

# Portrayal of Women (excluding Rosalind Franklin) in the 'The Double Helix' Memoir of James Watson

Sachi Sri Kantha

## KEY WORDS

autobiography, DNA, double helix model, history writing, misogyny, women scientists

The 70<sup>th</sup> anniversary of the publication of three brief reports related to the double helical structure of DNA in the *Nature* fell in April 25<sup>th</sup> (1-4). Subsequently, James Watson's classic autobiographical memoir *The Double Helix*<sup>(5)</sup> describing his retrospective version of the related events that happened between 1950 and April 1953 was published in February 1968. 39 years later, Watson presented his version of why he came to write this book<sup>(6)</sup>. According to Watson's count, 'by the year's end, some seventy thousand books had sold in the United States and British sales approached thirty thousand.' Friedberg<sup>(7)</sup> recorded in 2005, that this book has sold more than one million copies and was translated into more than 23 languages.

Due to this sort of popularity and burgeoning interest in DNA and molecular biology in the last three decades of the 20<sup>th</sup> century, among the books published by scientists in the 20<sup>th</sup> century, Watson's book had received an iconic status and opprobrium for different reasons<sup>(8-17)</sup>. In addition, it also has gained ranking as an educational resource book for teaching elementary biology to students in high school and universities<sup>(11,18)</sup>. A primary reason for its notoriety was the disparaging portrayal of chemist and x-ray crystallographer Rosalind Franklin (1920-1958), whom Watson had addressed with a diminutive 'Rosy'<sup>(11,15,19-22)</sup>. Anne Sayre<sup>(11)</sup>, Franklin's first biographer, had strongly criticized this portrayal of 'Rosy' as follows:

*'It seems to me that he [Watson] has carelessly robbed Rosalind of her personality, however, and this does not strike me as a virtuous act. I cannot read his motives, and I do not pretend to. Fictionalized, as he fictionalized her, Rosalind made a better character in a kind of highly personal, novelized memoir;'*

A question posed: was Watson a misogynist then? As of now, what has been sidelined was how did Watson described women *other than* Rosalind Franklin, in his 40,000 word treatise. In her Rosalind biography, Sayre had failed to address this issue. In an attempt to gain some insight into the complex persona of Watson, I studied Watson's portrayal of women other than Rosalind Franklin<sup>(5,8,9)</sup>.

First to be noted was that Watson had dedicated the book to Naomi Mitchison (1897-1999), a centenarian author and a sister of J.B.S. Haldane (1892-1964), one among the elite polymaths of his era. In addition, Watson had written appreciatively about the skills and hospitality of Dorothy Hodgkin (1964 Nobelist in chemistry), Odile Crick (wife of Francis Crick) and Elizabeth Kendrew (physician wife of John Kendrew). Memoir also contains descriptions about the help rendered by his sister Elizabeth. Neither a satirical comment on the aristocratic behavior of Baroness Edmond de Rothschild, nor casual descriptions about attractive *au pair* girls (Foreign girls living with English families) shouldn't be taken too critically. A passing mention of actress Hedy Lamarr's<sup>(23)</sup> 'rombs in the nude' for the *Ecstasy* (1933) movie has to be interpreted as that of a movie fan's disappointment on the scissor act of British censors.

What Anne Sayre (1923-1998) had done on behalf of her friend Rosalind Franklin's primary contribution to the elucidation of the DNA

double helical structure is appreciable. How she opted to write her Franklin biography had been recorded by her crystallographer husband David Sayre (1924-2012)<sup>(24)</sup> as follows:

*'Ann Sayre was not a scientist She was articulate. From about the mid-[19]40s to mid-[19]70s, she was a successful writer, mainly of short stories in 1949, that she met Rosalind Franklin, and they became fast friends in 1969, at the Eighth International Congress, which was held that year at SUNY Stony Brook, just a few miles from where we then lived, a number of crystallographers suggested that Anne should write a book in answer to Watson's. Anne said 'It's your science, why don't you write it?' but in the end agreed that she would do so. The rest I think most people know. She worked 5 years on 'Rosalind Franklin and DNA' (and incidentally received much help on it from Francis Crick) and it was published in 1975<sup>(25)</sup>.*

In the process of defending the legacy of Franklin, Anne Sayre had portrayed Watson somewhat as a misogynist, mainly based on Watson's portrayal of Rosy in his book. However, for comparison she had neglected the issue of how did Watson portray other women in his memoir? In science parlance, proper controls were missing. David Sayre, Anne's husband, completed his PhD in the laboratory of Dorothy Hodgkin in 1951. In reality, though Watson had stated briefly about his first meeting with Dorothy Hodgkin, Sayre had omitted including this fact. Anne Sayer's book also ignored the details on other women presented by Watson.

Sayre was also critical about Watson's epilogue note in his memoir in where he had acknowledged to the readers that his impressions on Franklin during his salad days of early 1950s were erroneous. To quote verbatim,

*'According to both Aaron Klug and Francis Crick, they each pressed upon him [Watson] the necessity for adding something to rectify the picture of Rosalind as it stood in the original manuscript. It seems significant to me that such pressure was needed, that in Watson's mind nothing more was required.<sup>(11)</sup>*

One may say that, whether pressed by his colleagues Crick and Klug or not, not many scientists possess the conviction like Watson to acknowledge publicly that he was wrong previously. Like all humans, Watson has his share of talents<sup>(7,8,14,17,23)</sup> and faults; but being a misogynist is not one of the faults.

Deriving multiple evidences from their personal lives (infidelities), published writings and treatment of their wives, misogynist labels have been tagged lately to elite Nobel laureate physicists like Albert Einstein<sup>(26-28)</sup> and Richard Feynman<sup>(29,30)</sup>. However, I infer that Watson is not a proponent of misogyny. His expressed sentiments in the epilogue of the book, *'my initial impressions of her, both scientific and personal (as recorded in the early pages of this book), were often wrong'* deserves the benefit of doubt and not subjected to scorn. Watson's appreciative portrayals of women other than Franklin (i.e., Naomi Mitchison, Dorothy Hodgkin, Odile Crick, Elizabeth Kendrew as well as his sister Elizabeth Watson in the book) should not be ignored.

Received on April 10, 2023 and accepted on May 6, 2023

mediPhone Inc.

Higashi Shinbashi 1-2-5 3<sup>rd</sup> Floor, Minato ku, Tokyo 105-0021, Japan

Correspondence to: Sachi Sri Kantha

(e-mail: sachisrikantha53@gmail.com)

ORCID ID:

Sachi Sri Kantha: 0000-0001-6693-0110

## ACKNOWLEDGMENT

I dedicate this essay to the memory of my two zoology mentors, Prof. K.D. Arudpragasam (1931-2003) and Prof. Mano Sabaratnam (1931-2014) who recommended 'The Double Helix' book for reading 50 years ago. That Watson was an ornithology enthusiast was a stimulus for me to read his book.

## CONFLICT OF INTEREST AND FUNDING

None.

## REFERENCES

1. Watson JD, Crick F.H.C. A structure for Deoxyribose nucleic acid. *Nature*, 1953; 171: 737-738.
2. Wilkins MHF, Stokes AR, Wilson HR. Molecular structure of deoxyribose nucleic acids. *Nature*, 1953; 171: 738-740.
3. Franklin RE, Gosling RG. Molecular configuration in sodium thymonucleate. *Nature*, 1953; 171: 740-741.
4. Tobin MJ. April 25, 1953 — Three papers, three lessons. *Amer J Resp Critical Care Med.*, 2003; 167: 1047-1049.
5. Watson JD. *The Double Helix: A Personal Account of the Discovery of the Structure of DNA*, Atheneum Publishers, New York, 1968, 143 pp.
6. Watson JD. *Avoid Boring People — Lessons from a Life in Science*, Oxford University Press, Oxford, 2007, pp. 213-239.
7. Friedberg EC. *The Writing Life of James D Watson*, Cold Spring Harbor Laboratory Press, Cold Spring harbor, New York, 2005, pp. 33-69.
8. Stent GS (Ed). *The Double Helix, by James D. Watson, A Norton Critical Edition — Text, Commentary, Reviews and Original Papers*, W.W. Norton & Co, New York, 1980, 298 pp.
9. Gan A, Witkowski J (Ed). *The Annotated and Illustrated Double Helix by James D. Watson*, Simon & Schuster, New York, 2012, 345 pp.
10. McElheny VK. DNA memoir stirs furor at Harvard. *Science*, 1968; 159: 862.
11. Sayre A. *Rosalind Franklin & DNA*, W.W. Norton & Co, New York, 1975, 221 pp.
12. Judson HF. *The Eighth Day of Creation — Makers of the Revolution in Biology*, Simon and Schuster, New York, 1979, 686 pp.
13. Crick F. *What Mad Pursuit — a personal view of scientific discovery*, Basic Books Inc., New York, 1988, 182 pp.
14. Hoffmann R. Under the surface of the chemical article. *Angew Chemie Int Ed. Eng.*, 1988; 27(12): 1593-1602.
15. Maddox B. *Rosalind Franklin: The dark lady of DNA*, Harper Collins Publishers, London, 2002, 380 pp.
16. Wilkins M. *The Third Man of the Double Helix — the autobiography of Maurice Wilkins*, Oxford University Press, Oxford, 2003, 274 pp.
17. Sri Kantha S. Self-deprecating humour in James Watson's *The Double Helix* (1968) memoir. *Current Science (Bangalore)*, 2012; 103(8): 950-953.
18. Larson JH. The humanization of science: a classroom exercise. *J College Sci Teaching*, 1986; 15(6): 542-543.
19. Manwell C, Baker CMA. The Double Helix: science and myth in the act of creation. *BioScience*, 1979; 29(12): 742-746.
20. Rapoport S. Rosalind Franklin: Unsung hero of the DNA revolution. *History Teacher*, 2002; 36(1): 116-127.
21. Gibbons MG. Reassessing discovery: Rosalind Franklin, scientific visualization and the structure of DNA. *Philosophy of Science*, 2012; 79(1): 63-80.
22. Walsh JA. The jealousy of scientific men. *Amer Biol Teacher*, 2014; 76(1): 23-27.
23. Sri Kantha S. Citations to movies in the books of James Watson: a case study. *Internat Med J.*, 2020; 27(1): 76-78.
24. Kirz J, Miao J. David Sayre (1924-2012) obituary. *Nature*, 2012; 484: 38.
25. Sayre D. Anne Sayre (1923-1998) obituary. *Internat Union Crystallography Newsletter* 1998; 6(4). <https://www.iucr.org/news/newsletter/volume-6/number-4/anne-sayre-1923-1998> (accessed Apr 8, 2023).
26. Lees C. Einstein= MC<sup>2</sup> where M is for misogyny and C is for cheat. *The Times* (London), July 25, 1993.
27. Guterl F. Albert Einstein: Keyhole view of a genius. *Sci Amer.*, 1994; 270(1): 26 & 28.
28. Phillips K. Albert Einstein decried racism in America. His diaries reveal a xenophobic, misogynistic side. *Washington Post*, June 13, 2018.
29. Jogalekar A. Richard Feynman, sexism and changing perceptions of a scientific icon. *Sci Amer.*, July 11, 2014. <https://blogs.scientificamerican.com/the-curious-wavefunction/richard-feynman-sexism-and-changing-perceptions-of-a-scientific-icon/> (accessed Apr 9, 2023)
30. McNeill L. Surely you're a creep, Mr. Feynman. *The Baffler*, Jan-Feb 2019; no. 43: 112-117.