

Introduction to Technical Communications

21W.732 Section 2

Ethics in Science and Technology

Formal Paper #2

Since its inception in the 1970s, stem cell research has been a complicated and controversial subject, demanding both scientific and ethical presence in order to be fully understood, and sparking heated debates all across the world involving the very essence of humanity itself. While still highly contended, discussions about the ethical implications of stem cell research were restricted mainly to subsets of the scientific community until, in 1998, Thomson et al. announced that they had isolated the first human embryonic stem cells—at this point, stem cell research became one of the main foci of the general media’s attention. Since then, scientists, scholars, authors, and journalists, among many others, have expressed their opinions on stem cell research in an effort to appease the general public and resolve this unending conflict. In this paper, I will first provide a brief overview and summary of two such attempts—*Going to the roots of the stem cell debate* (EMBO Reports; Jul 15, 2000; 1, 1; pp. 4-6) by Dietmar Mieth and *Science, Democracy and Stem Cells* (Philosophy Today; 2004; 48, 5; pp. 23-29) by Eric Cohen. Then, I will discuss the strengths and weaknesses of both arguments, and provide an in-depth analysis of their work.

In *Going to the roots of the stem cell debate*, Dietmar Mieth first provides a brief summary of the potential that embryonic stem cell research holds and how the subject is perceived by the public eye, and then proceeds to argue for the ethical implications of stem cell research. He then continues on to the central question he wishes to answer in his article—whether a human embryo can be considered a human being and therefore granted protection and certain rights. Mieth then discusses the formal definition of a human embryo and develops the idea of the moral status of an embryo to support his argument. He contends that considering an embryo to be simply a collection of human tissue violates the morally relevant status of a human being. To support this assertion, he states that since a human embryo cannot be separated from a human being by current

scientific and ethical methods, then it should be granted full protection and rights, and therefore a formal moral status. Mieth also attacks some common arguments presented by scientists, asserting that “anyone who is not prepared to accept the cruelty of nature as an ethically restrictive argument, should not use it as a normative argument for indifference either.” Mieth concludes by saying that scientists cannot excuse their research on human embryos by referring to the suffering of current patients; their interests are important, but they must not be given priority in a society that must be committed to all moral values.

In *Science, Democracy, and Stem Cells*, Eric Cohen’s main effort is to inform rather than to argue. He begins by stating that politics are crucial to all aspects of life, and that therefore they should not be omitted from scientific and ethical debates, and emphasizes this at several points along his article. He then seeks to endow his readers with information about three items that he believes are of utmost importance—the origin of embryonic stem cell research and its introduction into national consciousness and the media, the importance of the debate for American ideals, life and politics, and an overview of the actors and arguments in the debate itself. Cohen strives to keep the larger human themes, such as the nature of reason, the meaning of equality, and the dilemmas of progress, present throughout his work.

Mieth’s *Going to the roots of the stem cell debate* shows several weaknesses. Its format and structure is not at all times clear, which leads to some difficulty when trying to follow his points. His first sentence, “... the term ‘stem cells’ has become a magic password for entering a medical utopia where physicians will be able to overcome all human ailments once and for all” is entirely too informal; his tone in it is not well-suited to the nature of his paper, and this makes his overall argument lose strength from the very beginning. The most obvious flaw in Mieth’s first paragraph is its lack of a thesis statement. He jumps from topic to topic several times in his first two paragraphs before finally settling on the issue of assigning a morally relevant status to an embryo—a topic which he only vaguely mentions in his first paragraphs. In the interim, he attempts to provide an overview of the current situation of stem cell research as seen by the public eye, both nationally and internationally, but since it lacks appropriate structure, the result is an overview that is neither clear nor complete.

Disregarding Mieth's first paragraphs, the body of his paper is more effective. His arguments for the moral status of an embryo are well-grounded from a logical point of view, and he builds on them in order to come to further conclusions, maintaining a sense of coherence and cohesion in the second part of his article. Mieth also provides counter-arguments in advance of what his article's critics may say (such as the 'cruelty of Nature' argument), and these help further his persuasion of the readers. His only flaw is that almost all of his conclusions are admittedly based solely on his opinion rather than on facts brought about by the scientific or ethical community; however, such is usually the inherent nature of ethical arguments, and therefore this flaw is almost unavoidable.

While the body of Mieth's article is adequate, his conclusion, much like his introduction, is quite ineffective. In his concluding paragraphs, Mieth merely states that scientists cannot excuse their research on the suffering of existing patients. This argument and his consequent supportive assertions are logically well-grounded; however, it is inappropriate to introduce new topics in a conclusion, and the essay is therefore finished without a true sense of completion instilled in the readers.

*Science, Democracy and Stem Cells*, on the other hand, suffers from none of the structural faults that plague Mieth's work. Before entering into any meticulous detail, Cohen takes a moment to explain what the purpose of his article is and what readers should expect from it. His language is concise, clear, and effective. The tone of his essay is appropriate, and he handles the issue of embryonic stem cell research with great respect.

Cohen's arguments are also quite effective. He argues in his introductory paragraph that political involvement (when done correctly) is strictly necessary in any field of labor and life, and restates this at several key moments in his essay. His arguments, well-founded and coherent, are strictly bound across the essay, flawlessly leading readers from point to point as he effortlessly shares his perspective on every aspect and implication of embryonic stem cell research with them. He makes appropriate use of examples that hold current validity (especially when referring to political leaders and their actions.) In his effort to provide readers with information, he strives to remain as unbiased as possible, presenting the points of view of all sides rather than just one (this can be seen in his descriptions of the cast of actors in the stem cell debate and, to more

effect, in his description of political leaders' actions.) He accomplishes every thing he sets out to do from the beginning, and thus at no point should readers feel confused regarding the direction of the author's arguments or ideas, contrary to the case with Mieth's essay. Cohen's vocabulary is also quite adequate—elegant, yet easy to follow and, while his essay is slightly long, at no point does it feel tedious to continue with the reading.

No argument is without its flaws and weaknesses, however, and Cohen's is no exception. His last concluding sentences are somewhat vague, and he does not even attempt to solve or give his opinion on the questions he brings up at the very end. Also, it is arguable that he is not entirely unbiased—the names he assigns to the stereotypical positions in a regular stem cell debate might seem to indicate to the sensitive reader that he slightly favors embryonic stem cell research. These are only minor flaws, however, and do not detract much from his general argument.

In terms of arguments that both share, Cohen includes Mieth's point of view within his dissertation in an effort to be unbiased while presenting information. However, other than that, both articles speak mostly about different aspects of embryonic stem cell research—Mieth argues only for the ethical side of the debate, while Cohen argues for the importance of politics as a mediator in science and research.

In summary, *Going to the roots of the stem cell debate* provides readers with ethical and philosophical arguments of considerable depth, and these are further reinforced by Mieth's aggressive yet rational stance against embryonic stem cell research. The vocabulary used is adequate—simple, without any excessively impressive words, and effective in communicating Mieth's arguments. The format of Mieth's article, however, is quite poor, making it difficult for readers to follow his points, and thus the article as a whole suffers terribly for it. *Science, Democracy, and Stem Cells* has no such flaws, and the author's point comes across more clearly and enhanced by his format. Cohen's arguments have a solid structure and, in general, fulfill the essay's purpose.

Cohen's holistic point of view along with his superior ordering and format make *Science, Democracy and Stem Cells* a flawless example of an article that is both accurate and beneficial for the public at large. Therefore, after rigorously analyzing the strengths

and weaknesses of both articles, I am able to conclude that it is the better of the two at hand.