



Leonardo da Vinci

By Walter Isaacson. New York: Simon & Schuster;2017

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For over a decade, my colleagues and I have studied historical figures who are regarded as with attention-deficit/hyperactivity disorder (ADHD). For this project, biographies written by the historical figures themselves or by other authors from later generations are highly helpful. Steve Jobs and Benjamin Franklin are included in the list of more than 100 historical figures with ADHD that my research team has found. These two biographies were written by Walter Isaacson and my research team became interested in Walter Isaacson.

Several days ago, I was in San Diego to attend an academic meeting [1], to which my travel plans and schedule were entirely devoted. On the way to the Los Angeles International Airport after the conference, I felt emptyheaded and had no more plans. Then, I thought "I need some free-floating curiosity." After completing the departure procedures, I entered the duty free shop area, and found a bookstore signboard among the duty free shops of luxury brands, such as Hermes, Prada, and Rolex. I was curious to see what kind of expensive books they sold. Free-floating curiosity was then guaranteed by a thick biography of Leonardo da Vinci that I found, which struck me not only because its author was Walter Isaacson, but also because of the news that I read a while ago "Salvator Mundi, the long-lost painting of Jesus Christ by Leonardo da Vinci, which was commissioned by King Louis XII of France more than 500 years ago, was sold at Christie's in New York last November for USD 450.3 million including the auction house premium, shattering the world record for any work of art sold at auction [2]."

Leonardo's characteristics that are considered consistent with ADHD include 1) interest in diverse fields, 2) not being good enough with benefactors, 3) moving around cities without being able to settle in one place, and 4) failure to complete

paintings for a long time. As I read the biography of Leonardo da Vinci's written by Walter Isaacson, I got a lot of valuable information about the artist that I did not know before, including a detailed account of these characteristics.

Before beginning to discuss such characteristics, it is necessary to keep in mind that the adversities faced in childhood can be a strong risk factor for the development of ADHD as the child grows [3]. Caterina, Leonardo's biological mother, lost her parents at an early age and was an underclass poor. In her mid-teens, she met Piero, a wealthy notary in his early twenties, and gave birth to Leonardo. However, Piero married Albiera, who belonged to a wealthy family, before Caterina had Leonardo. Piero's father then had Caterina marry Accattabriga, a kiln worker and farmer from the same village, as soon as Leonardo was born. They all lived in the same neighborhood. These adversities would perhaps have impacted Leonardo's development.

This biography shows how Leonardo eventually developed his multidisciplinary interest from relentless curiosities and distinguishing talents that are regarded as symptoms and signs of ADHD manifested in his adulthood. He has been involved in various fields, such as military engineering, anatomy, mathematics, architecture, hydraulics (study of water works), and mechanics. Nonetheless, his interest in other areas did not completely disrupt his previous work or research. For example, Leonardo's anatomical study had a first round from 1487 to 1493. The second round was conducted between 1508 and 1513, including the dissection of an elderly man who was over 100 years old immediately after his death, with his consent. The third round occurred during his stay in Rome, between 1513 and 1516. From 1510 to 1511, in the midst of the second round of anatomical studies, Leonardo made 240 drawings and wrote at least 13000 words of text, illustration, and description of all the bones, muscle groups, and major organs of the human body. If these results were pub-

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lished, it would contribute enormously the development of anatomy. I believe that the reason this work has not been published lies in Leonardo's ADHD symptoms, such as procrastination or inability to prioritize works, which may be wrong. Unfortunately, his excellent colleague from that period, Marcantonio della Torre, a 29-year-old professor of anatomy at the university of Pavia, died in 1511 of the plague that devastated Italy that year [4].

Conflicts with patrons, although not yet confirmed, are believed to be among the reasons why he lived in several cities. His patrons, such as the French governor of Milan Charles d'Ambroise, the brutal Italian warrior Cesare Borgia, and the hapless papal brother Giuliano de' Medici, treated him harshly to finish his paintings. On the contrary, there was a good patron. He lived in Ambroise as a guest of the French King Francis I from 1516 until his death in 1519. The young, civilized, and demented king proved to be the perfect patron for Leonardo. The King admired Leonardo unconditionally, indulged his love for engineering and architecture, encouraged him to stage pageants and fantasias, gave him a comfortable home (the Château de Cloux, now called Clos Lucé, Leonardo's house), and paid him a regular stipend [5]. If Leonardo have met King Francis I in his youth, he would have done more.

Regarding his procrastination to finish drawings, Kenneth Clark wrote about the Mona Lisa "His insatiable curiosity, his restless leaps from one subject to another, has been harmonized in a single work. The science, the pictorial skill, the obsession with nature, the psychological insight are all there, and so perfectly balanced that at first we are hardly aware of them [6]." Although he began to draw the portrait of Francesco del Giocondo's wife, Lisa, in 1503, he would take it to his final journey, France, in 1516. He added small strokes and light layers to the painting through 1517. "Mona Lisa" was in his studio when he died and had never been delivered to Lisa's husband, Francesco. During his longtime work with "Mona Lisa," he performed anatomical studies, especially on mouth and optics. As a consequence, we find the conception of Mona Lisa's smile, which was based on Leonardo's meticulous anatomical investigation.

Regardless of ADHD, a special issue about Leonardo's personal life is about his young assistants. Leonardo never married. Instead, he lived with his young assistants. His first assistant was Salai, who moved to his house on July 22, 1490. When they first met, Leonardo was 38 years old and Salai was 10 years old. Salai was Leonardo's assistant, companion, amanuensis, and probably a lover [7]. While in Milan in 1507, Leonardo was 55 years old and had no son or heir [8]. Then, he adopted Francesco Melzi, a 14-year-old boy who was the son of a distinguished nobleman from Milan. Melzi's family

lived in the largest villa in the town of Vaprio. Leonardo then became a mix of guardian, godfather, adoptive father, teacher, and Melzi's employer in law. Although this type of adoption may seem strange today, it was an opportunity for the Melzis to make their son the pupil, heir, and amanuensis of the most creative artist of the time [9]. For the rest of Leonardo's life, Francesco would be by his side. In fact, "Francesco Melzi was named the executor and bequeathed most the estate in Leonardo's will after he died. This included Leonardo's pension, all sums of money owed to him, his clothes, books, writings, and all the instruments and portraits pertaining to his art and calling as a painter [10]." When Leonardo made his will in 1519, Salai was no longer by his side. Regarding their relationship as father and son, years later, the biographer Vasari [11] met Melzi and wrote that "he was a very beautiful boy and much loved by Leonardo. It was not clear whether there was any romantic or sexual relationship [9]." Vasari doubted that there was such a relationship between them. After Leonardo's death, Melzi married a prominent noblewoman and had eight children.

Walter emphasized curiosity as a fundamental characteristic of Leonardo's nature. Although the three basic elements of ADHD (hyperactivity, impulsivity, and inattention) and curiosity appear to be different or opposite components, we must remember that all of these characters are in the same object. Finally, I wonder whether Leonardo was with ADHD or not. I can tell myself that Leonardo was a typical genius and needed to be assessed for ADHD. The best way to get the result of this assessment is to buy the book "Leonardo da Vinci." I guarantee that, if you buy this book in a hurry, you will not regret it or lose it all. The book presents 144 wonderful illustrations and Leonardo's amazing notebooks. If you feel that the buds of "curiosity" your parents and teachers have cut off to make you a good student during secondary school or medical school are growing again, you will be getting more than ten times the value of this book.

Conflicts of Interest

The author has no financial conflicts of interest.

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