

# Letter

American amateurs who used three computers at the same time and knew how to manage the process of collaborating with their machines. (p. 476)

A third notable observation that shows up repeatedly is that “the truest creativity of the digital age comes from those who are able to connect the arts and sciences” (p. 5). In the first chapter, Isaacson presents Ada Lovelace as such a person, and he comes back to her in the final chapter, entitled “Ada Forever.” He also credits her with being the first to conceive of the idea that computing machinery might one day do more than just calculate, citing from the notes she made concerning the Analytical Engine:

The Analytical Engine does not occupy common ground with mere “calculating machines” ... In enabling a mechanism to combine together *general* symbols... a uniting link is established between the operations of matter and the abstract mental processes... The Analytical Engine weaves algebraical patterns just as the Jacquard loom weaves flowers and leaves. (p. 26)

One other thing that this reviewer found interesting is the number of key individuals who were sons of ministers. While Isaacson does not make an explicit point of this in his introduction or conclusion, this observation often arises in his presentation of the backgrounds of individuals. In particular, he attributes the culture of Intel, “which would permeate the culture of Silicon Valley” (p. 192), to Robert Noyce’s background as a son and grandson of Congregationalist ministers, a denomination he describes as being characterized by “the rejection of hierarchy and all its trappings” (p. 189).

While the book covers a lot of ground, this reviewer found it surprising that one important innovation, the UNIX operating system, and one key individual, Ken Olsen, were not discussed at any length. But maybe that is just the prejudice of one reviewer! Nevertheless, the book is fascinating and very readable. While not explicitly dealing with issues of faith and science, it provides a very thorough overview of the origins and rise of personal computers and the Internet. The last chapter alone, “Ada Forever,” is well worth reading for its discussion of artificial intelligence and human-machine symbiosis, as well as its summary of key lessons from the history of digital innovation.

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# Letter

## Thinking Consistently and Coherently about Truth

I came to Caltech to study science in the 1950s, bringing with me an evangelical Christian faith. I knew I’d acquire knowledge there that would conflict with what many people in church believed, but decided that since scientific truth is about the universe God created, I should always hold Christian faith and the truths learned through scientific inquiry in a consistent, coherent way, treating each with the respect it deserves as valid knowledge. That decision has borne lifelong fruit in a long academic career in secular universities.

I know or have known many Christians trained in the sciences, who have professional careers based on scientific

knowledge, and who through life rely on such knowledge in their daily work. Some are engineers; some are medical doctors; some are secondary school science teachers; some are technical people whose skills employ scientific knowledge every day. But to my dismay I find that many of them are unable or unwilling to think consistently about truth in science and the truth they hold in Christian faith.

When scientifically literate Christians endorse recent-earth creationist propaganda themselves, or present it to others as a legitimate alternative to established scientific knowledge, they create a kind of chaos for rational discussion. I’m puzzled and troubled that time and effort must be taken listening to such propaganda (or trying to refute it). Currently an influential and popular source of creationist propaganda is the media empire run by a person named Ken Ham, and the “Answers in Genesis” media system Ham controls. As others have pointed out, Ham’s empire is lavishly funded—to the tune of millions of dollars per year. My own life experience has taught me that when money and truth collide, truth often suffers.

It should not surprise anyone if all devotees of Ken Ham or other recent-creationist propaganda sources were uneducated persons without any knowledge of science. The real shocker is that some Christian people who repeat such propaganda to others have received scientific training adequate for their professions and daily work. It’s reasonable to infer that they haven’t really examined their belief-set for consistency and coherence as an account of the world we all live in. When goaded to desperation by gadflies like myself, some of these Christians even suggest that God may have created the world to “look old”—fooling us scientists and other naïve persons to follow the “evidence” showing its age. But this suggestion is truly blasphemous, because it implies that God is a liar.

The origins of recent-earth creationism are well known, and they are both theologically and scientifically suspect. Being a Christian does not require a scientifically trained person to defend or endorse anti-scientific arguments about the universe’s age (and therefore ignore the scientific evidence for a 12–15-billion-year-old universe and an earth almost that old). This is especially relevant if such arguments contradict scientific knowledge on which we rely in daily life and work. In the first place, recent-earth creationist arguments have nothing to do with the gospel; in the second place, they are based on a naïvely literal interpretation of the Genesis creation accounts. So why, in spite of this, do some people with good scientific training and lifelong professional experience using it, still endorse or even believe propaganda that openly contradicts reliable scientific knowledge? So far, explanations I’ve come up with for this odd inconsistency have nothing to do with truth; they have far more to do with family relationships, smoothing over disagreements arising from different educational backgrounds, and so on. But carrying around worthless baggage cripples sound Christian apologetics, and with Elijah, I would ask the same harsh question: *how long will you go limping along with two conflicting opinions?* (1 Kings 18:21).

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