

## Ex-Prodigy, My Childhood and Youth

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*Ex-Prodigy,  
My Childhood and Youth*  
By Norbert Wiener  
The MIT Press, 1953

It is a little difficult to put Norbert Wiener into one of the familiar scientific pigeon-holes. He thought of himself as a mathematician, which he undoubtedly was. But he is perhaps most widely known as the father of the subject of cybernetics, which is the science of control and communication. The first half of that word – incidentally invented by Wiener himself – is now widely familiar all over the world, as it qualifies everything from cafés to wars. As Professor of Mathematics at the Massachusetts Institute of Technology he worked extensively with engineers, so he has sometimes been called a mathematical engineer. But he was much more than any of these, as he always had deep interest in subjects ranging from biology to philosophy and literature, and contributed to each of them. Wiener was actually a rare type of human being, namely a mathematically accomplished scholar, in the best sense of each of those words.

One might at first think that a book titled *Ex-Prodigy* will chronicle the succession of

triumphs that a celebrated man like Wiener must have achieved in his life. But in fact it turns out that his early career was full of setbacks and crises of various kinds: the path to distinction was anything but smooth. The book recounts, with great honesty and poignancy, the tortuous course that the young Wiener had to trace before (as we might say in India) he achieved self-realization. The chief reason was precisely that he was a prodigy – a word that is used almost in a technical sense by Wiener, to describe a freak of nature, ‘something abnormal or monstrous ... [that] causes wonder’ (as the Oxford Dictionary has it). And Wiener describes in detail his experience of being treated like a strange and fabulous specimen of humanity – and he does so without sentiment, almost clinically: the book may be said to be the story of *his* experiments with truth.

Wiener was born to a scholarly family; his father, a native of Russia, was himself an intellectually precocious child. Educated at Minsk, Warsaw and Berlin, Wiener senior slowly worked his way west, ending up eventually in a cotton factory in New Orleans, becoming a farmer in Florida and Kansas and teaching in Missouri, before he finally joined Harvard where he retired as a Professor of Slavic Languages. He led his early life with ‘an adventurous indifference to poverty’, says the son. Mother was an intelligent and capable woman who came from a well-off family in Missouri. (In a characteristic aside, Wiener remarks how, in Jewish society, even a thoroughly impractical rabbi was always

considered a good match for a rich merchant's daughter, so Jewish biological habits, unlike Christian ones, helped to breed scholarly qualities.)

Wiener computes that he was seven-eighths Jewish, although (astonishingly) he did not know about his Jewishness till the age of 16. The discovery is made accidentally as he listens to a conversation of his father with another scholar who talks about the Wiener family's distinguished (medieval?) ancestor who was a philosopher and rabbi, born at Cordova and domiciled in Cairo as physician to the Vizier of Egypt. Wiener's Jewish roots had been carefully concealed from him by his over-protective mother, whose vocal criticism of the community took the form of a rather virulent (Jewish) anti-semitism, and was clearly intended to encourage assimilation of her off-spring into the American mainstream. This conformist spurning of the family's origins, although understandable at a time when Jews were still socially disadvantaged in the US, leaves the young Wiener confused and angry.

As a child Wiener was of course not aware of his extraordinary abilities; but his father was, and so proceeded to take charge of the son's education. It is only on entry to school that Wiener realizes the unusual situation he is in: all his class-fellows are older and so much surer of themselves, but are academically well behind him; and he cannot mix with them easily. He becomes the subject of articles in the press, both lay and learned; one of the

latter, after a conventional 'scholarly' analysis, concludes with an unfavourable assessment of the real value of prodigies, Wiener included. Together with the academic pressure put on him by a strict and critical father (who takes credit as mentor for the son's outstanding academic performance, perhaps with the well-intentioned desire to ensure that the son does not suffer from a swollen head), Wiener is soon a bundle of complexes, easily frightened, scared of failure. He has spent too much time reading as a young kid, and becomes acutely myopic. This makes him physically clumsy, on the play-field or in the lab. Add a psychic awkwardness, and a resentment of the way he appears to have become a guinea-pig for the educational philosophy of his father, one is not surprised that the young Wiener is at once both conceited and thoroughly unsure of himself and his future.

He graduates from Tufts College at 14 years, *cum laude*, but is not elected to Phi Beta Kappa, because there was doubt about whether the future of the infant prodigy would justify the honour. He *is* elected 15 years later, but by this time he is cynical about honours: later in life he resigns his membership of the (US) National Academy of Sciences.

He then registers for a PhD in biology at Harvard, gives up, pursues philosophy and mathematics at Cornell, gives that up too and returns to Harvard, where he finally gets a PhD in mathematical logic, at age 17 – only after he has taken his oral and written



examinations in a state of terror.

He then goes to Cambridge, England on a fellowship, and it is clear that this is where he finally grows up. At first, the prejudices of a citizen of an ex-colonial country towards former imperial masters cloud his view of English Cambridge, but he soon finds out that beneath their self-confident exterior, his Cambridge colleagues are willing to discuss and consider the wildest ideas. Released from the intrusive attentions of his father, and learning from such eminent men as G H Hardy and Bertrand Russell, he begins to find himself. A brief visit to Goettingen appears to complete his education, and he returns to the US just before the beginning of the First World War as a more confident scholar: his depressions slowly peter out. After a few odd jobs, he is finally offered a position in the Mathematics Department at MIT, and is asked to devote himself to applied mathematics. MIT became his permanent academic home, and there slowly emerged the Wiener that the world knows so well and respects so much. At age 31 he marries, and his wife finally provides the love and stability that Wiener had always needed; the book is dedicated to her, with the touching inscription '*Under whose gentle tutelage I first knew freedom*'.

So it looks as if growing up in Cambridge should be as fascinating a subject for scholarly investigation as growing up in Samoa.

We read every now and then in our own press of infant prodigies: persons who can do

impossible sums in their head at fantastic speeds, or play fifty ragas on the flute, or finish the doctor's degree at age 15. What is their life like? How many of them succeed in later life (whatever 'success' may mean)? Wiener keeps asking these questions throughout the book. There were four other 'prodigies' who joined Harvard with Wiener; at least one of them had a tragic career as his efforts to find anonymity were frustrated, in particular by a damaging and cruel article that a clever reporter wrote about him for *The New Yorker*. Wiener's own family, although full of love in its own way, compounded Jewish puritanism with the New England variety, and unconsciously suppressed his social development. But, at age 59 (when this book was first published), Wiener is able to take a remarkably unbiased view of his parents: they are resented, respected and loved, all at the same time.

Wiener's account should be of particular interest to Indian readers. For the social milieu of a scholarly Jewish family in turn-of-the-century United States, on the other side of the globe, does not seem so unfamiliar to scientists of my own (or perhaps even more an earlier) generation in India. The respect for learning, the strict and aloof father (not unloving in his own way), the relative security and social protection offered by parents and innumerable uncles and aunts, the social awkwardness of intellectual precocity, family commitment to abstract goals, unworldly scholars sustained by their incredibly competent wives – all these are uncannily



familiar. (The similarity is heightened by the peculiar circumstance that Wiener's father was greatly influenced by the ideas of Tolstoy – as Gandhiji was; and also by the fact that he adopts vegetarianism. As the Wieners travel around Europe – singly or together – their first concern often is to find a suitable vegetarian restaurant at their destination: a project that has long been hilariously and frustratingly familiar to Indian travellers to that highly non-vegetarian continent.) One can reason that in Wiener's case the social ambience he found himself in was the natural response to the persecution and the resulting insecurity that members of an ancient culture had experienced over the centuries, – and in many different parts of the world. In India it must have arisen from the position of disadvantage that a similarly ancient and proud culture found itself forced to suffer in the hands of foreign, imperialist rulers. Are there common social tricks, social weapons of defence, that the older cultures adopt when they cannot resist in other ways the aggression of younger, greedier, more dynamic ones? – I wonder.

Interestingly, the author refers at various times to his 'Hindu' friends, to his father's human sympathy rather like 'the compassion and self-abnegation of a Hindu Holy Man', and so on. He himself seems to see a correlation between his Jewish experience and that of Hindus – two ancient cultures in distress being presumably the binding link,

for he does not use the word *Indian*. (This choice could not have been inadvertent, for Wiener was deeply familiar with the different cultures and languages of the world; when I was introduced to him at MIT in 1959, his first question was, 'Are you Dravidian?') At one point he says, 'Who was I, a man whose proudest ancestor had led a life in a Moslem community, to identify myself exclusively with West against East?' This thought explains his later foray into literary criticism, when he analyses Kipling (who incidentally was a New England neighbour of the young Wiener), and concludes that it is far too simple to say East is East and West is West, as Kipling did in his passion for imperial binaries and determinate systems.

Wiener weaves these threads into a fascinating account; he writes with scientific clarity and literary elegance, and without bitterness. His is a touching story of how a scientist grew up, in American and English Cambridge, and carved for himself a distinguished position in the science and engineering of his times.

All in all, this is a most illuminating document – honest, poignant, touching, human. Wiener's life ranks with those of other eminent but troubled scientific souls – like L F Richardson and Alan Turing, for example – but mercifully has a happy ending.

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