

# Perspectives

## Anecdotal, Historical and Critical Commentaries on Genetics

*Edited by James F. Crow and William F. Dove*

### Birds' Eye View: A Decade of Perspectives

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ONE of Jan Drake's happy innovations as editor of *Genetics* was to initiate the publication of an essay, entitled *Perspectives*, at the beginning of each issue. His idea was embodied in the subtitle "Anecdotal, Historical and Critical Commentaries on Genetics." In the summer of 1986, he tracked one of us (J.F.C.) by telephone to a hideout at The Jackson Laboratory in Bar Harbor, Maine; acceptance was immediate. Jan suggested that the job might best be done by two colleagues at the same institution. So the name Dove was added to Drake and Crow to complete the *Genetics* Aviary.

At W.F.D.'s suggestion, the concept was broadened to include not only retrospective views but views by contemporary investigators on the issues with which they are involved. Thus, some essays were perspective while others were prospective. Our complementing backgrounds have made the collaboration an easy one. One of us (J.F.C.) was nourished on classical and population genetics, with an emphasis on *Drosophila* and evolutionary theory. By age and background, he is *per force* interested in history. The other (W.F.D.) was involved in 1986 in a transition from lambda to mouse genetics, via the protist *Physarum*, and so is deeply committed to experimental genetics in a range of organisms. These complementary views have been echoed in the various articles that have appeared during the first decade of *Perspectives*, 1987–1996, coinciding with the final 10 years of Jan Drake's editorship.

In this first decade of *Perspectives*, only one issue was missed: March 1991. On two occasions, the essay was replaced by an obituary, and one was replaced by the GSA Medal Essay (by Eric Wieschaus). Although we have not imposed a strict page limit, our aim has been to limit articles to about six pages.

The general policy has been to invite articles, although on a few occasions we have accepted unsolicited essays. We have taken advantage of anniversaries of important ground-breaking papers (*i.e.*, the classic by Avery, Macleod, and McCarthy), the birth of important contributors (*i.e.*, J. B. S. Haldane centennial), or

other significant events (*i.e.*, the first issue of *Genetics* in 1916). These have fulfilled the retrospective function.

The perspective and prospective functions have been achieved by articles that have integrated classic studies with contemporary problems in genetics. For instance, Frank Stahl (1994) addressed the perspective function in discussing the 30-year fate of the Holliday Junction: "Robin's model was the lightning rod for 30 years of research, and its central assumptions, though modified, have survived every strike." Nancy Kleckner (1990) provided the prospective function when she ended her essay on the regulation of transposition with three paragraphs formulating six distinct unsolved quandaries.

In one case, we invited an article to right a historical injustice. Gustave Malécot's deep and rigorous work in population genetics theory went unrecognized for many years, partly because it was mathematically difficult, but mainly because it was published in French in local journals that were largely unknown to English-speaking geneticists. The record was set straight in magnificent detail by Tom Nagylaki's (1989) scholarly review, one that we thought important enough to override page limit.

In addition to its historical function, *Perspectives* has played another useful role: *Perspectives* has been an oasis of general genetics. The series has developed during a time when the general GSA meeting has waned and been replaced by a very successful set of more specialized meetings. The oasis has been and will continue to be supplied by essayists from the community who want to convey to the wide readership of *Genetics* a broader view, one not permitted by primary research articles or talks at specialized meetings.

The machinery of *Perspectives* has been greased by the hands-on editing of Jan Drake as well as by his hands-off attitude regarding content and contributors. This has permitted a short, 2-month period between receipt and publication of an essay, something much appreciated by our busy essayists. Jan's eye for good writing has set a standard that has been further implemented by



The Wisconsin contingent: Jim Crow, Ilse Riegel, and Bill Dove. (Photograph by Glenn Trudel.)

two others. Pamela Drake has been a frequent source of help during the editorial process and also has an appreciation of good writing. In Madison, Ilse Riegel has taken over the copyediting process. Her eye for stylistic infelicities and inconsistencies has increased the readability and greatly reduced the number of errors in both text and references. How she can notice an

inconsistency in dates or abbreviations several pages apart remains a mystery.

Our greatest debt is to the numerous authors who have responded, almost always with enthusiasm, to our invitations to write articles—sometimes more than once. The result, we believe, has been an important addition, and we look forward to its continuation under the jour-



Jan Drake makes a point. (Photograph by William Dove.)

nal's new editorship. We continue to count on the community of geneticists for suggesting timely subjects and authors well suited to write on such topics.

Each of us has enjoyed a long friendship with Jan Drake. We round out this essay with two personal accounts.

**Between vertebrate embryos and microbes (W.F.D.):** My connections with Jan Drake began before I first met him in Urbana in 1965; my wife Alexandra knew Jan from college days in Woods Hole and then knew Jan and Pamela from the early days of the Medical Research Council Unit in Cambridge, UK. Since 1965, these connections have retained some of their ethereal character: We have each been interested in many of the same scientific problems but at different times.

Jan and I appreciate the experimental power of microbial genetics and are interested in mutation rates and mutagens. However, Jan came to this focus from an earlier interest in embryology, one first fostered with John Trinkaus at Yale and Woods Hole. By contrast, I have moved, as mentioned earlier, from the biology of phage lambda to that of the laboratory mouse. Thus, a current scientific conversation between us might invoke a point of old history with one of us, connected to a point of current experimentation with the other. Not long ago, as I was perfecting my technique at the dissection of postimplantation mouse embryos by omitting morning coffee from my regimen, Jan mentioned that, with Trinkaus, he had solved the problem of uncontrolled hand movements under the microscope by titrating any caffeine in his system with a measured amount of beer. I have not tried to reproduce this claim.

Jan and I also share a Caltech heritage in which we were doctoral students there—Jan in Biology and I in Chemistry. Here, too, our activities were asynchronously related, as I began to study phage lambda after Jan had left the Phage Group. But our shared colleague, Howard Temin, provided a long-term link to our Caltech experience and to our asynchronous interests in viruses, mutation rates, embryology, and cancer [see Dove (1995) and Drake and Crow (1996)].

**Mutation and mutagens (J.F.C.):** Jan's path and mine have crossed many times. I had heard of him as a promising young molecular geneticist, but this was some years before we met. Our first serious intellectual encounter was on Committee 17 of the Environmental Mutagen Society, which he chaired (Drake *et al.* 1975). I was impressed by the efficient way in which the committee functioned, thanks to Jan's leadership. He provided most of the technical information that the Committee

needed. He also did the great bulk of the writing, synthesizing heterogeneous input into a coherent whole. The report gives a full summary of the then-current knowledge of mutation and mutagens, comparison of test systems, ways of attempting to assess the human risk, costs, and policy issues. A particularly interesting aspect was an attempt to measure chemical mutation risks in terms of mutationally equivalent radiation doses. This would have the merit of putting chemical mutagenesis into the same regulatory framework as radiation. I just reread this paper and am once again proud to have been associated with it. Later, Jan and I exchanged roles. In 1983, I chaired a National Research Council Committee (NAS/NRC 1983) on which Jan served. Once again, the subject was testing for environmental mutagens, and once again, he was the major resource.

Of course his retiring as Editor is not the end of our pleasant and fruitful association. This issue includes an example of a very happy collaboration (Drake *et al.* 1998). What will surely be immediately apparent is the large part that he has played. As usual, he took on the task of collecting material from the rest of us and putting it into a coherent whole. And, as is his custom, he did the bulk of the work.

#### ENVOI

A fringe benefit of our association with *Perspectives* has been the chance to augment an already happy association with Jan and his wife Pam. A visit with the Drakes, whether it be at a Shakespeare Festival or at their island hideaway on the Carolina coast, is an occasion greatly to be treasured.

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