

Memo/Reply From  
**JOSHUA LEDERBERG**

TO: Mr. Rodeman  
Rockefeller  
1322

JAN 6 1981

Cloning....

After a dozen years of discussion (from 1960) this was intended to be my last word on the subject. I was victimized by too many popularizers trying to make me into Dr. Frankenstein.

But I believe most of what's in this 1970 piece is still valid ... plus what you read about on Sunday.

Your remarks about awakening "practical" people resonated with my experience. It took me 3 years to get any drug company seriously interested in "recombinant DNA".

I was glad to hear from you.

Sincerely



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FORM -

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# 1 Biological Innovation and Genetic Intervention

most of the preceding  
concerns  
medical/human  
problems.

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This volume is intended to be a glimpse of the future as a way of celebrating the history of an exciting era in biological science. The hazards of prophecy (not least to the prophets) are well known. Still, it would be a relatively simple task to post lookouts at the frontiers of contemporary insight and knowledge in fields like genetics and molecular biology. If, mercifully, our range is confined to the next 25 years, shrewd observers may miss no more than half of the significant questions that will unpredictably emerge and may score even better in outlining the solutions to some of the major problems that are clearly recognized—like the structure and development of the nervous system, immunity, or neoplasia. We should, however, be uneasy (or delighted, according to one's temperament) about the prevalent mood that tells that most of the really exciting fundamental questions have been answered—for history teaches that this often foretells a new scientific revolution that could shake our beliefs to their very roots.

This purview is based on an autonomous model of science that has uncertain durability. Perceived ignorance (or error) is postulated to be

The latter portion of this essay has been adapted from a presentation to the Jubilee Symposium of Hoffman-LaRoche & Co., Ltd., held at Basel, Switzerland in September 1971, and is used here with their kind permission.