

Honest Jim

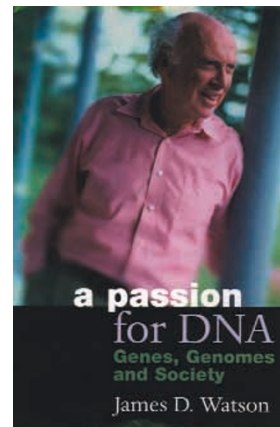
A Passion for DNA 'Genes, Genomes and Society'

by James D. Watson

Oxford University Press/Cold Spring

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When our descendants three or four hundred years from now look back on the century that has just passed, they will cite the names of James Watson and Francis Crick, doing so in the same reverential tone that we use when referring to Isaac Newton. With every passing year, it becomes increasingly clear that the DNA revolution that Watson and Crick triggered will be every bit as important as Newton's.

These two did far more than ignite the initial flame of a revolution; by helping us understand how translation, ribosomes, and messenger RNA operate, they also contributed substantially to the integration and consolidation of ideas that led, over the ensuing decade, to the formulation of the Central Dogma. Although their names will surely survive, those of all other 20th-century biologists will, for better or worse, be covered over by the sands of time.

Thanks to robust constitutions, good luck, and a touch of modern medicine, both are still with us, very active and vibrant. For those of us who have practised biology over the past decades, these two have become living icons, pillars holding up the firmament of biology. Having launched the revolution, they seem to have spent the next half century making sure that it advanced on a good track.

In the future there will be those who will want to know what Watson and Crick were really like and how their 20th-century watershed event actually happened. What were its precedents and conceptual underpinnings? Who among us, they will ask, knew these two up close? Might we share some amusing anecdotes that shed light on their personae? How did their clearly unusual intellects operate? And what psychic fuel stoked their internal fires?

Descriptions of the events that led up to the revolution of 1953 are already available; Watson's own book, *The Double Helix*, recounts from his own very personal perspective the research and thinking that led up to the historic discovery. Horace Freeland Judson's *The Eighth Day of Creation* does this

in a less idiosyncratic, more systematic, and, of course, far more objective way.

Still, this existing literature will hardly slake the thirst of those who want to know everything about Watson and Crick. Of the two, Jim Watson has been more visible in the public arena. He has not been shy and rarely has he been out of the limelight. After the decade of discovery that started in 1953, he went on to build up the Cold Spring Harbor Laboratory from a virtual shambles into a world-class research centre, and then proceeded to shepherd the Human Genome Project into existence.

During the course of all this, he has spent much time agonizing about where the DNA revolution is taking us. He has done so with a strong voice and has never pulled his punches. Very uncomfortable with equivocation and impatient with mushy thinking and ideological cant, he wants arguments laid out clearly on the table.

Watson's new book adds to the historical accounts of the mid-20th-century revolution and provides some peeks into his own persona. *A Passion for DNA* is an anthology of his writings over the past two decades. Some of his pieces accurately foretell how things were going to develop, on occasion a decade ahead of time. Others are broadsides launched during the controversy in the late 1970s about gene cloning and recombinant DNA. More recently, he has been in the thick of the debates swirling around the Human Genome Project, genome sequencing, and genetic diagnosis.

This book is vintage Watson – well-crafted prose, frequently opinionated, passionate, always strong-voiced, and showing occasional impatience with those who are not as smart as he (almost everyone) or who take a position that he finds quite simply to be wrong. The essays are occasionally redundant, later ones returning to themes and arguments made earlier. Still, this book remains a good read, sometimes very entertaining. On occasion, Watson has come to regret some of his strongly voiced opinions. One referred to repeatedly involves his initial

embracing of the Asilomar resolutions that led to a two-year moratorium on various forms of DNA cloning. As more experience accumulated on recombinant DNA and its (virtually non-existent) dangers, he increasingly became disenchanted with regulations that made no sense, and, always pragmatic, led the charge to dismantle them, taking no prisoners.

His agonizing about the DNA technology that he helped to spawn is very apparent. On one hand, it surely offers great promise for addressing a vast array of biomedical problems. But on the other, as with most new technologies, it has its potential dark sides, in this case genetic determinism, genetic discrimination, and eugenics of the most egregious sort. By denouncing the Nazi pseudo-science of racial genetics, Jim Watson buys credibility among those who would depict DNA technologists as scientists run amok, the lineal descendants of the German scientists who aided and abetted the Third Reich in its efforts to create a genetically superior race. His tone is not unlike that of the nuclear physicists who, having created The Bomb in the 1940s, drew back in horror and for the remainder of their lives campaigned publicly, and with success, to rein in the technology they had developed.

Watson's conflict about DNA technology and its societal impact is never fully resolved. As passionate an advocate of genomics as he is, he knows that none of us can foretell the future – where this new science will take us, how it will help us, and how it may one day be abused. In agonizing as he does about genetics and its future, he reminds us implicitly that we scientists, having created a technology, are obliged to explain it to the outside world and to immerse ourselves in the societal debates about how it will be used and how we can prevent its misuse. □

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