In today’s day and age, technology is often viewed as applied science implemented in devices that help solve problems. But this oversimplified view is misleading and often dangerous for society. Neil Postman and Paul Nightingale provide different perspectives on technology that help expose challenges in the sustainability, equity, and security crises.

Postman’s article touches on five ideas on technology that are often overlooked by society, the fourth of which exposes the sustainability crisis. Postman’s fourth point is that technology is “ecological”, figuratively, and to emphasize my point, literally as well. Postman wrote “ecological”, meaning that any technological change or innovation will always have an impact on everything, whether it be good, bad, intended, or unintended. The environment is often being negatively impacted by technological change. An example is the automobile. The creators of the car developed it to revolutionize transportation and make money; the fact that it is now one of the largest sources of environmental degradation did not cross their mind.

Postman’s second point – that there are always winners and losers for any technology – exposes the equity crisis. With any technology, there will always be some who receive the benefits and some who are negatively affected. We look at the automobile example again. Automobiles are a relatively expensive piece of technology to the average individual, so while it is a fairly common technology among the middle and upper class, it is much less accessible to underprivileged populations. With the world’s infrastructure adjusted to accommodate the automobile, transportation in general becomes less accessible to these underprivileged populations. Furthermore, the negative impact automobiles have on the environment only contributes to environmental inequity, affecting these populations even further.

Postman’s final point exposes the security crisis. He states that technology often becomes “mythic” – it becomes embedded in part of the natural world in our eyes. A prime example is the increasingly ubiquitous nature of phones, laptops, and digitalization in general. These technologies are becoming permanently incorporated into our society, and newer generations grow up perceiving them as “gifts of nature”, making them unsusceptible to modification. This is dangerous, as these future generations will become less and less aware of the potential dangers of the technologies that allow these devices to operate – in particular, the concerning issues with security in big data and artificial intelligence.

Nightingale’s enlightening definitions of technology allow us to see these three crises more easily as well. His third definition helps expose the sustainability crisis. The third definition focuses on the fact that technologies are heavily influenced by other technologies, systems, social constructs, rules, norms, institutions, etc. which form a “technological regime”. This technological regime is dependent on the values of society, which oftentimes do not align with sustainability. A prime example is the Industrial Revolution. At the time, essentially every aspect of society pushed for technological innovation and development with little regard for sustainability.

This way of seeing technology as a part of a wider social and institutional regime also exposes the equity crisis. With biases and inequities already embedded and built into the social systems, norms, authorities, and institutions that affect technology, it isn’t difficult to see how technology itself can be reflective of these biases which have a significant impact on the equity crisis.

Similar to Postman’s final point on technology, one of Nightingale’s definitions of technology describe it as a way of seeing the world. As a technology becomes increasingly embedded into society’s functions, we begin to “assign the properties of technology to the world” and do not bother to investigate these properties. This “tacit nature of technological knowledge” conceals the technology that lies behind the devices we use and renders us oblivious to the workings of big data and AI and the associated security risks. Nightingale’s definition makes this aspect of technology more transparent and allows us to be more aware of the security crisis.