

The art of science

A book makes a compelling case for amalgamating humanities and sciences

ISHAAN GERA

IN 1945, PERCY Spencer, an employee of Raytheon Company, was working with magnetrons. One day while working, he discovered that the peanut butter candy in his pant pockets had melted, leading years later to the invention of the microwave. Human development has been replete with such examples of chance or accidental discoveries—be it penicillin, Teflon or Vaseline—where we have been able to make uncanny connections and present new products to the world. The question today is not whether a human can work under the same context, but rather if a machine can make the same link. Since the advent of artificial intelligence and machine learning, humans have been trying to replicate human intelligence and consciousness. While progress has undoubtedly taken place, we are still far away from creating the 'Bicentennial Man'. More importantly, many believe that in the pursuit of this endeavour, we have put science ahead of humanities.

Scott Hartley, a Silicon Valley venture capitalist, is one such person, who believes that the real test of our creation lies not only in advancing techies around the world, but also in bringing in more 'fuzzies' (humanities or arts graduates) to better our pursuit of knowledge and foster our understanding of the world. He argues that an amalgamation of the two can create a better world and that governments need to reverse the trend of favouring STEM (science, technology, engineering and math) over humanities, as a philosopher might be as important



The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World

Scott Hartley
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in the future as a coder.

Hartley's book *The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World*, hence, revolves around the 'techie vs fuzzy' debate. He puts forth enough examples to show how companies are innovating to accommodate both. This is best described with an illustration of Nissan, which is using the services of a psychologist to solve the self-driving car dilemma. Hartley connects this with the simple thought experiment known as the 'trolley problem'. In the original case, a person is given a predicament, where he can either kill four people by keeping the trolley on the track or switch the path to kill another person. In the self-driving experiment, Nissan is trying to solve a similar problem to determine how the car should behave in such a scenario.

Hartley has divided the book into eight chapters to present similar dilemmas that companies are trying to solve and how people with fuzzy backgrounds are favoured over those with tech backgrounds. This is done in a systematic manner, presenting a problem in each of the chapters and then making it replete with stories to show the ethical dilemma

that technology presents, which a techie alone may not be able to encounter. Hartley doesn't dismiss the role of the techie. He is just arguing, like many others, to augment our education process to incorporate fuzzy skills.

The conclusion of the book is forgone, given the title. However, Hartley shies away from presenting a complete picture. Although the book does provide the reader with enlightening facts and reinforces the feeling as to why one can't dismiss the humanities in pursuit of STEM, Hartley doesn't expand on the proposition. He remains so embroiled in the parables that he misses the opportunity of raising many questions and presenting his view. More importantly, the author shies away from giving an overall view of problems like the future of work. Although he contends that AI and machine learning will erode jobs, he believes that many positions will be created as has happened in the past, completely ignoring the premise that the rate of job creation and destruction might not match in the future, leading to an erosion of work.

Overall, the book is a must-read for policymakers, parents trying to push children into STEM for want of opportunities, or anybody looking for trends in the industry. Despite its drawbacks, Hartley does present some eye-opening facts. Sample this: in the 1960s, Lotfi Zadeh of University of California, Berkeley, while working on the problem of computer understanding of natural language, advanced the concept of fuzzy logic to represent that natural language can't be easily translated into an absolute term like 0 or 1. Over the years, the term has often been used in artificial intelligence to represent human consciousness, where the truth is said to lie between 0 and 1. While neural networks have been trying to replicate this, there has been little success. The world needs more of fuzzy logic to solve these problems and Hartley does an excellent job to give a preview of fuzzy logic at work.

The writer is a former journalist