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CIO's book reviews; takeaways¹

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Leonardo da Vinci

Walter Isaacson

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Walter Isaacson is the author of several books on famous people; Steve Jobs, Einstein, Benjamin Franklin, Kissinger. He is Professor of History at Tulane University and was the CEO of the Aspen Institute, Chairman of CNN and past editor of Time Magazine.

In 2012, he was selected as one of the [Time 100](#), the magazine's list of the most influential people in the world.^[36] Isaacson is a fellow of the [Royal Society of Arts](#) and was awarded its 2013 [Benjamin Franklin Medal](#).^[37] He is also a member of the [American Academy of Arts and Sciences](#), the [American Philosophical Society](#) and an Honorary Fellow of [Pembroke College, Oxford](#)².



Introduction

Leonardo da Vinci was the genius of his time and is regarded by many as the outstanding innovator of all time. Curiosity was his passion. Many of his ideas foreshadowed centuries-later developments. While obviously brilliant, he encouraged collaboration and apprenticing. He was a misfit, but no one cared since he was so creative. Making connections across disciplines was key to coming up with ideas unseen by others. It never hurt to have a patron – or backer – for his ideas and he sought them out. Details mattered greatly. Execution of his ideas was often difficult and his only Achilles heel (not really).

As Wikipedia's authors note; 'many historians and scholars regard Leonardo as the prime example of the "Renaissance Man", an individual of "unquenching curiosity" and "feverishly inventive imagination" and he is widely considered one of the most diversely talented individuals to have ever lived.

The most recent biography of Leonardo da Vinci – let's call him 'Vinci' – is a brilliant in-depth look at the man; his way of thinking and a detailed look at the vast range of his interests and passions.

The 15th century was a time of invention, exploration, and the spread of knowledge by new technologies. Just like today. The Italian Renaissance was producing artists-engineer-architects who straddled disciplines.

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¹ a conclusion to be made based on presented facts or information: a main point or key message to be learned or understood from something experienced or observed

² Courtesy Wikipedia

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Vinci happened at a time when Florence had a population of 40,000 persons down from 100,000 in 1300 due to the Black Death. Milan, by comparison, had 125,000 citizens – three times the size of Florence. Florence, with its booming merchant class of status-seeking patrons, had become the cradle of Renaissance art and humanism. Vinci spent his career in Florence, Milan, and Rome.

There are many parallels with what is happening today but on a much grander scale. There is a reason that Silicon Valley is what it is today, that Toronto and its close connection with Waterloo (like Florence and Pavia³) are a hot bed of new ideas. Russia's 'Skolkovo'⁴ is not so fortunate for the opposite reasons. Scotland⁵, at the heart of the industrial revolution, experienced 'group think' in spades.

By dissecting the book by topic, CIO provides additional insight and perspective on the subject.

Read 'takeaways' by topic

Leonardo as a misfit. Illegitimate, gay, vegetarian, left-handed, easily distracted, and at times heretical. He was not formally educated, he had to learn from his own experience instead. He relied on experience – and preferred experience over received scholarship. His 'lack of reverence for authority and willingness to challenge received wisdom – would lead him to craft an empirical approach for understanding nature that foreshadowed the scientific method.

Leonardo as an artist. He was a leading artist of the Italian Renaissance; a painter, a sculptor, architect, inventor, military engineer and draftsman. Art and science combined into one man. His most commonly understood reputation is for his art works such as "The Last Supper" and the 'Mona Lisa' but his interest and works go much beyond painting.

On ranking art forms. Leonardo was above all else massively curious and determined to understand and resolve how things worked. One clear example of how not much escaped his determination was his ranking of the various art forms of the day. Controversial yes, but representative of the man. Vinci gives a rigorous scientific and aesthetic defense of painting. Leonardo's purpose in postulating the importance of painting was to raise the stature of painters.

Takeaways by topic

- Leonardo as a misfit
- Leonardo as an artist
- ranking art forms
- Vinci's characteristics set him apart
- seeing, dissecting, envisioning and leaving a record.
- career choices
- merging arts and sciences
- making a fortune
- collaboration
- being an industrial engineer
- curiosity trumping completion

³ Milan and the nearby university town of Pavia became more intellectually diverse. Charles d'Ambrose was dedicated to creating a court life which included painters, entertainers, scientists, mathematicians and engineers.

⁴ See 'Country Comment on the web site for a description of Russia's Silicon Valley initiative.

⁵ How the Scots conquered the world

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What made for the difference involved the supremacy of sight over other senses. The eye left an image in the brain. A sense of hearing was more ephemeral since sounds disappear after they are made. Poetry is less effective than painting since it takes many words to convey what a single picture can. Painting is more elevated than sculpture since the painter has to depict “light, shade, and color” and more, it is a ‘messy endeavour’.

Painting is also a science since it requires the ability to convey three-dimensional objects on a flat surface and needs the understanding of perspectives and optics – grounded in mathematics. Painting also requires not only intellect but imagination and makes painting creative.

Vinci’s characteristics set him apart.

Not merely extremely smart but had the ‘ability to apply imagination to intellect’.

He had become enthralled by staging fantasies. Architects, mechanics, musicians, poets, performers and military engineers were all engaged in executing them. Leonardo thought of himself as a member of each group.

Grounding his fantasy in reality is regarded a Leonardo’s failings – but as a true visionary one has to overreach and to fail some of the time.

On seeing, dissecting, envisioning and leaving a record. He was among the first to deconstruct complex mechanisms and make separate drawings of each element – found also in his anatomical drawings. He filled pages with outlines and passages for treatises on topics such as flight, water, anatomy, art, horses, mechanics and geology. He never mastered math and ended up using geometrical shapes using drawings rather than equations.

On career choices. Not interested in being a notary because work was ‘routine rather than creative’

On merging arts and the sciences. The ability to make connections across disciplines-arts and sciences, humanities and technology. “He saw beauty in both arts and engineering” Jobs said and his ability to combine them was what made him a genius. Wildly passionately curious, and creative across multiple disciplines.

On making a fortune. He was not motivated by wealth or material possessions. He decried “men who desire nothing but material riches and are absolutely devoid of the desire of wisdom. Nor did money motivate him. If the subject struck his fancy, such as the Musician, or if a powerful ruler demanded it, or his mistresses he was motivated. He did not dance to the music of patrons.

Imagination

- leaps of, fantasy, wonder, experimentation, desire for perfection, collaboration

Intellect

- smart, relentless curiosity, observation, think differently, knowledge for its own sake, visualizing spatial relationships



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On collaboration. Leonardo liked to be surrounded by friends, companions, students, assistants, fellow courtiers, and thinkers- scores of people he would like to discuss ideas with. Much of Leonardo's thinking was collegial – and he knew the advantages of having a team. He did not have a competitive personality – such as his later-life competitor, Michelangelo.

On being an industrial engineer. He did a time and motion study – likely the first industrial engineer – regarding the study to divert the Arno. He became interested in not only in how things worked but why.

On curiosity trumping completion. Leonardo was passionate about curiosity and less concerned about tying up loose ends. He enjoyed the conception more than the chore of completion. He went from seeking knowledge that could be of practical use to seeking knowledge for its own sake, out of curiosity and joy. Obsession is a component of genius.