Jonas audio notes

31a:

So, this week we’re talking about Responsible Cyber-infrastructure Development. This is the first of our two weeks on the philosophy of cybersecurity. We should probably start by introducing philosophy. After that, we’ll move on to the reading, and talk through the major arguments being made there, and the theory being advanced. As we go through, we’ll start applying the reading to cybersecurity.

First, to introduce philosophy—well, I guess the starting point is talking about why philosophy needs to be introduced!

Most fields of study show up somewhere or another in high school curricula, but philosophy almost never does—usually, your first chance to take a class in philosophy is when you go to college. So, a lot of the time, students coming into college, and in fact students showing up to a philosophy class that they in fact signed up to take, don’t really know what philosophy is. To make things worse, we talk about “philosophy” in a kind of vague sense, like “what’s your philosophy of life” or “what’s your philosophy about teaching” or whatever. So that muddies the water.

I’ll keep this short. Philosophy is what every other field used to be before it settled on a limited range of objects of inquiry, and a set of assumptions that limit what questions it asks. So, for example, people used to ask “what is stuff?” and tried to figure out what substance was, and what the basis of matter was, and all that. Once people started only taking answers to that question seriously when they were based on mathematically-based models that can be empirically verified, that became physics. But as soon as you stop asking “which model of subatomic particles best fits the data?” or “what can red shift tell us about the history of the expansion of detectable objects in distant space?” and start asking questions like “but how can something be both a wave and a particle?” or “but what caused the big bang?”, then you’re doing philosophy again. Unfortunately a lot of physicists don’t realize that, and think they’re doing really profound physics, when they’re actually doing really poorly-informed philosophy.

That’s one example, and maybe one that’s a bit too technical. But, yeah, philosophy is seeking out knowledge outside of the particular range of topics and methods that define all and any other field. When you’re studying the history of painting or mastering particular techniques or doing critique, you’re doing art history or studio art, but when you start asking what art is or what beauty is, or why we do (or should) care about it, you’re doing philosophy. When you study laws and legal structures or systems of rights, you’re doing political science, but when you start asking what a “right” is, and why it deserves our respect, you’re doing philosophy. And so on. Philosophy is when we ask about what things are, what their truth is—not within some particular setting or practical application, but *for real*. And if you push far enough in any field, you end up doing philosophy.

There are different sub-fields in philosophy, like ethics, metaphysics, and epistemology, and there are sort of famous questions or topics, like “what is the good life?”, or “why is there something rather than nothing?” When we push to the limits of cybersecurity to get to philosophy of cybersecurity, we get questions like

“Why do we care about privacy?”

“Is our data something we own, or is our data part of who we are?”

“When they come into conflict, how do I balance my commitment to help the public, as an engineer, against my obligation as an employee to generate profits for my employer?”

“When do I have an obligation, as a cybersecurity professional, to blow the whistle on harmful or immoral data practices?”

“When is a cyberattack an act of war? When does it justify a kinetic military response?”

Those are all questions that we cover in depth in our Cybersecurity Ethics course, PHIL 355E. Here, we’re going to cover some broader questions. This week, our question is “How can we develop cyberinfrastructure responsibly?”, where “cyberinfrastructure” includes both legal and technical forms of regulating, protecting, and managing data storage and data flows. So that’s a pretty big question!

We can’t possibly answer it conclusively, especially not in a week. That’s another hallmark of philosophical questions: they aren’t usually questions that have clear or satisfying answers. But they’re also questions that we can’t ignore, and questions that matter. So, ethical questions about how to live are philosophical because we can’t find answers that everyone agrees on, but we also just can’t ignore the question, since life will go on and we have to make choices!

Similarly, we’re not going to figure out what responsible cyberinfrastructure development would be, exactly, but asking the question and working on it for a while is going to help us think more clearly about it, and help us to make better choices.

To get at this question, we’re going to talk through this theory of responsible technological development from Hans Jonas. You’ll note that “Jonas” is pronounced with a “y” sound—that’s because he was German, and in German, “j” is “yot.” You don’t need to worry about that—I just didn’t want it to be confusing.

31b:

This is from 1973—why are we reading this? We are still coming to terms with this mid-20th Century shift in how we have to think about technology; what responsible thought about technology looks like. As is perhaps most obvious in our failure to deal responsibly with global climate change, we still need to get used to thinking in new ways about how to manage technology.

Before we get started, I want to give you an overview of this article's argument, since it's complicated and, in some places, assumes a familiarity with ethical theory that you may not have.

Jonas begins by reminding us that we have a long history of thinking about nature as an unchanging context for human life—only recently has technology taken on so much power and influence that nature’s shape and form has become subject to human decision-making. In talking about “nature” here, Jonas means to refer to nature without and nature within as well—that is, both the environment, and human nature, which is also increasingly subject to our own choices and actions. Technology is becoming the context in which our environment exists (or is altered or destroyed), and our lives are also increasingly lived within a technological environment rather than a “natural” environment.

He goes on to claim that our moral reasoning has been formed in a prior technological context, in which we really only had to worry about effects of our actions that could be pretty easily foreseen and predicted. In our new technological context, we have to worry about new kinds of objects of ethical concern—changing nature without and nature within—but we also have to worry about new kinds of ethical action—namely, how to make moral choices in a context where we have to worry about effects of our actions that reach far beyond what we can foresee or predict. Again, we can think about global climate change, and how choices going back even to the Industrial Age have set massive, unforeseen effects into motion. He recommends a new kind of humility: not a humility that recognizes how small and weak we are before nature, but a humility that recognizes and responds responsibly to how unable we are to predict and control the effects of our own actions.

33a:

This is an important point that’s easy to pass over too quickly. In most societies through most of history, humanity has had a cyclical view of time. This is clear in these passages, both from Antigone and from Ecclesiastes: a human life makes only a small and temporary difference in the world, like a sandcastle soon to be worn away by the sea. It’s hard for us, today, to get a sense of how different this view of the world, and this view of the unimportance of humanity, is from our own worldview today. Today, we tend to view time as having a direction—as taking place in a linear progression from past to future, where the future is different from the past. We have that view today, rather than the cyclical view, because we live in an era of modern science and modern technology. The modernist view of time thinks of time as a progression, in which humanity makes steady progress—an upbuilding process in which the future is always different from, and hopefully better than, the past, due to the progress of knowledge, science, and technology. We’ll return to this idea of modernism as we go forward through our material.

35a:

We might have in mind here things like the very idea of ecology or environmentalism—the idea that we can and should study how human activity affects the environment. We might also have in mind the creation of the atomic bomb, which threatens to drastically change entire areas of the earth. In the process of the creation of the atomic bomb, we were even unsure whether a global chain reaction might be caused by nuclear devices—scientists thought that the first nuclear bomb tests might ignite the atmosphere itself. American scientists decided to go ahead and try it anyway since they figured that if they didn’t test a nuclear weapon, the Nazis would anyway, so it might as well be us. Luckily, the tests didn’t end up destroying the Earth!

In our particular area of concern, we might think about datafication or securitization. Datafication is the process of increasingly universal electronic storage of data about people and environments. We are only now starting to think about what the impacts of datafication might be in applications like healthcare datamining that can help predict disease, but could lead to genetic discrimination or denial of health care coverage. Political use of data mining to strategically influence elections is another emerging, unforeseen concern about datafication, and big data analytics are also changing our advertising and economic systems.

Securitization is the process of interpreting our actions and policies through a lens of security. As we use more data analytics in pursuit of security, we need to worry about ways that statistics may be used to infringe on civil liberties, marking people within particular demographics and communities as security risks, even though they haven’t personally done anything to put anyone at risk.

35b:

This is another influence of modernism—the view of human history as a forward progression. As soon as we adopt this modernist view of history, “progress” becomes a value of its own, since we assume that humanity is on an upward trajectory. The idea that more knowledge is better becomes confused with the much less certain idea that more technology will always be better too. The result is that calls to slow down or develop technology responsibly becomes understood as “standing in the way of progress,” and therefore presumptively bad. So people and human concerns and values and goods get sacrificed in the name of progress, rather than defining “progress” as what is good for human concerns, values, and goods. That’s what he’s getting at here in talking about how technological development becomes an indefinite, self-validating goal, no longer tethered to meeting human needs and benefits.

36a:

Pause for a moment to consider this. How much does “commonsense morality” help with today’s difficult technological problems, like environmental issues, data security, and managing digital environments? “Be a good person” used to be enough guidance to do the right thing, but how far does it get us in figuring out how to protect the environment, or civil society in our current media environment, or productive democratic deliberation, or appropriate big data analytics?

48a:

Think about how common prescriptions of anti-depressants and anti-anxiety medications have become. Have these mental illnesses always been so common? Perhaps we are treating a symptom of our social organization rather than individual illnesses with no larger cause. In other words, maybe these illnesses are more common because our social, economic, and technological environment produces alienation, loneliness, and a lack of feelings of connection and meaning. If this is the case, then some part of what we are doing is using medications to neuropharmacologically alter ourselves so that we can better survive in a basically inhuman environment. Rather than changing our social context, in which we live and work in a technical system of global capitalism, so that it makes us healthier, happier, and more fulfilled, we may be using drugs in part to change people—to change nature within—so that we can live within an inhuman way of life.

This may be okay, of course. There isn’t necessarily anything sacred about prior human nature. But if we are technologically changing human nature to fit our technological environment, we should at least think carefully about what we are doing. We should want to develop technology to support human flourishing, not to change humanity so that we can survive technological flourishing.