

# Erich Hörl

Continent.



Image courtesy of Nina Jäger.

Erich Hörl is professor of Media Culture at the Institute of Culture and Aesthetics of Digital Media (ICAM) at Leuphana University of Lüneburg and senior researcher at Leuphana's Digital Culture Research Lab (DRCL).<sup>[1]</sup> He studied philosophy and theory of communication with Hans-Dieter Bahr in Vienna, with Jacques Derrida in Paris, and received his PhD in cultural studies from Humboldt-University Berlin where he studied with Thomas Macho and Friedrich Kittler.<sup>[2]</sup> Hörl's research focuses on an ecology and theory of technics and media, as well as an epistemology and media history of cybernetics and systemic thought. His work examines the contemporary aspects and perspectives of cybernetization and the history, problems and perspectives of the anthropology of media and technology. He is the editor of Die Technologische Bedingung – Beiträge zur Beschreibung der Technischen Welt, part of a three-volume project that also includes Die Transformation des Humanen. Beiträge zur Kulturgeschichte der Kybernetik (Frankfurt/Main 2008: Suhrkamp), co-edited with Michael Hagner, and the forthcoming *On General Ecology. The New Ecological Paradigm in the Neocybernetic Era*.<sup>[3]</sup> Among his recent articles is "A Thousand Ecologies: The Process of Cyberneticization and General Ecology", in *The Whole Earth. California and the Disappearance of the Outside*.<sup>[4]</sup>

cc.cc: How did you get here?

EH: Last year, I had one of the dialogues in the context of the anthropocene year with Peter Haff on the technosphere, and somehow our dialogue introduced the topic into this context. I work on the description of the technological condition, especially on the problem of how to describe the evolution of technicity that took place during the last 150 years. I coined the phrase "the technological condition" in order to specify our contemporaneity.<sup>[5]</sup> So this concept does not mean

(just generally) that humans always already live in a technological condition.

A Matter Theater | Technosphere and Technoecology Peter K. Haff and Erich Hörl, October 18, 2014.

There is a very historical bias here. This phrase “the technological condition” designates a kind of historical move towards a new culture of sense, that I call a “technological sense-culture”. I’m looking for appropriate modes of description, and “general ecology” is, for me, the overarching concept that specifies the new technological sense-culture beyond representation and reference—of a sense-culture beyond the traditional meaning of sense as that of a subject, of history or whatever, but a more machinic and relational constitution of sense, a new phase in the very historicity of sense as such. It is an ecology that is not bound to natural aspects anymore; it is rather a non-natural ecology—a techno-ecology—and I think this kind of description still has to be outlined. A new form of ecology that corresponds somehow to a new state of nature—that is the cybernetic state of nature, a non-natural state of nature if you want, has to be developed.<sup>[6]</sup>

The cybernetic state of nature is a notion that dates back to the 1960s, from Serge Moscovici. He formulated this concept of a new state of nature very early on, in order to account for the development of cybernetics and the new way of organising nature—maybe even the cosmological turn it implements.<sup>[7]</sup> Although it was a thick book, it was not detailed enough; from today’s perspective, concerning its vision of a cybernetic state of nature, it is not clear enough about the whole conceptual extent of this enigmatic term that is able to condense our historicity, that is now dominated by the process of cybernetization of all modes of existence. I always asked myself: in which direction could we move to better contextualise this concept of the cybernetic state of nature that seemed to be so rich but was still of a more intuitive value and conceptually underdeveloped?

All of a sudden, when I found Haff’s concept of the technosphere, I had the impression that this concept could be an interesting move of the whole question, and that it could be productive to work through this new suggested paradigm. I love that

Peter Haff introduced technology as a question of geology—and I think that techno-geology and techno-ecology could somehow resonate and really work well together. I think the people who invited me here had exactly this conceptual resonance and constellation in mind.

The techno-ecologization I describe caused a really interesting theoretical move. From today’s perspective, the ecologization of thought traversed the whole 20th century, and within the last 10-15 years, we are witnessing a powerful form of expression of new ideas that are all somehow under the umbrella of this term “ecology”. I would even say that ecology is our new historical semantics. There is not a single field that one could not try to reformulate in ecological terms today. The problematization of the difference of nature and culture comes up in this big move towards an ecologization of thought and has to be understood in this move. For a long time in history there was the great divide in thinking, since Aristotle at least, between nature and techniques. When you have this difference between nature and techniques, in Aristotle it was clear that nature has purposes and ends; for him *physis* is something that grows and has the *telos* in itself, and technology has to help in processes where the *telos* cannot be realised by nature automatically or better: by nature autonomously, on its own.<sup>[8]</sup>

So technology was always inscribed in nature, and nature controlled this difference. Technology played its role within the metaphysical frame of a teleology of nature, or what we might call occidental teleology. What happened in the 20th century is that there occurred a certain re-evaluation of the difference of techniques and nature, and now the side of technology starts to control the other side of the equation. That’s a really interesting historical move; this is the technological destruction of occidental teleology and I think the whole nature/technology difference—the whole struggle with this difference we’re experiencing under the title of non-modernity—has to do with the re-evaluation of this difference, and within this difference. In the end, it’s not about saying that there is no nature, because nature would always, already turn out to be cultural. Instead and against this story that has been endlessly repeated by cultural constructivism, I would interpret this struggle about the nature/culture divide within the economy of

difference that we are negotiating at the moment; I would take it as an event within the evolution of technicity, as expression of entering into a new phase of technicity.

cc.cc: What technical systems are operating on us right now?

EH: Haff's concept of the technosphere refers to a more traditional first understanding of infrastructure, like power grids, networks of transportation, from canals to railways, dams, food supply chains—very material things. But it also implies standards, bureaucracies. I guess these infrastructural layers are still there; but they are historically older, depending on networks of transportation and communication, dating back to the 19th century and its crisis of control that haunted industrial capitalism, and that has been so well described by James Beniger. But what I'm interested in, and what has to be included in our description of the technosphere today is this: the new infrastructural matrix we're living in, which is what I call a third wave of control culture. Control culture is not so much about surveillance but about regulation; it has to do with steering processes that become more and more complex today by what Mark Hansen calls "twenty-first century media." There is—to hook up with a conceptualization of Foucault and Massumi, both are speaking about Environmentality as our new mode of governmentality—an environmentalization of media culture: media is not this object standing in front of us, but it disseminates to the outside. Media becomes distributed, rendering what has been called the outside, as such, environmental—environmentalising our environment, to put it paradoxically.

I guess this form of environmentalization is, for me at the moment, the most interesting and urging aspect of the technosphere. The technosphere is the sphere of our environmentalization, with very material consequences. It's not only like Mark Hansen said—when we spoke about transmission, waves, electrosmog—that we are confronted with processes that always have the tendency to promote immaterialization. Because they are invisible to humans and operate on microtemporal levels, we think they could be somehow immaterial. But this is wrong. The whole infrastructure of this environmentalization is also a very material infrastructure. Just because Google is selling us the Cloud, this doesn't mean that all the

processes involved are conveyed to us in a state of immateriality, or something that is non-material. We have huge energy invested into server farms, and the problematics of rare earth metals. These very material aspects of the neocybernetic infrastructure of our new control culture are a very important part of the contemporary and coming technosphere.

Autonomy is the big problem of technology. Cybernetization is one of the big drivers of the technosphere. I could say—following Peter Haff who speaks in terms of complex systems—that systems theory is a possible mode of description, but is it enough? It is the task of the humanities to ask if the becoming-autonomous of technology, let us call it technosphere, forces us to rethink our thinking as well. This is a huge issue. Heidegger already had a clue of this when he repeated the question of what is called thinking today in the dawn of cybernetics in the 1950s. If we agree that this is our challenge, we would have to look for non-cybernetic and non-technological ways of describing it. We need a lot of sources because it's not just possible to invent anything offhandedly—we need to look through traditions, other modes of thinking, and have to look at them to see what tools we find there to describe this phenomenon. Therefore I would completely agree that this is not only a question or issue of the Occidental tradition to deal with this issue of description. The scanning of so called non-modern modes of thinking—like animist systems—has to be viewed against this background.

The problem with the 'sphere' concept is that it automatically brings us to the perspective of looking from the outside onto a sphere, therefore making it a system. But I would say—because for this suggestion of a possible point of view of a transcendent, if not transcendental, observer we have also to somehow bracket the concept of the technosphere—we have to bracket it as a spatial concept. If you look for a different sense of the outside, you really have this simple notion of the outside, looking from the outside on a sphere; but I would always ask for a thinking after the death of god that has to also condense, of course, conceptually. I would always ask "what other notions of outside are imaginable?"<sup>[9]</sup>

Outside does not just mean that there is an

observer that can look from the outside onto something. In French they have "*le dehors*" and "*l'extérieur*", and I remember that Deleuze is struggling with a different conceptualization of the outside. Of course Deleuze is a philosopher of immanence but it would be a terrible mistake to think that philosophies of immanence are completely enclosed visions without any outside—this is only the horror of immanence imagined from the traditional transcendental point of view. We have a concept of the outside from the old transcendental tradition, like a god looking at his creation. But we need another concept of the outside for describing the technological condition. That's the interesting point, that's what I wanted to negotiate: what other outside is imaginable? What Mark Hansen offers via Whitehead is exactly this: he opts for neo-cosmological descriptions that are offering a perspective from the outside, but not as the outside of an inside. If you look for a different sense of the outside view from the outside, for me that's Whitehead, and this notion is completely different from an observer who looks at a globe.

cc.cc: What pieces of the technosphere do you have on you?

EH: My iPhone; we are in this building, this building is also a part of the technosphere; you have all the gadgets around here for recording our conversation; satellites are crossing; microwaves bouncing between our phones...

Of course humans and technology are co-original, I wouldn't doubt that—it took me years to fight for this. But this has nothing to do with the technosphere. We are not always already living in the technosphere. This concept has a strong historical bias: it is a concept for describing our specific historicity that is bound to a certain phase in the evolution of technical objects. I came up with Simondon when I said that technicity, as such, has certain phases through which it evolves. It starts maybe with the first series of tools in the Paleolithicum. This is the phase of technical elements: they need a human user, they can't operate on their own, they are only elements/parts. This is the time of instrumentality in the strict sense of the word.

By the way, Simondon says that later on, when technicity entered the new phase of machines, we always think that machines started to replaced the

humans; but that's a wrong description he said, since it is the other way round, during the first phase of technicity humans had to take the place of machines because the evolution of technicity hasn't been far enough.

In machinic ensembles, as Simondon describes, the human still has the position of a conductor of the society of objects, and in another passage, in a lecture, he speaks about the human as translator between the objects. But, to come back to Haff now, what I love in the concept of the technosphere is not that the human is completely crossed out—because the human is of course still part of the technosphere—but, first of all, his perspective is not dominating anymore. The human perspective is not the perspective for describing the technosphere. The technosphere forces us into a post-human condition—we are compelled to think in a post-human way because technicity evolved from machinic ensembles, as described by Simondon, to the technosphere where the role of the human is even not that of a conductor, but it is an element of this complex cybernetic entity, or these multiple entities belonging to the technosphere.

The autonomization of technology as such is the historical moment that enables and forces us to speak about and to conceptualize the technosphere, and for me it would make no sense to replace the whole discussion about the material world, and to transmit it into the new concept called the technosphere. Concepts have to react to certain problems, but it wouldn't make sense to me just to have a new concept for an old thing.

cc.cc: Can a machine perform its tasks consummately? In doing its tasks can a machine perform something that consummates its relationships to its environment?

EH: Haff used the example of the captain commanding the navy ship. Maybe the captain has more control than the conductor. But in the technosphere, this position of control is not possible anymore. The control issue is what is connected to human agency. I have called it the "anthropocenic illusion." It is the anthropocenic illusion that has been destroyed by the technosphere. There was the anthropocentric position of the human that gave him most of the agency (he was the model subject), the human subject was the only one having real agency. The

interesting thing is that this construction caused a lot of technological progress and brought us into a situation where exactly this kind of proscription to the human turned out to be an illusion,<sup>[10]</sup> the situation is what some people started to describe as the anthropocene. That's why I am speaking about the anthropocenic illusion. The term "anthropocene" is misleading, giving the human too much attention. I would prefer the notion of "technoscene" as Alf Hornborg or the "capitalocene" that Jason Moore suggested. If we have the anthropocene, we can say that the anthropocene is an era that in the end brings a kind of demystification of the anthropocentric agency and a disenchantment of the anthropocenic illusion.

cc.cc: Please pick one image that resonates with your idea of the technosphere.<sup>[11]</sup>

EH: Spontaneously I chose the 3D printer: it reminds me that under conditions of the technosphere, the whole question of production comes up in a very interesting, new way. In the 90s, what came up again, or better: what insisted after the whole process of cybernetization during the 20th century and on the cusp of today's neocybernetic era was the whole question of post-industrial society, immaterialization that dominated the cybernetic visions from the 50s to the 70s. Even in the 90s, we discussed the whole question of electronic media as immaterial cyberspace and so on, as if it were leading us in a realm beyond material production. And people really thought that production would go away and would be replaced by all sorts of creativity (also this was just the repetition of early cybernetic visions; I'm thinking of Abraham Moles for example, and his vision of cybernetizing creativity). The first mistake of this belief in a post-productive vision of post industrialism was that production actually never went away but has just been shifted to other places in the world where people were enslaved. The whole question of recolonization, unequal exchange and so on, as the back side of all cybercapitalist visions here comes into play—questions that are worked through by Jason Moore or Alf Hornborg as questions of World-Ecology. The second aspect is that this thing, the 3D printer, the maker culture, just brings back the whole question of activity and producing/producting in a new way. Again, the same problem: if you think about a possible industrialization of the maker culture, a possible industrial occupation of this

culture, and what this could mean for the future of production and for our understanding of activity. I think this is a really important issue that must also be part of the discussions on the technosphere.

#### cc.cc Notes

[1] EDITORS' NOTE: Before becoming a media philosophy and cultural studies scholar, Hörl was trained in hospitality and hotel management, which for him, explains his interest in and love of handwriting, ligature and signature ("signing in" at the register is what authorises the offering and receipt of hospitality). The knuckle between the tip and middle segment of his saturnal finger is permanently stained with ink from pen writing (See the interview he conducted with Bernd M. Scherer during the (2013) "The Whole Earth: California and the Disappearance of the Outside Conference and Exhibition," [www.youtube.com/watch?v=v8bzqa-L6Y](http://www.youtube.com/watch?v=v8bzqa-L6Y)).

[2] Erich Hörl. *Die heiligen Kanäle. Über die archaische Illusion der Kommunikation*. (Zürich-Berlin: Diaphanes, 2005).

[3] EDITORS' NOTE: An English translation of Hörl's introductory essay was published in 2015. Erich Hörl. "The Technological Condition." Translated by Anthony Enns. *Parrhesia* 22 (2015): 1–15.

[4] EDITORS' NOTE: Erich Hörl. "A Thousand Ecologies: The Process of Cyberneticization and General Ecology." Translated by James Burton, Jeffrey Kirkwood, and Maria Vlotides. In *The Whole Earth. California and the Disappearance of the Outside*. Edited by Diedrich Diederichsen and Anselm Franke. (Berlin: Sternberg Press, 2013), 121–130.

[5] EDITORS' NOTE: Hörl states: "Ever since the arrival of cybernetics we have entered into the new territory of the technological condition, which is where the process of experiencing the world and constructing sense now takes place. The nature of this new territory gradually becomes clearer

precisely through its groundlessness: as a regime of sense that exposes the originary technicity of sense, that constantly merges human and non-human actors, that operates before the difference between subject and object, that is endlessly prosthetic and supplementary, that is immanent rather than transcendental, and that is to an unheard-of degree distributed and indeed ecotechnological. This regime of sense requires a radically new description of its characteristic formative processes, which has yet to be performed." Erich Hörl. "The Technological Condition." Translated by Anthony Enns. *Parrhesia* 22 (2015): 2.

[6] EDITORS' NOTE: By linking the terms ecology and technology in varying combinations Hörl refers to, but also radicalises a concept encountered in Nancy's term "*écotechnie*," a general "becoming-technology of the world" and "technological-becoming of Being or its finish." Jean-Luc Nancy. "War, Right, Sovereignty—Techne." Translated by Robert D. Richardson and Anne E. O'Byrne. In *Being Singular Plural*. (Stanford: Stanford University Press, 2000): 101–143.

[7] See Serge Moscovici. *Essai sur l'histoire humaine de la nature*. (Paris: Flammarion, 1968).

[8] EDITORS' NOTE: Hörl used the word "regulation" when talking about control culture and also evoked Aristotle's purposive nature above. In the 18th century, when the concepts of *laissez-faire* and *laissez-passer* were developing the Physiocrats were doing so while trying to translate the classical Chinese texts returning home from the early Christian missionaries and merchants. Among the thorny terms to grapple with was *wu wei* (無為), which can be intelligibly rendered as "effortless action," or "non-action," or "non-coercive action." The leader of the Physiocrats, François Quesnay, coined the phrase *laissez-faire* to translate *wu wei* and in so doing built a vision of an autoregulated social and physical organization. Quesnay insisted that his followers call him "the Confucius of Europe." See Paul Boshears. "Chinese Whispers: Addiction and Confucian Philosophy." (Ph.D. dissertation, The European Graduate School, 2015): 47–71. See also Yves Citton, "L'Ordre économique de la

mondialisation libérale: une importation chinoise dans la France des Lumières?" *Revue Internationale de Philosophie*, Spécial «La mondialization. Un point de vue philosophique» (2007): 9–32.

[9] EDITORS' NOTE: "The original exteriorization and 'being outside oneself'—the original and unavoidable exteriority—on which the post-hermeneutic fascination with negativity and its pathos of the 'discovery of an original wound' depends, is first accentuated and implemented historically through technology." (Hörl, E. *ibid.* p4)

[10] EDITORS' NOTE: "More than that [cybernetization] can be seen as a candidate concept for a fundamental shift in attitudes. In that context, the anthropological position and the manifest image and self-perception of the human with its clear metaphysical distinctions and orientations has become precarious. Without overestimating cybernetics as an event, it is evident that this process refers to the questionability of, and possible lack of defence for, a human exceptionalism." Erich Hörl. "Überlegungen zur kybernetischen Transformation des Humanen." In Die Transformation des Humanen. Beiträge zur Kulturgeschichte der Kybernetik. Edited by Erich Hörl and Michael Hagner. (Berlin: Suhrkamp, 2008), 10.

[11] EDITORS' NOTE: During the discussions, interviewees were asked to pick from a set of somewhat random images. This collection of different phenomena served as a prompt for thought on the forms of appearance and the visibility of the technosphere. You can view the set here [www.flickr.com/photos/57221817@N07/25411316686/in/photostream](http://www.flickr.com/photos/57221817@N07/25411316686/in/photostream). The discussion here refers to [www.flickr.com/photos/57221817@N07/25410993506](http://www.flickr.com/photos/57221817@N07/25410993506).