



The American Journal of
BIOETHICS

ajob Volume 4 Number 1



**Ethics of Research
Involving Mandatory
Drug Testing of High
School Athletes in
Oregon**

TARGET ARTICLE

**William Cheshire on the Uncertainty
of Words in Embryo Research**

Human Embryos and the Language of Scientific Research

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William P. Cheshire (2004) has surveyed a set of newspapers for language relating to human embryo research. Although he gives us few details about his methodology, apparently he has taken 53 "articles addressing human embryo research" and "reviewed" them for "their choice of terminology—both quoted and editorialized—relevant to evaluating the moral status of the human embryo." That is all rather vague, and it is not clear precisely what the context of each article was. He then categorizes a set of words as either "upgrading" or "downgrading." Upgrading terms include "human being, human life, human individual, human organism, person, actual or entire human being, baby, brother or sister, or humanity." Downgrading terms include

tissue, cluster of cells, research tools, discarded or leftover cells, no longer wanted, research embryos, embryos just for research purposes, cells that are going to be thrown away, cells to be used as medical treatment, potential life, embryos that will never be used to create life, not human life, or not actual human beings.

He concludes from his survey that the news media are seriously "skewed" and biased because they use more downgrading than upgrading terms. He wants journalism to hold "truth and fairness to a higher standard" and wants us to follow the "way of wisdom." Presumably what Cheshire wants is not really analysis of words but that we all recognize his particular view of truth. This is highly problematic.

Obviously, there are serious problems with his methods. We are given no information about the samples: what articles, written by what authors, on what topics, whether as news reports or editorial or comment, in what context, and so on. The choice of terms is problematic, skewed, and biased. Why should it be important to keep using the word *human* as a modifier for *embryo* if the context makes it clear that human embryos are being discussed? Why should the term *cluster of cells* be downgrading when that is manifestly exactly what an embryo—and every one of us—is? If the point is simply to count up numbers of terms used, then the mere fact that more are in the downgrading than the upgrading category should call the whole study into question. And most important, "upgrading" and "downgrading" with respect to what—Cheshire's own particular (undefined) version of neutrality?

Of course it is not really the usage count that matters. Rather Cheshire has a point of view, believes he knows the truth about the moral status of embryos, and wants the news media and presumably the rest of us to share that

view. He urges that we should "insist on accurate word choice and responsible editorial nuance in journalism." Absolutely! How could anyone disagree? But for Cheshire accuracy seems to lie in agreeing with his unarticulated assumptions.

There are scientific questions, moral questions, and political questions, and it is important to know which any particular report is discussing. What do we know scientifically about the product of early cell divisions in human beings? A great deal, in fact. And yet there is so much more to be known, and hence we need more research to understand fertilization and early developmental stages. As Cheshire hints in his last sentence, each of us went through a stage where an egg cell and a sperm cell came together. Yet not all joinings of egg cell and sperm cell yield a human or even any living being. In many cases the cells do not merge, there is no fertilization, and there is no cell division. Or in many other cases the process proceeds through a few cell divisions and then stops. In those cases where fertilization does occur normally, the chromosomes and genes are replicated and distributed to the increasing number of cells that result from the cell divisions. As reproductive scientists have learned, the early cell divisions produce more cells, but the cells are not yet differentiated. To the eight-cell and perhaps 16-cell stage in human beings, scientists can (and do sometimes) remove one or more cells to test them for genetic diseases. The rest can develop normally. In fact, there is a considerable body of evidence that up to the 16-cell stage the cells (blastomeres) are each totipotent—each capable of becoming a whole individual human organism. That is scientifically verifiable, and the language useful to describing the observed distinctions includes *cells, blastomeres, totipotency, research*, and other words that Cheshire seems not to like. If a news article is reporting on this research, however, the source is to be complimented for using accurate language. Scientific reporting that seeks truth and fairness, as Cheshire claims he seeks, should use precisely these terms and other technical distinctions when it is science being reported.

But bioethicists also want to ask questions about the moral status of each of these stages, and those are moral questions. Moral questions legitimately rely on moral language. Therefore, it might be reasonable to claim that from one particular moral point of view each of the totipotent cells up to the 16-cell stage has its own moral status. Because each can become a whole individual human

organism, perhaps each should be accorded special moral status as a potential human being. Or perhaps we might make the distinction that only the cluster of cells together makes a human being—but Cheshire downgrades the term *cluster of cells*, so that is problematic for him.

The point should be obvious. Cheshire is so blinded by his own particular moral certainty or his own version of “wisdom” that he apparently believes that anything that might suggest otherwise is skewed and biased. He sees moral judgment when journalists discuss research and scientific reports, but he does not see his own perspective as morally biased. This is a problem. His study is unscientific, and it does not lead to moral clarity or in-

sight. Yet Cheshire does help to remind us that we should all do a much better job of being as clear as we possibly can about when we are making a scientific statement and using scientific terminology and when we are making moral claims. We should all—scientists, journalists, and bioethicists alike—be as clear, careful, and honest as possible about our word usage and the implications of choices made. ■

References

Cheshire, W. P. 2004. Human embryo research and the language of moral uncertainty. *The American Journal of Bioethics* 4(1):1–5

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Embryos, Words, and Numbers: The Ethical Treatment of Opinion

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Criticism of the popular media is so commonplace that if it is to be more than platitudinous it had better include some solid data. William P. Cheshire's data (2004) are far from solid. However, before discussing the flaws in Cheshire's analysis, it is worth considering a question raised by his article; namely, what is the importance of the media and their representation of embryo technology in influencing the public? Cheshire argues that the news media depersonalize embryos and that this is a harmful influence on public debate. Yet, it is arguable that the influence of the news media is really quite weak. This point can be illustrated by briefly considering one example: the popular image of science and technology in the United Kingdom versus that in the United States. As anyone familiar with Snow's classic *The Two Cultures* or who has lived in both countries knows, science and technology have a much poorer media image in the United Kingdom than in the United States. In the United Kingdom scientists are almost invariably represented as “boffins”—eccentric and overly excitable nerds, generally not to be trusted. In the United States, on the other hand, science is mainstream, as witnessed by the substantial and popular coverage of it in the print and broadcast media. Yet in the context of embryo technology there has been a remarkable popular and political consensus in the United Kingdom that embryo and cloning research should go ahead, albeit with careful regulation. In the United States, on the other hand, the debate remains live, open, and passionate, as witnessed by the stalemate in Congress over regulation.

If, according to Cheshire, the representation of embryos by the media is so significant, why is there this difference? Two plausible reasons spring to mind. The first is that the United States is by many measures (see under “poll—say religion important to them” at <http://www.adherents.com>) the most religious country in the developed world—certainly more religious than the United Kingdom—and religious activism is a powerful strand in public life. It might be that people turn to their religious roots rather than television or the newspaper in deciding obviously serious moral questions. In the United States the influence of the popular media is constantly countered (rightly or wrongly) by religious influences, including those that Cheshire himself exemplifies. Whether “fair” news reporting should reflect the influence of religious activism is another question.

A second and important factor influencing public perception of embryos is one that undoubtedly trumps the media coverage. This factor is the now vast number of people with first- or secondhand experience of assisted reproductive technologies (ART). These people, numbering in the millions (Nygren 2002), form their perceptions from direct experience. Because clinicians often show couples pictures of their in vitro-fertilized embryos, they know that embryos are (to use Cheshire's “downgrading” terms), in objective truth, “clusters of cells” and more “potential” than actual children, in the sense that three out of four embryos fail to develop to pregnancy (Macklon, Geraedts, and Fauser 2002). Because often more embryos are gener-