Nobel Laureates

Their Parents' Influence

By Echo Wu

The following Nobel Laureates were interviewed over a 2-year period. Dr. Bill Phillips was working at the National Institute of Standards and Technology when he won the Nobel Prize in Physics in 1997. Dr. Norman Ramsey, born in 1915, was still actively working as a professor at Harvard University when he won the Nobel Prize in Physics in 1989. In 1970, Dr. Paul Samuelson received the Nobel Prize in Economics (only the second prize awarded in economics at the time). He also was born in 1915 and still acted as a consultant to the federal government at the age of 93. Dr. Ted Haensch, a professor from Ludwig-Maximilian University in Germany, was awarded the Nobel Prize in Physics in 2005.

Nobel Prize winners from all over the world have received global attention for their exceptional performance in a variety of fields since the beginning of the last century. Much of the attention has focused on their academic work, educational backgrounds, and achievements. However, relatively little is known about their familial environment, early childhood, and the role their parents played in shaping their later success. It has been of great interest for me, as a researcher and a parent, to understand how the parents of these eminent individuals have contributed to the achievements of their children. So it was my purpose to use the Laureate's own words to explain their family experiences and parent support during these formative years.

What Did They Experience?

Dr. Bill Phillips (BP)

Personal relationships were the first thing that BP mentioned when he commented on his talent development. Such relationships included those with family, friends, colleagues, and students. Regarding the relationship with his parents, BP said he felt very secure about the fact that his parents loved him, while at the same time, they had high expectations of him and his two siblings. BP's parents emphasized education, and always expressed to their children how important it was that they learn at school, work hard, and pay attention to their teachers. "They made it very clear that they expected their children to do well in school, so if I thought my parents didn't care, I probably wouldn't [have] work[ed] so hard. So I do think they had a very important influence on me." Under his parents' influence, BP developed a love for reading when he was young.

> *My mother would have been very happy if one of her children could be a physician. But they did not demand us to do or not do one thing or another. . . . They encouraged us to do the thing we had [a] passion for. . . . I was very interested in science, for as long as I can remember. But what may have been really appealing to me was, I was reading biographies [of people] like Marie Curie, [about] how she did all the experiments. . . . It was even very romantic to me. Certainly I was motivated.*

Although BP's parents were not scientists, they gave their children the freedom to explore their interests and encouraged them to have a wide range of interests. As one of the consequences, BP became a happy and easy-going person and experienced few social and emotional problems at school. "I didn't have many difficulties. Of course every high schooler would feel that when they are growing up they don't fit in sometimes. But I don't think I had many more problems than any other high school students." In describing himself, BP cheerfully claimed that he saw himself as optimistic, romantic, and a geek who was very interested in technical things.

Dr. Norman Ramsey (NR)

As an only child for most of his life (when he was 6, his 10-year-old brother died), NR said his parents had a remarkable influence on him in terms of his education and achievement. Both of his parents were educated professionals, and his mother had a master's degree in mathematics, which was very rare at the time. His mother spent extra time with him reading and doing mathematics. His father, who wished for his son to attend West Point Military Academy, also influenced him but in a different way.

Instead, he played golf and tennis with him. NR's parents had high expectations of him, and "they expected me to work hard, to do my best." But, as he mentioned, he still had the flexibility and freedom of making subject choices, and "they allowed me to figure it out by myself."

NR skipped two grades and graduated from high school at age 15, which was regarded by NR as an advantage when compared to the learning experience of his peers. And since he was "quite relaxed about things," like BP, he did not experience many social and emotional problems. Although his parents were "always anxious to push me more than I was" in terms of socializing with peers, he said, "I was quite happy to be by myself."

In alignment with his parents' beliefs, NR expected his own children to work hard at school, and to behave well, too. Although it was his wife who took care of the children most of the time, and "had the primary responsibilities and activities with the children," NR also has very good relationships with his five daughters. When asked about his understanding of creativity, NR mentioned, "I think the main reason that most people don't have great creative ideas is because they don't spend time looking for [them]." His advice was, "think, think, think." To parents in general, his suggestions include supporting children's curiosity by understanding and questioning things, letting children find out the answers by themselves, and encouraging them to work hard, "but not so hard that they don't get opportunities for thinking!"

Dr. Paul Samuelson (PS)

During the interview with PS, I had a strong impression that PS did not have a satisfactory childhood, especially in terms of his relationship with his mother. From the age of 17 months until the age of 5, he spent half of his time living away from home "for no reasons" with a couple of distant relatives. Yet, PS admitted that his parents were supportive of their children's education, and they encouraged them to read. PS eventually developed into a lifelong reader. His mother compared him and his brothers with other children and urged them to behave well and to achieve high academic performance. PS remembered benefiting from his father's library, which was full of encyclopedias, literature, law references, and books about religion.

> *Both of my parents had good intellectual abilities . . . They encouraged us to read, and my mother used to compare us to our cousins, who had always done very well at school. . . . I think if my parents had not been supportive, I couldn't see how we could have done what we did.*

Just like NR, PS skipped grades several times at school and was very good at mathematics and writing. Because he has a great interest and passion for economics, he does not regard his job as work, rather, "That's my play, not my work!" He was highly motivated by his own interests, and often did things very enthusiastically, "at the time when I was interested in something."

In contrast to the other interviewees, PS did not want to manipulate any of his own six children's decision making, including which university to choose for higher education. "I didn't want to influence their opinions. They can find their own way." And despite the fact that four of his six children also turned to areas related to economics, he insisted that it was not because of him but because "they found themselves driven into it." Therefore, it is understandable that his suggestions to parents included being loving and permissive parents, not trying to overtly create a "little genius." He also suggests not putting too much pressure on a child with potential, rather allowing more freedom for him or her to achieve.

Dr. Ted Haensch (TH)

Different from the other three Laureates, TH is not from a family with a strong educational background. Born and raised in Germany, TH had great interest in exploring the world and conducting experiments, even when he was very young. "There was a sense of determination and strong motivation for me to become a scientist or an engineer." TH could always concentrate on things that interested him. "I liked science, since I thought it was fun. It's not because of my parents." His parents were supportive, especially his mother, who was a housewife without much education and did not really understand much about his academic interests. He reported, "We had some support from home, but some other kids, who were growing up in academic families, probably had a lot more support from parents in terms of academics." But at least, there was the atmosphere of appreciation of intellectual activities in TH's family.

Regarding himself as an introverted person, TH admits that at times he was bullied by schoolmates and colleagues. "I would say I was sensitive enough to know not to offend people, and I tried to be nice," he added. When explaining his social and emotional development, TH mentioned,

> *I think people would say that I am a predictable person. I don't have rages, depression. Not noticeable at least. Ha . . . I have [a] stable personality. . . . Probably social life wasn't that interesting for me. . . . I like to concentrate on solving problems, and I believe that sometimes you can only do things the right way if you can concentrate on it.*

TH believes that everyone is gifted in some ways, and an important thing is to find one's true interest. In providing suggestions to parents and educators, TH expressed supporting children's discovery of things that they could really enjoy, finding the specific areas that attract children the most, and encouraging them to be independent.

What Can We Learn From These Experiences?

The Nobel Laureates' interviews have brought out some unanticipated, yet very interesting, findings. Several themes related to parenting stand out that may represent

the most distinctive contributory factors to the Nobel Laureates' outstanding academic success. These themes include nurturing the passion and interest in children, showing them love and support, providing the freedom of choice, and helping them develop strong reading habits.

Passion and Interest

All four Nobel Laureates spoke about their intense interest or passion for mathematics and science. Not only did this intense interest provide the intrinsic motivation for them to work on subjects or activities they enjoyed very much; it also led them to the most appropriate direction for their future careers, and, consequently, helped them fulfill their potential and achieve exceptionally high performance in either physics or economics. Also noticeable is a passion or interest that usually developed at a very early age. The implication for parents and educators is to be aware of a child's initial interest, because these sparks may turn out to be the foundation for success in later stages of life.

Love and Support

BP and NR had active professional parents who provided sufficient and fairly flexible parenting support in their children's academic, physical, and social and emotional development. Meanwhile, PS and TH were reared by parents who had modest educational backgrounds. Yet, parents in both families encouraged their children to pursue their interests. Parental warmth, love, and care were shown by these parents, and except for TH, who was from Germany, the other three (American) Laureates all indicated their parents' involvement in their academic and nonacademic development. Additionally, parents were not described as domineering or demanding, which leads to the next theme.

Freedom of Choice

According to their interviews, BP's mother wished him to become a physician; NR's parents wanted their only son to attend West Point; and PS's parents desired for him to become a lawyer. Although these parents had their own initial expectations for their children, a sense of flexibility or freedom of choice turned out to be a distinctive theme among all of the families. Such freedoms eventually allowed the interviewees to focus on their own interests and pursue careers that were different from their parents' wishes. Possibly this freedom of choice may have helped the Laureates' continued interest in the subjects they chose, shaped their creativity and capacity of intervention, and thus enabled them to fulfill their potential.

Reading Habits

Either reading with parents at an early age, or reading by themselves, all the Laureates have had positive and intense experiences with reading. Such reading habits provided them with an early start in the exploration of the world through books. Reading also opened the window for them to obtain broad as well as specialized knowledge and information that probably was not taught in school, and to maintain their strong interest and intense passion in specific areas. As BP mentioned, the more he read the biographies of physicists, the more he was intrigued and attracted by the field. Obviously, like a spiral circle, habitual reading and interest in math and science interacted and supplemented each other, guiding these Laureates toward successively high levels of learning.

Future Steps

These interviews are part of a larger ongoing project that will include interviews with more than 30 Nobel Laureates. The initial results from the four interviews have generated some interesting preliminary findings that provide implications for parents, educators, practitioners, and a broader audience on how talented performance may be achieved with the support of certain parenting practices and optimal family environment.

According to the results of those already interviewed, love and support from parents are among the most important factors in determining children's talented performance later in life. However, such parental love and support seem to accompany certain levels of freedom of flexibility for children to choose and discover their own interests and passions, motivating them to work on things they really enjoy. Strong interests and passion in one or more subjects, combined with long-term reading habits, exposure to libraries, and access to other resources, have helped these Laureates gain an early advantage.

Author's Note

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