

A Tribute to Ira Herskowitz

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I first met Ira Herskowitz when he was a graduate student at MIT and I was a young faculty member at Wisconsin. I had written a review *The Genetics of the Lambdoid Phages*, roaming over a broad range of biological topics from the regulation of DNA replication (my central focus) to population genetics (conservation of genetic maps) to self/nonself discrimination in biological species (host-induced modification of DNA). Ira had just begun research on the regulation of gene action in lambda. A seminar visit to MIT in the late '60s introduced me to this shining intellect, graced with a collegial enthusiasm to communicate. The young Ira was uniquely eager to discuss actively the entire range of genetical concepts assembled in my review. In the years that followed, I interacted with Ira on a few carefully chosen occasions. As I sketch these encounters, you will see the driving urge and magnificent ability to communicate that matured in Ira Herskowitz through the decades of his short but sweet life.

In 1971 I helped Al Hershey assemble the *The Bacteriophage Lambda* from Cold Spring Harbor. My attention was consumed with “getting the details right”, particularly



for contentious experimental issues with which my laboratory was involved. But the book needed to reach a general audience, and it was Ira, still a graduate student, who was able to provide the needed Glossary. Those of you who know Al Hershey as the quintessential stylist for scientific writing would join me in admiring Ira's being chosen for this task of demystifying lambda.

Photo of Al Hershey and Ira Herskowitz, p.97 from *We Can Sleep Later: Alfred D. Hershey and the Origins of Molecular Biology*, ed. F. W. Stahl, Cold Spring Harbor (2000)

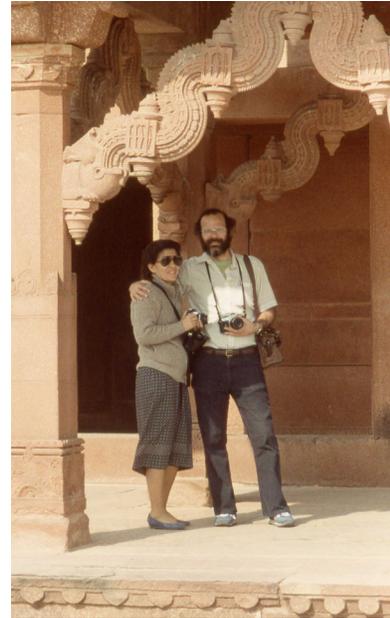
In 1983, the International Congress of Genetics was held in New Delhi, India. The elapsed time has eroded memory of the lectures we gave, leaving instead a deep imprint of another facet of Ira's urge and ability to communicate. During the open weekend of the Congress, Ira and Flora Banuett joined me in going by taxi to Agra and Fatepur Sikri - the great abandoned city of Akbar. Ira was particularly eager to connect broadly with the life of India – from the unforgettable Mughal architecture to the simple village life. Here are Ira and Flora at Fatepur Sikri.

Driving by taxi along the road, we stopped at a village. While Flora was able to engage the hard-working women by comparing of the types of clothing they wore, Ira discovered that the young boys were excited about the possibilities for exploration offered by their new bicycles. Ira connected.

Ira's urge to communicate across cultures and generations comes to the fore in the final vignettes of my tribute. Ira and I have shared an appreciation for the power of the ideas for biological regulation crystallized by Francois Jacob. So, on the occasion of Jacob's 70th birthday, Ira joined me, Fotis Kafatos, and René Thomas

in organizing a small conference on regulation and development. Ira was a major force in marshalling a broad-ranging discussion from participants representing numerous experimental systems. Most of these participants were “famous.” But Ira's enthusiasm for the ideas and the experiments silenced any tendency of a scientist to “tell his life story”. He played a major role in communicating the themes developed in this event (*Genetics* 126: 479-486, 1990).

All of us have known Ira's keen appreciation for genetics. This has extended into his active recognition of his intellectual and biological forefathers. The link with Al Hershey and the gathering *autour de* Francois Jacob illustrates Ira's investment of real effort to honor his scientific lineage. His effort was not limited to honoring Nobel Laureates. In 1988, Ira wrote a *Perspectives* essay (*Genetics* 120: 857-861) on an observation by Don Hawthorne: The Hawthorne Deletion Twenty-five Years Later. In 1998, he wrote another essay on the impact of the discovery of transactivation by René



Ira Herskowitz and Flora Banuett, at Fatepur Sikri, December 1983



Photo from Les Treilles, Provence, France: (left to right) Bill Dove, Ira Herskowitz, Spyros Artavanis-Tsakonas, Fotis Kafatos, Sarah Kafatos, Catherine Bachy, G. P. Georgiev, and Francois Jacob, May 1990.

Thomas: Coming Early to the Late Genes, *Current Biology* 8: R827-8. These gestures pale, however, in contrast to the gesture Ira made when, with David Botstein, he was awarded the Genetics Society of America Medal in 1988. Ira proudly introduced his parents, Irwin and Reida, and described early family days when his mother typed his father's genetic textbook, without word-processing and correcting carbon copies by hand. Beyond genetics, virtual and literal, Ira enjoyed observing that his identical twin brother, Joel, was so different from him. He communicated to us listeners that, in important ways, a person is far more than his or her genome.

My last extended connection with Ira Herskowitz came in 1998 when I visited San Francisco to to give a seminar. This event opened my eyes to the life and impact that Ira has made in the San Francisco community. In no other seminar audience have I found among the doctoral students such a deep and broad understanding of the ways geneticists think. Ira has taught you in San Francisco. Beyond the campus, it was a special pleasure to walk the streets of San Francisco with Ira. An image of the village in India popped back into my mind as we stopped to talk with a sidewalk astronomer.

Some woodland Native Americans in Wisconsin believe that after death each person's spirit inhabits a favorite place in the forest. Ira's special place is on the streets of San Francisco.



Ira Herskowitz in San Francisco, December 1998