

Horyzonty Edukacji Akademickiej 3/2025 (82-92)

DOI: <https://doi.org/10.26881/head.2025.3.10>

Maksymilian Chutorański

Institute of Pedagogy

University of Szczecin

ORCID: 0000-0002-1740-0460

Towards the academic didactics of things

Summary

The interview with Professor Maksymilian Chutorański explores the concept of the didactics of things, situated within the broader framework of non-anthropocentric pedagogy. The conversation addresses the relations between human and non-human actors in education, the role of technology and materiality in learning processes, and the redefinition of educational effectiveness. Professor Chutorański argues that things are not merely tools but active participants in cognitive and educational processes – shaping ways of thinking, relationships, and the organisation of academic teaching. In this light, "educational objects" such as the syllabus, examination, book, or digital technologies become subjects of pedagogical inquiry. The discussion presents the didactics of things as a perspective that broadens our understanding of teaching and learning through relational, material, and critical lenses.

Keywords: thing-centred didactics; non-anthropocentric pedagogy; agency of things; materiality of education; technology in teaching

Jarosław Jendza [JJ]: To begin our conversation, I would like to thank you very much for agreeing to spend some time with me, especially since the conversation we started at the "Viva Dydaktyka" conference in May 2025 did not end on that occasion. What is more, when discussing the boundaries of teaching at that time, the participants of the conference raised a lot of questions. Perhaps we will be able to answer some of them today.

In the community of the theorists of education, you are known for your work on a certain shift related to what you call human and non-human actors in education¹, while showing that not putting people at the centre can open up new paths to understanding teaching, including academic teaching. I would therefore like to start with the boundary you have outlined between what is human and what is non-human in education. Could you elaborate on this a little?

¹ All footnotes in this interview are provided by the editors. Human and non-human actors / Actor-network theory (ANT) – a trend in social sciences (e.g. Bruno Latour) which analyses networks of relationships between humans and "non-humans" (e.g. artefacts, technologies), assuming a preliminary symmetry of their agency in explaining phenomena. See, for example, Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford University Press. See also: Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Harvard University Press.

Maksymilian Chutorański [MCh]: I don't know how formal I should be in this conversation – because we know each other, after all – but thank you very much for the invitation, and I am grateful to be able to talk to you today, Jarosław.

It's Monday morning, and you're giving me a wonderful start to the day and the week. Thank you very much for that – and for inviting me to this conversation – because it's a great feeling to be able to create such stage directions about what technology does to us and between us.

You asked about the boundary between what is human and what is nonhuman. Let me begin by saying that, indeed, when we speak about education, upbringing, teaching, or didactics, we usually speak about people. At the center of these activities stands the human being – their thinking, behavior, attitudes, and development.

Things, and other nonhumans, appear in this context most often in specific roles – primarily as tools: as teaching aids, educational technologies, means to an end.

We sometimes say that we know how, or don't know how, to use them properly. One often hears about the need to “make better use of the educational potential” of one technology or another. In this view, things are seen as helpers – instruments that can be used well or badly. This way of thinking fits neatly into what might be called a narrative of instrumentality.

At times, however, we treat things as obstacles – smartphones, for instance, which we believe distract us and hinder our development. Similarly, critiques of consumerism see things as a threat: many material goods, it is said, pull us away from what “really matters” – from human relationships, values, intangible culture, and so on. At the same time, things also possess a symbolic dimension – they are important insofar as they mean something to people. In this sense, they are carriers of meaning, embedded in human experience. I think these are the most common ways in which things appear in pedagogy and didactics: as tools, as obstacles, as “containers of meaning.”

Yet things – or nonhuman actors – play far more roles in education than we usually acknowledge. In fact, I cannot imagine any educational situation in which some kind of nonhuman would not be involved. If we think about it more deeply, even the very fact that we are talking right now depends on things – computers, communicators, servers, cables, and all the materialities that make our encounter possible. We use things, of course, but they also enter into our lives and co-create them. They act in many more ways than those we have just mentioned.

I'm not sure if I'm still following the main thread – it's probably difficult to piece it all together now – but in responding to your question (or rather, complicating it), I would like to bring in the perspective of the technological revolution and draw attention to the crucial context of the Anthropocene and the Capitalocene.

In this light, it seems important to ask who the subject of knowledge is today, and how we should understand the process of its formation. I have the feeling that we still lack a language capable of grasping these phenomena properly – yet I also believe that we should approach nonhumans with greater attentiveness. In a world where the boundaries between what is natural and what is made are increasingly blurred, we need to rethink our responsibility for the ways in which we transform the world.

[JJ]: You know, I don't feel that our threads are diverging – quite the contrary. I find aspects in your statement that I would like to dwell on. First, however, I must admit to myself that I am part of an environment that talks about things as teaching aids.

Traditionally speaking, the teaching aids we use usually have a specific purpose. This way of thinking is not only traditional but also common sense – that is, it comes naturally to us. Here we have, as you say, an interactive whiteboard, which we sometimes think fulfils its functions better than a blackboard. The very language of assigning it a predefined function incorporates the language characteristic of an anthropocentric approach to education.

In the academic world, we also have materialities of symbolic significance – these certainly include the paper book, which we hold in high esteem. We also have materialities that we view with scepticism or even negativity.

Suffice it to mention the narrative associated with the works of Jonathan Haidt² According to this researcher, we are dealing with a phenomenon he calls "phone-based childhood," which has disastrous consequences for the development of children and later adults, including our future or even current students. In addition, new technologies contribute to the spread of misinformation and so-called deepfakes – and therefore they should be removed from education, that is, these very things should be removed from education. However, your language suggests something else. What does it suggest?

[MCh]: First of all, complaining about things is not a new invention. If we look at Plato, who "complains" about writing – he says that it is both a medicine and a poison³. This complaining about things has a long tradition – and it may well be justified, because things can indeed enslave us. Yet it is also thanks to them that we are able to shape and experience the world in a distinctly human way.

We can cite cognitive archaeology, whose proponents argue that excavations can be treated as part of our minds – that is, we evolve by creating tools that influence how we think about the world⁴. In this light, to represent bison in the mind, it is not enough to "think about bison". By painting bison on rocks, people simultaneously created the ability to represent them in their minds. It is not that the mind first acquires a certain ability and then applies it to material reality. This ability is created in working with the material, with what surrounds us.

Technologies and things make us think in a certain way – and make us who we are. Take a shopping list: you can "keep it in your head", but you can also take a pencil and a piece of paper. The

² Jonathan Haidt, "phone-based childhood" – a social psychologist's thesis on the generational effects of early and intensive exposure of children to smartphones; he links it to mental health and social functioning problems. "Deepfake" refers to synthetically generated, realistic content (image/sound) used, among other things, for disinformation. See, for example, Haidt, J. (2024). *The anxious generation: How the great rewiring of childhood is causing an epidemic of mental illness*. Penguin Press.

³ Plato, among others, in his dialogue "Phaedrus," ambivalently assesses writing as both a "remedy" and a "poison" for memory and cognition. See: Plato. (1958). *Phaedrus* (trans. W. Witwicki). In: *Dialogues* (vol. 2). PWN.

⁴ Cognitive archaeology – a field of study examining how material practices (e.g. tools, rock art) have shaped human evolution and cognitive functions. On this subject, see, for example: Malafouris, L. (2013). *How things shape the mind*. MIT Press.; Donald, M. (1993). *Origins of the modern mind: Three stages in the evolution of culture and cognition*. Harvard University Press.

list will be different because we think differently when we have to write something down and differently when we don't have that option.

Haidt is right to a certain extent: the presence of technology can be destructive – or, more mildly, its presence causes us to lose something. Nevertheless, we gain other things – and it is worth asking what we want to lose, and what we want to gain. If we have phones, they affect our relationship with the world. Schoolchildren are physically at school during break time, but thanks to their phones, they are also "elsewhere" – in multiple realities with algorithms.

Perhaps it is more difficult for us to be in a shared world or to build it together. Nevertheless, this is nothing new; technology has always influenced us. Books also "did something to us". If you do not have the ability to write and read, or do not have access to paper, your "spiritual culture" and ways of thinking are different.

Technologies come in and "do something to us" – and it is important not to start from the premise that they destroy humanity. They probably destroy something, but they also give something. The question is: how do we identify the stakes? What would we not want, and what do we consider useful?

[JJ]: In this part of your statement, my attention was drawn to the shopping list and the practice of note-taking. The literature on this subject is growing, and we are seeing a shift in theory: from "note taking" to "note making"⁵. We do not "take" notes, but perhaps we create them. Is it not in such shifts that the need to pay attention to the multidirectional interaction of people and things becomes apparent?

[MCh]: That's an interesting point. Of course, how we take notes matters. Now you can install a programme where you upload a file and, with the help of artificial intelligence, ask for a summary of the entire book. You have 600 pages and you ask for the most important points to be highlighted. This is a very useful tool for researchers who have to read a hundred texts.

Look – it "thinks for us", selects the most important issues, considers some things to be substantive and others not. On the other hand, we deprive ourselves of independent selection and the chance to be delighted by something unexpected. Sometimes a single phrase appears in the context of others and suddenly you experience something extraordinary. AI can deprive you of this, as well as the opportunity to go in a different direction, to notice something marginal that later turns out to be significant. The machine does not notice certain things.

But this is not new: we remember "cheat sheets", scripts from readings that contained "the most important theses of the books we had to read at school". It worked in a similar way.

⁵ The shift from "note taking" to "note making" is sometimes theorised as a shift in emphasis from passive recording to active construction of meaning during note-taking (research on learning and memory), but it is also treated as a specific academic practice in the field of philosophy of education. See, for example: Kiewra, K. A. (1989). A review of note-taking: The encoding-storage paradigm and beyond. *Educational Psychology Review*, 1(2), 147-172. Mueller, P. A., & Oppenheimer, D. M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science*, 25(6), 1159-1168; Vlieghe, J., & Zamojski, P. (2021). Entering the world with notes: Reclaiming the practices of lecturing and note making. *Educational Philosophy and Theory*, 53(13), 1388-1398.

When I have a group and we have to take notes together, we have to agree on what is most important, sometimes we argue about it – we enter into relationships. It's a different experience than when a machine takes notes for us. We learn not only "what is most important", but the process of note-taking itself is valuable in itself.

[JJ]: I am now sprinkling ashes on my head after what you said, because sometimes I encourage people to be effective in teaching.

[MCh]: Thinking about effectiveness can lead us in different directions – for example, towards criticism of instrumental, calculative reason, to which the Frankfurt School (including Theodor W. Adorno and Max Horkheimer)⁶ devoted a lot of space. It is worth asking what "effectiveness" means and what teaching is for.

Sometimes I tell my students a biographically important story: I ask them if they know what the "wow effect" is. It's when you watch a film, listen to music or read a book and get goosebumps. It's an important part of studying. Then I ask them – for example, in their third year – for the title of the book or the author who gave them that "wow" feeling. At first, they laugh and ask if they have to be books on pedagogy or if they can be other genres. Sometimes they give me something, sometimes they don't.

I assume that people study pedagogy because they want to. Suddenly, it turns out that quite a few people haven't read any books that moved them – and that's a tragedy for me. A waste of time: nothing existentially interesting for three years. From the perspective of the lecturer, it's also a tragedy – after all, these students had classes with me in their first year. I have a lot of books that make me go "wow", but I couldn't "sell" them, make them interesting, convey that "wow" to them. I tell this story to subsequent cohorts. Sometimes I refer to John Holt⁷, saying that there is no teacher who suits everyone.

I tell my students quite frankly that university life is not always wonderful. Often, what we really learn here is simply how to survive classes – and that, too, is an educational experience. If something more happens along the way, if you learn something that genuinely matters to you – that's great, but it doesn't always happen. I'm fully aware of that in my own teaching as well. I teach demanding subjects – research methodology, general pedagogy – and I tell my students openly: look for the "wow" effect. It may not always appear, but it's worth trying.

Of course, I do my best to show that these subjects can be fascinating. For instance, I often start a class on methodology with a conversation about conspiracy theories. Still, I know there are some who would rather not be asked any questions, who will find nothing particularly engaging in my classes – and that's perfectly fine. Not everyone needs to experience a revelation. I encourage them:

⁶ The Frankfurt School, with Adorno and Horkheimer, criticises so-called instrumental reason, drawing attention to the dangers of reductionist, calculative thinking in modern societies.

⁷ John Holt – American educator and critic of traditional schooling; author of, among others, *How Children Fail*, an inspiration for unschooling movements. See, for example, Holt, J. (1964). *How children fail*. Pitman.

look for your own “wow.” And if you don’t find it in my course – just pass Chutorański and keep looking elsewhere.

I’ve had many lecturers myself, and not all of them were important to me. I didn’t find that “something” with each of them – that spark that makes you want to follow someone’s thought. For me, what matters most in teaching is attentiveness and openness – the readiness to be moved by something, to let something change us. In that sense, my teaching doesn’t have to be “effective.” Because it’s not effectiveness that counts here but creating space for an encounter with something that might truly matter.

[JJ]: Thank you – this is an open definition of effectiveness in teaching, because we often think that effective means “efficient and fast”.

[MCh]: Usually, when we think about effectiveness, we set a goal. If we think about teaching instrumentally, we are effective when we choose the means that will get us to our goal the fastest and most efficiently. The question is: how do we know what the goal should be? We say that the goal of academic teaching is “certain knowledge and skills”, but this is problematic. We have syllabuses that show a simple and orderly world, we have learning outcomes that we should achieve – if we look at effectiveness in this way, then I am a very bad teacher.

[JJ]: I understand your point of view, but we would like to recognise that we live in a society where the law matters – a set of rules that we agree on. By electing MPs to parliament, we recognise that they make laws on our behalf that shape our actions. The syllabus is undoubtedly part of education law and an integral document of any study programme. This shaping does not preclude questioning and criticising the law, but I am convinced that as long as a law is in force – even if it is bad – we should comply with it.

I find it difficult to accept ignoring the law. In our community, there is a popular opinion that the syllabus is “bullshit” and a bureaucratic requirement – it can exist, but we will do what we think is right anyway. I admit that I find this way of acting unacceptable.

As a community, we agree on something – for example, we walk across the road when the light is green and stand still when it is red – but then a group of people say that they are not interested and will walk across when the light is red. We have learning outcomes, an integral part of the syllabus; we treat them *a priori* as an inconvenient requirement that must be hacked, and we consider “hacking” the system a virtue of civil disobedience. This may mean that, as academics, we do not participate in co-creating the law – which is more comfortable, and perhaps – to use Sloterdijk’s term⁸, cynical.

[MCh]: But I didn’t say anything like that! When talking about the “wow” effect and my version of effectiveness, I was not suggesting circumventing the law. On the contrary, I am close to Kant’s approach – let us use critical reason in public, and in private we must obey the rules.

If there is a law, we apply it, but if we don’t like it, we speak out publicly to change it. Coming back to syllabuses: I agree that they provide security. Imagine a “crazy” professor who spends 15 hours

⁸ Peter Sloterdijk uses the concept of “cynical reason” to describe a conscious distance from prevailing norms while simultaneously reproducing them. See: Sloterdijk, P. (1987). *Critique of Cynical Reason* (trans. M. Eldred). Minneapolis: University of Minnesota Press.

talking about how much he likes mushroom picking. These things happen. A syllabus can protect people from such practices – and that's fine. However, I have other problems with syllabi. Sometimes we receive a syllabus that we did not create – because it is part of the study programme. This raises the issue of academic autonomy. In addition, syllabuses may underestimate the energy of the group.

When an important event occurs, we cannot follow it. The syllabus fits well with certain teaching concepts, but not with others. For example, I care about developing critical discussions – let's say about creativity. We create an atmosphere, but the syllabus says that the course ends with a test or exam. This contradicts what I want to do throughout the entire course: I say "be free" and at the end – "be obedient". I don't know if there is a good solution here. On the one hand, syllabi are necessary to protect students and give them certainty; on the other hand, they are rigid. The legal and didactic situations differ, there are frictions, and the dynamics of the group require sensitivity.

We cannot fail to follow the group if teaching is to mean SOMETHING to them. Sometimes the syllabus does not allow us to go in different directions. Sometimes it is pedagogically justified to talk about something other than what is provided for in the content – if only for the sake of the "wow" effect. Also, keep in mind that the syllabus is also a kind of technology. It is something that influences how we organise education. Just like pencils and chairs, syllabuses are actors that do something. And the syllabus is a very important non-human actor. Look – we've already spent half an hour on it, the whole teaching revolves around this thing.

We are talking about the extent to which educational programmes can be arbitrary, and the extent to which structures "position" our actions and enforce certain behaviours in our relations with students. Exams are also such a "thing". We can teach people to think creatively, but in the end there is an exam that we prepare and write on pieces of paper – these things do something to people, to the process of education. I have students who say, "The whole class was fun, and then the exam came and changed everything" – and they don't understand it.

[JJ]: Thank you for saying that, because I am increasingly realising that I am more of a liberal than a radical – I strongly believe in human freedom, but also in a community that creates something together and agrees on something. I am less and less attracted to stories about how we are supposed to be "anarchist pirates" hacking the system, although part of me finds this concept of education and this pedagogical ideology very appealing. But let's close this topic and move on to what you call the didactics of things.

During our debate at the "Viva Didactica 2025" conference, you said something that was important to me. I think that today there are three dominant schools of thought on academic didactics: First, the teacher-centred model, which focuses on the competences and "resources" of academic teachers; secondly, one that focuses on the programme, the curriculum, i.e. the content of education; finally, an approach that is both very popular and increasingly questioned, namely student-centredness, which focuses on the individual potential, limitations and needs of students. These three trends dominate and fill the "field of possibilities" of thinking about teaching.

Meanwhile, Maksymilian Chutorański appears at the conference and says that there is another way, and that is the pedagogy (didactics) of things. How do you imagine academic didactics of things?

[MCh]: We have already talked about this a little, but for the sake of clarity, let us first treat didactics as a pedagogical discipline and only then as a practice. Of course, the two are connected, but especially in the former, we are dealing with the search for ways of perceiving the educational agency of things.

From this point of view, the didactics of things would deal with examining what these things do to us and would focus on non-human actors. To begin with, we can refer to classic works on the extended mind, including the works of authors such as Andy Clark and David Chalmers⁹.

These approaches show that our mind does not fit inside our skull – it is a function extended beyond the body and connected to the tools we use. Example: a blind person with a cane – their cognitive apparatus is integrally linked to the cane, which determines how they perceive reality. Various things directly influence how we think. Another example: notes and letters. They not only influence what we think (whether we think "faster" or "better"), but also the quality of our thinking about the world. They are not transparent "memory enhancers" – they influence how and whether we are able to remember the world, what we pay attention to.

Returning to the didactics of things: the point is to see what things do to us and in what constellations they "become us" – or rather, become cognitive subjects, subjects of knowledge. It is worth asking how things participate in the production of knowledge, in "unveiling the world" (as Heidegger might say) . Let us look at how we structure the world described in didactics. Only on this basis should we create categories – instead of a priori accepting familiar ones that limit what we can see. The didactics of things questions the famous Cartesian division between what is thinking and what is extended. Material culture – as Olsen once said – is not a mere antechamber to the true, immaterial culture.

Let us give one example: Seymour Papert's constructionism¹⁰, close to constructivism, which assumes that cognitive schemas arise in working with material. Another example: Latour's laboratory ethnography – research into the practices of cognition by scientists¹¹. These analyses by the French

⁹ This refers to the concept of the extended mind. It is a thesis according to which tools/artefacts (e.g. a notebook) can be functional parts of the cognitive process. See, for example: Clark, A. Chalmers, David. 1998. *The extended mind*; Clark, A. (2010). *Supersizing the mind: Embodiment, action, and cognitive extension*. Oxford University Press.

¹⁰ Seymour Papert is one of the main proponents and theorists of constructivism – a teaching approach in which learners construct knowledge by creating publicly "tangible" artefacts (e.g. programming in Logo). It is a teaching approach that strongly emphasises working with material, while at the same time being an extension of constructivism. See, for example, Papert, S. A. (2020). *Mindstorms: Children, computers, and powerful ideas*. Basic Books; Harel, I. E., & Papert, S. E. (1991). *Constructionism*. Ablex Publishing.

¹¹ Bruno Latour (1947–2022) was a French philosopher, anthropologist and sociologist of science, one of the most influential thinkers in contemporary social sciences. He is best known as the creator or co-creator of Actor-Network Theory (ANT), which revolutionised the way we think about science, technology and society. Latour conducted research in three main areas. He is the author of Actor-Network Theory (ANT), which challenges the traditional division between people and things (i.e. between subject and object). He believes that both people and material objects (e.g. technologies, documents, buildings) have agency. However, this agency does not mean that things "think", but that they participate in the creation of the social world and that they influence decisions, actions and relationships. Social networks arise from connections between humans and non-humans who jointly "act" reality. In the second area, together with Steve Woolgar, he wrote the classic book *Laboratory*

philosopher show that it does not always look like in philosophy of science textbooks: a brilliant scientist comes up with a hypothesis and then tests it.

On the contrary, he works a bit "by touch", with various materials and reagents. New knowledge was not hidden in his mind or in things – it arises in interaction. This is particularly interesting for teaching.

Let us now return to the syllabus. How would the syllabus fit in with this approach? You start working with the material and you do not know where it will lead you – perhaps no formal operations¹² will even "arise" here. How to arrange this in the syllabus? I do not know.

In summary, I would say that the fundamental question of the didactics of things is what things do to us – rather than what we do with them. This involves negating the Cartesian boundary I mentioned earlier. On one side are thinking subjects, and on the other, extended things. In didactics, we constantly enter into complex constellations and assemblages. We are symbolically and materially entangled in them. After all, we have a pencil and a piece of paper in front of us – you can write something down and see this conversation differently.

[JJ]: Thank you for the explanation. Since the readers of this magazine represent various fields, let us pause for a moment on a certain term. Some people, who are sensitive to language and accustomed to traditional patterns of word usage, may feel confused, because one of the phrases you use is "the agency of things". Why do you allow yourself to construct such a phrase?

[MCh]: You are right: "the agency of things" does not function in the traditional division – we still have the Cartesian separation: thinking, free, creative, rational people have agency, and on the other side – things: mechanical, "silent", "dull", deprived of agency. I constantly argue that this division is inadequate, bad, or at least unnecessary.

It is not that things are the same as people, nor is it about "taking something away" from people. I argue that human beings and their existence in the world are something more. Our relationships with things, animals, and materialities are richer than traditional categories suggest. I therefore use the term "agency" and refer to things as "agents". This does not mean that a hammer thinks – rather, that it does something to us. Referring to Bruno Latour and actor–network theory (ANT), at the beginning of the study we assume symmetry and suspend judgement on who or what has decisive agency.

Life: The Construction of Scientific Facts (1979), in which he showed that science is not a "pure" discovery of truth, but a social process of producing facts in laboratories, which is defined in methodology as the ethnography of the scientific laboratory and research on scientific practices ("Laboratory Life"). In his book *We Have Never Been Modern* (1991), Latour argued that "modernity" – the separation of nature and society – is a myth. In reality, the world consists of hybrids, i.e. mixtures of natural, social and technical elements. In his later works (including *Facing Gaia* 2017 and *Down to Earth* 2018), he addressed the climate crisis, proposing a new perspective on the relationship between humans and the planet – not as dominant on Earth, but as participants in the web of life.

¹² A reference to the findings of Swiss constructivist psychologist Jean Piaget, who treated formal operations as a certain stage of cognitive development characterised by abstract and hypothetical-deductive thinking. These operations are probably mentioned here as a contrast to "open" practices of working with material.

We do not know whether it was a person who decided to do something or whether a thing forced a certain course of action. Example: I have prepared a presentation, but my phone or computer breaks down – and we cannot continue our conversation. The thing "does" end our conversation. The "agency of things" is a working assumption that things can have a similar set of competences as other elements of the system, and sometimes we even have to grant them key agency for the functioning of the system.

It is also worth emphasizing the pedagogical agency of things. Imagine a primary school: it's break time, two floors, a staircase. A teacher stands there and says, "Please don't run, you might fall – there are no railings here." That's a symbolic, verbal message – a typically human one. Now let's add the railings. Their "intention" is similar: to protect children from falling. But this time, the action doesn't occur through words, but through matter – through form, resistance, and the limitation of movement.

It does make a difference whether we have a teacher issuing warnings, or a metal railing that simply makes running impossible. If we remove the railing, the whole system begins to operate differently – I would even say, worse. In this sense, we can say that things co-participate in the educational process – they possess agency of their own, influencing human behavior and the ways in which we learn.

[JJ]: Thank you for explaining the "agency of things." To conclude, I would like to ask you to summarise. How would you answer the question: What does didactics of things make us aware of?

[MCh]: I'm not sure what new I can add, but you could put it this way: things structure our actions, and we don't always understand why we behave in a certain way and what things do to us. We don't always realise that things enable certain ideas to emerge, "suggest" topics for our discussions. If we do not pay attention to the infrastructure of things, the material infrastructure, and do not admit that it has a broader meaning than just being a passive, subordinate tool, we will lose the opportunity to understand teaching in a certain way.

[JJ]: That's a great point. Returning to my perception of the syllabus as an element of education law, I see that the pedagogy of things draws attention to the fact that the syllabus does something to all of us and causes us to behave differently. There is a lot of such materiality in our academic environment and world. To exaggerate, I could say that I am, to some extent, a "subject of things".

Things sometimes enable our actions (e.g. today's conversation), sometimes eliminate practices, and even more often influence and structure them. Interpreting our conversation quickly, I also see that the didactics of things would allow us to look at what is around us more carefully; to ask different questions – e.g. what is the agency of Microsoft Teams, through which, or rather with *which*, we are recording this interview? Once again, thank you very much for your time.

[MCh]: Thank you very much for the conversation.

References

- Clark, A. (2010). *Supersizing the mind: Embodiment, action, and cognitive extension*. Oxford: Oxford University Press.
- Clark, A., Chalmers, D. (1998). The extended mind. *Analysis*, no. 1, s. 7–19.
- Donald, M. (1993). *Origins of the modern mind: Three stages in the evolution of culture and cognition*. Cambridge, MA: Harvard University Press.
- Haidt, J. (2024). *The anxious generation: How the great rewiring of childhood is causing an epidemic of mental illness*. New York: Penguin Press.
- Harel, I. E., Papert, S. A. (1991). *Constructionism*. Norwood, NJ: Ablex Publishing.
- Holt, J. (1964). *How children fail*. London: Pitman.
- Kiewra, K. A. (1989). A review of note-taking: The encoding-storage paradigm and beyond. *Educational Psychology Review*, no. 2, s. 147–172.
- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford: Oxford University Press.
- Malafouris, L. (2013). *How things shape the mind*. Cambridge, MA: MIT Press.
- Mueller, P. A., Oppenheimer, D. M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science*, no. 6, s. 1159–1168.
- Papert, S. A. (1980). *Mindstorms: Children, computers, and powerful ideas*. New York: Basic Books.
- Plato. (2005). *Phaedrus* (trans. A. Nehamas, P. Woodruff). Indianapolis: Hackett Publishing.
- Sloterdijk, P. (1987). *Critique of Cynical Reason* (trans. M. Eldred). Minneapolis: University of Minnesota Press.
- Vlieghe, J., Zamojski, P. (2021). Entering the world with notes: Reclaiming the practices of lecturing and note making. *Educational Philosophy and Theory*, no. 13, s. 1388–1398.