

## 6 Diversions of a *Wunderkind*

The last chapter was devoted to my work in the early days of my career as a *Wunderkind*. However, my life was one of play as well as work. My parents entered me as a member of a playground which had been set up in a vacant lot next to the Peabody School. We had to show a card to get in and to allow us to use the services of the playground teacher as well as to crawl through the jungle gym and to coast down the slide or to employ such other devices as were there for our use and our exercise. I spent much time there talking with the policeman on the beat. Patrolman Murray lived opposite us and he loved to tease me with tall tales of police service.

I had many playmates whom I found at the Peabody School and retained even after my father had taken over my education. There was Ray Rockwood, who later went to West Point and died many years ago as an officer in the service. He was endowed with two aunts, whose efforts mutually canceled each other. One was a Christian Scientist, and the other manufactured some sort of proprietary medicine.

Walter Munroe was a son of a starter of the Boston Elevated Railway, and Winn Willard was a carpenter's son. Another of my playmates was the son of a man who later became mayor of Cambridge. The King boys, the sons of a Harvard instructor, were mechanically gifted and owned a little working steam engine which was my envy. *The Youth's Companion*, for which my parents then subscribed on my behalf, offered such engines among the premiums in their subscription contests, but even without competing, it was possible to buy the premiums through their services at a reduced rate. My parents bought many toys for me in that way, but they never went quite so far as the steam engine.

In those days the papers were full of what was then an unfailing source of news: the persecution of the Armenians by the Turks. How we came to the conclusion that it was any of our business, I do not know, for we certainly knew little about Turkey and less about Armenians. One day the

King boys and I decided to run away to the wars and fight on behalf of the oppressed. How my father got on our trail I do not know, but in about a half hour he found three very confused little boys gazing into a shop window on Massachusetts Avenue half way between Harvard Square and Central Square. He delivered the King boys to the mercy of their own family. To me he administered no punishment except that of a biting ridicule. It was years before my parents stopped teasing me about this occurrence, and even to the present day the memory of this teasing can hurt.

Most of the survivors among my childhood playmates have made good in the world. One of them, who was notorious among us all as a particularly nasty and vicious child, is now a great tycoon of industry. Another, who distinguished himself by chasing a comrade through the streets with a hatchet, has disappointed all of us by eschewing the life of violence for the scarcely more satisfactory career of a petty swindler.

We had all sorts of fights in those days, from snowball fights to a serious gang affair in which two armies of boys met on Avon Hill Street and pelted one another with stones. Our parents soon broke this up. In one snowball fight a companion of mine, who suffered from a high degree of nearsightedness, incurred a detached retina and lost the sight of one eye.

I have said that I, too, was a myope, and I suppose it was this snowball accident as much as anything else that led my parents to punish me for fighting and otherwise discouraged fighting at all costs. I never would have made a good fighter, as the effect of any severe emotion was to paralyze me with such weakness of fear that I could scarcely utter a word, let alone strike a blow. I suppose the reason was as much physiological as psychological, as I have always gone into fits of weakness when my blood sugar was low.

I took a sufficient part in the sports of the children of my age. I helped to make snow forts for snowball battles, as well as the snow prisons in which we immured our captives and in which I occasionally got immured myself. I jumped on behind the delivery sleighs or "pungs" which traversed the yellow slush-covered streets of the winter Cambridge of those days. I scaled the back fences with the best of them, and ruined my clothes when I fell off. I tried to skate on a child's doublerunner skates, but my ankles were weak and lax, and I never graduated to the more efficient single runners. I coasted down Avon Hill Street and would try to persuade my seniors and betters to give me a ride on their swifter double-runner sleds. In the spring I searched the pavements and the yards for little pebbles which I could grind up with spittle to make a crude sort of paint, and I would chalk the pavements to make hopscotch courts on which my comrades and I could play. I

walked over to North Cambridge to get comic valentines or Christmas cards from the stationery shops, according to the time of year, as well as cheap candies and the other delightful trifles of extreme youth.

I used to play a great deal with miniature electric motors. At one time I had the vision of making one of these, following the directions in a book which I had received as a Christmas present. However, the book was written from the point of view of the boy who has a small machine shop at his disposal; and even if I had possessed one, I neither then nor later would have had the mechanical skill to make use of it.

I remember among my toys a megaphone, a kaleidoscope, and a magic lantern, as well as a series of magnifying glasses and simple microscopes. The magic lantern had a number of comic slides with it, which were quite as gratifying to a small boy of that day as is a Walt Disney movie to his present successor. We used to hold magic lantern shows in the nursery and to take our pay in pins.

There were times when we tried to make a little real money for our undertaking. Father had a series of photographs of Greek art which I understood had been given to me, and I tried to sell them around the neighborhood. I had a pretty task to collect them when my parents found out what I had done.

Christmas of 1901 was hard for me. I was just seven. It was then that I first discovered that Santa Claus was a conventional invention of the grownups. At that time I was already reading scientific books of more than slight difficulty, and it seemed to my parents that a child who was doing this should have no difficulty in discarding what to them was obviously a sentimental fiction. What they did not realize was the fragmentariness of the child's world. The child does not wander far from home, and what may be only a few blocks away is to him an unknown territory in which every fancy is permissible. These fancies often become so strong that even when the child has penetrated beyond the previously unknown boundaries, the conviction of his imagination maintains him in accepting a geography that his experience has already shown him to be false.

What is true concerning the physical map is also true concerning the chart of his ideas. He has not yet had the opportunity to explore very far from the few central notions that are his by experience. In the intermediate regions, anything may be true; and what is for his elders at least an emotional contradiction is for him a blank which may be filled in any one of several ways. For the filling of much of this blank he must depend on the good faith of his parents. Thus the breaking of the Santa Claus myth discloses to him that this dependence on the good faith of his parents has

its limitations. He may no longer accept what they have told him, but must measure it by his own imperfect criteria of judgment.

The family was enlarged again in the spring of that year. My sister Bertha was born, and her birth nearly cost my mother's life. Our neighbor, Dr. Taylor, attended my mother. He was a gray-bearded, elderly man, with two sons who were among my playmates. As before, Rose Duffy was the midwife. I was full of fancies about what birth might mean, and had a weird idea that if one could put a doll, say a doll made out of a medicine bottle, through the proper course of incantation, one could make a baby out of it.

This naïveté was remarkable in view of my scientific sophistication at the time. The various biological texts which I read between my sixth and my ninth years contained a great deal of material on the sexual phenomena of animals in general and of vertebrates in particular. I was quite aware of the main outlines of mitosis, of the reduction divisions of the egg and the spermatozoon, and of the fusion of male and female pronuclei. I had a fair idea of the elements of embryology and of the gastrulation of some of the lower invertebrates. I knew that these facts were somehow connected with human reproduction, but my inquiries of my parents in that direction were not encouraged, and I was quite aware that at some place in my line of thought there was a clue missing. Intellectually, I was far advanced in the understanding of the phenomena of sex both in plants and animals. But emotionally the whole matter was as indifferent to me as it can only be to a young child: or rather, where it was not a matter of indifference to me, the only emotions it excited were those of puzzlement and terror.

What made the family situation even worse at Bertha's birth was that both my sister Constance and I came down with measles about the time of mother's delivery. I don't remember how we managed to take care of the three of us at the same time.

It was about this time that my parents tried to see if I could be brought into greater conformity with the habits of the other faculty children. They sent me to a Unitarian Sunday school after a considerable amount of protest which I took out in philosophical debate with the minister after Sunday school. The minister was Dr. Samuel McCord Crothers, that admirable essayist and litterateur, who was a friend of the family for many years and who more than twenty years afterward officiated at the marriages of my sisters. Dr. Crothers was not shocked by my youthful rejection of religion, and tried to meet my arguments seriously. At any rate, through his forbearance it was not absolutely impossible for me to continue in Sunday school.

The Sunday school had a good library, and there were two books which I remember impressed me particularly. One was Ruskin's *King of the Golden River*. Many years afterward, when I read his *Modern Painters*, I recognized the same sense for mountain scenery and the same strong ethical attitude which I already knew in his story for children. The other book was an English version of a French story of the seventies entitled *The Adventures of a Young Naturalist in Mexico*. It is only within the current year that I have seen this book again and I have renewed my impression of the rich picture it gives of the lushness of the tropical forests of the Mexican lowlands.

The Sunday school gave a Christmas play in which I was due to appear somehow or other in a minor part. The making up and dressing up embarrassed me exceedingly, and created a disgust for participating in amateur dramatics which has lasted to this day.

That summer, which we spent in a cottage in Foxboro, *Cosmopolitan Magazine* published the serial story by H. G. Wells entitled, "The First Men in the Moon." My cousin Olga and I devoured it, and although I was not able to appreciate all the social significance of the writing, I was properly shocked and terrified by the brittle figure of the Grand Lunar. About the same time, I had been reading Jules Verne's *The Mysterious Island*. These were the two books which introduced me to science fiction. Indeed, for many years I remained an *aficionado* of Jules Verne, and a trip to the library to find yet another volume of his writing was probably a greater delight than this generation of children can get out of the movies.

Parenthetically, for all this I am not enthusiastic over modern science fiction. Science fiction has been rapidly formalized and it is no longer a genre which offers sufficient freedom for the author who tries to follow its accepted canons. I have tried a little fictional writing about scientific matters, but it is entirely outside the frame of the science fiction monopoly. Some writers in this field have let their taste for fiction outstrip their sense for fact, and have allowed themselves to be used as promoters for various schemes of charlatans. The very originality of science fiction has become a cliché. Its slickness is quite different from the enthusiasm and verve with which Jules Verne adapted the romantic milieu of Dumas, or the sincerity by which H. G. Wells made his sociological discourses palatable and fascinating.

Whether it was summer or winter, Father did a considerable amount of literary work, and I always found it very exciting to follow the successive stages of publication. The first book of his own, as contrasted with the *Poems* of Moritz Rosenfeld (which he had helped to see through the press), was a *History of Yiddish Literature*. This was a little too early for me to have

clear memories, but I well remember his next book, the two-volume *Anthology of Russian Literature*, which he edited and the component parts of which he in large measure translated. This was followed by a great contract with Dana Estes and Sons, by which my father agreed to translate all the works of Tolstoy for the cash sum of ten thousand dollars. This was a rather skimpy reward even at that time, and today it seems a ridiculously small sum to pay for the translation of twenty-four volumes. My father accomplished this task in twenty-four months. In this he was helped by a very competent secretary, Miss Harper, and I believe that she was paid directly by the publishers. Father's relations with his publishers were never very smooth, and I think that he was justified in his general attitude of suspicion.

I soon learned that a manuscript is followed by the long banners of galley proof, and these in turn by the smooth oblongs of page proof and the leaded oblongs of plate proof. I learned the main signs of the proofreader and the general technique of proof correction. I learned that authors' corrections in galley proof are expensive, while they are exorbitant in page proof and practically prohibitive in plate proof. I saw Father cut up two or three Bibles in order to translate the Biblical quotations of Tolstoy, and I used to play with the discarded proof sheets and remains of these Bibles as if I were reading proof myself.

Although I had met my mother's family before we moved to Avon Street, most of my recollections of them belong to that time. My mother's mother and two of her sisters followed her to Boston at some period which I do not remember. My grandmother lived in a Cambridge lodging house on Shephard Street at the time that my sister Bertha was born; and I can still remember a heroically determined effort on her part to bathe me, in which she showed herself quite indifferent to my imminent suffocation and to the action of soap on my eyes.

I do not think that she had any particular quarrel with me, but she certainly did with my parents. I do not know in what manner the latter had offended, although it seems clear that the old quarrel between German Jew and Russian Jew played at least a role. At any rate, my parents accused my mother's family of trying to break up their marriage, and there followed one of those family feuds that are not even terminated by death. Some of the participants in these feuds may die, but the rancor of the survivor lives with their memory.

I met my Grandfather Kahn only once if at all. I know his looks very well from his photograph, which is that of a tall, grave man with a long, gray beard. He was already separated from my grandmother, and lived in some

sort of old people's home in Baltimore. I remember that at some later birthday he sent me a gold watch for a present. He died about 1915.

My father and I spent a great deal of time in the spring of 1903 looking for a place to pass the summer. We made a regular circuit of the villages south of Boston, from Dedham to Framingham, and even along the sea-coast around Cohasset, but we never found the right place. We asked the advice of all of father's friends who lived in the outer suburbs. Finally, we decided to look a little farther afield in the northwest sector, and hit on a place called Old Mill Farm in the town of Harvard, about halfway between Harvard Village and Ayer Junction. We spent one summer there getting acquainted with the place, and decided that the next summer should see us engaged in modernizing the farmhouse and preparing to lead the simple life of a farmer and a college professor.

I do not know precisely what relation the name of the town of Harvard has to Harvard University, but any connection between the two places themselves is remote. The town of Harvard is distinguished historically for containing the site of the first or second water-driven grist mill built in inland Massachusetts. Though this mill was not on the farm we eventually bought, the old dam still stood near its boundaries, and the pond had been successively enlarged by later and later structures until the dam had come to stand opposite the farmhouse. Hence the place was called Old Mill Farm, and this is the name by which I shall refer to it in the ensuing chapters.

When Father bought Old Mill Farm and decided to live there later all the year round, I think there were several motives at work. One was his love of the country and his desire to work in the soil. Another (which I think must have been much less important) was the pride in the additional status of the landowner. Without any doubt, Father considered it essential for his children to have as much of their bringing up as possible in the country, and I believe he found my schooling problem less unsolvable than it might have proved in the city where the only choice would have been either a rather rigid public school or a rather expensive private school. I don't think Father could have found the country more conducive to his literary and scientific work than the city, and indeed it was pretty obvious to me that he made a considerable sacrifice in commuting as he did between Ayer and Cambridge.

When we first came to Old Mill Farm in the summer of 1903, the farmhouse was a gaunt, unattractive structure, dating from the decade before the Civil War. The house stood gable-end to the road, and was connected with a large barn by the usual sequence of ells and woodsheds. Opposite the house was the pond, which then seemed to me almost a lake but which

could scarcely have been more than two hundred feet wide. It had a marshy island in it and a little grove of trees on the right side, in which we found ferns and trilliums in the early summer. On the other side was the dam, from which two streams led across a boggy meadow and under the road to the extreme limits of our farm. Beside one of the streams, and nestling under the dam, was a shed equipped with a turbine; it had been used by a previous owner as a small factory for some product I cannot remember.

The land between the two streams and the road was a tangle delightful to a youngster. There were frogs and turtles in the streams. The little fox terrier who was my personal pet soon learned that I was interested in them, and would retrieve turtles for me between his jaws. The tangle of weeds in the half-marshy triangle of land was rich in flowers interesting to the child, such as touch-me-not, joe-pye weed, turtle mouth, and spiraea. Down from the stone embankment which carried the road hung festoons of the vine of the wild grape. The meadows were full of blue, yellow, and white violets, of wild iris, and of bluets and sweet grass after their season. In a more remote pasture there grew the two gentians, fringed and closed, as well as both the pink and the white spiraea and an occasional bush of rhodora.

All these were delightful to me. Not less so were the willows which lined the pond, together with an old stump grown up with withies, which formed our playhouse. There was a nearby sandpile, where we pitched a tent made of old rugs and piano boxes. By the sandpile were needle-covered banks under a spreading pine tree, and there we could burrow and make little ovens in which we baked potatoes. The sandpile was the washed-out part of an old road which had led past our house before the present one had been located, and down which Lafayette is said to have ridden on his great tour about the United States, when he came back as the guest of the country. A trail from the sandpile led down through a wet wood of alders to the sandy shore of the lake, where my sister and I used to bathe among tadpoles, leeches, and tiny frogs, before we had learned to swim enough to be trusted off a shelving beach. Later on, when we were older, our favorite bathing place was a pool just above the great dam, where the main stream poured over in a waterfall, and I could just stand up on tiptoe with my nose out of the water.

There was a boat on the pond, and we used to row up past the ruins of the seventeenth-century dam well into the inlet of the pond. With its water lilies, yellow and white, its pickerel weed, its bladderwort, and the mysteries of its turtles, its fish, and its other submerged inhabitants, the pond was always a delightful place for us. So was the old henhouse, with its chicken-wire supported on live willow posts which had struck root and had



grown into young trees. So was the barn with its hay loft, where one could hide and slide and jump to one's heart's content. So were the neighboring farmhouses, at whose back doors we always stopped for a glass of cold water and a pleasant word with the farmer's wife. We learned to avoid the front door, with the untrodden grass before it; for it led to the forbidden regions of the front parlor, open only for weddings and funerals, with its reed organ, its stiff haircloth furniture, its tinted family photographs, and its whatnot, laden with the particular treasure of the house and with the family album.

A little farther afield—about a mile and a half—lay the Shaker village. This was a particular treasure; a Protestant monastery, where the brothers and sisters of a sect doomed to perpetual celibacy sat on opposite sides of the aisle of their little chapel, dressed in an extreme version of the traditionally austere Quaker costume. I remember venerable Sister Elizabeth, and Sister Anne as well, who retained the worldly coquetry of wearing false hair under her coal-scuttle straw bonnet. One or the other would preside at the little shop in their great empty main building. They sold souvenirs and simples, as well as sugared orange peel and enormous disks of sugar flavored with peppermint and wintergreen. These were ridiculously inexpensive, and were the one sort of sweet which our parents allowed us to eat as far as our appetites might go.

The colony must have been about a century old and had an atmosphere of antiquity and permanence about it which was far more European than American. A celibate sect is always likely to find recruitment very difficult, and even though the Shakers would adopt children in the hope that they would grow up in their austere faith, something usually happened during adolescence or immediately after, and the youngsters almost always abjured the righteous faith of their foster parents to go the way of Satan and the flesh. Thus the great communal workshops and the two-story stone barns stood empty, and the fields went half tilled, while the outlying community houses under their spreading fir trees became orphanages or boardinghouses. The cemetery was a waste of weeds and brambles battening on the bones below, and the landing platforms which Shaker modesty had ordained to be built before each house, in order that the women mounting into the carriages should not display their feet in an unseemly and indecorous manner, were rotting away.

For some years Constance and I had been continually at odds with each other, and this seemed to my inexperienced parents a sign of original sin. I call them inexperienced because they were just beginning to realize the conflicts implicit in the growing up of brother and sister. Now, however, I

was eight and Constance was four, and there began to be a possibility of our being comrades. I know that we explored the thirty-acre farm together, and that for the first time I began to see her as an individual.

Although my new country life had its delights, the breaking of my acquaintance with children of my own age was a strong countervailing disadvantage. I found, indeed, a group of children from Ayer and from neighboring farms with whom I could play. But the frequency of my play was cut down by our relative isolation. Indeed, I never again fully caught up with the richness of companionship which seemed to me on retrospect to belong to our years on Avon Street. I know very well that the disadvantages of being too much alone and isolated were not easy to overcome in view of the financial struggles of the family at that time, but the effects were serious and long-lasting. When I left Cambridge for Harvard, I broke up the acquaintanceships of my early childhood, and although I made new ones in Ayer and later in Medford, I was never again to feel the continuity of so rich an environment of childhood friendships.

This is a section of [doi:10.7551/mitpress/11597.001.0001](https://doi.org/10.7551/mitpress/11597.001.0001)

# **Norbert Wiener—A Life in Cybernetics**

## **Ex-Prodigy: My Childhood and Youth and I Am a Mathematician: The Later Life of a Prodigy**

**By: Norbert Wiener**

### **Citation:**

*Norbert Wiener—A Life in Cybernetics: Ex-Prodigy: My Childhood and Youth and I Am a Mathematician: The Later Life of a Prodigy*

**By: Norbert Wiener**

**DOI: 10.7551/mitpress/11597.001.0001**

**ISBN (electronic): 9780262347051**

**Publisher: The MIT Press**

**Published: 2018**

Funding for the open access edition was provided by the MIT Libraries Open Monograph Fund.



**The MIT Press**

© 2017 Norbert Wiener

Foreword © 2017 Massachusetts Institute of Technology

*Ex-Prodigy* copyright © 1953 by Norbert Wiener. First edition published 1953 by Simon and Schuster, Inc. First MIT Press Paperback Edition, August, 1964

*I Am a Mathematician* copyright © 1956 by Norbert Wiener. First MIT Press Paperback Edition, August 1, 1964. Published by agreement with Doubleday & Co., Inc.

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

This book was set in ITC Stone Sans Std and ITC Stone Serif Std by Toppan Best-set Premedia Limited. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Names: Wiener, Norbert, 1894-1964, author. | Kline, Ronald R., writer of foreword.

| Container of (work): Wiener, Norbert, 1894-1964. *Ex-prodigy*. | Container of (work): Wiener, Norbert, 1894-1964. *I am a mathematician*.

Title: Norbert Wiener--a life in cybernetics : *Ex-prodigy* : my childhood and youth, and *I am a mathematician* : the later life of a prodigy / Norbert Wiener ; with a new foreword by Ronald R. Kline.

Description: Cambridge, MA : The MIT Press, 2018. | Includes bibliographical references and index.

Identifiers: LCCN 2017042823 | ISBN 9780262535441 (pbk. : alk. paper)

Subjects: LCSH: Wiener, Norbert, 1894-1964. | Mathematicians--United States--Biography.

Classification: LCC QA29.W497 A25 2018 | DDC 510.92 [B] --dc23 LC record available at <https://lccn.loc.gov/2017042823>

10 9 8 7 6 5 4 3 2 1