

# TECH[NOCULTURE

## Authorship attribution

### Episode 28

### Full transcript

Guest: Aleš Vaupotič [Aleš]

Host: Federica Bressan [Federica]

[Federica]: Welcome to a new episode of Technoculture. I'm your host, Federica Bressan, and today my guest is Aleš Vaupotič, Head of the Research Centre for Humanities and Professor at the University of Nova Gorica in Slovenia. He is a literary comparatist, a new media artist, and a curator who lives and works between Ljubljana and Nova Gorica. Welcome, Aleš.

[Aleš]: Hello.

[Federica]: Thank you for being on Technoculture. To begin with, I would like to ask you, how do you combine, and if you find it easy or hard, being an academic scholar and also a creative artist, considering that a lot is said about the almost opposed mindset that is required to conduct research or to be a creative artist?

[Aleš]: Yeah, this is a major issue in, like, establishing my position also within the field of art and in the field of scholarship, like literary scholarship. I remember when I was finishing my undergraduate studies in Ljubljana, it was the study of comparative literature. I learned many theories from the field of humanities, and at certain point, I wanted to somehow engage with the material, with art, maybe literature or any kind of art, in a more immediate way, and then, of course, I was interested in fine arts, visual arts - video in particular - throughout my studies, but not as part of my formal education. So I was starting to drift into the field of video and new media art, and it actually helped me understand the material that I studied as a literary theorist much better. So this is what I try to use as an argument when somebody tells me that I'm too much of an artist and not enough strict as in the field of theory. Of course, nobody says that I don't do the theory strictly enough, but that my approach is an artistic approach,

which is an unusual approach. Well, that's a reality that I have to accept, but I think it adds to my understanding of humanities questions, whereas in the field of art, I don't know, maybe humanities, the theorist's view doesn't help, so I'm not sure about that.

[Federica]: I oftentimes see that even in research, in the beginning it all starts with an intuition, and then you take all the necessary steps to prove if that intuition and what it led you to makes sense, is true, there's evidence to back it up. So in the beginning, there still needs to be that, which is more characteristic of the artistic approach rather than just 100% rational, although this is a simplistic view, and I'm fully aware of that. What I'm sorry about is that it's oftentimes also the only narrative we hear when today these things are talked about. Things are probably more nuanced in between, but what do you think? Is that so, that even in scholarly research, you need those intuitions, you need that sensibility, so to speak, on which then you build a systematic pragmatic path that maybe then differs from the activity of the artist or not, doesn't? What do you think?

[Aleš]: Yes. Of course, this is an ideal image of how you could approach a problem, but I might be a bit conservative in my position as a literary scholar. Basically, I want, like humanities scholarship, like theory of historiography, I don't know, theory of a certain genre of art, basically you have to be really strict when you are developing theoretical perspectives, and I know that very few artists are as disciplined as most of the theorists are. So, you know, many artists may use some elements of theories, but they don't push the arguments far enough, you know. So basically, theory is not that interesting, not that interesting. Maybe it is... Yeah, this is more strict, maybe limiting, but if you go really deep into issues, you know, then maybe, then it's interesting from another point of view, not from a creative point of view, but basically you are more of a philosopher, you know, where you really go into issues that are complex and really difficult to imagine.

[Federica]: In your work, *The Language of New Media*, a milestone book by Lev Manovich from 2001, recurs, as well as many concepts contained in this book. For example, the concept of cultural interface, which is a key concept in his theory of new media. I would like to ask you, how central is this concept in your research considering that when Manovich wrote the book in 2001, digital humanities were not as widespread as they are today? This is a new label, and digital humanities are precisely concerned with many different things, among which one is that of studying, observing the impact of digital technologies on how we conduct research in the humanities and also how cultural content is indeed spread and perceived. So how central this concept is in your research.

[Aleš]: Yes. Yeah. Manovich is an author which I admire a lot, and basically what is the most important that we can take from his works I think is the theoretical framework that was developed in the book *Language of New Medium*. He's, like, an interesting guy, you know. As

far as I understand - I don't know him personally, but he does artistic works, but I imagine that like his focus is also really strongly rooted in the theoretical approach because in *The Language of New Media*, he actually refers to [Foucaultian 00:07:02] approaches as his theoretical background among, of course, others. For me, I remember finishing my master studies in video and new media at the art academy in Ljubljana, and I was using computers to make art, and somehow I started making virtual spaces, and, of course, in virtual space, you have to put some stuff in the space. You know? So basically, we have to find things to put them into the space, and, of course, then when you have the things that you put in the space, then of course you have to look at how to put them in this particular space. So here you have the dichotomy between the things that you collect, so you have to have something. Okay, there was like generative art where you would just get some random stuff flickering in the screen, which is all right, but I was not that much interested in that aspect. So basically, if you are building a space, you have to control what are the elements in this space, and of course then, of course, how it functions as an interface [of stuff 00:08:14], something like that. So Manovich really, like, defined the concept, basically, how the language of new media works, and that's basically you have a database or an archive of a multimedia material, and then you have one or more, or basically, you basically have more interfaces to this same material that you have. So I was really intensely, like, interested in and working in my own artistic works basically on how to bring together an archive of different things and, of course, how to make a new media artwork or some sort of interactive video at the time, you know. I didn't know the concept initially. So how to bring this together. For me, here I was going back to my, of course, comparative literary studies, which I finished before starting the art academy, and comparative literature, I was focusing in my graduate work on Mikhail Bakhtin. And for him, the most important aspect in the study of literature is to recognize different voices of different groups of people, different like social classes, different cultural groups, different people in any possible way, so basically you would have to preserve, protect those different voices that... Basically, he was studying a novel, so how to bring different voices into one novel. So I was studying Mikhail Bakhtin and his theory of the polyphonic novel, and this was in my background constantly, because I studied really extensively Bakhtin at the time. And I tried to translate that into a video- and computer-based interactive video space, so that's basically how I started. And here, Manovich's idea of a dichotomy of database and the numerous [interfaces 00:10:25] to this same database is like a [definition 00:10:28] of how you actually build a meaningful entity in new media, and this is important for like art, for new media art. Of course, you have to have a new object, something that the viewer, user is faced with, but I was always thinking of going back, you know, to the humanities argument. Right? When you discover something or, then you have to, of course, argue for your ideas, what you found out about history of literature or whatever, and it has to function in a similar way, basically to have an archive of findings, and then put them together in a way that functions. I don't know if this is very clear, but this was actually my entry point into the new media art. And then I was still in one foot in the like comparative literature, basically, in the theory of this [unclear 00:11:25] of Bakhtin. And,

of course, I used Foucaultian language of Foucault's *The Archaeology of Knowledge* to speak about basically the Bakhtinian theory.

[Federica]: What I find interesting is that it seems to be understood that how cultural data are encoded and presented through different types of interfaces is not neutral. It impacts the way you receive that content, and yet it's such a subtle, subtle concept because it's not easy to explain why and how. That's why it's tricky. But what I would like to ask you is, is there a way to crack the code, to talk about these things, to measure these things, or to master the art of data presentation so that you can steer the interpretation of the user in one way or the other? Can you measure this? And I would like you to respond to this by telling me how you talk to your students about this when you introduce them to the field of digital humanities where this is such a fundamental concept.

[Aleš]: Yes. Here, I have a quite clear, like, touchstone, basically. The reference point in the new media art, visual [art 00:12:49], video for me, the main reference point is Nam June Paik, his video works. And if we remember how his works look like, it's basically like a total mix of mediated images appropriated from like mass media and stuff like that, and it really changes extremely quickly. The thing is that this is a way of saying something that is completely different from some sort of reasoning of like storytelling of being clear, in a sense. So basically, how to like make presentation clear, for me, the measure for that would be actually that it is as clear as videos of Nam June Paik, because for instance, if you want to speak about cultural history in Korea, you have, for instance... It's not that like that well established in Europe, but in Korea, you have people that have certain skills, for instance drumming or, I don't know, dancing or stuff like that, that are considered national treasures. And of course, if you look at Nam June Paik videos, he has like masters of drumming in his videos and stuff like that. So basically, you have two options. You can document how these people actually perform those extremely complex skills, or you can just remix this in a completely crazy way. So I believe that the language of video is a kind of a meeting point between presentation of information in new media and basically the world as we, like, think of it rationally every day. And here, there's one work by Nam June Paik which is not like his best work, but it's really clear. It's called *Key to the Highway*, and it's basically the shape of the Rosetta Stone (you know, the stone where you have like Greek, hieroglyphic, and I think Aramaic inscriptions so they could, of course translate, hieroglyphic script). So he used the shape of this stone and put like three types of writing in [three 00:15:25] layers, like those three translated texts. On top, there are some images, some scribbles, then in the middle you have normal texts about from Fluxus era, and then at the bottom there are screenshots of Nam June Paik's videos. So basically, you have different ways of saying something, but I also believe that maybe our culture has changed so drastically that the language was like dominating 19th century, before of course, but before the images took over, is something completely different and that we have to learn the language of video, which is not rational. It is not actually developed argument in the same way that you would develop

argument in a paper text. Of course, then how you measure whether a presentation of your data, of information, is okay. Basically, at this point, you have to judge for each individual result, each individual project in particular, and then decide, because now I don't think there is any more clear measure than what I said here, you know, basically trying to understand the complexity of how the image, a dynamic image, either on a screen, an interactive screen, or, I don't know, in any way, you know, how it actually mediates, and changes, and shapes your argument and changes, of course, the material that you painstakingly collected, you know, the initial archive that you actually, of course, have to collect and be very strict. You know, you're not just fabricating falsehoods, you know? Basically, we work to get as real information as we can in the humanities.

[Federica]: A lot of technology has happened after Manovich published the book in 2001. For example, Facebook wasn't there, but the internet wasn't what it is today, and also mobile devices weren't in everybody's pockets like today. Do you think that despite this gap, Manovich understood something fundamental about the new media and he exposed the theory just right so that it doesn't need a significant update today, or do you see a fundamental shift change in the landscape of the new media?

[Aleš]: Yes, I think that's the case. As I said... Okay, maybe this seems a bit, like, that I'm, like, self-indulging, but basically, I read his theory as saying exactly what I was doing in my project because I was collecting archives and basically building multiple interfaces to those archives. And yeah, if we want to speak about the new technical devices, this is what he, like, addresses in his last book, *The Software Takes Command*, where he calls Alan Kay, and his co-author, basically, about... In the '70s, there was this text speaking about the Dynabook, which was actually the concept of a portable computer. So basically, you walk around with laptops and do everything, but that was a text from, I think, '75, something like that. So, you know, there is... The technology was actually thought through at the time because they could actually foresee what will happen. The other thing is, of course, basically how we use computers today, and again, if you go back to the mother of all demos [unclear 00:19:30] like from the '60s by Douglas Engelbart. Again, you have like a... It's basically that you have different terminals on one computer, which is actually similar to cloud computing now, you know. So basically the first presentation of a, like, contemporary kind of computer and interfaces was actually developed on a single computer, but it was not there in the space. It was actually distant in one space, and then there were different terminals at different locations, so you would have some sort of cloud computing already then. So I'm not really sure that things have actually changed that much. What I do notice that has changed in the last, let's say, five to ten years is that basically people are, like, losing faith in what those new technologies will contribute, like also the use of like social media, this is something that the early, like, new media artists, I think, would object to, you know, because at the time we would be really... Okay, I might not be the first generation and so on, but also my generation working after 2000, and basically we

would be uneasy giving our data and basically our engagement with computers to a corporation somewhere to do whatever with that. The critical view of technologies is actually because of the mass use, of course, is not as emphasized as it was, as I recall, like 10 years ago.

[Federica]: I asked you whether you think that Manovich's theory requires some major update, because oftentimes when he is brought up in conversations, some people object that it's an old text, that it's just an old reference so we should be past there, although they tend not to say what other, better, more updated theory should replace Manovich's view fundamentally.

[Aleš]: Yes. Basically, I must say that I test my understanding of the theory of new media with my students, and I see I... You know, when you have to explain this to younger generations, basically, you have to persuade them that this makes sense, and I actually combined Lev Manovich's theory mainly with the theory by Espen Aarseth, his book *Cybertext: The Perspectives on Ergodic Literature*. It's even older than Manovich. It's from the '90s.

[Federica]: That means that it's older than your students, correct?

[Aleš]: Yes, exactly.

[Federica]: When you say your students, what generation? This is 1999, 2000, something like that.

[Aleš]: Yes, they must be from like their 20s, so yeah, 18 years it's like, yeah, almost 2000, yeah. So... Well, yeah, they're probably a bit like older than 20 years ago, in 20 years, but so basically, I want to give, to show to my students descriptive categories that they can use when they speak about new media. And this is where Espen Aarseth's theory of cybertexts comes handy, because he was developing the ways how to distinguish different kinds of cybertext, and cybertext would be basically text that has some self-manipulating mechanisms, so basically you can have a hypertext which is a text where basically it offers you ways of choosing your path through the textual database. What I find it, like, crucial in Aarseth's work is that he distinguishes, like he says a lot, but basically, the key thing is the distinction between two kinds of cybertext. One is like a single user cybertext, so basically you can imagine a person playing a video game, computer game, and there's, of course, the rules and the whole system, whatever, and it can be super spectacular on the one hand, and on the other hand there's a multi-user discourse. That's where you can speak to other people, which would be, of course, at the time he speaks about those multi-user dungeons which were like text-based sites where you could chat or you can, of course, there were those adventure games when you could like explore. There's this great cave adventure, it's like one of the most famous ones, is where you would explore caves and you would enter a room, and then some text would come up and says, 'You're in a room. There's a hammer. You can pick up the hammer,' or stuff like that. And

you can imagine, of course, like in literature, you know, if you're in the room and somebody tells you what you see, you see it like you see it in a novel. So basically, if you have a single user and if you want to develop that, basically you have to develop that system, the game that the user plays, and, of course, then show some information, because if you want to have a text, then there has to be some meaning in it. If you have a multi-user cybertext, then basically people can do anything, so you have to establish a new society, a group of people, that's sustainable, that doesn't need the author's input all the time, and basically you're not basically developing any rules or any content. What you need to establish here is a community, and, of course, such a community is Facebook. Those people managed to get like an enormous amount of people giving their work, collecting the materials, of course, they are controlling it to some degree. Basically, also people can like talk to each other, you know, which is really important, and they develop certain social skills, and this is what is actually involved in developing a multi-user cybertext. So this distinction between a single-user cybertext and a multi-user cybertext helps you explain basically how to think about those things, because if you were speaking about a multi-user cybertext, then basically the only measure of what is there is how the, like, community of people using this communication system, like what they are doing, how this community works, what is it made of, whether it's rules and how active is it, who is active and so on.

[Federica]: Technoculture is interested in talking around, because I think you can't really talk about, how digital technology impacts our lives. You can say that one small difference is that 10 years ago I used to call my friends mostly from my landline, and now I have my mobile phone, so I can text them, which we normally do. We text more than we speak nowadays. And I can do it from the grocery store, I can do it from the bus. And this doesn't sound like a big change, but if you think that I can make a bank transfer, that I can book a flight, that I can do, well, all that we know that we can do today from basically everywhere, all these things summed together, they change our experience. This changes the way we organize time, and therefore we perceive time and also others' relations. What about the fact that we write more than we have ever written before, and how many emails we send every day? So this entire landscape, if you look at it altogether, really looks something dramatically different from if you want to go back 30, 40 years to the '80s. It is different. I still think that it's kind of hard to look into the difference because we don't have the historical difference to make a detached - precisely - reflection on our current state. I would like to ask you, if you do some comparative work like this, comparing how today differs from 20, 30 years ago, or 10 for that matter, or you only look at today, what happens today, and you kind of make reflections around what you see?

[Aleš]: [unclear 00:28:52] I think you're touching on the like core issue of like digital humanities, because on the one hand, basically there is a possible approach that you would just digitize and use computers in the like methods, in the things that you would do in the humanities, as you used to do things, and just do those things with computer. I was always uneasy about that. Basically, I must say when I was like more in the art domain, and when the digital humanities,

the term 'digital humanities', came in vogue, I was actually approaching like introducing the theory of new media into comparative literature, and I was actually against like direct contact between a just technical approach to how the computers are used in, can be used for culture reasons, and, of course, I wanted the mediation of somebody who is really focused on how the communication works. So I think to think about digital humanities, we have to go back to what the computer as a [unclear 00:30:05] medium and digital technologies of today actually change, but also other technologies. There's the acceleration of the execution of algorithms, so basically computers do things extremely fast. The other thing that has actually changed, there have been different stages or whatever, but there is the acceleration of communication. You could, the communication in a sense of you can quickly, like, send a statement and information from one place to another, or you can also move things much more rapidly. So basically, these two things (the acceleration of how you actually can execute rule-based procedures and, like, the acceleration of telecommunications, either when, like, transporting humans or things or by just sending information over the internet), I think this really radically changes how the world looks like. What changes is the relationship between the physical body and our environment, and here, basically, I'm thinking about a text by Peter Weibel. He is a video artist, and he's the, of course, the director of the Zentrum für Kunst und Medien in Karlsruhe, and he's also, of course, I think, one of the key theorists of new media. And here, for instance, you have different stages that change how a human body relates to its environments. This is also something that Paul Virilio wrote about, but let's go back to the stages. So basically, you can live locally, you know. In the village, you go out, you go to the field, you do something, so you can admire world around you. So another stage would be like looking out of a window from a train, so you are in a moving room. There's a room where you can do stuff, and the environment, landscape, is like a film, you know? You can look at the world, and you don't have any relationship to the world that you see to the window, you know. Here, then the third stage as a consequence when basically the reality is actually not tangible as it was in when you live actually locally, in a local environment. Here is a text, *Disappearing Architecture*. It was a collection of texts, and basically I think Peter Weibel edited this collection. He was speaking about telematic machines, automobile, airplane, and telematic media (which is TV and so on, basically, that actually like transmit images of reality to us, to people). So what happens is that reality becomes manipulable and artificial, and here is a sentence that he says. He says like this: 'We do not watch reality through a window. Reality has become a window.' If we think about the ways that we can, like, simulate things, you know, we can, like, fabricate 3D-print things, and you can have virtual reality or everything. So reality is not given. It is a message created by multiple people and groups of people. It has to be read, interpreted and so on. So basically, this is like the final result of the development between the person there's... Like in the beginning you have a person in the world, and then basically the world is, how you see the world can be manipulated, and of course, if you move quickly through space, you can see the world quickly, we can travel all around the world today, of course. You can simulate things extremely fast today using computers, and then the reality that surrounds us has many

surfaces, many elements, but basically surfaces that you see or maybe surfaces that you can touch.

[Federica]: Sorry, do you mean layers or surfaces?

[Aleš]: Also layers, but here I'm not speaking about... Because if you have a reality, you can distinguish layers when you look at it, but basically, just when you stand in front of things, if what you see adapts to, like your Facebook account adapts to who you are, you know, nobody sees the same thing as the others, you know, so basically then you have to consider that reality is not just something that is there, you know. It's not nature. It's basically a message, but, of course, it's not message from one person, from a Big Brother or whatever, you know. It's a really complex, like, fabrication a mix of different techniques which were, I believe, still developed by different people with different cultural backgrounds, different ideas, different intentions. So yeah, to summarize, digital humanities, I think, have to radically change the way that humanities... Like when you use digital [tours 00:35:50], you cannot actually think about the same categories as we did before, which is, of course, a problem and yeah. It demands drastic changes.

[Federica]: Does postmodern philosophy inform your work, your approach, your theories?

[Aleš]: Well, postmodern approaches... I talked about this with a professor a couple of years ago (and she was like a senior professor, of course, much more experienced for me), and she said that it's not an idea that is, like, that clear as it maybe was in the '90s. The postmodernism is focusing on the, like how to relativize different approaches. I think you have two possibilities, basically. A simple example maybe is Michel Foucault's, yeah, position within culture, within a contemp, current theoretical, methodological framework. You can think of him as a post-structuralist postmodern thinker because everything that there is is only discursive regularity, and it's just like a refraction of discourses on other discourses, but also he says that he wants to be a positivist, positivist, because he wants to actually describe what people say, what are the regular practices that people do, you know, so what they actually do. So not what can be done or how this what they do is only a practice. It's the fact that people do things, you know, and those are substantial things. Maybe they are not material things, but it's a fact that when people do something, it is something that we have to consider as fundamental, and in this case, this is something that is not... This is a view that's not postmodernist, you know. Basically, there is a reality. Foucault says, I think, in one of his lecture at the Inaugural Lecture at the Collège de France, that it's some sort of intangible materialism, something like... No, incorporeal materialism. So you have material effects of things, but there is no body, so disembodied materialism which is trying... Here, I think he was trying to find a substance to something that is not a body, a simple body.

[Federica]: I would like to ask you to elaborate a little bit on the concept of archive and

archive art. You mentioned it before a little bit, but I'd like you to elaborate in the light also of this work by you from 2017, "How to Study Literary Realism as Archive Art?" What's about archive art?

[Aleš]: So the archive art, I think, as I said, digital humanities would, in my opinion, have to at least, like, think in each particular case how what the result of a digital humanities project is is actually always a new media object as defined by Manovich. So you have an archive of things, and basically then you do something with the archive. Of course, in the, while building an archive (and of course, you have datasets in digital humanities and so on), it is a problem how to like create an archive in the domain of humanities, and here I think there is one particular aspect that can clarify the issues here. The phenomenological approach in the humanities of Husserl and others, also Heidegger, but basically the phenomenology, which is the study of phenomena, and the phenomenon always entails also the person perceiving or understanding the phenomenon. So what you have here is a relationship between the one understanding and the object of thought, so you have... When you think about something, you keep the object that you think about in your thoughts, but the phenomenology, of course, also believes, and I believe with the phenomenologists, that there is also something outside of my mind that is there, the thing that I'm thinking about. But, of course, it is difficult to actually, like, understand that the thing that is outside of myself is something outside of myself, so this is a basic problem for the humanities. Well, I believe that digital humanities should actually accept this challenge, and when you collect archives to work with the data further on, I think that we would have to digitize phenomena in the phenomenological sense. So basically in a phenomenological sense, basically we have to describe your intention, so basically what you are projecting into the reality that you are understanding, so then you have to, of course, recognize that this reality is something different from you, then there is the object that you are thinking about in your mind, and that there is this particular relationship of intentionality between what you think about and basically the object that you're thinking about. So basically, that the phenomenon entails something outside, something that is part of the interpretation, and that it has different elements. So I don't see this very often, or extremely rarely, that digital humanities would tackle the problem how to digitize the world culture, considering the phenomenological approach. So in phenomenology, actually, they found out that what you have to do is only be descriptive, which is, of course, a problem because then you, if you're always describing and you're describing the same thing from many points of view, it's really difficult to, like, turn like a museum collection into a dataset, you know. So... But I think there could be possibilities, you know, to somehow try to note, like to record like interpretations, you know. So basically, if you, like, take that basically your data, dataset, is a collection of digitized interpretative acts, then, of course, things get very complicated, but you're making a step towards, of course, better digital humanities. For the phenomenologists like Husserl and others, the end result would be basically describing something like a stream of consciousness, you know, from modernist literature, which is, of course, not scholarship, and, you know, it's endless, and you never get to the

actual reality in front of you, but maybe we cannot just get to the objects of culture, you know. Maybe if we can't get there, it's better to digitize phenomena than to somehow just create databases that it's not really clear what is in those databases. I think also the development of how the database is developed sometimes is not done in a way that is critical enough, and here, another issue opens up is, of course, the interdisciplinary collaboration between people like coming from different backgrounds, of course, from the humanities, from informatics.

[Federica]: Do you think that there is some confusion in the terminology today around archives, including collection, dataset, database, digital archive? Because handling digital files every day and using precisely the logic of the computer that groups everything in a hierarchy of folders, we tend to use these terms interchangeably. 'I have a collection of,' or 'This is my archive of pictures,' and 'Yes, I have a database of,' meaning also the content. Do you agree that there is confusion in these things?

[Aleš]: Yes. This is, again, a key issue, and comparative literature is somehow a discipline that likes to complicate concepts, terms, you know. An archive can mean anything, basically. Any word in the theory can mean many different things, and each author basically develops the meaning. Here, basically, I would answer with the reference to the digital humanities study program that I have developed at our university because this is a solution to this problem. Basically, the study program consists from a bit less than a half from the humanities courses. So basically, what I would want to teach the students on the, let's say, this is a master level program, is to understand, in this case, an archive, what an archive can mean in the humanities. But if you want to work in the domain of digital humanities, there are two possibilities. You can be a traditional participant in this field who has not, for instance, studied computer science. I haven't. But in the future humanists, digital humanists, will have to be able to manage their own dataset, so there you have somebody who is technically able to process data, so for this reason, the, like, 40%, the other 40% of the study program would actually address only computer information science. So we would somehow consciously develop two approaches to actually working with archives of meaningful things. Of course, if you process data that is recorded in the digital form that you can manipulate using computer, you have to take this seriously, and this will not go away. And as I said, our reality is changing because you can manipulate things using algorithms and stuff, but on the other hand, you have to be really conscious that an archive, for instance, for Foucault is, it's a system of formation and transformation of statements. That's one of the definitions of 'archive' for Foucault, so it's not an archive of things. It's a system of formation and transformation of statements which can mean something or it can not be that concrete, you know. And also, in this form, I'm not sure it is... I'm not using this part of Foucault in practice that much. So basically, you have to develop the different understandings that pertain to different parts of the digital humanities practice, and I think this is a challenge in this field, and yeah, I was saying that these two parts of the humanities courses and the computer science courses are like a bit less than half, so the rest would be, of course, to

understand the new media communication, and the video and user interfaces and stuff like that.

[Federica]: You teach at the Faculty of Humanities at the University of Nova Gorica, but you also contributed to putting together a program in the digital humanities for new students. What kind of skills you decided that students should receive, what kind of subjects are included, and does this program try to have a specific focus that makes it unique in relation with other programs in other universities in the digital humanities?

[Aleš]: Yeah, when I was developing this study program with my colleagues at the school of humanities at the University of Nova Gorica, we were looking at other schools, other programs. What I wanted to emphasize is, I think, in a sense, original. What I wanted to do is actually to create a heterogeneous mix, and for this reason, I divided the program in two major parts, and, of course, the additional third part, which one would be, like, taught at the school of humanities, whereas the computer and information science part would be taught by computer scientists and our school for engineering and management, which, of course, also has courses and does projects in machine learning and stuff like that. So what I wanted, actually, there is a possible approach where you mix the technical approaches with the humanities approaches from the beginning, in Germany also at the undergraduate level, whereas here, basically we are enrolling people that have finished either a humanities study program (for instance, like literary history, like anthropology, I don't know, history, whatever), and those are one group of students that can enroll; the other ones are those that have finished computer information science or something like that. So, of course, people come from different backgrounds, and at this point in Slovenia there is no undergraduate study for digital humanities, also around Europe and in the world. There are no... There are very few of those that you could study that on the undergraduate level, and I think that's a good thing because you want somebody to initially develop some kind of, can become a part of a certain approach, and I think that traditional disciplines can still provide with certain guidelines that, of course, then you can of course change, move, shift, but if you don't know the philosophy, like history, different methodologies in the humanities... For instance, I know like [literary 00:52:10] history, but if you don't know theories of historiography, you know, basically it's really difficult to then upgrade your methods using digital tools. On the other hand, I believe that somebody who is very skillful with, like, working with algorithms, with data, can later on develop certain amount of knowledge of humanities but can still retain focus in the field that he or she studied at the undergraduate level. So then, of course, in the first year, some courses are not taught together because the people that have, like, finished humanities, of course, need to learn certain basic skills from informatics, and, of course, the computer science students need to, like, get acquainted with the humanities methodology. But what I still believe in the case of digital humanities is that it is an interdisciplinary domain, interdisciplinary research practice. And interdisciplinarity means, of course, that people with different skills come together, and there's another thing that I think is crucial for understanding what interdisciplinary discipline or interdisciplinary collaboration

is. We have to know that there is no interdisciplinary, interdisciplinarity as such. There are always constellations of particular skills, traditional disciplines, new, emerging disciplines, but always it has to be founded on something with some sort of tradition. You know, traditional disciplines can change, can be integrated into other disciplines, like you have material science which integrates chemistry and physics, and it's a field. So it's really important for us to develop the interdisciplinary constellation of digital humanities, and, of course, to nurture the interdisciplinary collaboration of people that come from different backgrounds. So this is one of the strong points of this program.

[Federica]: Does generative methodology in the digital humanities have to do with the project you did that involved data visualization or novel strategies for data visualization?

[Aleš]: Generative methodology, that's a term from Los Angeles, University of California Los Angeles, and it comes from the design practice, and of course, in like computer science, also iterative design, so basically like trial and error, building prototypes, evaluating things. This is something that is not usual in the traditional humanities. So yeah, I have used this approach, and it's a hands-on approach which, yeah, comes from the, basically, graphic design, and also the design in general, you know, when you're designing different technologies or different solutions for a problem.

[Federica]: What characterizes generative methodology?

[Aleš]: Generative methodology, it is presented in the book *Digital Humanities*. It is like an open book, like it's not open, it's like freely accessible on the internet. It was published, I think, by MIT Press a couple of years ago. Johanna Drucker and some other co-authors wrote it. So basically, generative methodology is actually to create, to build things, you know. So if you have like history, historical information, you can have basically letters, you can, of course, encode certain information related to letters (who was sending a letter, where the letter went, different stuff). Of course, you can then integrate the information that was actually collected and create something, and then you evaluate that. So yeah, and you can do this basically consecutively, so basically that you create something and then you evaluate what you have done, and then you adapt and change.

[Federica]: Not being familiar with it, the first question that pops up in my mind is, in this type of iterative process where you evaluate what you have once you have it, it's a bit of a provoking question, but does it mean that you don't really know where you're going, you don't have a clear research question, it's really like, 'Let's see what happens'?

[Aleš]: Yes, of course. This is one way of looking at it, and, you know, if you don't know where you're going, this is not necessarily a bad thing in the humanities. I can give you an

interesting example, at least I hope it's interesting. I used to teach video at the design school, and I had students, and at the same time I was doing a PhD in the history of literature not related to that. But, of course, I then, at that time, I asked my students (I was teaching, as I said, video) to make videos based on poems by a Slovenian poet, Tomaž šalamun, and also on different other poets. So basically, I was teaching people to create videos, to master the language of video, and at the same time, they were using literature, literary works, poems, that I was also working on when I was doing other stuff. There was an interesting result. First, there were two authors, and one was not useful for visualizing his poems. So basically, somehow the results of - of course, all the students did their videos, but none of the videos was actually, didn't actually work. And it was interesting. Then I changed the poet, and this other author, Tomaž šalamun, his poems are actually like basically one image after the other, so it's very visual, and then, like, students were very successful, and it was, yeah, an interesting experiment, so I had a collection of really good videos, and of course, each of those videos was related to a great poem. But what is the result here from the point of view of digital humanities? I consider those videos by, of course, graphic design students (so students that haven't studied history of literature or theory of literature) are recordings or notations of their readings of those poems, you know, because it's really difficult to materialize some other person's reading of a literary work. It is actually impossible. You can ask the person to describe, or to interpret, to write down the interpretation, but here, you know, basically it was a way that the young people were, like, faced with poems, and then they created images that they somehow saw that were, like, fitting to those poems. You know, here you, they were actually creating videos, but those videos were in fact recordings of how they read literature. So basically, in this sense, you get vague results. You get like 10 great videos to 10 great poems, but it's a step forward, you know, how to record a reading. So this is basically creating, generating, and you're going into the unknown, but you gain something that is otherwise really difficult to find, to record, or to, yeah, to materialize, and then, of course, when you once you have those videos based on poems, of course, the literary theory and literary history can work on that because now you have actually objects that correspond to the readings of poems.

[Federica]: You participated in a European project where, among other things, you collaborated with a team in Ljubljana, a team of experts in information design and data visualization. Maybe you can tell us a little bit about that project, what it was about, and what the other partners were, but what I would like to ask you is the part of data visualization and experimenting with new ways of presenting the data to look at it differently. How did that also translate to your artistic work? So data-driven art and all of that, how do you take scientific data, and what do you do with them so that you can also exhibit them in an art space?

[Aleš]: Yes. There are two issues here. So first is, of course, the question how to visualize a digital database, and you're speaking about the visualizations that were created on a women writers database. It is a collection of the reception documents within the literary system (mostly

in Europe, but also outside Europe) focused on the women writers. This was a project, it was a film project called *Traveling Texts*, and in Slovenia it was based at the University of Nova Gorica, but also colleagues from many different countries also collaborated. The thing is, what we did here is, actually we wanted, the focus of the project was, of course, on the one hand, to collect the reception documents on women writers within the literary system. So basically if somebody writes a book, the reception document about this particular novel is a translation or a review or a mention of this book, so basically George Sand, the centre of the literary system, as from the point of view of women writers, her works were translated all over Europe and also elsewhere. Here, I think the initial point was very good because the reception document actually materializes the stream of it's not influences but it's reception, so you cannot write literature unless you know something about literature. So basically you have to read something, so it's in reverse. And when a book is actually translated, the energy of the text by the author is pushing the literary system further, so when you're writing and you are like referencing a major literary work, you know, it's something that you would like to emulate that is basically, or if you're translating something... So basically here we have information that is very concrete in the sense of how literary system actually functions, yeah, in Europe. And, of course, once you collect the data then, of course, we have lots of entries, and it's really difficult to study those. And here, there are two possible approaches. One is, of course, that you somehow find a suitable technique to statistically analyze the data, to visualize it using, I don't know, standard visualization techniques. I don't believe that this is possible. I think the first step that the digital humanities has to do to actually embody the, like, traditional insights of the humanities is to actually understand what happens when you visualize the same dataset in different ways, and in order to do that, to evaluate different visualizations, you need to see the visualization, and, of course - which can be an issue sometimes in the literary scholarship - you also have to be skilled in the visual language. So we did experiments with having different people involved, like people from the computer information science that could develop different kinds of visualization. We were involving at different stages people that were like literary scholars that could like comment during the creation of visualizations on what they see and whether what they expected to find in the dataset is actually visible in the visualization or not. And, of course, there's the development of the rhetoric of the visual language of the graphs and, of course, the language of user interfaces. Of course, that's also a way of, a communication medium, basically. You create an interactive interface that helps you access some database. The focus here was - and I think this is really important - on creating all the, or at least as many possible visualizations as possible, and to realize any idea, as crazy as it was. And, you know, this is something that helps us to see how, on the one hand, the database itself is complex and rich, and on the other hand, how powerful the visualization method is in like changing the focus of what you, and how you enter an archive of, let's say, cultural data. Of course, there's always a tension between how we humanists perceive literary history and, of course, how it is written down in the actual database, you know, as an encoded element, materials. So yeah, the thing that we wanted to explore is develop experimental, experimentation within the field of humanities data

visualization, and at the same time, if you want to experiment, you have to somehow establish infrastructure for that, and, of course, we were like also looking into the ways of organizing an interdisciplinary collaboration. And it is a fact that it is, I think, impossible to pay commercial firms to visualize a dataset 100, 200, in 200 ways, you know, and to develop 200 concepts of how to visualize a certain, like, given dataset, whereas if you have students, basically you can integrate like the skills when they're, like, learning the skills, how to visualize information. Also, in this case when it's women writers database, it's a good thing to consider the fact that when we learn literary history at school, there are fewer authors, women writers mentioned than male. The ratio is not the same as when you study the number of authors that are actually there recorded, so the fewer women that the ratio is like much lower. So these are important issues, you know, because the people are complex and wholesome beings, and it's something that is, I think, good for anybody. I think also in the computer science, this was developed at the Ljubljana University at the faculty of computer and information science in the class of my colleague Narvika Bovcon, and also some students from University of Nova Gorica were involved - they are also developing the understanding of how complex the information in a specific dataset is. Because, let's face it, today when you have information on users, it is the fact that the information that you can buy, get somehow, you know, you can use it, you can manipulate it, but also there are different aspects of this information and, of course, you can use it in any possible way, but it's always good to understand, you know, the complexity and to be able to manage it.

[Federica]: How does one of these plots become a work of art that you can exhibit?

[Aleš]: Okay. Yeah, that's the other end of this story. Yeah, thank you. On the one hand, you have to somehow give meaning to data collected in a digital humanities project because otherwise it doesn't make sense doing it. So you have to evaluate the data that was collected and, of course, basically somehow work on that data as much as possible. Now, this step makes you really well acquainted with the data, so you actually somehow, all the time that we were like teaching either literary history or computer science, we were at the same time getting acquainted with the data that was and is still being collected in the writers database, and now it's a virtual research environment that helps even more in [unclear 01:11:04] so that the research on the women writers can go on. So how to make a step towards the arts is actually, if you want to enter the art field, then you have to tackle the issues like that are relevant to this field. If you want to create a good artwork, first of all, it has to be something that others have not seen yet in visual arts. Of course, if you show people something that they haven't seen, basically that's what you want, because if they have seen that, that's not that good, you know, because then it's not something that was actually made within this artwork. So it is difficult to find ways of creating images out of reality. When we were studying history of women writers and the literary system, we saw something, you know. It's a layer of our world, of the history of our contemporary world, that is there, so we have been in touch with something that is extremely real and that is not that well known to many people, you know, to the audiences outside of really narrow

field of literary history. Once you find a domain that is not explored well, so basically then it's simple, you know, so it's the first step. So if we go back to theory of new media of Manovich, so you have a database and the multiple interfaces, so now that we have the database, if you've seen something, you've collected something that others do not have, haven't seen, and then basically just you have to make an interface to that. And, of course, you can do that using a graph, or in our case what we did is, we've built 3D models that were resembling jewelry. If you carry a pendant on a necklace, you carry it with you for a long time, so when you carry that with you for a long time, you think about this object, and that's basically what you want people to do with something as important as literary history and how it's been developing and how we understand it today. So this is what we want to connect, you know, you had like really super fascinating content (at least in my opinion), and of course, you have to make it accessible to people, you know? You build silver objects. They're like 3D-printed objects using somewhere, like built as graphs, different graphs on an object, small sculpture-like objects, somewhere like lace-like text fragments, also 3D scans of face, manipulated. They were like inscriptions from poems. So the idea was to actually use the information from the research project and to materialize it, embody it, in such a way that people would think about, would reflect on it, would not actually, like, see this as something that is not, like, related to what they do in everyday life.

[Federica]: So when you are inspired by scientific data to make a work of art or you're inspired to embed this data in a work of art, is it about making them pretty, or they can still be informative? And meaningful how, in what way, or both, but in the case of a work of art, is one aspect more important than the other?

[Aleš]: Well, in this case, it was extremely clear that we are dealing with women writers. As a Foucaultian scholar, I am convinced that you cannot approach the reality neutrally, so feminism is one approach, and it's a concrete approach. So the reality is skewed in a sense, and if the feminist approaches in, like, humanities can show the aspects of reality that were invisible, that were like marginalized, basically, that, for me, is the only possible approach. Okay, maybe the gender aspect... Or not 'maybe'. It's a fact. The gender aspect is not the only one. I consider similar aspects also, the post-colonial studies approach where different cultures can see things differently, and, of course, the cultures come in contact as in colonialism, which, of course, has specific results. Also, eco-critical approaches where we start to think about non-human kinds of consciousness, if such a thing exists, also is an approach that decentralizes the way that the culture is organized. Yeah, I think the content here is crucial, yeah, because you have to be aware that when you are doing something, presenting something, it is embedded in a context and you are saying something, and I think it is important that you are clear in the ethical terms how your ethical position is established, what you are saying. So yes, here, 'pretty' is not the term... Maybe it is a term, beautiful, that I would use, and of course, it has to be beautiful, but of course, it also... A part of beauty is also the fact that the message is clear, but, of course, 'clear' in a meaning that I mentioned in Nam June Paik's works, you

know. His videos are not clear when you just look at them, you know, but if you're a video artist, you actually study his videos, and you see that those videos are much more clear than some simple video that wants to say a certain story or present some object.

[Federica]: So in this case, the scientific data resulting from a research project have been used, elaborated, to also be exhibited in an art space. I know that you've also had a fascination for other technologies used in science, for example in the chemical field, electronic microscopy, and so on, and you have used also data produced in that field for your art, in particular some pictures from the microscope which you simply enlarged. Without any further manipulation, then you just presented that to the public. What was that about?

[Aleš]: Yes, I'm always simultaneously a literary comparatist and an artist, so basically I'm always doing both things at the same time. So when I was doing the jewelry-like visualizations of the history of women writers, I was in fact interested, and I am working on the 19th-century literature, so I was actually interested in the research, and this was influencing my use of the data in the artistic project. The other project that you have mentioned was when I was collaborating with my colleagues from the Materials Research Lab from the University of Nova Gorica, so basically from the study of material science. I don't know anything about chemistry and physics, so I cannot say that I can be a scholar within this domain. In this case, I was working with electron microscopes, actually scanning electron microscope, and with our transmission electron microscopes, which are machines that can create something that looks like an image. And here, this is a contact point with my studies, also... One of my research areas is, of course, the theory of new media. In the theory of new media, there is the issue of technical images, and we can still say that the image, the visual surface, is still the main medium in communication with computers today and also it is dominant. Here, I go back to theory of the technical images by Vilém Flusser. There is the idea of the visual term - this was very popular in the different parts of the humanities, basically that we used to be, used texts more, but now we are more using images to communicate. Well, Vilém Flusser, like Prague Jew that emigrated to Brazil and then in the '70s returned to Europe to France and then in the '90s was, in the early - he died in '91 - he was developing his theory of technical images. I think his approach is a crucial one because he distinguishes between the traditional images and technical images, and I believe that traditional images are something completely different than the technical images. Technical images, for Flusser, are photography and all different kinds of image-making technologies like television and even diagrams for building machines like blueprints, and of course, X-ray is one of his examples, telephone. The thing is that how you create a photograph is completely different than how you create a painting. In a painting, you see something, and then you, through your understanding and through your imagination, like, put this image in your consciousness onto this surface. In photography, this is not the case. You can actually have a monkey, like, pressing the button and you still get photographs. Of course, the thing is that I'm not saying that we do not need people that are photographers

- I know what the artists that work in the field of photography do, but that is not the same thing as pressing the button on a camera. If you can create - or not 'create', make an image with the photo camera and you actually do not know what is in the image, this is a particular case. So what you are doing here is, you get the image, but then you have to control the image afterwards. So Vilém Flusser has, of course, developed different theories of different [technical 01:23:40] image-making media, but for me, as a practicing visual artist and video artist, for me, it's important to have a hands-on experience with the machines that can produce images. This was my main interest when I was working with electron microscopes. I could actually use those microscopes almost by myself, and I could experiment because I was in position to be able to collaborate with colleagues from the Materials Research Lab. And when you work with the image, you understand how this image is produced. And the other thing that is, of course, crucial here is, as a video artist, you are exposed to images that people don't usually see. Here, you have an advantage before other artists because you have many images that are not yet used up, and I think it is really important to introduce those visual features into the visual culture, you know, into the visual arts domain, because if there are visual features, it is something that we can relate to - and, of course, we must relate to - and we have to reflect on what this image means, how it functions, how it looks like, why we see it as such, and so on. Here, I had a hands-on experience on an image-making technique that is, that you don't usually get that much time on electron microscopes as I did, and so I was experimenting actually using electron microscopes to make videos.

[Federica]: I would like to thank you for being on Technoculture and for sharing this time with us, and I wish you all the best with your projects and your art. Bye.

[Aleš]: Okay, so see you.

[Federica]: Thank you for listening to Technoculture. Check out more episodes at [technoculture-podcast.com](http://technoculture-podcast.com), or visit our Facebook page @technoculturepodcast and our Twitter account, hashtag Technoculturepodcast.