Cloning And the Constitution: An Inquiry Into Governmental Policymaking and Genetic Experimentation

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The title of this book, *Cloning And the Constitution*, is somewhat deceptive in that neither "cloning" nor "Constitution" refers to the customary usages of these words. The word "cloning" generally conjures up images of twenty-six Adolf Hitlers roaming the countryside in Ira Levin's *Boys From Brazil*. The cloning referred to in this book is, for the most part, the relatively innocuous scientific research tool of gene splicing via recombinant DNA techniques. The "Constitution" in the title refers to Professor Ira Carmen's conceptualization of the "Living Constitution." He undertakes an in-depth constitutional analysis of the cloning controversy that arose in the early 1970s. Carmen believes that "the opinions of leading decisionmakers, key groups, and citizens generally regarding the value to be accorded provisions in our governmental rule structure may themselves be aspects of the Constitution . . . " (p. 3).

Given this belief, Carmen pursues two separate inquiries. He first analyzes local and national governmental policymaking decisions that have an impact on cloning research. He then surveys a group of scientists engaged in "cloning research" and their appointed "watchdogs." From these discussions and survey results, Carmen hopes to demonstrate that cloning research is protected free speech, not in the traditional legal sense, but in terms of Carmen's extremely expansive "Living Constitution":

For the Living Constitution is law, is custom, is usage; moreover, it is an institution, a corpus of behavior patterns energized by deep-seated beliefs regarding the role of statecraft and the bounds of constitutionally sheltered freedoms. It is not enough, then, to know the law or to know the rule; one must also know why people live the law and how they live it. And so the manner in which salient persons and publics have conceived

1. Ira H. Carmen is a professor in the Department of Political Science at the University of Illinois.
2. Carmen explains that he developed the full analytical concept of the "Living Constitution" in *I. Carmen, Power and Balance* (1978).
relationships between science and the fundamental law could well be the essence of constitutional history . . . [pp. 3-4]

The cloning debate was spawned in the early 1970s when gene-splicing and recombinant DNA techniques — cloning — were developed. These techniques allow scientists to isolate and mass produce a specific genome\(^3\) by grafting desirable portions of DNA within the genetic material of host organisms.\(^4\) By subsequently reproducing the altered host, the scientists are able to obtain large quantities of either the genome or the product which it expresses.\(^5\)

The pioneers of this research perceived a potential safety hazard arising from this work. They feared that a lethal genome could be grafted into a host organism and a biological time bomb would be created. The fears were accentuated by the fact that the most successful host organisms were common bacteria that lived in humans. When these scientists brought this potential hazard\(^6\) to the attention of the general public, the cloning controversy began. Carmen hopes that a "Living Constitution" analysis, based on the two separate inquiries, will reveal that the cloner's research is protected free speech.

*Cloning and the Constitution* begins with introductory chapters that discuss the significance placed upon science by the authors of the Constitution, principally analyzing the scientific attitudes of Thomas Jefferson and Benjamin Franklin. Carmen then reviews the dominating role the government has taken in funding scientific research in this country, detailing the myriad means and bureaucratic systems involved in supplying financial support to scientists. Carmen points out that these systems have mushroomed with no central agency or authority responsible for assuring the development of a consistent national policy on scientific research (pp. 30-31).

Next Carmen describes the evolving constitutional theories that equate the expanding concept of protected "quasi-speech" with scientific investigation. Although scientific research can be fairly categorized as conduct rather than speech, traditional legal thought could classify research as a "pursuit of knowledge" which should be afforded first amendment protection (pp. 35-41). Unfortunately, these legal concepts of constitutional rights are of apparently little interest to Carmen who does little more than adopt the thesis that the government's

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3. DNA and RNA are basically codes which are "read" by the cells that contain them to produce specific sequences of amino acids. The amino acids are combined to form proteins. A genome is a specific portion of a cell's nucleic material which acts as a template for the production of a specific protein.

4. A portion of the nucleic material of an organism is "spliced" into the DNA of the host material; thus the name "gene-splicing."

5. An example of this process would be the recent successful efforts to isolate and reproduce the genome which is transcribed to produce Interferon.

6. It belatedly came to the attention of the gene-splicers that microbiologists had safely dealt with highly experimental forms of these common bacteria for over a hundred years.
involvement in restricting cloning research violates the scientists' first amendment rights.

In Chapter Three, Carmen begins his elusive search for "living constitutional" vindication of his thesis by tracing the history of gene-splicing research and the development of restrictions placed upon these scientific experiments. The origin of the government's role in genetic experimentation, aside from supplying the funds for the research, began when genetic scientists Paul Berg and Stanley Cohen independently developed techniques for performing recombinant DNA experiments. Instead of going ahead with these experiments, the scientists, motivated by genuine health and safety concerns, placed a temporary moratorium on further research and asked the National Academy of Science (NAS) to evaluate the potential hazards.

In 1975 the NAS organized a conference of top scientists that met in Ansilomar, California. The NAS scientists developed guidelines to allow those conducting recombinant DNA research to proceed with little risk of danger. These guidelines became mandatory when adopted soon after by the National Institutes of Health (NIH), the primary governmental funding agency. The cloning debate was also carried out in Congress when legislation to restrict cloning research was introduced and in city council meetings in Cambridge, Massachusetts, and Ann Arbor, Michigan, where local restrictions were considered.

Despite this exhaustive survey of policymaking decisions in these various forums, Carmen was unable to uncover any deepseated beliefs among participants in these debates that cloners are protected by the Constitution (living or otherwise). The most generous conclusion attributable to these results is that Carmen's thesis concerning the first amendment protection of scientists is incorrect. Instead of illuminating core constitutional values, the review of these decisions emphasizes the antithesis of Carmen's "Living Constitution" theory — the highly pragmatic nature of the policymaking process.

In the next chapter, Carmen turns to the group of people most likely to vindicate his thesis — the scientists actually engaged in cloning research. Carmen describes the results of a survey given to nineteen geneticists active in cloning research and seven administrators who were responsible for overseeing cloning research at different academic institutions. Carmen asked the participants to respond to a number of questions regarding the government's attempts to regulate the cloning research projects. The geneticists, by a small majority,

7. Professor Berg described his research in his Nobel Prize acceptance speech, Berg, Dissections and Reconstructions of Genes and Chromosomes, 213 SCIENCE 296 (1981). Sanger and Gilbert shared the Nobel Prize with Berg for this work.

8. Part of the NIH guidelines required every institution receiving recombinant DNA funds to establish an Institutional Biosafety Committee. The "watchdogs" surveyed by Carmen were chairmen of these committees.
agreed with the author that when their research is classified as pure scientific investigation they are protected by the first amendment. However, nearly all felt that the regulatory scheme then in effect was constitutional. The results obtained from the administrators generally reflected the same trends as the responses given by the geneticists (pp. 148-49).

Carmen is unable to find a great deal of support for his thesis even among the people most likely to be searching for a constitutional right. Carmen's response to these less-than-enthusiastic results was to "surmise that the consensus hospitable to recombinant DNA investigations as constitutionally protected phenomena has not, as yet, been converted into a viable systematic expectation respecting statutory standards. Fluidity and watchful waiting are the bywords" (p. 147). Basing any conclusions on such a small sampling of clearly biased respondents suggests that "irrelevant" may be another applicable byword.

The author's attempt to contribute an additional dimension to the debate over recombinant DNA is largely unsuccessful. Neither the results of his analysis of the historical "debate" regarding recombinant DNA or his survey of cloners and their watchdogs provides support for his thesis that cloning research is protected free speech. It is not clear why the author is willing to publish this material when neither of his efforts to establish his thesis are successful and the relevance of his underlying constitutional theory is called into question.

The flavor of Professor Carmen's writing style should be clear from the small samples quoted. His verbose and often convoluted writing style deters any attempt to clarify his questionable theoretical and methodological approaches. Carmen apparently suggests that constitutional rights evolve from a people's feelings about their own behavior. Taken to its logical conclusion, this would inevitably result in constitutional anarchy with each person defining his or her own constitutional rights. If this is what the "Living Constitution" means to the author, his conception of constitutional rights is quite far removed from the realm of traditional constitutional values.

One observation of value that can be gained from this work is the surprising extent to which scientists are willing to cooperate with different factions in order to further their research pursuits. Unfortunately, Carmen contributes little to the interesting debate on the freedom of scientists to perform their research without government intervention.

— Barry J. Swanson