a sharp line between persons and things, with the practical consequence of the differential treatment accorded persons and things. [6] Sellars makes all these points more explicitly and clearly than Smart, but it is, nevertheless, instructive to observe Smart moving in the same direction. He writes:

A scientist has to attend seriously to the arguments of another scientist, no matter what may be that other scientist's nationality, race or social position. He must therefore at least respect the other as a source of arguments and this is psychologically conducive to respecting him as a person in the full sense and hence to considering his interests equally with one's own. [7]

The moral obligation of one scientist to another, here recognized by Smart, can be generalized into the moral obligation of one person to another. The other to whom we owe respect, the other whom we ought to treat "as a person in the full sense," is here being defined as the giver or receiver of arguments. Interpreted broadly yet without violence to the essential point, the giver or receiver of arguments is one who can enter into meaningful—one might even say "rational"—discourse. Hence, the line that Smart draws between persons and things is the same line that differentiates man from brute; and, like Sellars and the others, he attaches definite moral consequences—respect and other obligations—to being on one side of this line rather than the other.

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The foregoing reference to the opinions of Dr. Lilly and Professors Scriven, Sellars, and Smart indicates some practical consequences of opposed answers to the question about how man differs from other animals—in kind or in degree only. These

writers all assume that the difference in kind that is established by man's having, and by all other animals' lacking, the power of propositional speech is only a superficial difference. They assume, in other words, that the power of conceptual thought can be adequately explained in neurophysiological terms, and that its presence in man and not in other animals can be explained by the size and complexity of the human brain, which is above the critical threshold of magnitude required for conceptual thought.

On this interpretation of the observed fact that linguistic animals differ in kind from non-linguistic animals, *is man a person rather than a thing?* The answer is affirmative if, as suggested by the above-mentioned writers, the line that divides persons from things can be drawn by such criteria as conversational ability, the ability to engage in meaningful discourse, and the ability to give and receive reasons or arguments. By these criteria, men are at present the only beings on earth that are persons. All other animals and machines are things—at least in the light of available evidence. The special worth or dignity that belongs exclusively to persons, the respect that must be accorded only to persons, the fundamental imperative that commands us to treat persons as ends, never solely as means—all these are thought to obtain on this theory of what is involved in being a person.

If in the future we should discover that dolphins, too, or certain robots, are persons in the same sense, then they too would have a dignity, deserve a respect, and impose certain obligations on us that other animals and other machines would not. However, 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 achieve-

ment 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 endurable. 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?

Stressing “in principle,” the question calls for a moral judgment. Validly to make a moral judgment in a particular case, real or imaginary, we must appeal to a defensible normative principle and one that is applicable to the facts as described. Can we do so in the case that we have been imagining? The facts include not only the scientifically measured ranking of individuals according to degrees of ability and achievement, but also the overarching fact that we have been taking for granted for the purpose of this discussion; namely, that it has been discovered that the psychological differences between men and other animals are all differences of degree. With exceptions that constitute a small minority, men have found nothing morally repugnant in killing animals for the health, comfort, sustenance, and preservation of human life. It seems reasonable to regard as morally sound those policies that have the almost unanimous consent of mankind, including its most civilized and cultivated representatives. By this criterion, we must acknowledge the moral validity of the policy that men have always followed with regard to the killing of animals for the benefit of the human race. If that policy is morally sound, it must reflect a valid normative principle. What is it?

It is indicated by the fact that, with the exception of relatively small numbers of scientists and philosophers, the members of the human race have always interpreted and still do interpret the observation that they alone of all animals have the power of speech as signifying not only a psychological difference in kind

between themselves and the brutes, but also the psychological superiority of their own kind. Combining this fact with the policy that men have pursued in their treatment of animals, we can discern the normative principle underlying the action. It is that *an inferior kind ought to be ordered to a superior kind as a means to an end*; in which case there is nothing wrong about killing animals for the good of mankind. The same rule applies to other uses of animals as instruments of human welfare.

Now let us alter the picture by introducing into it the supposition with which we began this discussion—the supposition that it has been discovered that men and other animals differ psychologically only in degree. If, on that supposition, we still think it is a morally sound policy to use animals as means to our own good, including killing them, the underlying normative principle must be that *superiors in degree are justified, if it serves their welfare, in killing or otherwise making use of inferiors in degree*. But that principle, once it is recognized to be sound, cannot be restricted to the relation between men and animals; it applies with equal force to the relation between men of superior and men of inferior degree, especially to those who are at the top and at the bottom of the scale of ability and achievement, since the difference in degree that separates them may be as large as the difference in degree that separates the lowest men from the highest animals. Thus we appear to have reached the conclusion that, given only psychological differences of degree between men and other animals, and given a scientifically established ranking of individuals on a scale of degrees, the killing or exploitation of inferior by superior men cannot be morally condemned.

Is there a flaw in the argument? If there is one, it would appear to lie in the illicit substitution of the relation between superiors and inferiors *in degree* for the relation between a superior and an inferior *kind*. I am not prepared to say that the substitution is illicit, particularly if the superior and the inferior in kind are only superficially different in kind and hence in their underlying constitution differ only in degree. But if the normative principle that subordinates inferiors in kind to the good of their superiors in kind is defensible only when the superiors and the inferiors differ radically in kind, then we cannot validly convert that normative principle into a rule governing the action of superiors in

degree with respect to inferiors in degree. Since, in the long history of man's reflective consideration of his action with respect to brute animals, the prevailing view of the difference between human beings and non-human animals has always been that it is not only a difference in kind, but also a radical difference in kind, I think it is reasonable to presume that the conscience of mankind has sanctioned the killing or exploitation of animals on this basis, and not on the view that the difference in kind is only superficial. The latter view, as explicitly formulated in this book, represents the position implicitly held by a relatively small number of scientists and philosophers in very recent times. It can hardly be regarded as generating the almost universal moral conviction that there is nothing reprehensible in the killing or exploitation of animals.

The conclusion that we have now reached has both negative and positive corollaries. On the negative side, the practical consequences may be very difficult to live with. If nothing less than the superiority of human to non-human beings that is based on a radical difference in kind between men and other animals can justify our killing and exploitation of them, we are without moral justification for our practices in this regard, should it turn out, as well it may, that the success of a Turing machine in the conversational game decisively shows that the difference in kind is only superficial. Two future possibilities—the one just mentioned or the possible discovery by psychologists that the difference between men and other animals is only one of degree—would leave us with what, after protracted consideration, might turn out to be an insoluble moral problem. We might have to concede that there is no clearly defensible answer to the question whether we ought or ought not to kill subhuman animals. We would then be forced to treat the problem as one of pure expediency, totally outside the pale of right and wrong. And in that case, would not the problem of how superior men should or should not treat inferior men also cease to be a moral problem, and become one of pure expediency? For those of us who still hold on to the traditional belief that moral principles of right and wrong govern the treatment of man by man, the contemplation of that eventuality is as upsetting as the possibility earlier envisaged—that with the discovery that men and other animals differ only in degree, it would

be possible morally to justify a future elite in exterminating the scum of mankind in a global emergency brought on by population pressures that exceeded the limits of viability.

The positive corollary reveals that some of our traditional moral convictions rest on the supposition that men and other animals differ radically in kind. When we affirm the equality of all human beings in virtue of their common humanity, and subordinate to that equality all the differences—and inequalities—in degree between one individual and another, that affirmation involves more than simply asserting that all men belong to one and the same kind, which can be anatomically or physiologically identified. It involves the assertion that men differ from other animals in kind, not only psychologically, but also radically in their underlying constitution. Their superiority to other animals by virtue of such a radical difference in kind is that which gives their equality with one another as members of the human species its normative significance—for the rules governing the treatment of men by men as well as for the rules governing the treatment of other animals by men. The revolutionary social and political ideal of human equality is thus seen to depend for its ultimate validity on the outcome of the test that will decide which of the competing hypotheses about man is nearer the truth. [8]

(3)

We have seen that the line we now draw between men as *persons* and all else as *things* would be effaced by the discovery that nothing but differences in degree separate men from other animals and from intelligent robots. But can it be preserved if the difference, while one of kind rather than of degree, turns out to be only a superficial difference in kind and, therefore, one that is ultimately reducible to, or at least generated by, a difference in degree? Can the special dignity that is attributed to man as a person and to no other animal, and can the rights and responsibilities that are usually associated with that dignity, continue to be defended as inherently human if man is not radically different in kind from everything else?

Dr. Lilly and Professors Scriven, Smart, and Sellars have presented us with what I shall call a diminished view of what it means

to be a person. For them, men are persons by virtue of their distinctive power of conceptual thought, manifested by propositional speech—and so also will dolphins and robots deserve to be ranked as persons if and when they, too, manifest their possession of conceptual thought by conversational or linguistic performances comparable to man's. In an etymologically warranted sense of the word "rational," talking animals are rational, and non-talking animals are brute; for the Greek word "logos" and its Latin equivalent "ratio" connote the intimate linkage of thought and word that is manifested in propositional speech. But if the difference between rational and brute animals solely and ultimately depends upon a difference in degree that places the talking animal above and the non-talking animals below a critical threshold in a continuum of brain magnitudes, such criteria as conversational ability, ability to engage in meaningful discourse, or ability to give and receive arguments may not suffice to establish men as the only persons in a world of things, with the dignity or moral worth that attaches to personality and with all the moral rights and responsibilities that appertain thereto. This began to become clear in our consideration of the hypothetical case that we explored dialectically in the preceding section. The argument there led us to the conclusion that the age-old prohibition against treating men as we have for ages treated animals, and the basic equality of men that rests not only on their all being the same in kind but also on their superiority in kind to animals, not just superiority in degree, cannot be defended—at least, not adequately—except on the ground that men differ *radically* from other animals and other things.

The reason why this is so can be made clearer by going back to the conception of personality as the bearer of moral worth, moral rights, and moral responsibility, which originated in classical antiquity with Plato and Aristotle and with the Roman Stoics, which developed under the influence of Christianity in the Middle Ages, and which, as reformulated in the eighteenth century, especially by Kant, prevailed in Western thought until very recently. As contrasted with the minimal or diminished view advanced by a number of contemporary writers, the traditional view conceived a person as a rational being with free choice. Rationality by itself—if that is nothing more than the power of conceptual thought as manifested in propositional speech—does not constitute a per-

son. A dolphin or a robot would not have the moral worth or dignity that demands being treated as an end, never merely as a means; would not have inherent rights that deserve respect; and would not have the moral responsibility to respect such rights, if the dolphin or robot was nothing more than a talking animal by virtue of having the requisite brain power for speech. Nor would a man! On the traditional view, a person not only has the rationality that other animals and machines lack; he also has a freedom that is not possessed by them—the freedom to pursue a course of life to a self-appointed end and to pursue it through a free choice among means for reaching that end.

I think the traditional view is correct as against the minimal view that has recently been advanced. Man as a person belongs to what Kant calls “the kingdom of ends” precisely because the end he himself pursues and the means whereby he pursues it are not set for him but are freely appointed and freely chosen by himself. His moral rights and moral responsibility stem from the freedom that is associated with his rationality, not just from his rationality itself. If the power of conceptual thought that constitutes his rationality can, according to the identity hypothesis, be adequately accounted for in neurophysiological terms, then man’s rationality does not carry with it the freedom of choice that is requisite for his having the moral rights and responsibility that comprise the dignity of a person. The power of conceptual thought elevates man above the world of sense, the world of the here and now; but the power that elevates him above the world of physical things and makes him a person is the power of free choice which, as Kant puts it, involves “independence of the mechanism of nature.” [9] Such independence can be man’s only if the psychological power that is distinctive of man involves an immaterial or non-physical factor and can, therefore, operate with some independence of physical causes.

The freedom of free choice is properly called a “contra-causal” freedom when “contra-causal” is understood not as the total absence of causality, but as the presence of a non-physical causality. This does not mean total independence of physical causes; it means only that the act of free choice cannot be wholly explained by the action of physical causes. As will be pointed out in Chapter 18, one of the theoretical consequences of affirming the materialist hypothesis is the denial of free choice. If the brain

is the sufficient condition of conceptual thought and if, therefore, there is no reason for positing an immaterial or non-physical factor as operative in man, then man may have other freedoms, just as brute animals do, but he does not have that freedom of choice which makes him the master of himself and of his own destiny—the course he takes in life from beginning to end. Conversely, the affirmation of free choice presupposes the truth of the immaterialist hypothesis, which posits in man the operation of a non-physical factor, needed not only to explain his power of conceptual thought, but also to explain his contra-causal freedom of choice.

The proposition that man differs in kind, not just in degree, from other animals and from machines represents the conclusion that we have reached in the light of all the evidence that is at present available. This proposition may not be overturned by future findings, but if future experiments with Turing machines decisively show that man's difference in kind is only superficial, not radical, the practical consequences would be almost the same as they would be if future evidence showed that man differed only in degree. The distinction between men as persons and all else as things, and with it the attribution of a special dignity and of moral rights and responsibility to men alone, can be sustained only if man's difference is a radical difference in kind, one that cannot ultimately be explained by reference to an underlying difference of degree.

We saw, in the course of the preceding discussion, that the dignity of man as a person and his moral rights and responsibility rest on his freedom to determine the goal he pursues in life and on his free choice of the path by which to attain it. This throws light on the fact that we do not refer to other animals as engaged in the pursuit of happiness. Their goals are appointed for them by their instinctual drives, and the means they employ to reach these goals are provided either by fully developed instinctive patterns of behavior or by rudimentary instinctive mechanisms that require development and modification by learning. If man were just another animal, differing only in the degree to which his rudimentary instinctive mechanisms needed to be supplemented by learning, the pursuit of happiness would not be the peculiarly human enterprise that it is, nor would there be any ethical principles involved in the pursuit of happiness. There can

be an ethics of happiness only if men can make mistakes in conceiving the goal that they ought to pursue in life, and can fail in their efforts by making mistakes in the choice of means. Lacking the power of conceptual thought, other animals cannot conceive, and hence cannot misconceive, their goals; only man with the power of conceptual thought can transcend the perceptual here and now and hold before himself a remote goal to be attained.

To this extent, a difference in kind, even if only superficial, is involved in man's concern with living a whole life well, not just with living from day to day. Other animals do not have this problem. This is just another way of saying that they do not have moral responsibility or moral rights. But if there were only one solution to the human problem of living well—the problem of how to make a good life for one's self—and if that solution were determined for each man by causes over which he had no control, then man would not be master of his life, would not be morally responsible for what he did in the pursuit of happiness, and could not claim certain things as his by right because he needed them to achieve his happiness—the happiness he has a right to pursue in his own way.

This last right, the source of all other rights, would not be the fundamental human right that it is, were man not master of his life, not only able to conceive a remote goal toward which to strive, but also able freely to choose between one or another conception of the goal to seek as well as freely to choose the means of seeking it. More than the power of conceptual thought is thus involved in the pursuit of happiness. Freedom of choice is also involved, and with it a radical difference in kind between men and other animals that have no moral problems, no moral rights, and no moral responsibility. Hence, should a Turing machine of the future succeed in the conversational test, as proponents of the materialist hypothesis predict that one will, the moral aspects of human life will be rendered illusory. Of course, unable quickly to shake off the habit of centuries, men may for some time hold onto the illusion that there are better and worse ways to live; but in the long run the truth will prevail, and men will give up the illusion that there is a fundamental difference between living *humanly* and living as other animals live.

This, in my judgment, is the most serious and far-reaching practical consequence of a decision in favor of the materialist

hypothesis concerning the constitution of man, and with it a decision that man's difference in kind is only superficial. Only if the immaterialist hypothesis is confirmed by repeated trials and failures of Turing machines in the conversational test, only if man's difference from other animals and machines is a radical difference in kind, will the truth about man sustain a serious concern on his part with the moral problems involved in the pursuit of happiness—the problem of trying to find out what the distinctively human goods are and the problem of engaging by choice in one or another way of life aimed at a maximization of the goods attainable by man. [10]

(4)

One matter mentioned in the preceding discussion deserves further elaboration. It concerns the role of instinct in human life as compared with its role in the life of other animals. The view we take of the way in which man differs from other animals—in degree only, superficially in kind, or radically in kind—directly affects our understanding of the role of instinct in human life; and so, in the first instance, we are concerned with the theoretical consequences of diverse views of the difference of man. But there are practical consequences, too, though they are less immediate; for according as we understand the role of instinct in human life in one way or another, we may be led to adopt one or another practical policy with respect to the alteration or control of human behavior. A striking example of this is to be found in certain recent popularizations of the findings of ethology concerning the instincts of aggression and territoriality that are operative in fish, birds, and mammals. On the basis of those findings, interpreted in terms of the view that man differs only in degree or at most only superficially in kind, the thesis is advanced that the basic patterns of human behavior underlying the institutions of property, nationalism, and war are determined by these same animal instincts; and, being thus instinctively determined, the human institutions in question are unamenable to alteration or eradication as long as man remains the animal he is. [11]

To state the theoretical problem with clarity, a number of distinctions must be made. First, we must distinguish between

that which is innate or unlearned, as indicated by its being species-predictable, and that which is acquired or learned, as indicated by its variable presence or absence in individual members of a given species. Second, we must distinguish between those completely formed instinctive mechanisms that operate effectively without the intervention of learning and those more rudimentary instinctive mechanisms that need to be supplemented by learned behavior in order to be effective in operation. And, third, we must distinguish between instinctive mechanisms, on the one hand, both those that are fully formed and those that are rudimentary, and instinctual drives, on the other hand.

The former are patterns of overt behavior; the latter are conative sources of behavior—sources of energy impelling toward certain biological results. Such are the instinctive drives of sexual or reproductive behavior, self-preservative behavior through feeding or flight, aggressive behavior, and associative behavior. These instinctual drives are innate in the sense of being species-predictable; when activated by specific releasing mechanisms, they impel the animal toward specific objects or conditions that constitute satisfactions of the drive and bring about its temporary quiescence. Though quiescent for a time, the instinctual drive remains as a potency to be aroused again, and when aroused it once again activates patterns of behavior seeking its fulfillment. The behavioral means of fulfillment (1) may consist of fully formed instinctive mechanisms, as in the case of the insects without brains or cerebro-spinal nervous systems, and also as in the case of the cerebro-spinal vertebrates with relatively small brains; or, (2) they may consist of rudimentary instinctive mechanisms supplemented in varying degrees by acquired or learned patterns of behavior, as in the case of the higher mammals with relatively large brains; or, (3) as in the case of man, the means of satisfying instinctual drives when they are operative may consist of overt patterns of behavior that are products of learning or intelligence.

While there seems to be no question that the instinctual drives found in the vertebrates and especially in the mammals are also present in man, the prevailing scientific opinion is that man has no fully formed instinctive mechanisms for the satisfaction of these drives, nor even rudimentary ones as in the case of other higher animals. The only species-predictable behavior in a mature human being consists of such simple reflex arcs as the pupillary,

the salivary, the patellar, or the cilio-spinal reflex, together with such involuntary innervations are produced by the action of the autonomic and sympathetic nervous systems. Men are impelled to overt behavior of certain sorts when in states of fear, anger, hunger, or sexual arousal. This overt behavior will be accompanied by visceral changes—in the glands and in the involuntary musculature—that are set in motion by the autonomic and sympathetic nervous systems. But the behavior itself will consist of voluntary actions that have been learned, that are intelligently organized, and that may be directed to the immediate fulfillment of the drive, to a postponed fulfillment of it, or to its frustration. Such behavior will vary from individual to individual; and in any one individual, it will vary from time to time, though the instinctual drive may be the same and be of the same strength.

The foregoing description of the way in which instinctual drives operate in man as compared with the way in which they operate in other animals is more consonant with the view that man differs in kind than with the view that he differs only in degree; for the difference between the operation of instinctual drives and instinctive mechanisms in other animals and the functioning of instinctual drives in man appears to be one of kind rather than of degree. What other animals do entirely by instinct or by the combination of instinct and perceptual intelligence (i.e., the power of perceptual thought through which animal learning takes place), man does entirely by learning, through the exercise of his perceptual intelligence and especially his power of conceptual thought. The presence of the same instinctual drives in man and other animals does not lead to the same overt performances in man and in other animals when these same drives are operative; nor does the presence of the same instinctual drives in all members of the human species lead all men to behave in the same way when they are activated by the release of instinctual energies.

The power of conceptual thought in man enables him to devise alternative ways of dealing with his instinctual urges. But if all the driving power behind human behavior comes from the instinctual urges that man has in common with other animals, and if man's power of conceptual thought is merely the servant of his instinctual drives, then in its main outlines human behavior is instinctively determined, as animal behavior is to a greater

extent and in more detail. For human behavior to be radically different in kind from animal behavior, with respect to the role that instinct plays, man must be radically different in kind from other animals. Not only must the power of conceptual thought enable man to devise diverse ways of dealing with his instinctual urges, but he must have psychic energy not drawn from instinctual sources in order to exercise mastery over them—to sublimate or divert them to non-animal satisfactions, to postpone their gratification for long periods of time, or to subdue and frustrate them entirely if he so chooses. No other animal manifests such mastery of its instinctual urges. In Freudian language, no other animal suffers the discomforts or pains that result from domesticating and civilizing its instincts. Both civilization and its discontents belong only to man: civilization with its technology, its laws, its arts and sciences, because man alone has the power of conceptual thought that produces these elements of human culture; the discontents of civilization, born of the frustration, prolonged postponement, or sublimation of instinctual urges, because man alone exercises some voluntary control over the instinctual drives that he shares with other animals.

Surprising as it may seem, Freud's account of the relation between man's intellect and his instincts presupposes that man differs radically in kind from other animals. I say this with full knowledge that Freud himself, if explicitly asked the question about how man differs, would give one of the opposite answers—either that man differs only in degree or that his difference in kind is only superficial. No other answer fits Freud's explicit commitment to the principle of phylogenetic continuity, and his equally strong commitment to a thoroughgoing determinism that precludes free choice. Nevertheless, when we read *Civilization and Its Discontents*, we find many passages difficult to understand unless man is radically different from other animals that have the same instinctual drives; such as the following:

Sublimation of instinct is an especially conspicuous feature of cultural evolution; this it is that makes it possible for the higher mental operations, scientific, artistic, ideological activities, to play such an important part in civilized life. If one were to yield to a first impression, one would be tempted to say that sublimation is a fate which has been forced upon

instincts by culture alone. But it is better to reflect over this a while. Thirdly and lastly, and this seems most important of all, it is impossible to ignore the extent to which civilization is built up on renunciation of instinctual gratifications, the degree to which the existence of civilization presupposes the non-gratification (suppression, repression or something else?) of powerful instinctual urgencies. This "cultural privation" dominates the whole field of social relations between human beings. . . . *It is not easy to understand how it can become possible to withhold satisfaction from an instinct.* [12]

I have italicized the last sentence quoted because I want to call attention to the question that must be answered. *How is it possible for us to withhold satisfaction from an instinct?* What power in us enables us to do so? Freud's answer to that question is, in my judgment, very revealing. It is given in the following passage:

We may insist as much as we like that the human intellect is weak in comparison with human instincts, and be right in doing so. But nevertheless there is something peculiar about this weakness. The voice of the intellect is a soft one, but it does not rest until it has gained a hearing. Ultimately, after endlessly repeated rebuffs, it succeeds. This is one of the few points in which one may be optimistic about the future of mankind, but in itself it signifies not a little. And one can make it the starting-point for yet other hopes. The primacy of the intellect certainly lies in the far, far, but still probably not infinite, distance. [13]

The foregoing explanation of how men are able to withhold satisfaction from instincts, and to exercise mastery over them in other ways, attributes an autonomy and causal efficacy to the human intellect which it could have only if the power of conceptual thought were an immaterial or non-physical power. Only if he possessed such a power would man be able to choose between diverse ways of gratifying his instincts; be able to decide whether to gratify them or not; and be able, in addition, to seek the gratification of desires that are not rooted in his instinctual urges at all, but arise from his capacities for knowing and for loving, as only an animal with the power of conceptual

thought can know or love. [14] Thus, Freud's account of civilization and its discontents and his statement about the power of the human intellect in relation to man's animal instincts appear to lead to a conclusion that runs counter to his own commitments to determinism and to phylogenetic continuity; namely, the conclusion that man differs radically in kind from other animals by virtue of having a non-physical power that gives him freedom of choice and that has sufficient independence of instinctual energies to gain mastery or exercise control over them.

We find the same conclusion implicit in Konrad Lorenz' recent book on aggression; and there, as in Freud, its implicit presence is obscured and contradicted by many things that are explicitly said to the contrary. Lorenz acknowledges the uniqueness of man by virtue of his power of conceptual thought. [15] In addition, he attributes to man, because of his rationality, a "responsible morality" that is not possessed by other animals, and tells us, as Freud does, that "we all suffer to some extent from the necessity to control our natural inclinations by the exercise of moral responsibility." [16] In his discussion of the "behavioral analogies to morality," he clearly indicates that what morally responsible men do by reason, other animals do solely by instinctive mechanisms. [17] Nevertheless, he explicitly denies autonomy to reason; i.e., denies that man has in his constitution any power sufficiently independent of instinctual energies to exercise mastery over them.

By itself, reason can only devise means to achieve otherwise determined ends; it cannot set up goals or give us orders. Left to itself, reason is like a computer into which no relevant information conducive to an important answer has been fed; logically valid though all its operations may be, it is a wonderful system of wheels within wheels, without a motor to make them go round. The motive power that makes them do so stems from instinctive behavior mechanisms much older than reason and not directly accessible to rational self-observation. [18]

Reason, or the power of conceptual thought, has no driving energy of its own, and no causal efficacy of its own; all its commands or prohibitions draw their effective force "from some emotional, in other words, instinctive, source of energy supplying

motivation. Like power steering in a modern car, responsible morality derives the energy which it needs to control human behavior from the same primal power which it was created to keep in rein." [19]

Because, like Freud, Lorenz is committed to determinism and to phylogenetic continuity, he leaves us with the puzzle of how reason and responsible morality can operate to thwart instinctual drives if they lack autonomy, i.e., if all their energy derives from instinctual sources. In addition, there is the further puzzle of how man can have moral responsibility without having a freedom of choice that involves some measure of independence of animal instincts. These puzzles vanish if one holds the view that Freud and Lorenz cannot adopt, because it is irreconcilable with their basic commitments—the view that man differs radically in kind from other animals, and that he has the power of conceptual thought and contra-causal freedom of choice by virtue of having a non-physical or immaterial factor in his make-up, a factor that has a certain measure of autonomy and causal efficacy.

(5)

The reader should not need to be reminded that, at this stage of our inquiries, we do not *know* whether man's difference in kind is superficial or radical; we do not *know* whether the materialist hypothesis or the immaterialist hypothesis is nearer the truth. Such arguments as can be advanced in support of one or the other hypothesis have already been examined; I have not, in the foregoing discussion of the role of instinct in human life, offered any new arguments for the immaterialist hypothesis. My sole purpose has been to see the alternative practical consequences that would follow from a future decision in favor of one hypothesis or the other. Let me summarize what has now become clear.

On the one hand, if man has an immaterial or non-physical factor operative in his make-up and if, with that, he has freedom of choice and some measure of independence of his animal instincts, then the resultant discontinuity between man and other living organisms would require us to desist from trying to explain human behavior by the theories or laws that we apply to the behavior of subhuman animals. In spite of the fact that the same

instinctual drives are operative in man and other animals, the radical difference in kind between them would mean that instinct does not play the same role in human life that it plays in the lives of other animals. Man would have a mastery over his instincts that no other animal has; and he could have rational goals, ideals envisaged by reason, beyond the satisfaction of his instinctual needs. We might then look upon the future of man with the optimism that both Freud and Lorenz express, but we would have grounds for that optimism which they cannot reconcile with their scientific convictions. [20]

On the other hand, if determinism and the principle of phylogenetic continuity hold true in the case of man, as they would if man differs only superficially in kind from other animals, then the laws governing and the theories explaining the behavior of subhuman animals would apply without qualification to human behavior. In spite of the fact that man differs in kind by virtue of having the power of conceptual thought, instinct would play the same determining role in human life that it plays in the lives of other animals; and, in that case, we cannot be optimistic about the future of the human race, for so long as man is governed by his animal instincts, his behavior cannot be altered in its broad outlines and in its basic tendencies.