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Über Evolutionstheorie, biologische Waffen und Charles Dickens



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My principal endeavor in the year at the Wissenschaftskolleg was to complete the research and begin the writing of a book on the present state of the theory of evolution. This is a history and analysis of the several lines of scientific argument — some of them highly controversial — that have developed in evolutionary theory since the emergence of sociobiology in the early 1960s; where necessary and interesting, I trace antecedents of these developments, sometimes back to Darwin. I got through a substantial portion of this.

The work on the recent history of evolutionary thought gave rise to a number of public presentations. In January, I went to the universities of Zürich and Basel to give lectures on the historical relationship between genetics and the theory of evolution. The talk in Basel was the opening address to a three-day international conference, a COGENE Symposium, on "Genetic Experimentation and Evolutionary Change". In June, I gave a Tuesday-morning colloquium at the Wissenschaftskolleg on "Open Questions in Evolutionary Biology", and at the end of the month delivered shorter versions of this first at the Max-Planck-Institut für Molekular-Genetik, Berlin-Dahlem, and then (in German) for the Medical Faculty of the Freie Universität Berlin.

Also in June, the Wissenschaftskolleg was host to a two-and-a-half-day seminar on "Open Questions in Evolutionary Theory", which I or-

ganized. My report on this meeting appears among the *Seminarberichte*, next section of this *Jahrbuch*.

I may add that the strength of Berlin in the biological sciences, together with the attraction of the Wissenschaftskolleg as a scholarly ambience, proved helpful to my investigations of the recent history of evolutionary theory. I was able to be in regular conversations with interesting scientists at the Max-Planck-Institutes and the Freie Universität, as well as others elsewhere in Europe who visited Berlin or whom I went to see. Fellows of the Wissenschaftskolleg, Michael Ghiselin and Gunther Stent, are themselves biologists with insight into evolutionary theory. Such encounters were capped in the month of August, 1988, by the European Summer University and by a workshop held by the Dahlem Konferenzen. The summer university was organized in large part by the directorate of the Wissenschaftskolleg, and was held for four weeks in August at Jagdschloss Glienicke. Students were offered four areas of specialization, one being biology and in particular evolutionary theory; certain distinguished evolutionists were recruited to teach at Schloss Glienicke for a week each, allowing me time for extended conversations about recent developments in the science. The Dahlem conference is going on even as I write this, the last days of the month, and has brought some forty scientists to Berlin to argue about the evolution of complex functions in vertebrates.

I also brought with me to Berlin the draft of a long article on an aspect of biological warfare. This was the claim by the government of the United States, under President Ronald Reagan, that in the late 1970s and early 1980s the Soviet Union was supplying certain biological toxins as a weapon of war to Vietnam, which was using them against hill tribes in Southeast Asia — the so-called "yellow rain". If true, the Soviet Union would have been in flagrant violation of several arms-control treaties. The claim was challenged and in the past two years conclusively disproved by a small, independent group of American and English scientists. My piece is a history of how the claim came to be made and how it was refuted. In the fall of the year I revised this into a chapter of a book, the rest of which will take up other aspects of the control of chemical and biological weapons; the research for this continued actively while I was in Berlin. In February, I delivered a version of the paper on yellow rain as a lecture, one of the Kolleg's Thursday-evening series, before an invited general audience.

Besides that, I wrote short biographical sketches of several scientists. The most substantial of these profiles is of Joseph Needham, biochemist, embryologist, and, of course, the premier historian of science in China. By early August, I had this in near-final draft. Another, briefer bio-

graphical account, for a more scholarly audience, is of Max Delbrück, one of the founders of molecular biology.

For the pleasure of it, I wrote an article setting out a Lévi-Straussian analysis of the structure of Charles Dickens' *Great Expectations* — an analysis that leads to a surprising new view of the interior dynamics of the plot and the relationships among the characters.