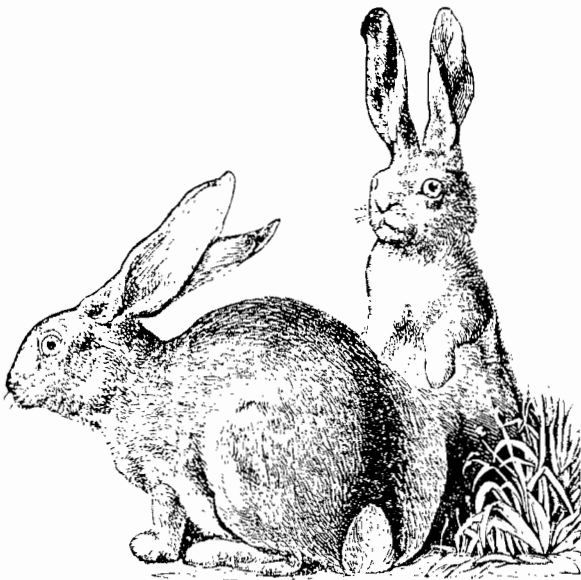




THE RESPONSIBLE USE OF ANIMALS IN BIOMEDICAL RESEARCH

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Carl Cohen's defense of the use of animals for biomedical research in *The New England Journal of Medicine*¹ raises most of the major issues in the moral controversy concerning human treatment of nonhuman animals. It exhibits the major lines of attack against both animal rights advocates (such as Tom Regan²) and utilitarian animal-liberationists (such as Peter Singer³). It is also a showcase of the most common mistakes made by those who seek to defend the current human use of animals.

Cohen argues that although we do have obligations to animals — for example, not to be cruel to them — we have no obligations to animals based on their rights to such treatment. According to Cohen, the biomedical use of animals does not violate their rights, since by their very nature animals cannot have rights. Cohen rejects the util-



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itarian argument that much of the biomedical use of animals is an unjustified subordination of the most vital interests of animals to relatively minor human concerns. He thinks a proper utilitarian assessment of animal experimentation counsels the increased use of animals in biomedical research, rather than its reduction or elimination. Because there is a stronger justification for animal use in biomedical research than for any other use of animals (e.g., for food or clothing), Cohen argues that opponents of animal experimentation must adopt what he feels is the absurd position which opposes *all* use of animals.

In response, I argue that Cohen cannot secure the rights of severely retarded humans while denying that psychologically sophisticated animals have rights. Cohen can reach his conclusion that we should increase our biomedical use of animals only because (1) he counts animal pain and suffering as less important than equivalent human pain and suffering, (2) he ignores the frequent misuse of animals in biomedical research, and (3) he overlooks the abundant alternatives to current animal experimentation. I propose the limited use of animals based on their degree of psychological sophistication as a consistent and attractive alternative to the extreme views of both Cohen and his absolute prohibitionist opponents. I close by suggesting that only if researchers would be willing to experiment on severely retarded humans at comparable levels of psychological sophistication are their experiments on animals morally permissible.



Do All Humans But No Animals Have Rights?

Cohen argues that only humans beings can have rights.

Rights arise, and can be intelligibly defended, only among beings who actually do, or can, make moral claims against one another. Whatever else rights may be, therefore, they are necessarily human; their possessors are persons, human beings. (p. 865)

Cohen is correct in maintaining that rights cannot arise unless there exist moral agents for whom these rights claims make sense. To say that some being has a right is to say (at least in part) that some other being has obligations to treat the right holder in certain ways specified by that right. So if there were no beings more cognitively and morally capable than pigs or dogs, there would be no rights.

However, the fact that rights claims require the existence of duty bearers does not imply that only those duty bearers can have rights. Even Cohen would grant that human infants have rights, yet they are not duty bearers. Thus, some creatures possess rights despite being unable to invoke them against others or to recognize and respect others' rights.

Cohen attempts to avoid this objection by shifting his criterion of rights possession to the *capacity* for being a moral agent, rather than actually being a moral agent.

Animals ... are not beings of a kind capable of exercising or responding to moral claims. Animals therefore have no rights, and they can have none.... The holders of rights must have the capacity to comprehend rules of duty.... (p. 866)

However, most people would grant that severely retarded humans have rights (Cohen does), and yet they do not have "the capacity to comprehend rules of duty." Thus if having the capacity to be a duty bearer is necessary for the possession of rights, then severely retarded humans cannot have rights.

Cohen responds to this point with his talk of "kinds."

The capacity for moral judgment that distinguishes humans from animals is not a test to be administered to human beings one by one. Persons who are unable, because of some disability, to perform the full moral functions natural to human beings are certainly not for that reason ejected from the moral community. The issue is one of kind. Humans are of such a kind that they may be the subject of experiments only with their voluntary consent. The choices they make freely must be respected. Animals are of such a kind that it is impossible for them, in principle, to give or withhold voluntary consent or to make a moral choice. What humans retain when disabled, animals have never had. (p. 866)

Cohen seems to be claiming that the capacity for moral agency is essential to human beings and is necessarily lacking in other animals. Thus, severely retarded humans, because they are human, retain the capacity for moral agency even in their retarded state. Animals by their very nature lack this capacity. Since the capacity for moral agency confers rights, severely retarded humans have rights, whereas animals do not.

But many severely retarded humans could never carry out even the quasi-moral functions that some animals can perform. Dogs, for example, can be obedient, protective, and solicitous, while there are severely retarded humans who could not achieve these minimal moral abilities despite our best efforts. Given this fact, it just is not plausible to claim that severely retarded humans have the capacity for moral agency, while claiming that psychologically sophisticated animals do not. Cohen certainly has not given us any reason to accept this claim. He simply assumes that being a member of a biological species guarantees that one has certain capacities, despite overwhelming evidence that marginal members of species often lack capacities normal for that kind of creature. We need a strong argument before we should reject the obvious point that some animals have a greater capacity for moral behavior (however minimal) than do some severely retarded human beings.

Cohen might argue that severely retarded humans have the capacity for moral agency despite

lacking the ability to realize that capacity. But why should we accept such an attenuated notion of capacity? Certainly capacities can be left unrealized, but if there is no possibility that they could ever be developed, what sense is there in claiming that the capacity is present? I see no reason to accept the notion that there can be unrealizable capacities.

Is Speciesism Defensible?

Perhaps Cohen would agree that severely retarded humans lack the capacity for moral agency but thinks this is unimportant. He may be arguing that we should treat the severely retarded as human beings and that since human beings have rights (presumably because many of them are moral agents), severely retarded humans have rights as well. On this reading, Cohen is suggesting that we treat individuals according to their biological kind and ignore their individual characteristics. Moral status is to be determined by species membership, not individual qualities. This is "speciesism": the view that species membership is by itself a morally legitimate reason for treating individuals differently.

Peter Singer and others have argued that speciesism is "a form of prejudice no less objectionable than racism or sexism."⁴ Cohen's speciesist perspective concerning the moral status of animals vis-a-vis humans does coincide uncomfortably with the outlook of racists and sexists towards blacks and women. Both judge according to class membership while ignoring individual qualities.

Cohen responds to this charge of speciesism by embracing it:

I am a speciesist. Speciesism is not merely plausible; it is essential for right conduct, because those who will not make the morally relevant distinctions among species are almost certain, in consequence, to misapprehend their true obligations. The analogy between speciesism and racism is insidious. Every sensitive moral judgment requires that the differing natures of the beings to whom obligations are owed be considered. (p. 867)

This passage defends the truism that there often are differences between members of distinct species which are morally relevant in determining how we

should treat them. But this is not what is at issue in the debate over speciesism. Singer, Regan, and other opponents of speciesism are not suggesting that we ignore morally relevant differences between members of different species and treat them all identically. (They are not suggesting, for example, that dogs be allowed at the dinner table or be allowed to vote.) What rejecting speciesism commits one to is being unwilling to use difference in species by itself as a reason for treating individuals differently. Similarly, rejecting racism and sexism commits one to not using race or sex by itself as a reason for differential treatment. Cohen's truism does not support speciesism in this problematic sense.

Unless Cohen can show us that there is some morally relevant difference between severely retarded humans and psychologically sophisticated animals, his position is open to the following objection: if experimenting on severely retarded humans is a violation of their rights, then experimenting on psychologically sophisticated animals violates their rights, as well.

The analogy between speciesism and racism or sexism is deficient in one respect. Species classification marks broader differences between beings than does racial or sexual classification. Thus attempting to justify differential treatment on the basis of species membership alone (as Cohen does) is not *just as* morally objectionable as doing so on the basis of race or sex, since members of different species are more likely to require differential treatment than are members of different races or sexes (within a species). For example, in determining what sort of food or shelter to provide, it would be much more important to know a creature's species than it would be to know a person's race or sex.

But this does not imply that difference in species by itself is a morally legitimate reason for treating individuals differently, while difference in race or sex considered by itself is not. Arguing that a woman should be prohibited from combat because of her sex fails to provide a morally relevant reason for the recommendation. Arguing for this on the grounds that this woman lacks the required physical capacities is to provide a morally relevant reason. Similarly, arguing that a chimpanzee should be experimentally sacrificed rather than a human, simply because it is a chimpanzee, gives no morally relevant reason for the recommendation. However, arguing that the chimpanzee does not value or plan for its future life to the extent that the human does is to provide such a reason.

Thus even though considerations of species are frequently more closely correlated with morally relevant features than are considerations of race or sex, species membership by itself (like racial or sexual class membership) is not a morally legitimate reason for differential treatment. Speciesism is thus a moral mistake of the same sort as racism and sexism: it advocates differential treatment on morally illegitimate grounds.

The illegitimacy of judgments based on species membership alone becomes especially clear when comparing the moral status of a severely retarded human with that of psychologically sophisticated animals, since here the individual does not have what most members of the species have. The morally relevant differences which *usually* exist between individuals of two different biological

kinds (and hence which would frequently justify treating them differently) are lacking when comparing severely retarded humans with psychologically sophisticated animals. Any plausible morally relevant characteristic — whether it be rationality, self-sufficiency, ability to communicate, free choice, moral agency, psychological sophistication, fullness of life, and so on — is possessed by some animals to a greater extent than by some severely retarded humans. In this case, to classify by biological kind and to argue for differential treatment on that basis alone obscures and ignores morally relevant features rather than relying on them. We should not treat individuals on the basis of group or kind membership when their individual characteristics are readily apparent and relevant.

Thus, Cohen's argument fails on this second interpretation, as well. His appeal to biological kind to justify differential moral status of severely retarded humans and psychologically sophisticated animals is an unjustified form of speciesism. Unless Cohen can show us that there is some morally relevant difference between severely retarded humans and psychologically sophisticated animals, his position is open to the following objection: if experimenting on severely retarded humans is a violation of their rights, then experimenting on psychologically sophisticated animals violates their rights, as well.

Does Utilitarianism Justify Animal Experimentation?

Utilitarians hold that the right policy is the one whose consequences maximize the satisfaction of interests. In this calculation the interests of all affected parties are fairly taken into account. Utilitarians who oppose animal experimentation do so not on the grounds that animal rights are violated but because they think that the overall good resulting from these experiments is not sufficient to justify their negative consequences. The benefits which result from animal experimentation (such as an increase in scientific and medical knowledge) either do not outweigh the costs (e.g., animal pain and death) or could be achieved in a less costly fashion.

Cohen rejects the utilitarian critic's position that the like interests of humans and animals should be given equal moral weight. He denies that similar amounts of human and animal pain are equally morally significant.

The first error is the assumption, often explicitly defended, that all sentient animals have equal moral standing. Between a dog and a human being, according to this view, there is no moral difference; hence the pains suffered by dogs must be weighed no differently from the pains suffered by humans.... If all forms of animate life ... must be treated equally, and if therefore in evaluating a research program the pains of a rodent count equally with the pains of a human, we are forced to conclude (1) that neither humans nor rodents possess rights, or (2) that rodents possess all the rights that humans possess.... One or the other must be swallowed if the moral equality of all species is to be defended. (p. 867)

This argument misses the mark. To claim that animals "have equal moral standing" and should have their like interests treated equally implies neither that there are no moral differences between humans and animals nor that we should treat animals in the same manner that we do humans.

From the utilitarian position that the right act is the one which maximizes the net satisfaction of interests it follows that it is morally preferable to give a human a slightly less amount of pain than to give an animal a slightly greater amount of pain (or *vice versa*). If the pains are of equal intensity and consequence, then one should be morally indifferent. The fact that one is the pain of a human and the other is the pain of an animal is not by itself morally relevant.

This is not to say that the same type of experiment on a human and an animal would cause each the same amount of pain and suffering and that we should be indifferent to which being we use. Giving a typical chimpanzee a deadly virus in order to test a vaccine is likely to cause less pain and suffering than giving a typical human the deadly virus for the same purpose. The greater psychological sophistication of the human, its greater intelligence and self-consciousness, makes possible

a greater degree of pain and suffering. (Sometimes the reverse is true, however.⁵)

Even though pain and suffering would often be minimized by experimenting on an animal instead of a typical human, that does not show that we may morally discount the pain and suffering of animals. We must still count the pain and suffering of animals equally with the like pain and suffering of humans. But in cases where a human will suffer more, we should prefer the use of animals (and *vice versa*).

Cohen is thus mistaken in thinking that giving equal consideration to the like interests of animals and humans makes moral discriminations between the two impossible. For a utilitarian, equal consideration (or equal moral standing) does not imply identical treatment. Cohen has given us no cogent reason for rejecting the view that the like pains of humans and animals must be given equal moral weight. Since the pain of the animals on whom we experiment cannot be discounted, Cohen's utilitarian justification for the biomedical use of animals becomes far more difficult to achieve.

Cohen argues that even if "the pains of all animate beings must be counted equally" (p. 868), a utilitarian calculus would still come out in support of the biomedical use of animals:

The sum of the benefits of their use is utterly beyond quantification. The elimination of horrible disease, the increase of longevity, the avoidance of great pain, the saving of lives, and the improvement of the quality of lives (for humans and for animals) achieved through research using animals is so incalculably great that the argument of these critics, systematically pursued, establishes not their conclusion but its reverse: to refrain from using animals in biomedical research is, on utilitarian grounds, morally wrong. (p. 868)

Substantial benefits have resulted (and continue to result) from biomedical experimentation, much of which involves the use of animals. And although a utilitarian benefit/cost analysis would reach the conclusion that it would be wrong to stop the use of animals entirely, it would not justify Cohen's call for an increase in the biomedical use of animals.

Cohen can reach this conclusion only by abandoning utilitarianism (and its principle of equal consideration of like interests), by adopting the speciesist position which treats animal pain and distress as insignificant when it is a means to human benefit, and by being overly pessimistic about the possibility of alternatives to animal use.

The Possibility of Substitution

Whether research using living creatures is justified on utilitarian grounds depends in large part on the availability of substitute procedures. A utilitarian benefit/cost analysis (which must consider alternative, less costly ways to achieve these benefits) would find that some, perhaps many but certainly not all experiments, using animals are morally justifiable. *Some* use of living beings continues to be necessary and justifiable. Even developing alternatives to the biomedical use of animals often requires the use of animals. At present substitute techniques are not sufficiently developed to eliminate this use entirely (and they may never be).⁶

Nevertheless, Cohen is overly pessimistic about the possibility of alternatives to the current biomedical use of animals. His speciesism prevents him from appreciating or even acknowledging the numerous substitute procedures that are being developed. A recent report by the U.S. Congress' Office of Technology Assessment (OTA) on alternatives to animal use in research, testing, and education is much more encouraging about the potential for alternatives.⁷ This study presents numerous suggestions involving the replacement, reduction, and refinement of the use of animals. In addition to the promising techniques of *in vitro* experimentation and computer simulation (which Cohen mentions), the OTA report suggests:

- (1) Coordinating investigations and sharing information (to reduce duplicative experiments when unnecessary for validating the original research);
- (2) Replacing the use of higher animals with lower animals (invertebrates for vertebrates and cold-blooded for warm-blooded animals);
- (3) Using plants instead of animals;

(4) Sharing animals (e.g., getting several tissues from one animal);

(5) Designing experiments which use statistical inferences and whose design provides reliable information despite the use of fewer animals;

(6) Decreasing the pain and distress in animal experimentation by altering the experimental design and by using anesthetics and tranquilizers;

(7) Using non-living chemical and physical systems that mimic biological functions;

(8) Using human and animal cadavers; and

(9) Teaching by demonstration instead of by individual student use of animals.

Recent amendments to the Animal Welfare Act⁸ and the Public Health Service Act,⁹ as well as legislation concerning the education of health professionals,¹⁰ all encourage alternatives to the current methods of animal use.¹¹ Cohen's pessimistic assessment of these alternatives flies in the face of a growing trend of using already existing alternatives and of developing new substitute procedures. Experiments which cause animals pain, distress, or death are clearly not justifiable when such substitute procedures are available.

Should We Increase Biomedical Animal Use?

Cohen argues that in order to achieve maximum safety for humans "the wide and imaginative use of live animal subjects should be encouraged rather than discouraged" (p. 869). Cohen is right that some experiments which subject humans to risk could be conducted using animals without loss in the significance of the results. Furthermore, risky experiments which are necessary *should* be performed on psychologically less sophisticated creatures. An increase in psychological sophistication brings with it a wider range of interests, a greater ability to experience satisfaction (and dissatisfaction), and the possibility of leading a fuller life. Inflicting suffering or death on these creatures causes greater harm.

In advocating an increase in the biomedical use of animals Cohen not only ignores the available alternatives but disregards the widespread experimental misuse of animals, as well. Numerous books

and articles have persuasively documented that many experiments using animals have been unprofessional, of dubious scientific merit, repetitive, or cruel.¹² Two video tapes are especially persuasive; "Unnecessary Fuss," about head injury research involving baboons at the University of Pennsylvania,¹³ and "Tools For Research," a general review of research using animals over the last twenty years.¹⁴ The flurry of recent legislation concerning animal welfare cited above shows a growing public recognition of the misuse of laboratory animals. Government regulations for the care of laboratory animals have been developed to prevent these sorts of experiments, as well.¹⁵ Cohen's suggestion that we encourage the wide and imaginative use of live animal subjects, instead of limiting this use and working to find substitute techniques, shows blatant disregard for this widely acknowledged problem.



Can A Consistent Position Concerning Animal Use Be Developed?

Cohen charges his anti-speciesist opponents with inconsistency or absurdity: "Scrupulous vegetarianism, in matters of food, clothing, shelter, commerce, and recreation, and in all other spheres, is the only fully coherent position the critic may adopt" (p. 869). The person who eats veal and then strenuously objects to the killing of cats in relatively painless medical experiments is inconsistent. We do not *need* to eat animals for food (certainly not mammals); carefully chosen vegetarian diets are perfectly healthy. We do need the ongoing results of biomedical research, and for some of this research the use of living creatures continues to be required.

Cohen is right that the use of animals in biomedical research is less difficult to defend than are other uses of animals. (Only one out of every hundred animals used is for this purpose.¹⁶) But the anti-speciesist critic of current biomedical uses of animals need not be committed to prohibiting all uses of animals. Since anti-speciesism allows for discriminating between animals, critics can consistently object to the raising, slaughtering, and consumption of veal calves while not objecting to commercial shrimp farming and shrimp consumption. A critic might also object to repeated surgery on healthy animals in the training of veterinarians and not object to the use of chick embryos for toxicity testing. The recommendation that experimenters substitute cold-blooded animals for warm-blooded ones or invertebrates for vertebrates is also perfectly consistent. These suggestions are not speciesist, since species membership *per se* is not the justification offered for differential treatment. Differences in the fullness of life, in psychological sophistication, and in the capacity for suffering are what motivates these suggestions.

Thus, one can argue for limiting animal use in biomedical research without embracing the extreme position prohibiting all uses of any animals for whatever reason. Cohen can successfully saddle only his most extreme opponents with this consequence. A more circumspect skepticism about the legitimacy of a significant portion of laboratory animal use is possible. Advocates of limiting the use of animals in biomedical research can

consistently advocate the limited use of animals in other areas, as well. Both extremes — the absolute prohibition of all animal use, as well as Cohen's speciesist encouragement of such use — should be avoided.

A Test Biomedical Researchers Should Use

I have suggested that it would be morally preferable, *ceteris paribus*, to give a deadly virus to an animal rather than to a typical human being. The pain, suffering, and distress caused by the two experiments, as well as the significance of the loss of life, would be minimized by experimenting on the animal. However, this argument in support of the experimental use of animals rather than typical humans does not give us a reason for preferring animal experimentation to "marginal case" human experimentation. Since many animals (e.g., chimpanzees) and *severely* retarded humans would suffer equally from such an experiment, the pain and distress of the experimental subject gives us no reason to prefer the use of one to the other. Furthermore, given their rough equivalence in psychological sophistication, the value of the two creatures' lives is about the same. Whatever moral rights such creatures have, if any, are also comparable.

Thus, an important test to determine if an experiment is significant enough to justify the pain, suffering, and (perhaps) death of the creature involved is to ask the following question: Would the investigator still think the experiment justifiable if it were performed on a severely retarded human at a comparable psychological level as the animal? If not, then the experiment should not be conducted. Only an arbitrary preference for members of our own species could avoid this conclusion.

If this test were used, and I am arguing that it is the appropriate test, many — though certainly not all — experiments on animals would cease and be replaced by alternatives. Biomedical researchers would do well to keep this test in mind.¹⁷



Notes

¹ Cohen, Carl (1986), "The Case for the Use of Animals in Biomedical Research," *New England Journal of Medicine*, 315, pp. 865-870. All page references in the text are to this article.

² Regan, Tom (1983), *The Case for Animal Rights* (Berkeley, California, University of California Press).

³ Singer, Peter (1975), *Animal Liberation* (New York, Avon Books).

⁴ Singer, Peter (1986), "Animal Liberation," in VanDeVeer, Donald and Pierce, Christine (eds.), *People, Penguins, and Plastic Trees* (Belmont, California, Wadsworth), p. 31.

⁵ Singer, Peter (1979), *Practical Ethics* (Cambridge, Cambridge University Press), p. 53.

⁶ Office of Technology Assessment (OTA) (1986), *Alternatives to Animal Use in Research, Testing, and Education* (Washington, D.C., U.S. Government Printing Office, OTA-BA-273), p. 138.

⁷ *Ibid.*

⁸ The Food Security Act of 1985 (Public Law 99-198).

⁹ The Health Research Extension Act of 1985 (Public Law 99-158).

¹⁰ The Health Professions Educational Assistance Amendments of 1985 (Public Law 99-129).

¹¹ See OTA, *Alternatives to Animal Use in Research, Testing, and Education*, Ch. 13.

¹² See Singer, *Animal Liberation*, Ch. 2; Ryder, Richard (1985), "Speciesism in the Laboratory," in Singer, Peter (ed.), *In Defense of Animals* (New York, Basil Blackwell) pp. 77-88; Jamieson, Dale and Regan, Tom (1982), "On the Ethics of the Use of Animals in Science," in Regan, Tom and VandeVeer, Donald (eds.), *And Justice For All* (Totowa, New Jersey, Rowman and Littlefield), pp. 169-196; Rollin, Bernard (1981), *Animal Rights and Human Morality* (Buffalo, Prometheus Books), Ch. 3.

¹³ Available from People for the Ethical Treatment of Animals, P.O. Box 42516, Washington, D.C. 20015.

¹⁴ Available from Bullfrog Films, Inc., Olney, PA.

¹⁵ See National Institutes of Health (1985), *Guidelines for the Care and Use of Laboratory Animals* (Bethesda, MD, NIH Pub. No. 85-23).

¹⁶ See OTA, *Alternatives to Animal Use in Research, Testing, and Education*, p. 43.

¹⁷ I would like to thank Beverly Diamond, John Dickerson, Martin Perlmutter, and Hugh Wilder for helpful suggestions on earlier drafts of this paper.



TREATING ANIMALS NATURALLY?

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Editors' Note: This article is a response to an article by Professor Peter S. Wenz, "Treating Animals Naturally," published in *Between the Species*, vol 5, no. 1, pp. 1-10.

Of the nine chapters in *Environmental Ethics* I most expect criticism on the one on higher animals — not because my treatment of animals is socially controversial but because it isn't. The chapters on organisms, species, and ecosystems all depart more radically from current thought. My value theory in the book is objective, running upstream against a torrent of subjectivity. But my account of animals will disappoint animal activists. I eat animals and leave them to perish in the wild. I kill goats to save a few endangered plants. I tolerate hunting, under ecosystemic conditions. I accept some wildlife commerce as a management tool. I seem to have no mercy.

Frankly too, I am less than confident in applying my theory to the examples I cite. I changed my mind about some of them while researching the book. My theory leads to unexpected conclusions.



DISCUSSION