

12 Bytes review: Jeanette Winterson on AI and making life less binary

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Katherine Johnson's computing achievements were sidelined for years
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12 Bytes

Jeanette Winterson

Jeanette Winterson, the award-winning author of *Oranges Are Not the Only Fruit*, began circling around artificial intelligence after reading Ray Kurzweil's *The Singularity is Near*. Since then, the science and technologies of AI have informed her fiction, including her 2019 novel *Frankissstein*.

12 Bytes is Winterson's first non-fiction book about AI. With 12 essays, or "bytes", that together form an unusual and entertaining read, the book is inflected with the same delightful, dry humour as the rest of her work.

In each essay, Winterson holds AI up to the light, contemplating it from different angles. One of the most thought-provoking (and smile-inducing) of the resulting refractions is her treatment of spirituality. By comparing Gnostic aeons (similar to angels) to quantum bits, god to a 3D printer and heaven to mind-uploading, she suggests that AI has been born out of the human quest for meaning – a quest, she argues, that has been turned into a male pursuit.

Although Winterson stresses that it is "not a history of AI", *12 Bytes* traces the historical and contemporary women who have been written out of the record of com-

puting's past and AI's future. From Ada Lovelace's struggles against 19th-century oppression to the way the crucial roles of Katherine Johnson and other African American women at NASA during the space race were largely unknown before the book and movie *Hidden Figures*, Winterson emphasises their importance.

Not enough has changed. She lambasts a male technician at Google who belittled women's abilities in company-wide emails, and a physicist who lectured on why women aren't really suited to physics at CERN, claiming these events aren't anomalies but indicative of the systemic biases explaining the lack of female CEOs, STEM workers and students. But why is this binary, built out of stereotypes, perpetuated?

Winterson doesn't shy away from all this, but is refreshingly measured and optimistic. AI, she thinks, provides an opportunity for rectifying the situation. It isn't human and has neither gender nor ethnicity. "Computers are not binary but they use binary," she writes. AI might teach us to be less binary, even about intelligence.

And what exactly do we mean by the "I" in "AI", she asks. Our definition is based on Descartes's dualism, which she says "confused consciousness with rational, deductive, problem-solving thinking of the kind (sometimes) displayed by humans. In his view, by male humans".

On this front, AI has already beaten us: it "thinks" faster than we do, with top-end laptops managing 100 billion instructions per second. We have our own intelligence, plus that of AI, but we are nowhere close to solving human issues like gender and racial equality or the climate crisis, says Winterson. She concludes that we don't have a non-binary definition of intelligence, encompassing emotional intelligence and love. If only Descartes had also written "I love, therefore I am", she writes.

12 Bytes is such a welcome break from the scaremongering that accompanies non-specialist surveys of AI that it is easy to get swept away by the author's impassioned storytelling.

While Winterson is positive that we will learn from AI, she is clear that it is the same sort of people (white men, statistically speaking) who do its programming and designing. Aside from increasing diversity in the workplace, which is only happening slowly, she doesn't settle on how AI can avoid reflecting the biases of its creators.

With its imaginative, insightful and wide-ranging essays, *12 Bytes* will undoubtedly prompt readers to begin their own circlings around AI. Less certain is whether it will propel us out of an infinite, theoretical orbit and inspire a course of action on AI's issues.

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