3. Constrained Freedom

Interview with Paul North*

About Paul North

Paul North is Professor at the Department of Germanic Languages & Literatures at Yale University. He teaches on media and literature from Ancient Greece through the romantic and enlightenment traditions into 20th century literary and critical theory. In The Yield: Kafka's Atheological Reformation *(Stanford, 2015) North presented a largely unknown Kafka based on readings of the famous writer's theoretical works at the end of World War I. Paul North's new book,* Bizarre Privileged Items in the Universe: The Logic of Likeness *(Zone Books, 2021) diverges from centuries of thought focused on the idea of difference to engage deeply with the concept of likeness: in evolution, in natural and social worlds, in language and in art. More on: paulnorth.org.*

Johan Fredrikzon: You have called Simondon the inversion of Heidegger. Writing at roughly the same time, was Simondon directly influenced by Heidegger?

Paul North: Well, the fifties in France was a time of transition, when everyone was in love with Heidegger. Simondon's *On the Mode of Existence of Technical Objects* and parts of *Being and Time* share an idea that the world is interactive, and that tools,

* Johan Fredrikzon spent one and a half years as a visiting research assistant at the Film and Media Studies Program at Yale University 2018/2019. Some months before he arrived, a two-day workshop on Simondon was held by the Yale-Düsseldorf Working Group on Philosophy and Media, titled *Modes of Technical Objects*, with scholars from the US and Germany. Fredrikzon decided to engage a few of the workshop participants for this special issue of *Sensorium*, with the purpose to discuss perspectives on Simondon as a theoretical instrument for thinking technology, how the French philosopher matters in their work, and why there seems to be a revival in the interest in the writing of Simondon these days. On behalf of the *Sensorium journal*, the interviewer would like to thank the three interviewees for their generous participation.

which are the machines of *Being and Time*, constitute existence just as much as they happen to lie around in it. Technology in *Being and Time* are circuits of activity and purpose that tools participate in, and that constitute human beings. Simondon is saying something very similar in his book, *On the Mode…*: There is an interactive freedom that gives rise to an interactive history in which there is a mutual constitution, where the skill of the human beings and the knowledge of human beings around machines – and machines themselves – interrelate in complex patterns. Machines relate to other machines, to their forbears, to their models, to the early innovations of things in this peculiar symbiosis.

I think Simondon recognized that philosophy had not caught up with this fact. A good example is Heidegger's *The Question Concerning Technology*, that poses questions in a vocabulary that goes back to ancient Greece. In a sense, Simondon drew upon the Greeks as well: take a concept like *hypertele* which comes up later in *On the Mode... Hypertele* is a description of the experience of a technological object. Simondon adopts Greek vocabulary, but he does not say that the Greeks knew the authentic relationship to technology. He is saying: Here is a name that we can cobble together like we do for technical objects. The name is a little machine. So we take a technical name and make a philosophical one out of it, and thereby we make philosophy more like technology, we help philosophy show us that it is like technology. This is quite the opposite of Heidegger, trying to capture technology in an ontological vocabulary. *Hypertele* is something that really interests me, particularly how the functionality of a technical object goes well beyond its ”function”. Which is to say, a particular use of a certain technical object does not exhaust its potential application.

JF: Heidegger would say that if we only look at the instrumental aspect of technology, we are missing the core idea of that technology. He has this idea that we used to have a simpler, more authentic technology in earlier periods, which changed with industrialization. Because of this development, we need to ask deeper questions about technology. So let us not look at functionality, let us not look at instrumentation, let us rather look at the way that our world is technological at the core.

PN: Well, here is a difference then. Heidegger thinks that the originary of technology is a phenomenological process, where it brings an entity to light – makes something appear: How do we get these particular beings? Tikto—in Greek, technology is the birth of beings. Simondon, you could say, is interested in a similar

question – how do we get these technical objects? But instead of relying on a quasi-metaphysical process – the birth to presence of beings – he posits instead a free interaction between a technician and a set of technical possibilities that are built into a particular object. So, this is very, very different from Heidegger. The aim is not to make a world or show how the world is made, the aim is to show how the technical object has a sort of life.

JF: A trajectory?

PN: It has a trajectory, and that trajectory interacts with human culture in such a way that they mutually determine one another. And that is something Heidegger would never say. He thinks that these technical objects would be the embodiment of a certain interpretation. But not that the machine interprets us.

JF: Some parts of *On the Mode of Existence of Technical Objects* to me sounds very "essentialistic," if that is the word.

PN: Simondon does use the word *essence*, but essence is just the generative trajectory of a certain technical object – there is no essence beyond the particular historical life of the object. He is interested in telling you how those generative trajectories come about. The essence is not the function, shape or substance of the object. It is the *how* of its development. Take for example a carburetor. The idea of such a machine emerges out of an intuition of the way fuel could be delivered to an internal combustion engine. The carburetor is there, its shape a ghost looming in the need to deliver fuel from here to there, within certain technical constraints. That intuition is originally very rough, and the parts to build a carburetor are taken from other machines. Once that initial configuration is set up, this determines *in part* what can possibly be developed out of it, but only partly, because the constraints come both from the object in its nascent stage outward to the technician and also from the environment, which he calls – quoting his teacher Canguilhem – "milieu". The milieu includes everything from the kind of life practices of the technicians to the tools available in the lab. A reciprocal giving of possibilities take a certain trajectory given the initial shape. And the essence is the trajectory itself.

In other words, there is not a kind of active interpretation or a free refusal of the status quo, as it would be for Heidegger. A technical object is rather a concrete intuition, if you can imagine such a thing, the projection of a need in parts and linkages and transferals of motion.

JF: It sounds like it is still fairly determined.

PN: It is a very complicated play of determination and freedom, that is for sure. Simondon is not so naïve as to think there is total freedom. Nor is he a Hegelian. Obviously, history is littered with failed technical projects. To succeed requires the liberty to fail. That said, it is also not surprising if a carburetor works out the way it should. It's already in the reciprocal relationship of milieu, already made technical objects, and the intuited need. But it is also the case that when the carburetor is first imagined, and then first instantiated, it is not a *model* of the shape that the carburetor will take – it is merely a departure point for future adjustments. So, the form of the need and the form of the technical object is not fixed and it is not predetermined by the need. Need and object grow together through tinkering.

JF: Simondon seems to be interested in ”liberation” of the technological object. Sometimes he reminds me of philosophers of artificial intelligence.

PN: So, here is the best thing you can do with Simondon today: Acknowledge that thinking of technology *is* technology. According to Simondon, we need to become students of technology in order to develop our thinking. You do not have to be a techno-utopian or even imagine that technology is the most important thing in the world, to understand that technical modes of objects are resources for thinking. I think Deleuze does that, though he avoids history. The most important thing Simondon does is to combine empirical history and the phenomenological history of someone like Heidegger, into the genesis of an object. He is a kind of materialist historian, let us say. Very different from both Marx and Braudel, but drawing a straight line through them.

JF: He is also trying to ”liberate” technical objects from systems of politics.

PN: Yes, that is a problematic aspect of Simondon. My presentation at the Yale Simondon conference was about why Simondon never mentions the bomb. It must have been on everyone's mind. It certainly was when he was beginning to write.

JF: It was *the* technology in his time.

PN: *The* example of world-destroying technology. A humanity-destroying technology. A technology-destroying technology. In a sense, the bomb expresses the limit of his way of thinking about technology. Because it expresses a functionality to reduce the technical age to absolute dysfunction. There is no constructive use of a nuclear bomb. The only constructive use is to not use it.

Not using technology is an interesting issue. Simondon is not really an advocate of *using* technology. That is what Heidegger's argument was about: using technology. Simondon is advocating building technology, developing technology, living in the

embrace of the tinkering, and seeing human history as in a reciprocal *interaction* with the development of technology. But his anthropology is very different from the usual anthropology of technology, which says that humans *use* technology and worries if they will end up being abused by technology in the end. Human beings are already *within* the technical apparatus, as part of it and also as part of its milieu, which is the bigger apparatus.

JF: It is where humans and technical objects coexist?

PN: A human is that kind of carburetor that mixes the fuel from the milieu to run the development engine. That is a very interesting idea: there is nothing mechanistic about machines for Simondon.

JF: How so? I know he speaks a lot about the automobile and the water mill?

PN: Right, but they are not automata. The object is not in its function or its purpose, it is in its genesis. Thus, these things are not merely animated by the human being, the water mill animates the human operators too—it animated them as inventors, refiners, duplicators, manufacturers, and finally as workers. This is especially the case in the domain of development. To Simondon, the inventor plays a very small role. He feels the initial constraints of the initial bad formulation of a technical object, and can – "within the obstacles set" – move things around and open a new path. This is a vision of constrained freedom. Or a freedom to manipulate certain constraints. The final product – or the initial sketch – does not matter that much however. What is important is the further work within these constraints, the going into the machine to develop its logic.

JF: So, he is rejecting the schoolbook version of development: The reason the locomotive came about, was because of a need for mobility.

PN: At first needs are given outside of any system. Obviously other needs are created by the technical system after a time anyway, right?

JF: What about aesthetics? There is an aesthetic vision somewhere in his writings.

PN: We have been talking about the technical object as having some relation to "perceived needs". Which is another way of speaking of the difference between function and functionality. It is interesting that technical objects also have to be or *become* information. Information for Simondon is the goal of aesthetics. What does that mean? Here is an interesting definition of information: A function or a figure that moves from a milieu in which it is familiar to a milieu in which it is foreign. So, in some sense a technical object cannot simply satisfy a need. It also has to be a relation to an outside, it has to come through a shift, it has to come and by its very

working from afar "revise" the need. As though it could be possible for a simple need to produce an invention to fill it. We know this about technology too. We always needed to carry a computer in our pocket, but of course we never thought of it. The need did not predate the invention. Beyond being a machine that does something, a technical object contains the thought of the next need.

JF: Suddenly it was there.

PN: It came as information, it came as – one says in mathematics – an undefined variable. To a small coterie of technologists, it may have come as something familiar, though that is because they are imagining warping the current milieu, while to everyone else it comes as information. Only so long as it remains information, is it technology. The iPhone, in other words, is already no longer technology. Technology has to have this informational quality.

Let's go on with this ready example. Simondon thinks that information comes from elsewhere into a situation that is somewhat chaotic and helps to stabilize it – gives it a little bit of form. It is obviously not responding to a perceived need, but coming in to re-adapt a situation, diminish a certain tension, and expose a part of the context that had been hidden. And you can see that the iPhone did that. Once stabilization is accomplished, it becomes part of the new chaos, part of a new tension, awaiting a further gizmo. There is a theory of history here in which gizmos respond to social tensions as information, as forces of re-ordering, which, if you look at this from an empirical view, does not quite explain how it is working historically. Information reconfigures the milieu but at that time it becomes part of the milieu, and insofar as there is still tension, it then takes another technology to come in and stabilize again. So the stabilizing force is only active insofar as it is information, not even yet being used, as we usually imagine technology to be, being in its use – this is my reading of Simondon.

JF: So, when he speaks of cars and, in a sense, traditional technology – in a very knowledgeable and in-depth way – he is also thinking about these types of technologies as information, at the core?

PN: Yes, absolutely. He does not talk so much about the mundane social effects of automobiles; how people could get around, how efficiently, how fast. He is not interested in that.

JF: He is interested in the parts and how they work together.

PN: And how they involve people in a process of becoming foreign to themselves. In modern philosophy there tends to be a political quality to technology – you can

see it in Hegel: it is the slaves' interaction with tools that the master cannot have that makes the master a slave of the slave. Simondon was interested in that dynamic too, from a different perspective. Hegel of course was only interested in the use of tools—use gave power. For Simondon, again, it is not use but genesis that involves human beings in technopolitics.

JF: What does the genetic part mean, in this case?

PN: Not progress, for sure. Progress means to develop something that fits in your hand better than a stone does; it's task is to "extend capabilities." This then is a straight-ahead humanism. With progress, surprisingly, a human being is not involved in the object, and so it is not a true genetic technical process. An abstract ideal lead you to make a better widget. Participating in the fabrication of a world, which is the fabrication of new needs, is different. Marx is thinking about this too in the machinery section of *Capital*. He thinks not so much about the products they enable workers to make or the higher speed at which the work goes, but about how the machines remake the people. Machines make workers into machine operators and they also unmake workers as craftspeople. And they make capitalism into an efficient producer of surplus value. Industrial machines produce… a new landscape for thought and action.

JF: Does Simondon agree with Marx?

PN: He agrees that technical objects change all the relations in a milieu. We could say that technical objects are absolutely archaic—every made thing is technical. There might be clues in the history of technology that human beings have always been "homo technici", but it is not until the invention of machines that homo is subsumed into the genesis, of itself and the objects. You do not have to tinker much with a hammer. Hammers have not changed much over the millennia.

JF: If he brings any fundamental insight to philosophy, it is to stress the importance of technology in philosophical thinking from the start. Is that fair to say?

PN: Perhaps his most important contribution is to stress the radical change that technical objects make in the movement of history and thought. You can say it in another way: "everyone is an engineer". That is how Spengler would have said it. Engineers participate with things and in history in a different way—they mediate designs. In this way engineering is fundamentally different than using. Here Simondon also differs from Heidegger. Heidegger only thought about using tools, and about use as a mode of practical interpretation. Now humans have become the combustion engine's instrument for the emergence of carburetors, if we think of an

engine as an expression of a need-in-transformation towards-an-end it cannot foresee.

JF: Simondon also seem to think about machines as organisms, influenced by ecological thinking and cybernetics. What is really to gain from describing machinery and technological systems from what we normally would think of as organic entities, in your view?

PN: Through Canguilhem Simondon's way of thinking is colored with evolutionary paint, and there certainly are analogies to be made with Darwin and later theorists. Where Simondon is very much like an evolutionary thinker, is in his word *ensemble.* Object, engineer, milieu—altogether form an *ensemble,* which is the fundamental unit of history—much like organism, environment, and niche in evolution theory. One lesson of both is that environment cannot be separated from object—Simondon stresses that the milieu is in the object, and the engineer is in the object as well. The three form a circuit that operates in a meta-technological way, each feeding the others. As dynamic as this seems, he nevertheless has a strong inclination towards *balance*. He likes order, he likes stability, even though he is willing to disrupt a lot of things to get there.

JF: Balance of what?

PN: He is not interested in the depletion of natural resources or the mystical harmony of ecosystems.

JF: He seems to be observant of – and that is probably why I spoke of aesthetics before – a certain beauty of machinery functioning – a machine doing what it should be doing.

PN: Machines in operation interest him, but the responsive, reciprocal course of their genesis that moves toward stability interests him more. Whether you are driving a pickup truck, mining rare earth metals, or coding software, the technical objects that enable you have their birth, growth, deviations, and death.

JF: Right, Simondon wants to move away from function seen as an ordering of machines to perform to our needs, and instead look at where the function is coming from and where it is heading, I suppose. Does it make sense to speak of a fulfilment of becoming?

PN: If you mean by that a following out of certain implications, some of which will open onto further implications. Contingency is the main product of building. Look at the development of the iPhone. You see how the refinements are built up from the previous stages. I think the best way to talk about it is as a movement from confusion

to fusion. It is not as though the possibilities of the next version of the iPhone are contained in the previous version, but you can, given your competences, find a space there, and work on it in a certain way. The way you work on it is conditioned by the way you worked on the previous one, and together something fuses out of this. I talk about, in other words, constraints and possibilities that are not all actualized. Every moment is hypertelic in that regard. And that is the difference between Hegel and Simondon. For Hegel historical objects internalize difference; for Simondon, technical objects externalize difference. They are hypertelic—they fly beyond their dialectical summation.

JF: It sounds like a theory of complexity. You cannot determine it. It will play out, but we cannot say in which way.

PN: One question is where does the drive to keep tinkering come from? That is something I do not understand. Is Simondon a Nietzschean in that he thinks it comes from the passion of the tinkerer? Sometimes it seems like there is a kind of slingshot effect; one alteration leads to another, it goes through its iterations, and drags us all with it.

He does not think it is demanded of capitalism. In Simondon, there is no such thing as progress – it is a *mode of existence*, that can be analyzed. Capitalism depends on the myth of technological progress. Simondon shows us that there is no progress in technology. It follows a fundamentally different model of history. So, if that is the case...

JF: ... then capitalism employs a model of history that is incompatible with Simondon's way of reasoning?

PN: Capitalism is wrong. According to Simondon, capitalism builds on the false conception of technology as something related to progress. I would not say that the mood is critique, necessarily, but it would be a fundamental shift in mode of thinking. And you could develop or promote the engineer or the tinkerer's position as an alternative. But it is so easily subsumed into capital, right? The tinkerer has a little bit of freedom. If you want to use Simondon to develop a critique of technology – what would that be? Can you apply Simondon's perspective and be a critic of technology? That would be the question. And I do not have an answer to that.

Did you ever see the film by Terry Gilliam – *Brazil*?

JF: *Brazil*, yes.

PN: There is this revolutionary or at least rebellious plumber played by Robert de Niro. He is a tinkerer. He is not invested in the system. He does not make things

better; he neither keeps order nor keeps the system going. Technical malfunctions, in a totalitarian system or in capital, exist not only to prove the need for the system, but also to discipline the people, to show them that they are submitted to the system. This renegade plumber merely patches up the mess, temporarily, without concealing the system again and the tenant's dependence on it under the pall of good function. Unofficial technologists could be Simondon's answer. Bill Gates and those sorts of people went from being unofficial technologists to really ruling the world.

JF: So, if Gates and the Hewlett Packard people would have stayed in their garages and kept on tinkering, and had not become global billionaires...

PN: Now we are talking about the movement of capital, which has become parasitic on technology. The movement of technology is another thing entirely. Sometimes they even work against each other. A line of big investors is waiting to capitalize AI, but the genesis of the object is still in process.

JF: And the capitalist explanation is that capital is making better technology.

PN: That is not the movement of technology, according to Simondon.

JF: That is part of the progress myth?

PN: You could say capital makes better technology for sales, but there is no such thing as "better technology". It is the process of thinking certain technological forms that the tinkerer takes on.

JF: It borders on the view of an artist. Without posing as one, perhaps.

PN: And without the fiction of that kind of freedom. The kind of freedom where you can do anything, like ex nihilo creation. Simondon wants nothing to do with that. It is the middle person, the one who can take an invention and actually make it into a form of life, bring it in line with the milieu and allow each to change the other, that is interesting for Simondon.

JF: When I read parts of Simondon's book, *On the mode of existence of technical objects*, I was reminded of what Heidegger is saying: Here is a block of marble and that block of marble wants to become this beautiful, perfectly balanced statue. I recognize a similar idea in Simondon, an idea of "this technology wants to become" something. Which I read as an expression of a sort of essence.

PN: Yes! I think it is best to think of it as a freedom of constraints. And constraints then give birth to other possible movements. Heidegger just does not have enough of a sense of the material of stone. But he does talk about gravity, when he talks of sculpture as opposed to, for example, frieze making. There is something in the

material – in this case the stone – that leads towards upright, human forms, through the constraint to the new freedom, so to speak.

JF: It cannot become anything.

PN: You cannot do anything with any material. And this is not just a constraint seen in art history. You would not call it essence, but there is a physical fact that is hard to overcome. Stone sculptures stand on the ground. They have a high tension between the material and the representation that projected images for example do not.

JF: There seems to be a lot of respect, if that is the word, for materials and the dynamics between who is making stuff in Simondon's writing: a sort of "listening" to the material.

PN: That is a beautiful way to put it. An extreme example of that is a book by the Deleuzian thinker Manuel de Landa, on chemistry, *Philosophical Chemistry. Genealogy of a Scientific Field* (Bloomsbury, 2015). There, he argues that chemistry even goes beyond the constraints of machines, which still always were expected to "do something". Chemistry is satisfied with acting and reacting and transforming into new substances. It expresses a kind of combinatorics, that a lot of things can emerge from. You do not even know if it is going to have "functions" at all. It is really quite open and... scary.

JF: Would de Landa be an example of someone who thinks along Simondonian lines?

PN: Through Deleuze. For sure.

JF: Is there a Simondon-moment right now?

PN: If anything, we are all looking for resources these days. And Simondon is one, although a terrifically weird one. One thing Deleuze taught us – and Heidegger too – is that the *unthought* is more promising than the thought. This is the difference between philosophy and theory in the United States. Theory works on the unthought and philosophy on the thought. Simondon is just a trove of unthought for our current situation. But I don't think there is a renaissance of Simondonian thinking.

JF: People do not get high on Simondon, like they do on lots of other thinkers?

PN: Exactly. You know why? This is a totally different topic. Deleuze has a kind of prose style that liberates people – except for the die-hard Deleuzians. Like Emerson liberated Nietzsche and German literature, Deleuze liberates people from scholarly discourse. That is the "high" you are talking about.

JF: Which has some good parts to it.

PN: Yes. But Simondon does not give us any of those things. With him, you are forced to shift the way you think about theory. That can be painful.