

Professor Kaku notes, Oppenheimer's work brought the war in the Pacific to an end by wiping out two cities of no military significance. Yet the American Oppenheimer was celebrated as a war hero (Kaku, 2023, p. 35).

In various places, Professor Kaku interrupts his narrative with engaging references to antiquity and mythology. For example, although I had read of Pandora and her fabled ill-

Book Review of Michio Kaku

duality principle. Light energy has a dual nature as a particle (photon) or as a wave (optics) (Kaku, 2023, pp. 41-42). By 1924 Louis de Broglie had asked, if light (photons) can occur as a wave and as a particle, why not matter (electrons)? The 'double slit' experiment (Kaku, 2023, p. 43) proved that, indeed, even when *one* electron is fired through one of the two slits in the experimental wall it is as if it had passed through *both*. How can a single electron be in two places at once is still controversial? To a non-physicist like me I would have thought it's because when an electron is in movement it's behaving like a wave but when it rests it is a particle. When a wave hits a groin on the shore it breaks on *both* sides. No doubt the answer cannot be that simple. It fascinates me to think that a medieval philosopher/theologian St Thomas Aquinas wrestled with the same question concerning Angels. How was it possible for Angels to be in two places at once? His conclusion was that the Angel was always in one place, but its power could be in multiple places

Book Review of Michio Kaku

Book Review of Michio Kaku

Another Canadian company, D-wave, has a Quantum Computer on the market priced between \$10 to \$15 million which optimizes data by manipulating electric and magnetic fields to reach a low energy state. The company is aiming for a 7000-qubit capacity but currently can reach 5600 qubits, which in terms of QC theory is quite limited to what QC may be capable of reaching. Nevertheless, some big companies have seen this computer as worth the investment including names such as Lockheed Martin, Volkswagen, and NASA (Kaku, 2023, p. 97).

Whilst Part I represents roughly a quarter of Professor Kaku's book I have given it a great deal of emphasis in this review because this part of his fascinating book is dealing

machine without worrying about what we mean by intelligence (Kaku, 2023, p. 36). From St Thomas's perspective, AI as pure intelligence not being corporeal would be more like an angel than a human. However, my question is, if a machine can learn

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ⁱ For more evidence see the following two websites: a. <https://www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality>; and b. https://wir2022.wid.world/www-site/uploads/2021/12/WorldInequalityReport2022_Full_Report.pdf.