

Schrödinger: Life and Thought

Walter Moore

Cambridge U. P., New York,
1989. 513 pp. \$39.50 hc
ISBN 0-521-35434-X

A friend asked me last year whether I had seen the new Schrödinger biography, then in visible astonishment added, "It contains pictures of five of his mistresses and of two of his illegitimate daughters!" Having studied in Vienna, it came as no surprise to me that Schrödinger had been a ladies' man; that was common knowledge there. So he also had illegitimate children. That can happen in the "best of families." Yet, impelled by an admittedly base form of curiosity, I looked for the book in question on my next time in the bookstore. Written by Walter Moore, a professor emeritus of physical chemistry at the Universities of Indiana and Sydney, and published by Cambridge University Press, the book has a highly scholarly appearance, formulas and all. After reading a few pages here and there, I bought it. It is really two books in one: a clear, elegant and complete account of Schrödinger's scientific life and achievements, and a detailed and insightful account of Schrödinger's private life.

On the scientific side we get the fascinating history of the work that culminated in the epochal papers on wave mechanics. Then, there is Schrödinger's famous booklet *What is Life?*, which attracted Francis Crick and James Watson—and who knows how many others—to molecular biology. To be sure, the book reviewed here includes much more, but maybe nothing to invalidate what Richard Feynman once told me: "Schrödinger was the Harry Truman of physics, not obviously destined for greatness, but one who certainly lived up to the demands when his time came." Then there are the "assistants," the likes of Fritz London, Max Delbrück and Jan Tinbergen, and the peers, including Albert Einstein. The not unconflicted Schrödinger-Einstein friendship survived a dark period of European history and though both men behaved honorably, there was some strain caused by a letter Schrödinger wrote to the *Graz Tagespost*, which that newspaper took the liberty of publishing under the crass headline "Confession to the Führer." Further strain developed during the competition involved in the premature unification attempts in the late 1940s. There is the dramatic sequence of events that bring the Schrödingers from Berlin to

Graz and then to Dublin at the urging of Eamon de Valera.

And then there is the story of Schrödinger's private life. This story comes to life in these pages, always backed up by Moore's careful and extensive research. But Moore also reveals himself as a first-rate storyteller. And what a story it is!

Samples:

▷ Over Christmas 1925, Schrödinger writes the wave mechanics papers at a villa in Arosa, where he stays accompanied by a woman (definitely not his wife) whose identity remains a mystery to this day. Eat your heart out "Dark Lady of the Sonnets."

▷ Though in highest demand following the creation of wave mechanics, he takes time out to tutor the pubescent Junger twins, Ithi and Withi; years later one of them is to "almost" bear him a child.

▷ For all this to be possible, the Schrödinger marriage had to be an "open" one. The big surprise is that it was open at both ends: "Anny [Mrs. Annemarie Schrödinger] would find in Hermann Weyl a lover to whom she was devoted body and soul, while Weyl's wife Hella was infatuated with [experimental physicist] Paul Scherrer."

Reading all this, what comes to mind are the numerous books on Alma Mahler-Werfel-Gropius, which study this good woman on account of the passion she elicited from three such distinguished artists (and some others on the side). But then Schrödinger was a much better physicist than Franz Werfel ever was a writer, and a good case could be made for Hermann Weyl having been a much greater mathematician than Gustav Mahler was a composer, never mind Gropius. So how is it that we learn about all this only now? How is it that Mrs. Schrödinger is not the subject of studies and novels? Maybe the answer has to do with the idealized picture of scientists that our society clings to, against all evidence. Just as an artist is given automatic license, indeed is goaded, to excess in drink, drugs and sex, a scientist is pictured as cool, aloof, objective, unemotional and devoted to his science, to the exclusion of everything else. We know this to be false. Scientists are emotional, for after all what is the meaning of devotion in the absence of emotion? And yes, the scientist is as prone to excess as the guy next door, and probably for the very same reasons. It is refreshing to once have the veil lifted and to see the heroes of yesterday as they were, and not as society had decided they must or should have

been. Moore is to be congratulated for this.

This portrayal does not in any way detract from Schrödinger's tremendous achievements. And if Schrödinger emerges as a libertine, he is in good company: Saint Augustine, Mozart, Wagner and so on.

As in all such stories there are in this one elements of true sadness and near-tragedy. It appears that Schrödinger used his marriage as a shield against deeper forms of commitment: A love poem, it seems, was as far as he would go. This complex business is treated with insight and tact in the book.

Some time after I read through this book, I ran into the friend who brought it to my attention in the first place. He was still visibly disappointed, not by Moore's beautiful book, but by Schrödinger's behavior. He had patterned his own life according to the "cool devotion to the exclusion of all else" philosophy.

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Superconductor Electronics: Fundamentals and Microwave Applications

J. H. Hinken

Springer-Verlag, New York,
1989. 158 pp. \$39.00 hc
ISBN 0-387-51114-8

Superconducting Quantum Electronics

Edited by V. Kose

Springer-Verlag, New York,
1989. 299 pp. \$49.50 hc
ISBN 0-387-51176-8

Superconducting Electronics

Edited by Harold Weinstock
and Martin Nisenoff

Springer-Verlag, New York,
1989. 441 pp. \$75.00 hc
ISBN 0-387-51521-6

Superconducting electronics offer the ability to measure electromagnetic quantities at sensitivities unapproachable by any other technique. Since the introduction 20 years ago of the first commercial superconducting device—the SQUID—superconducting instrumentation has been routinely used in such diverse applications as medicine, materials science and oil exploration. Higher-frequency applications find superconducting electronics in radioastronomy and metrology. It was primarily the speed