

ON CHIMERAS

by *Bernard E. Rollin*

Abstract. This essay is a critical response to Neville Cobbe's article "Cross-Species Chimeras: Exploring a Possible Christian Perspective." New technologies, particularly biotechnologies, raise major concerns in society. In the absence of good ethical thinking on these issues, bad ethical thinking becomes regnant. Two common types of bad ethical thinking are (1) confusing whatever disturbs people with genuine ethical issues and (2) confusing religious issues with ethical ones. Cobbe's article commits the former type of error with regard to the possibility of a mouse created with human brain neurons. I analyze and discuss that error and also raise questions about Cobbe's attempt to analyze the creation of chimeras from a Christian perspective.

Keywords: chimeras; Christian response to chimeras; ethics and biotechnology; Gresham's law for ethics; mouse with human brain neurons

Neville Cobbe's essay "Cross-Species Chimeras: Exploring a Possible Christian Perspective" (2007) is well written and well researched and makes some vital distinctions with regard to the nature and creation of chimeras. In this respect alone it is a valuable resource for those wishing to expose themselves to a new and controversial modality in biotechnology. Inevitably, any new technology at all, and a fortiori those technologies with the potential for affecting living things and our sense of nature, will raise social unease and confusion regarding their impact. Because the scientific community historically has disavowed any connection with ethics, those formulating these new technologies, who presumably are in the best position to understand them fully and articulate the ethical issues they raise, have

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tended to abrogate that responsibility. For example, those who created the cloned sheep Dolly said very little about the ethical implications of cloning animals. (In fact, the chief scientist involved in creating Dolly specifically refused to comment on ethics except to affirm that cloning humans was clearly wrong, with no further articulation of that claim.)

In the absence of science's leadership in the ethical discussion, a societal vacuum is created regarding the ethical implications of a new technology. Because society abhors a vacuum as much as nature does, that vacuum is soon filled by doomsayers, sectarian theologians, politicians, and others with claims that tend to be thrilling, lurid, and pretentious but are devoid of genuine ethical content. Within a week of Dolly's announcement to the public, a *Time*/Warner survey showed that fully 75 percent of the United States public firmly believed that cloning Dolly "violated God's will." (Ironically, in a conversation with the group that produced Dolly I had warned them that failure to initiate a moral dialogue would produce that very response.)

I call this phenomenon a "Gresham's law for ethics." Gresham's law states that bad money (for example, inflated paper currency in post-World War I Germany) drives good money (for example, gold) out of circulation. In other words, if you owe a million deutschemarks on your home, you will pay it with valueless paper money, not with gold. Similarly, bad ethics drives good ethics out of circulation because the claim "Cloning violates God's will" is much more appealing and easier to understand than "Cloning will aggravate our current tendency toward agricultural monoculture" and replaces a real issue with a spurious one as a focus of attention.

Informed discussion of the ethical issues is therefore a societal necessity, but too often writings in the area make two fundamental errors: First, they tend to confuse what upsets or outrages people with true ethical issues. For example, there is an ever-increasing tendency in our society to believe that any speech that offends anyone else creates an ethical problem. Yet, not only does this conflict with our societal commitment to free speech; it also would truncate virtually all substantive claims, because virtually any claim can offend someone. If one rationally criticizes school rules demanding short hair and rigid dress codes and thereby offends a whole traditionalist community, it is hard to argue that so giving offense represents a moral issue. In the area under discussion, it may disturb some people if humans "manipulate life," but such a reaction does not by itself make "manipulating life" a moral issue. I have argued elsewhere (Rollin 2007) that some people writing on the mouse created with human neurons commit this very error.

The second error is believing that something that putatively violates a religious tradition creates a genuine ethical issue. A woman not wearing the veil offends the Taliban greatly, but few Americans would see that as constituting a legitimate moral issue. Not everything that offends reli-

gious people is an ethical issue. Unfortunately, politicians tend to perpetuate this error, as Bill Clinton did when he packed the Bioethics Commission on Cloning with religious leaders whose pronouncements often had little to do with ethics. Similarly, the Pope criticized the creation of Dolly on the grounds that all creatures are "entitled to a normal birth," ignoring the fact that Dolly had a normal birth. Not only religious figures make such errors. They are found in secular writings when such contentless phrases as "human dignity" or "species boundaries" are invoked. Certainly, it is easy to see that rape violates human dignity, but why does a mouse with human brain neurons do so? And "species boundaries" makes little sense because we know that "species" are snapshots of a dynamic process, not the fixed natural kinds of Aristotle.

Cobbe's article, it seems to me, falls into the first of these two problem areas. In discussing the mouse created with human brain neurons, he automatically assumes that animals with large numbers of human brain cells or "humanlike mental characteristics" create a significant moral issue. Like many who begin with such an admittedly widespread assumption, he never specifies what these issues are, just as Dolly's creators failed to specify the issues in human cloning. Cobbe assumes what he should demonstrate, namely, that (some or many) people's negative reactions to an animal with humanlike mental characteristics is a legitimate moral-based response.

Let us briefly pursue this. Many people in Europe have indicated an unwillingness to accept a pig heart in a xenotransplant even to save their lives. Such unwillingness seems to arise from an antiquated view of the heart as the seat of the soul. Surely this is not a genuine ethical issue (although there may be others relevant to xenotransplantation, such as animal welfare considerations); it is at best an aesthetic one.

Is something like the pig heart case operative here? Putting human neurons in mouse brains does not create a human brain (or, presumably, a human mind). How many human neurons can fit in a mouse skull? Does it create human consciousness in a mouse? We do not know, although odds that it does seem small. Does it augment the mouse intellectually? Again, we do not know. But suppose it does? The key question is what ethical issue this would raise as opposed to the aesthetic (or "yuck") issue. Do we know that a smarter mouse or a mouse with a higher level of consciousness would be a suffering, unhappy animal?

Indeed, suppose the mouse did acquire a humanlike intellect. What does this even mean in a mouse? Given the mouse life span of three years at most, coupled with its lack of a sociocultural life with other such mice, it surely could not develop a mind like ours, which is strongly conditioned by language. Perhaps it could reach the level of apes taught signing, a series of experiments that have not raised a moral tumult except when the apes are sold to toxicology labs or are suddenly deprived of the chance to use their newly acquired skill. And even if the mouse did develop language,

surely the only issue would be its isolation from others possessed of similar abilities, an eventuality that could be forestalled by creating a group of such creatures if any are to be made. The key point is that it is incumbent on critics to discuss fully what if anything is morally wrong with making a mouse with a humanlike intellect.

A knee-jerk reaction is “Don’t do it!” if we could indeed humanize a mouse intellect. But why not? Statements by the National Academy of Science that we need to be wary of “giving animals characteristics that are valued as distinctly human” or “human characteristics that would be ethically unacceptable to find in an animal” (Greely et al. 2007) are classically question-begging. Indeed, if the animal did not suffer or turn out to be unhappy, we could presumably learn a great deal about animal forms of life from such a being, and thus one could generate a justification for such an experiment.

In my view, however deliciously seductive the image is, we cannot think of the augmented animal as a human in a mouse body. Rather, it is at most a smart mouse. In any case, there is no discussion in Cobbe, or anywhere I have been able to find, of what ethically would be wrong if it were a human in a mouse body. Presumably, ethics would arise in terms of how it were treated; surely one could not for example morally justify killing it at will if life *per se* mattered to it—that is, if it were aware, in Martin Heidegger’s felicitous phrase, of the “possibility of the impossibility of its being” (1962, 310). The only argument of substance I have seen is that we would have problems identifying the moral status of such a being, since we currently assume that the class of full moral objects is essentially coextensive with the class of normal humans. Animal ethics is of course challenging that assumption, and a mouse with augmented or even human intellect would make the discussion and resolution of that issue more pressing.

The second part of Cobbe’s article, where he discusses a Christian response to creating chimeras, will certainly be valuable to those whose ethical perspective is distinctly Christian. He cites many passages that could be seen to bear on the issue and does a superb and knowledgeable and fair job of also citing conflicting scriptural evidence. He avoids the second error by not positioning Christian issues as universally applicable moral issues. I personally have serious doubts that any biblical passage can serve as a clear foundation for moral evaluation of issues and practices unimagined in biblical times. For example, if we look to the Bible for moral evaluation of homosexuality, it is quite negative; indeed it is described as “an abomination” and a killing offense. As a child, I remember hearing sermons in the South justifying segregation by appeal to the biblical proscription against yoking the ox and the ass. In my view (as a person emerging culturally from the Jewish traditions but not practicing) rigid adherence by the Orthodox Jewish to kosher slaughter practices (throat cutting) that were laudably designed in biblical times to be humane compared with the alternative

(bludgeoning) no longer serves us well in a world where there are more humane alternatives. Similarly, were I a theologian looking to defend God's acceptance of chimeras, I might cite Balaam's ass (Numbers 22:20–35) as a clear example of an animal possessed of a human intellect. The point is that this is a game without rules, a Rorschach test for one's preconceptions.

With John Dewey, as I have argued elsewhere (Rollin 2006), I believe that Christians and other believers do far better to devote their attention to dialectical definition of emerging ethical issues in the spirit of Christian morality than to play "Where's Waldo?" with sacred texts. To do otherwise is to risk that the moral issues are not addressed at all and that convenience on one hand or mob psychology on the other prevail.

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