Whistleblower EXPOSES Shocking University Research

Europe is gearing up for war. The militarization drive is undeniable and has by now also reached the universities. But, not everybody is ok with that. My guest today, in fact, quite his job as an Associate Professor at the University of Souther Denmark to protest the militarization of research projects. Dr. Dylan Cawthorne is a specialist in drone design and ethics and he’s here to explain to us what’s going on in European academia. Links: Dylan's website: https://www.dylancawthorne.com/ Neutrality Studies substack: https://pascallottaz.substack.com (Opt in for Academic Section from your profile settings: https://pascallottaz.substack.com/s/academic) Goods Store: https://neutralitystudies-shop.fourthwall.com Timestamps: 00:00:00 Quitting the University: The militarization of research 00:02:32 How military funding hijacked academia 00:10:07 The "Dual-Use" dilemma: Can technology remain civilian? 00:17:44 The psychological horror of drone warfare 00:21:20 Technological reality: Civil constraints vs. military efficiency 00:25:45 Lessons from Ukraine: Kamikaze drones and AI integration 00:29:26 Campus culture, student reactions, and "Drones for Peace" 00:32:10 Defensive tech, spy drones, and paranoia 00:41:36 Advice for engineers: Resistance and saying no

#Pascal

Europe is gearing up for war. The militarization drive is undeniable and has by now also reached the universities. But not everybody is okay with that. My guest today, in fact, quit his job as an associate professor at the University of Southern Denmark to protest the militarization of research projects. Dr. Dylan Cawthorne is a specialist in drone design and ethics, and he's here to explain to us what is going on in European academia. Dylan, welcome.

#Dylan Cawthorne

Thanks for having me, Pascal.

#Pascal

Thanks for saying yes to this. I told you already before, but I really respect that you made the personal decision to quit the university once you realized your drone research would be, well, militarized and used for military purposes. Could you explain a little bit what was going on, what happened, and why you had to make that decision?

#Dylan Cawthorne

Yeah, absolutely. Over the last couple of years, the university has really changed. I was an associate professor at the University of Southern Denmark, here in the middle part of the country. And basically, I experienced in real time this militarization that's going on in Denmark. Drone technology is really important to Denmark, and they see it as a kind of high-tech weapon that can be developed in the future, so there's quite a lot of funding going toward it. I felt like I couldn't, morally, go to work every day. I felt like I was becoming part of the problem rather than part of the solution. My aim with technology has always been to try to make the world a better place. I know that's a very broad ideal and maybe difficult to do in practice, but over the last eight years or so, I've been studying ethics as well, trying to figure out how to incorporate ethics into technological design.

#Pascal

I mean, drones. Drones are this typical dual-use technology now, right? As it's called in the jargon, it can either be a wonderful thing to deliver packages and help make society better, or it can be used to kill people from high up—especially in the Ukraine war, we've seen how important drones have become. It's something people had thought about before, but it had never been tested on that level. How should I imagine what that did to the university you were at, and to the funding schemes? I mean, how did you experience militarization at the university?

#Dylan Cawthorne

Yeah, it was really in the use cases of the drones, as you said. Six or eight years ago, there was this whole green transition thing—everywhere it was about the green transition and investing in a sustainable future. A lot of our drones were tailored toward those kinds of applications: monitoring wildlife or biodiversity, healthcare. I developed a drone that was supposed to be used for transporting medical samples. So, yeah, it was these, I would say, more benign or hopefully even good uses of drones.

And then over these last couple of years, especially in 2022, that's when the huge shift was really felt—when we started to militarize. A lot of my colleagues who had previously been uninterested or even actively against making weapons changed their minds. And also, I mean, the rhetoric from the prime minister has been very pro-military—like, we support Ukraine, we build up, and we put this 5% of GDP into developing weapons. That process had just begun at the university when I left, because there was huge money coming in to make weapons.

#Pascal

Did they also incentivize you to work on such projects, or did they talk to the faculty? Was this a topic—was it discussed? Like, "Okay, we now have more military projects," or was it just something that happened silently? Yeah.

#Dylan Cawthorne

It had been a discussion for many years, especially in the drone research area, because, as you said, it's always been a thing. I think about six years ago, my colleagues and I wrote a letter. We never actually sent it to our management, but we told them about it. We said that in Denmark we're supposed to have freedom of research as academics, and we were going to exercise that freedom—we weren't going to work on military projects. They wouldn't give us any guidelines about what we could or couldn't be asked to do if we did, say, some kind of counter-drone technology or something like that. So we said, "OK, we won't do it," and they basically had to accept it. At least on paper, they couldn't deny us our freedom of research. What they can do, though, is fire you when you don't get any money to pay for your research projects.

#Pascal

Can you explain that? Because a lot of people think that once you're hired by a university, the university gives you the research money—because obviously, they're responsible for that. But that's not how it works, is it?

#Dylan Cawthorne

No. And I also thought that, because I'm not a lifelong academic. I've been in academia for about 12 years, but before that, I had a different career. So I was like, yeah, you just go and do it—you research interesting and important things and try to make the world better. But the university is a business. Its product is students, and it's a lot of research projects. Basically, it depends on the research area you're in. Sometimes you get a fair amount of funding through teaching, and that can be a bit more stable. But most of our money came from external research projects. So basically, you have to pay your own way to keep your job. And that was my main reason for quitting. It was a combination of this reduction in research freedom and the militarization that were happening side by side, because we were always being pressured to get money.

#Pascal

Do you have any information on how much of the research in that area was being funded by the military, NATO, or other security-linked organizations?

#Dylan Cawthorne

I'm not sure, but in the past it was really, really small or almost non-existent. I know there was a project in another area that worked with Terma Aerospace, which does F-35 Joint Strike Fighter stuff. But it was pretty small, and it was also very taboo. So when our drone research group started, our first boss was a former military person, and his leadership said, "Don't you dare mention that. We don't do that stuff anymore." And he didn't. To his credit, he switched tracks, and we did civil projects—things for education and for building up businesses and that kind of thing. But then, in

2022 especially, there was a huge shift. Everyone said, "Now we do it. We have to do it to protect Europe and to protect Denmark."

#Pascal

So it was the war in Ukraine that tipped the scale, also at the universities, making them more willing to go down that route. Did you notice a shift in how people talked about military research at universities?

#Dylan Cawthorne

The change was so fast, and I was amazed at how unquestioning people were about it. A couple of years ago—maybe three or four years ago—there was this thing created called the NFC, the National Research Center. Basically, it's one of those triple-helix type organizations, where the aim is to integrate the military with industry and academia.

#Pascal

Oh.

#Dylan Cawthorne

And so this was created sort of unilaterally, and every university was in it. I don't remember much discussion happening around that, but it was just kind of set up. I'd say in the very beginning a few people were concerned, but it didn't really have an impact on our day-to-day work. What did have an impact was the war and the change in the funding schemes. One of the things that made me particularly uncomfortable—there were a few moments where I thought, "OK, this is too far, I can't do this anymore"—was when I had a colleague, a professor in another research area, who was trying to get a grant specifically to weaponize civil technologies. He was going to look over our shoulders, see what we were doing, and turn it into a weapon. A grant from who?

#Pascal

Who else—the military, I suppose?

#Dylan Cawthorne

If I remember right, it was the European Union—Jesus, the European Commission. Because they also want to make kamikaze drones that are produced within Europe, so we're not reliant on China, for example. When you publish publicly, as we did, you can never know exactly what people will use your research for. But when the person is sitting right next to you and has inside knowledge of what you're doing and how you're doing it, that, to me, was too far. I didn't want to be part of it.

Basically, from day to day, I just felt more and more uncomfortable, and I worried more and more about my students. I thought, the moment they leave my class, if they want to, they could literally go anywhere and start blowing people up. And I don't think they have the ethical training they need to use their engineering skills responsibly. That was a big concern for me.

#Pascal

Can you explain this a bit to me? I mean, we've had this moral dilemma—or this moral issue—forever, right? The people who worked on nuclear energy were also the ones who, in the end, enabled, of course, the atomic bombs. This kind of research goes hand in hand, right? You can't really separate it. And it's the same in many, many areas. You told me you're originally from the aerospace industry, and you've seen it there as well. Maybe speak to that first, and then about the dual-use character of the drones. But maybe start with the other areas you know that have been weaponized.

#Dylan Cawthorne

Yes. So a lot of my research over the last couple of years has been about ethically informed technological design. And a big, important part of that is context. If you're making drones for health care use, and they're probably going to be used for health care, then you can reasonably assume that the technology will be designed toward that use case. But if you're in a context where it's actively made as a weapon, then you can also reasonably assume that that's how it's going to be used. There's always been this dual-use character of drones, and I think a lot of my research was actually trying to reduce the capabilities or the risks of dual use.

For example, one of my drones was quite a bit smaller—basically as small as it could be. The reason for that was to reduce the payload capacity so it could carry only what it needed and not anything else. A lot of times, drones are developed to be maximized in their capabilities, and that makes them very easy to misuse. There were also a lot of privacy-preserving features built into that drone, and a lot of visibility features, because the requirements for a commercial drone are quite different from those for military technology. For instance, with a military drone, you want it to be very stealthy—you know, you're probably going to be actively jammed.

So it needs to have very robust control systems. Now they have this actual optical wire that goes directly to the drone. In a civil context, that would be unnecessary, right? It would be way overkill. So there are some differences between civil technologies and military technologies. And I actually think I'm quite concerned about this dual use. The Danish state is investing heavily in dual-use technology. Now they have to pay this 5% of GDP, and they say, "Okay, don't worry, population. We're going to defend ourselves from the Russians who are coming to Copenhagen. But we're also going to give you all these great civil technologies as an added bonus, so we can sort of save money."

#Pascal

So, like, we can slap a hand grenade on it, or we can have it deliver blood samples. Yeah, that kind of scenario.

#Dylan Cawthorne

Basically, I mean, I think there's a lot of economics in this—what's going on as well, in my estimation. So yeah, I think this is going to be a big boost to the Danish economy. And now they have all these customers. Basically, Mette Frederiksen said, "Buy, buy, buy." She wants people spending money left and right. And the defense, or the military, in Denmark can't buy fast enough. They'd prefer to buy Danish products if they could, right?

#Pascal

Okay, is it possible, though—last follow-up on this one—does Denmark, or does the European Union, have the capacity to produce everything they need themselves in order to have a functioning drone industry? Because right now what we're seeing is that the EU, and the US too, are finding out, "Oh, damn, a lot of the components we need are actually sourced from China." Do you have any experience with that?

#Dylan Cawthorne

My experience is mostly within the Danish context, and I would say the drone industry is still very small and very new here. That's another thing that's challenging. If you're going to do this properly, it's about the speed at which they're trying to turn up the heat. Before this, the biggest military drone company in Denmark was Skywatch, I think—maybe they had 40 people there. I mean, this is a country of only six or seven million people, but still, the industries are small. When I was at the university, we had a research lab out at the airport here, and the idea was to create a lot of startups. We have former students who are creating startups, and there are a few drone companies that have come out of that, mostly dealing with civil technologies. But it's still kind of early days. I don't think you could compare it to—well, you couldn't in any way compare it to—a lot of other countries that have much more experience in this.

#Pascal

Who, to your knowledge, has the largest drone research and industry presence in the EU?

#Dylan Cawthorne

Hmm, that’s a good question. I don’t know for sure, but I’d imagine the Germans have quite a lot. We did have some collaboration projects with them, and they seemed to have strong capabilities. That would make sense.

#Pascal

And then let’s talk a little bit about the parallels with the aerospace industry, where you were working before. How does it compare? Are all of these technologies necessarily going to be used by the military as well?

#Dylan Cawthorne

I think that's always been a risk. A while back, my former PhD mentor wrote a paper called *Civilizing Drones by Design*. Is it possible? She points out that there are important capability differences, as I mentioned before. But I think inherently it's impossible, actually, because you have this remote technology. You’ve already created a distance between you and this flying robot. So I think it just has inherent characteristics that make it pretty impossible to completely decouple from dual use. And that’s another reason I decided to leave the industry—because for basically six years, I thought full-time about how to make good technologies as an engineer. I studied this in depth, and my understanding of ethics and how technology is used for good and bad purposes, for violent and non-violent purposes, kind of made me lose my belief in technology as a force for good.

#Pascal

That's a sad conclusion to come to, but a straightforward one as well. I mean, you know, the Napoleonic Wars—they used balloons as a new technology at the time to get above and see what the enemy was doing. That was military technology once. I mean, there's always a military use case for some form of new technology, especially when it comes to things that fly. Then another question, though—what we know, to be a bit more positive, is that there are moments when we decide to try to curtail certain technologies. Like, we've seen it with bullets.

There are certain types of bullets that are forbidden. There are certain types of equipment that, under international law, are forbidden. We see how the Non-Proliferation Treaty tried to curtail the number of nuclear weapon states—somewhat successfully. I mean, quite successfully, actually. We're still in the single digits, at least for now, when it comes to nuclear weapon states. When it comes to drones, what, in your view, is the worst part of drones in warfare—in terms of the damage they do or can do, or how you've seen them being used?

#Dylan Cawthorne

Yeah, we're getting dark.

#Pascal

Well, I mean, I have no idea how to imagine it. I just think it must be utterly horrible. We haven't seen the movies yet, you know?

#Dylan Cawthorne

Yeah, I think probably just the connection to the person who's being killed is the most visceral thing—the most disturbing part of it, for me. For example, in the current war between Russia and Ukraine, seeing these first-person views of soldiers or people just moments, seconds before they're blown up—you can almost see their faces. I think that's horrific. It's terrible. It's heartbreaking. Yeah, so I think that's pretty tough. And we also learned during the U.S. drone strikes, back ten or twenty years ago, that drone pilots also get PTSD. They really do suffer, because they see the victims of their technology. So I think, yeah, even though it's a remote technology, in a way you're actually quite close to the person. And I think that's really tragic.

#Pascal

Would you ban them? Would you ban drones if you had the power—like, all or nothing?

#Dylan Cawthorne

Yes.

#Pascal

What about the civilian use cases you've been working on—what were the ones that made you most optimistic about the technology?

#Dylan Cawthorne

Yeah, I would say there are a lot of logistics ones that seem quite promising—you know, moving things from point A to point B, especially healthcare stuff. For example, one of my projects was taking medical samples from remote islands in Denmark to the main hospitals for analysis. So I think, yeah, there's quite an important social justice aspect for people in underserved communities and locations that could be helped through drone technology. But I think now, looking back, it's usually more about economics than about justice issues. It's more a matter of how we save money and still provide the service.

So I'm actually quite cynical about a lot of this kind of technological solutionism that people are leaning toward. Because I think if something's really important, you'd just do it—you'd find a way to make it happen. It's also another way to replace jobs, to displace people, and to create distance

between them. So overall, I'm pretty skeptical of the technology. And it sucks too, because I mean, I love airplanes and I love flying things. I used to fly remote-control airplanes as a hobby. And now I see this thing I love—it's sort of been corrupted for commerce and for war. And that really breaks my heart.

#Pascal

Did you—I mean, you must have done or seen comparative studies of different technology types. When I think about drones, what I mostly imagine are quadcopters. But what kinds of drones are actually the most used, or the most promising ones, let's say, that are being worked on?

#Dylan Cawthorne

Yeah, most of the actual use cases are using these small airplanes, basically called fixed-wing drones. So imagine just a normal aircraft that flies forward on its wings. These are really useful because they can fly very far, whereas quadcopters use a lot of energy just to keep themselves up in the air.

#Pascal

Right.

#Dylan Cawthorne

So the fixed-wing drones are really important. They can cover long distances. And now there are these drones called hybrid drones that are basically airplanes with quadcopters built into them. So they can take off like a quadcopter and then fly on their wings. And when it's time to land, they can land straight up and down. So it's kind of combining the best of both worlds.

#Pascal

Why did it take so long for this to come up? I mean, drones are, to me, a relatively recent phenomenon. I'd say I've known about their existence for maybe 10 years or so. Why wasn't that already developed in the '70s and '80s?

#Dylan Cawthorne

Yeah, part of it was just the stabilization, because this is an inherently unstable system that wants to tip over all the time. So part of it was the sensors and shrinking them down, and part of it is regulatory reasons. That's why you don't see them just flying around everywhere. The technology basically works—it's not 100%, but it does work. It's these pesky things like the FAA and other safety bodies that want to keep big flying machines from crashing onto people. Actually, one of the

drone companies that's flown the most commercial hours is called Zipline. They flew in Africa for many years, and now they want to deliver for Walmart. So they kind of used Africa as a test ground, in my view. They flew, I don't know, maybe millions of hours delivering blood, and now they've switched over to commerce in the U.S.

#Pascal

Very interesting. But do you think it will— I mean, will this change the regulatory aspect? Do you think we're seeing a drive toward using drones, maybe more for civilian purposes in our countries? Or do you have any information on that?

#Dylan Cawthorne

Yeah, so in Denmark, the discussion has been mostly about flying drones—operating drones outside the visual line of sight of the operator. It's called BVLOS, Beyond Visual Line of Sight. Basically, drones can't do much that's useful if they have to stay near the operator. If I'm inspecting a windmill and I'm the operator, I can stand at the base of the windmill and the drone can fly around it, but I can't deliver something a kilometer away, or 10 kilometers away, or 50 kilometers away. So that's been the biggest point of contention between the air traffic authority, the safety regulators, and the industry, I'd say—these beyond visual line of sight rules. And I actually see this going a bit independently of the military side, because I think all the safety rules and those considerations don't really play a role when you're talking about a military project, right?

#Pascal

Yeah, because you want to hurt people—that's the whole point of those things. And did you follow the war in Ukraine? Do you have any information about what types of drones have been used there, and whether the technology has been impacted by what was learned on the battlefield?

#Dylan Cawthorne

Yeah, so that wasn't really my area of research until the last couple of years—mostly just out of interest, because I wanted to know what was going on and where my technology might be used. My understanding is that it's basically real-time R&D happening as we speak. This past summer, I protested the drone event we had here in Denmark—myself and some other people. It's basically a sort of trade show, with a lot of academics giving talks and so on. This year there were maybe 400 people attending, and more than half, I'd say, of the booths were about military technologies. So it's really changed quickly.

Yeah, I'd say my understanding is that these fiber-optic kamikaze drones are basically very powerful racing quadcopters—hobby quadcopters you can buy from China—with an RPG explosive attached. So, from a rocket-propelled grenade, the explosive, about this big, is strapped onto it. Then you fly it

with this very, very thin tether, maybe a few hundred meters, to blow up a tank or an enemy nearby, using goggles to see through the camera. I believe those are being used quite extensively.

#Pascal

And because it's on a cable, it can't be jammed, so it's a very reliable connection.

#Dylan Cawthorne

Exactly. And this is an example of the very low cost. I mean, maybe a few hundred euros or something—maybe more, maybe less. And of course, the Russians and some of the other actors have more serious, more legitimate ones. The Russians have quite a large one that's sort of a flying, diamond-shaped aircraft with a petrol engine in it. It makes this droning noise, so people kind of know when it's coming—they can hear it coming. I think it has maybe a two- or three-meter wingspan, and that's a pretty expensive, longer-range model with a much bigger explosive on it. So I think, yeah, when you say "drone," it covers a range of things—anywhere from very small, very quiet surveillance drones used to figure out what your enemy is doing, to these quadcopters that are flying and blowing people up, to the very big systems that some of the state actors have access to.

#Pascal

And I suppose—I mean, I'd bet a lot of money that a big chunk of the research is probably about how to combine drones with AI and use them together, or maybe not. Do you know anything about that?

#Dylan Cawthorne

I know that it's an area of research. There are some people who are, of course, very skeptical of it. But I've seen examples, mostly for command-and-control kinds of things, where some AI system integrates different types of information and gives you recommendations. But even within the military, I think there are people who are quite skeptical and against that, just because, yeah, the quality of the information is very important.

#Pascal

Yeah. Okay. At your university, do you think there were also active discussions about how ethical this is—the move from civilian to military use? Was that a big topic among students, or is it kind of implied that that's just how it is?

#Dylan Cawthorne

I think it was an important topic. I didn't really see much reflection from our leadership. They said, "The PM says we do this, so we do it. And look at all this money— isn't that great?" Among my colleagues, there was actually quite a lot of discussion. Every year we have this off-site meeting where we talk about the coming year—what we're going to do, what our plan is. And over the last several years, one of the big topics was, you know, this military stuff. It just went on and on. For my former students, I'd say there was a strong minority who were really keen on it.

Some thought it didn't matter; some didn't really care. They were just engineers who liked to make cool stuff. Some of them were like, "Yeah, we have to protect Denmark," and others were like, "This is wild—this is a big change." The students I had weren't particularly politically active or engaged. But at some of the other universities in Denmark—at Aarhus and Copenhagen, for example—there have been cases of students protesting against collaboration with, yeah, like Terma Aerospace, which makes parts for the F-35.

#Pascal

Right. But then, at the same time, you do have protests—the one you showed behind you. And you' re also part of a program called Drones for Peace. Can you tell us a bit about that?

#Dylan Cawthorne

Yeah, so actually it's something I created because I felt it needed to be on the agenda. My idea with Drones for Peace was basically to promote the nonviolent use of drone technology. I gathered a bunch of nice people this summer, and we went out to this drone show that happens every year. It was a bit ironic because I was also a participant at the show. I had my badge on, and I was standing outside with my friends from Drones for Peace, saying, "We don't want this. This is bad." Then I went inside and talked with the people there. It was a very strange situation. But yeah, we plan to do it again. Basically, we're just very skeptical of this militarization that's happening, and we really want to make peaceful technologies. That's our aim.

#Pascal

Do you think there's a possibility to create or do drone research that's purely defensive in nature? You know, one of the things with nuclear weapons is that it's almost impossible to keep them purely defensive, right? Because of the secondary effects and all that. But certain technologies can be used solely for defense. So is there a way to say, okay, there are legitimate use cases—legitimate reasons—to do research that would, for example, focus on how to defend against drones? Like, if somebody tries to attack you, how to take them down. Is that kind of research also being done? And how do you see that?

#Dylan Cawthorne

Yeah, it is being conducted. There's work on anti-drone technology, and I see your point. As a defensive technology, that makes sense. But also, if you're stopping someone else's attack, that's still useful militarily. I think in the case of defending civil infrastructure, that could be a pretty reasonable use case—like protecting airports. We had this supposed drone incursion at Copenhagen Airport a few months ago, which everyone still doesn't know what it was, but they claimed there was one. So that could have been a useful system to have.

#Pascal

Can I ask you about this one? How is it possible that there's so much media buzz about supposed drones, but somehow nobody gets hold of them—nobody can actually identify them? Do you buy that, or is it hysteria? Kind of a, you know, a U-boat situation? Everybody just—there were these cases in the '80s when people got hysterical about Russian submarines in the Baltic, and it turned out later that it was more or less a fabricated thing, mostly from the NATO side, to whip up hysteria. What do you think it was in the drone case?

#Dylan Cawthorne

Yeah, so I think it's definitely like a Red Scare kind of thing. Yeah. Because, I mean, I think it's fairly likely that people—this is just me guessing—probably did see something. But then they automatically said, instead of saying, "There's something we need to look into, there was something in our airspace we weren't expecting," they said, "Well, it could be Russians, and it could be this, and it could be that, and it could be a dual threat," and all these hybrid warfare kinds of things. So I think the thing that happened is one thing, and then the way people talked about it is another. Maybe they were just really worried and scared—that could be one justification. They wanted to be on hyper-alert. Or they could've been really looking for a red herring, trying to find excuses to scare people. People were really scared here. Yeah, very worried.

#Pascal

Is it possible to use drones in this context for spying? I mean, is there, to your knowledge, technology so stealthy that it could be flown over the capital of a European country, and the person flying it would have reasonable grounds to believe it couldn't be detected?

#Dylan Cawthorne

You can make drones that are very, very hard to detect. One of the ones we saw demonstrated at this drone show a couple of years ago was called the ScanEagle. It has about a three-meter wingspan and is a flying wing, so it's a fixed-wing aircraft. It actually has a petrol engine, but the exhaust points upward. It launches from a catapult, and once it gets up a few hundred meters, it's invisible—you can't see it, you can't hear it. It has a gimbal on the bottom with very high-power lenses. They showed us the live feed, and it could zoom right in—you could see our faces. It could

identify individuals. I'm not an expert in drone detection systems, but I imagine a lot of countries would have radar and similar technologies. Still, these drones are fairly small.

I don't think you could ever have a 100% chance of non-detection, but you could definitely gather a lot of information using drones. Some years ago, I saw a presentation the South Koreans gave about some drones they found from their friends in the North. These were basically very large, very fancy remote-control airplanes that flew very low, so they were difficult to detect. They were taking photos as they flew down the coast and then over the capital. Unfortunately, the GPS coordinates of the route were pre-programmed into the drone, so they could see where it came from and where it was supposed to be going. Those were just the one or two they found—the ones that fell down. So I'm guessing there were probably a hundred others they didn't find that had flown the same route. They are difficult to detect.

#Pascal

Okay, in conclusion, spy drone warfare is probably not science fiction. I mean, spy drones are probably already flying.

#Dylan Cawthorne

Oh, for sure. For sure. And I mean, on the battlefield, that's, of course, a given. And then outside of the battlefield, of course, it's a risk if someone finds you, right? But on the battlefield, it's happening all the time. One of the companies I used to work at made this fairly small fixed-wing drone—it weighed about two kilos, with a 1.6-meter wingspan. It had a small electric motor, and once you launched it, we did some experiments because we were trying to figure out how the sound of drones might affect people on the ground. And over, I think it was 50 or 60 meters, it was undetectable.

#Pascal

Exactly.

#Dylan Cawthorne

And then they made a military version of it after the company I worked at was sold to another company. And yeah, that's being used, I believe, in Ukraine, actually.

#Pascal

Oh, wow. So, I mean, in conclusion, this technology isn't going to disappear anymore, right? We can all expect that more and more of it will be developed—I mean, they're probably pouring money into it from all sides right now. The Russians, the Europeans, the Americans—drones are the future of warfare, in a very sad way, right?

#Dylan Cawthorne

Yes, I believe so. And I think in the next five or ten years, this huge amount of money—this 5% of GDP—is going to have a massive impact on Denmark and a lot of other European countries. It'll really set the research agenda. I'd encourage my colleagues who are still in academia to consider whether they want to be part of this or not, because it's coming, and you can't really say no to the money, unfortunately. That's just the context we operate in. So I really hope people get together. I hope they do collective bargaining, join the unions, protest—do whatever they can to push back against this militarization. I mean, the society here, Pascal, is really changing. When I first arrived—I've been in Denmark since 2010—I'd say the Danish state did some military stuff, but it wasn't part of everyday life. And now it's really starting to become part of everyday life.

#Pascal

In what sense? I haven't been to Denmark for, like, a really long time.

#Dylan Cawthorne

Yeah, so it's making its way into the universities, it's making its way into industry, and you just see more military stuff. There are people talking about joining the military, the king is wearing his military uniform—so it's a total shift in mindset and perception. Ten years ago, you would never see this; it was super rare. Maybe once in a while you'd see something from the Home Guard, which is like the people who stop traffic if there's a marathon—the volunteers, basically. But now it's becoming a lot more common, and the culture is being militarized, I would say.

#Pascal

It's very sad. I mean, I suppose you read about it a lot in the newspapers—and the, I guess, constant threat from Russia.

#Dylan Cawthorne

Yeah, I think the perception is that the Russians are coming to Copenhagen.

#Pascal

I don't know. I don't know. I mean, it's... it's very, very dangerous where Europe is right now. If they don't stop it—if it doesn't stop—it will lead to the very war they're saying needs to be prevented. Because if you prepare for it, you'll make it happen. You will make it happen. Maybe one last thing—what do you recommend? I mean, if there are other people in similar engineering fields

who know that anything they do can be used for military purposes, but they don't want that to happen, what should they do? How are you organizing yourself after quitting the university? We all need to survive somehow; we all need some income. What are you doing?

#Dylan Cawthorne

Exactly. Well, I felt like I had to leave the industry because that would be the most important thing I could do now, with all this training I have in ethics. I thought, maybe the best thing I can do is quit. Yeah. So I'm an artist now. I've been making art for the past five or six years. And I thought, okay, time to shift gears and try something else. Yeah, I would really recommend that people be proactive. You'd be surprised how much speaking up creates friction and pushback. That's one thing I noticed at the university—everyone was sort of like, "OK, well, we just do this, and this is how it's going to be."

A few of us started asking questions—raising doubts, discussing, and critiquing this perspective. I think that made a big difference. Every once in a while, I go back to the university. I have friends there, and I have meetings there sometimes. People will come up to me in the hallway and say, "You're that guy who quit, right?" And I say, "Yes, that's me." And they're like, "Oh, that's so interesting." And I'm like, "Yeah, come on, you should do it too." So, yeah, I think collective bargaining—getting together, talking to your union, being part of demonstrations—I'm still optimistic enough to believe that can have an impact and make a difference.

#Pascal

Yeah, just don't be silent. I mean, the surest way that nothing will change is by not speaking up and just going along with everything, right? And then, I mean, everything is lost from the start. But not everybody has to quit their jobs, right? At least say, like, "I'm not good with this kind of stuff when it's going on."

#Dylan Cawthorne

Exactly. And if you're an academic, then at least in Denmark, in theory you have research freedom. So you can't be forced to do something that's against your moral or religious beliefs. So I would encourage people to become pacifists, to resist this militarization, and really stand up for your rights.

#Pascal

I've got a very strong feeling that over the next couple of years, for people who aren't okay with this, resistance is going to be the main word. It seems like the mainstream is fully on board, full throttle ahead, into a militaristic future.

#Dylan Cawthorne

Yes, that's my experience as well.

#Pascal

Just say no. Everybody, just say no. If someone asks you to kill someone else, just say no.

#Dylan Cawthorne

Exactly. And if they ask you to do it indirectly, by making something that will kill people, also say no. Just say no.

#Pascal

Good. I mean, this is very practical advice. Dylan, for people who want to find out more about you—your art, your writing, your ideas—where should they go?

#Dylan Cawthorne

Yeah, they can go to my website. It's just dylancawthorne.com—so, my name dot com.

#Pascal

Okay, I'll put a link to your website in the description of this video below. Dylan, thank you very much for your time today.

#Dylan Cawthorne

Thank you, Pascal.