

Joseph C. Pitt

What is the philosophy of technology?

Abstract: I argue that there is no such thing as Technology *simpliciter* but there are technological infrastructures which make it possible for us to do what we do. Likewise, there is no such thing as *the* philosophy of technology. Philosophizing is an activity – it is doing something. We do philosophy of technology. In particular, doing philosophy of technology is to consider how new instrumentalities change our understanding of what can be known and what we should be doing in the light of that new knowledge.

Let's begin by attacking the question. I start by asking the question my first-year college students ask: "What is philosophy?" There are two sorts of uses of the term "Philosophy". One is captured by the story the chair of my undergraduate department, Frank MacDonald, told the five of us headed to graduate school. "Someday you will find yourself on a plane sitting next a gentleman who sells lady's shoes. He will ask you what you do. Whatever you say, do *not* tell him you teach philosophy. Tell him you are in education. He will then wax poetic about the importance of education and his fond memories of school. He will probably then ask you what level you teach at. If you say college, he will then probably regale you with tales of his college days. Then he will ask you what your field is – stall – tell him the humanities. He will then hold forth on the importance of the humanities...finally, he will ask you for the specific humanities field you are in, worn down you tell him philosophy. He responds: 'fantastic! Let me tell you my philosophy of life!' and you are doomed for the rest of the flight!". Clearly, the use of the phrase "my philosophy of life" does not translate into what we normally teach in our classrooms. If it means anything, it probably means something like, let me tell you how I think the world should work. That is not doing philosophy, it is pontificating.

For the rest of us who understand "philosophy" to mean love of wisdom, from the Greek *Philia* (love) and *Sophia* (wisdom), philosophy becomes something other than pontification. Granted, there are some, like Heidegger, who pontificate, and others who invent problems no one else is concerned about and talk to the three other people they went to graduate school with. But if philosophy is truly love of wisdom, then the first thing to realize is that it is action oriented. For wisdom concerns knowing what to do. And the wisest person you know is probably your grandmother, for who else do you go to when you need advice on what to do?

This is clearly a pragmatist take on the question at hand, for pragmatism is concerned with action. So, perhaps, our question becomes this: what should, ought we do about technology? Or maybe, better yet, what should we do with technology? Or maybe a combination of both. But they are both different questions that send us in different directions in search of answers.

But first, we need an answer to a prior question: what exactly is technology? In my 2000 book, *Thinking About Technology* (Pitt 2000), I offered the following definition “Technology is humanity at work”. This was immediately criticized, by among others, Ashley Shew, who went on to show that various members of the animal kingdoms used tools to assist them in their daily activities. I myself argued that the definition was too broad since it seemed to cover everything humans do, the point being that we need to stop searching for broad definitions and look at the technologies themselves. But, in my 2019 book, *Heraclitus Redux; technological infrastructures, scientific and social change, and the end of life* (Pitt 2019), I gave it another try.

After first discussing the notion of a technological infrastructure in the context of science as that collection of things, institutions, and people, that makes the doing of science possible, I now offer this: technological infrastructures are those arrangements of people, structures and materials that make human activities possible. In short, there is no one thing called “Technology”, rather, we utilize a vast array of materials, structures, people, etc., to do what we do. Consider the following example. I need to go to the store to buy some groceries. Being that I live in the country, I need to drive there. That means I need a vehicle. First, consider what it takes to produce an automobile: designers, large companies with the financial resources to build plants, hire and pay workers, acquire the materials needed. When it comes to acquiring the materials, ores must be mined and refined, which requires another system of materials such as mining materials, miners, investors, transportation systems to get the materials to the refiners and then the refined materials to the manufacturers. To sell the finished product requires a network of dealerships, with trained salesforces and mechanics for the shop. These dealerships have to be financed, enter the banks. So, I am now in a position to buy the car, which I do. But to use it to get to the store, I need to drive on roads which have been built requiring design and materials and road builders. I hope you are beginning to get the picture. What we call technology is a system of interrelated and mutually supporting systems that make it possible for us to do what we want to do.

Not only does this system make it possible to do what I want to do, it also restricts what I can do. For example, I can’t just drive anywhere I want, across fields or on the wrong side of the road, etc. To use the system I have to play by the rules. And sometimes, when I want to change the rules, I find that I cannot or that it is very difficult. Thus, while the technological infrastructure of modern society makes it possible for us to do what we want to do, it also constrains what we can do and because of its complicated interrelatedness it is very hard to change it. This is not to argue for technological determinism, the view that technological development takes on a momentum of its own that we cannot stop, but it is to give that view a nod.

Let us now turn to the question which is supposed to be the focus of this paper: what is the philosophy of technology? In a recent book I co-edited with Ashley Shew, *Spaces for the Future; a Companion to Philosophy of Technology* (Pitt & Shew 2018), Ashley argued that the sub-title should not be “A Companion to the Philosophy of Technology”, because there is no one univocal philosophy of technology. She is right. If there were, it would be similar to “My Philosophy of Life”.

Just like there is no one philosophy of science, or one philosophy of logic, or one epistemology or one metaphysics or one ethics. When we talk about the philosophy of science, we are referring to an examination of the philosophical questions posed when trying to understand science, such as “what is evidence?” Thus, it is probably more appropriate to talk about *doing* philosophy of science. Likewise, instead of talking about *the* philosophy of technology, we should probably talk about doing philosophy of technology, since philosophy is an activity, not a set of dogmas. So, what does that amount to?

Doing philosophy of technology is to engage in a critical and reflective set of examinations of a number of issues that various individual technologies raise as well as various technological infrastructures. In particular, doing philosophy of technology is to consider how new instrumentalities change our understanding of what can be known. New instruments often let us “see” what could not be seen before. But are they reliable? Consider the electron microscope. We don’t really see anything using that instrument. It employs an arm that glides over a microscopic surface, guided by computer programs which then translate what they find, using more computer programs, into an image on a computer screen. Several problems emerge immediately. The image on the screen is colored – often vividly and brightly. The problem is that at the level of reality this instrument is working, the nano-level, there is no color. The image on the screen can’t be checked. A second problem is the question of how are we to use the information this image provides? How reliable and appropriate are the computer programs employed? Suddenly it is not so clear that this marvelous instrument is giving us anything useful. Its usefulness is tested by seeing if the predictions we make based on the image turn out as they should. But, even if they do, it could all be a function of the system itself.

Another consideration are the consequences of employing a new technology. If there is a rule in philosophical work on technology it is the rule of unintended consequences. Either we can’t predict the impact of a new technology or we don’t want to. Take, for example, the cell phone. Who could have predicted the impact on sociality that the cell phone would have. Our kids interact with their peers in completely different way than older generations do, and if you want to interact with the young, you have to change your way of doing so. For example, we live on a farm and hire undergraduates to help with the work. If they have a question, they text us – they don’t call, they text. And we have to text them back since they don’t answer their phones for regular calls. I have used the following example before, but it is worth repeating. A couple of years ago, at the end of the semester in a course on the philosophy of technology, on a whim, I asked the class what piece of technology they would willingly give away. The cheezy philosophy major in the front row said his toaster and got a laugh. The thoughtful engineering student in the rear said his cell phone and the rest of the class gasped out loud. When I asked him why, he said he no longer had any privacy. He is constantly being bombarded by texts which if he doesn’t answer immediately are repeated and if he still doesn’t answer, he is ostracized. The first thing he does in the morning is check his emails, before he gets out of bed. The impact of this device is transformative, but who would have thought it? And what should we do about it?

We haven't even addressed the kinds of problems most people associate with philosophical problems of technology: ethical problems. Perhaps the most current pressing problem concerns privacy. Using social media has opened Pandora's box. Through mechanisms I don't fully understand, your personal information can be stolen by individuals or organizations that can use it in a variety of inappropriate ways, from trying to convince you to vote a certain way, to raiding your finances. These are issues we never anticipated and they raise serious ethical concerns, as well as having real world consequences. Thinking about how to handle these and similar situations is doing philosophy of technology. We should also note that there may not be any satisfactory solutions, for some of these problems since the cat is out of the box. Consider climate change, an unanticipated consequence of unabated use of fossil fuels. It appears that the window of opportunity to reverse climate change is rapidly closing. We only have 11 years to stop the rise of temperatures by reducing use of fossil fuels, or the planet will die, if not in our life-times, most certainly in that of our children.

Doing philosophy of technology doesn't guarantee finding answers to these and many more questions. At best it gives us a better understanding of what we are doing to ourselves and our planet and perhaps the rest of this solar system. Doing philosophy of technology is seeking answers to questions that force us to ask what should we do, grandma?

References

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