

Sabine Seymour & Paul Feigelfeld

episode 5

The Culture & Technology Podcast

<https://culture-technology.podigee.io>

Episode 5: What is Data?

Paul Feigelfeld x Sabine Seymour

INTRODUCTION

There's a lot of hype around the word data these days. But what's less clear is its exact meaning – and its relationship with culture. For Episode 5 of the podcast, media theorist Paul Feigelfeld is joined by technologist and entrepreneur Dr. Sabine Seymour, who recently joined the Polypoly Cooperative to give people more control over their personal data. The two debunk the many myths swirling around this hot

topic, from the history of computer science to AI's black box and the future of equitable data development.

GUESTS

Dr. Sabine Seymour is a technologist, researcher and entrepreneur whose work channels the democratising potential of digital technologies. After many years in New York City, she recently returned to Europe where she joined the Polypoly Cooperative, an initiative giving citizens sovereignty over – and a share in the profits of – their data. moondial.com/sabine-seymour

Paul Feigefeld is a media theorist, curator and cultural scientist who researches how media and technology change the way we think and work and produce art. Listen to more of Paul in conversation with Shannon Mattern in Episode 1. twitter.com/paulfeigefeld

HOST

Severin Matusek is a writer, producer and editor who has spent the last decade researching how technology transforms culture, communities and society.

IDEAS AND PEOPLE IN CONTEXT

- **François Viète** (1540-1603) was a French amateur mathematician, astronomer and lawyer who made significant contributions to modern algebra through his unprecedented systematic notation system and theory of equations.
- **Claude Shannon** (1916-2001) was an American mathematician, engineer and cryptographer widely known as “the father of information theory”.
- **Surveillance capitalism** is a term coined by Harvard Business School emerita Shoshana Zuboff to describe the economic system built on the mass commodification of personal data as a form of capital and wealth creation. shoshanazuboff.com/book/about
- **Mosaic** was an early web browser developed by the National Center for Supercomputing Applications (NCSA) and released in 1993. [en.wikipedia.org/wiki/Mosaic_\(web_browser\)](https://en.wikipedia.org/wiki/Mosaic_(web_browser))
- **Netscape Navigator** was another early web browser that built on the success of Mosaic, built by Marc Andreessen who had co-created the latter. Eventually replaced by the Netscape Navigator, which became the launchpad for Mozilla Firefox in the late 1990s. en.wikipedia.org/wiki/Netscape_Navigator
- **TCP/IP** is short for Transmission Control Protocol/Internet Protocol, a series of codes enabling computers to communicate within a network. en.wikipedia.org/wiki/Transmission_Control_Protocol

- **Data commons** are initiatives in which data is gathered and shared as a common resource, often guided by community ownership and a public good element. Wikipedia and OpenStreetMap are examples of data commons. foundation.mozilla.org/en/initiatives/data-futures/data-for-empowerment/what-is-a-data-commons
- **The General Data Protection Regulation** (GDPR) is a European Union law governing personal data protection and privacy. In force since 2018, it imposes a strict and comprehensive set of measures on organisations and individuals that process data collected from or targeted at European citizens. gdpr.eu/what-is-gdpr
- **Zebras Unite** is a cooperatively-led global movement charting the way for a more ethical and inclusive approach to startup culture and venture capital investment. zebrasunite.coop
- **Polypoly Cooperative** is a European Union data chaired by Dr. Sabine Seymour to give individuals sovereignty over their data by enabling them to trace and control its use, and share in the profits it generates. polypoly.coop

CREDITS

The Vienna Business Agency supports businesses, the economy and the city in developing the Austrian capital's creative industries and shaping its future trajectory. viennabusinessagency.at

Editorial Team: Paul Feigelfeld, Anna Dorothea Ker, Severin Matusek, Elisabeth Noever-Ginthör, Elisa Stockinger, Heinz Wolf.

Theme Music by Zanshin.

The topics of the Culture & Technology Podcast will be further discussed at the Creative Days Vienna 2021 - part of Vienna UP'21. <https://viennaup.com>

TRANSCRIPT

“Data by itself has no meaning. Data is worthless without context.”

Hello and welcome to the Culture and Technology Podcast. I'm your host, Severin Matusek. The Culture and Technology Podcast is a virtual salon initiated by the Vienna Business Agency in which experts from Vienna and around the globe explore how technology is reshaping the future of culture.

In 2017, the Economist announced that the world's most valuable resource is no longer oil, but data. I can understand why. We generate data in everything we do with our digital devices: when we move around, listen to music, buy things, search the internet or watch movies online. Facebook, Google and Amazon are some of the

most powerful companies in the world right now. They know more about us than we do ourselves.

So... does that mean we have no control over our data?

To find that out I invited Sabine Seymour to join us. Sabine is a technologist, researcher and entrepreneur whose work channels the democratising potential of digital technologies. After many years in New York City, she recently returned to Europe where she co-founded the Polypoly Cooperative, a new initiative that aims to give people more control over their data by allowing them to profit from it too.

For the second time on this podcast, we'll be joined by Paul Feigelfeld. Paul is a media theorist, curator and cultural scientist who researches how technology changes the way we think, work and produce art.

Together with Paul and Sabine, we explore the question: How does data influence the way we experience and create culture?

Paul and Sabine, welcome to our virtual salon.

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PF

So maybe we could start by trying to define what we actually mean by data. Because it's like many of these terminologies. It's something that we use every day. And that is thrown around quite widely in the media and in conversations, but rarely do people actually know what they're talking about, or how, what the different facets of terminology are. So maybe that's my first question to use, Sabine, would be how you define data for you or for us.

SS

Well, data per se is an interesting terminology in itself. However, the way I want to use it in this conversation is I want to really deviate from thinking about raw data, which if you, for example, have a sensor, and you get, you know, 39 degrees from your thermostat, that's data. At the same time, if you generate data, because you send a text message, you also create data through the text. But you also create data, because you're using various digital devices, various mobility devices, various streams from your mobile phone. So you constantly generate data.

However, data is worth pretty much nothing, I always call it – it's sand, or, you know, just raw wheat. Only when you really contextualize it and make information out of it, then you actually have an interesting point to look into. So contextualizing different data sets. The other is data, per se, again, has no meaning without - and I would consider this wisdom. So you have data, then you create information out of it. But we

have a long-term history of understanding complex systems, whether that is technology, social systems, etc, etc.

And so this systematic approach to me is then looking into creating wisdom, it's almost like your Grandma looks at you and says, You look like you need chicken soup. That's wisdom. Because there's a lot of data, because you heat up, you have a fever, you don't look that great, etc, etc. and all that for her is information that she already because she has had this many many, you know, years over and over again, uses her wisdom to basically give you the chicken soup. So again, it's a very long explanation.

PF

But it's a very good explanation. And it brings me to the next two questions. Basically, one is the aspect of time and training that it needs to gain this wisdom, which is something that is also widely discussed, and that we I think we should dive into a little bit more is the way that smaller scale and larger scale systems dealing with data are training to create this kind of wisdom and experience and what the training data are and what the resulting biases are.

And speaking of time, the other thing that we could talk about this maybe a little bit of the historical development of these concepts of data because you could argue that the concept of data is not one that this automatically just comes into being with digital media, but has existed long before that. And maybe we could try to trace that a little bit. So different forms of preliminary data or prehistoric Paleo data through the history of knowledge, but maybe we can start with the next question. Or you can give us some examples from your personal experience and, and professional history, how data learns, or how we learn with data.

SS

I think data per se doesn't learn, I think data is used to create or to inform, to then learn from the information that is created. So that is one that I want to question because I know there was a lot of talk about artificial intelligence and learning systems and machine learning and etc, etc, and neurological networks and so forth. But I think we need to understand that, again, data by itself has no meaning.

Data is worthless without context. And going back to I remember when I was in, in grad school and business school, we basically were using Excel spreadsheets, right? So you created statistical patterns. So of course, you know, you were inputting data to create those spreadsheets.

PF

I totally misheard 'sadistical' patterns. [Laughs]

SS

No, no, no, it's statistical patterns. And then when I moved on to, to, you know, study interactive telecommunications, again, then, you know, data had a different meaning, because then I used it as a or then basically, we use digital tools to automate to start automating processes. And so that's, you know, where we are today and up with artificial intelligence, where we're machine learning first, to be very frank, most of it is machine learning. Where machines are basically learning certain patterns.

PF

In my work, I researched a long time ago, the history of cryptology, which is very closely connected with the history of mathematics, per se. So there's this one guy in at the end of the 16th century called François Viète, who was a French mathematician and cryptologist. He was basically a lawyer, but then he also was a hobby mathematician, and he worked for the French court, while they were at war with the Spanish. And he was the first one to sort of develop a universal method for crypto analysis. And from that, because he was, you know, researching frequencies of letters and something like this. But from that he developed symbolic algebra.

So the first mathematical formula came into being and I always had the feeling that the this is sort of one of the birth scenes of a concept of a new concept of data or information or this relationship between data and information, because the new thing that he installed was the concept of a variable that hadn't existed before in mathematics. So you always were doing mathematics with very concrete values. But he sort of liberated this by saying, we don't have to know what we're dealing with, we can, you know, go many, many steps before we actually add value to something.

So this sort of meaningless token that you can use to calculate, to create a reality of whatever kind, or analyze some sort of reality, is something that I think was paramount in the development of the scientific revolution in the 17th century. And hence, of course, also, everything that came after that sort of surmounted into the computer.

And maybe this sort of pops back up when we look at the first technological definitions of information and data from the 1940s in Claude Shannon's work, where he defines information as the opposite of noise. But also only you know, this in this very, very nice combination that it can only exist with noise and, and sort of pure information, pure noise is both not really possible, as is pure chance or random numbers?

SS

Well, and I think I think that's, you know, that's where bias is, it is basically coming into, particularly the conversations that we currently have with AI and unbiased data or biased data. I think it's a very important discussion.

PF

Do you think people sort of messed it up in the beginning – was there is a basic misunderstanding that they thought, or they had this desire for the cleanliness of something like raw data that doesn't exist, you know, that's to say, technology isn't biased, it's sort of neutral. It's just a tool, and there can be no politics or social bias or anything in that. And from that, over the coming decades, it's sort of f*cked itself up?

SF

Well, I think, I think that would be in the context of the internet, per se. So I would, I would first, you know, start with the internet. And the way in the early '90s, the internet was created, there wasn't really much talk about data, per se, it was literally about, you know, being able to speak with people on the other side of the planet, or digitize music and play and stream. And, you know, create an openness, and democratize, you know, nations by the sheer fact that, you know, we have information about these different countries. So there was a lot about, you know, making the world a better place, through technology, through digital technology, particularly, like I said, the internet.

So I think in the beginning stages, we definitely had, you know, a very different mindset. That then, you know, turned into, you know, we recently spoke about surveillance capitalism, and, you know, the way that because it turned into something else, and from my own experience, you know, I mean, I, I've been online since 91, I was one of the first students really, you know, working with, first of all, Mosaic predecessor, you know, of Netscape. I know, I remember when we dial into the White House in '94. And this is a big thing, um, you know, and, you know, it took at least a cigarette to download one image.

So that's, you know, from, from that time on, we were, you know, highly motivated to really think about the information that we, you know, the term 'information highway,' I don't know whether people still remember that. You know, so that was a very positive, you know, way of thinking about it. And, of course, then we had 2000, where everything went down the drain. But I think to me it was like, Well, everything was so cool. And we already had talked about distributed technologies that nowadays are, you know, a big term particularly in the, you know, cryptocurrency world, and then it was Amazon, you know, and then now you can argue, you know, was that a good thing? Was that a bad thing? And where is all that now?

PF

So, it's a difficult question. I mean, we talked about it beforehand, because I'm slightly younger. So I've had a few years less on the internet. And I went into it, I think more naively, like late the late '90s, when I was really starting to use it. I also just subscribe to this affirmative. utopianism, thinking that yeah, it's fucking great because also, I really didn't have the education yet to to know what kind of an infrastructure or protocols are beneath all these ideas. Once I learned that it quite

quickly became clear. That protocol like TCP IP, for example, is something that comes from a certain mindset as a defense architecture.

And it's something where you make certain decisions at every possible node. And meaning like to create a truly open internet would mean to create entirely new protocols and entirely new infrastructure and this is something where we slowly I think starting to get or people are slowly starting to get the idea. At the same time, of course, we have built such a huge Cathedral, a sprawling mess on this on top of this infrastructure that it's very hard to remodel the place, you know.

SS

Well, I would argue that it's hard, but it's feasible.

PF

It's feasible. And it's, it's the only sustainable thing to do. And maybe that can bring us to our next topic, which is sort of where we try to not only talk and, and nerd off on tech stuff, but also bring culture into play. Because I think what would be really interesting is to speculate, and think about the role of culture in redesigning and remodeling these infrastructures, but also, through practices, but also the practices practiced on these infrastructures and platforms. And I think you have a lot to tell us about that. Because you have done that from the very beginning.

SS

Absolutely, I think.

SS

I think it's an amazing opportunity to think about, again, talking about digital technologies, because I think we also had talked about the fact that it is very difficult to create, and use a digital tool for creation if you do not understand the tool. So I was using, or I'm always using the metaphor of an amazing painter, who knows everything about the colors, the mixing the textures, you know, the screen, whatever he or she, you know, needs to know about creating that painting, however, he or she is not a chemist.

So they are not basically, you know, creating the actual paint the actual oil, if you say, if it's an oil painting, but in my opinion, you know, there is a certain delineator in digital technology, where if you want to be a creative, a creator of culture, I'm somebody that use these these types of tools, to, you know, manifest your ideas and your art and your craft, then you need to understand at least, your oil.

Again, you don't need to be a chemist, so you don't need to, you know, build a computer and know about processing, or even C++, you know, some very, very, like, you know, harsh, you know, and difficult programming languages that you might need to learn by heart, no, but you can, but you have those tools now that you can

use on top of that, you know, baseline. And so that would be when, you know, you use it as a tool, or you use digital tools, however, and I think this is very, very important.

Visual technology currently is influencing our culture in an extreme way. And so it is very interesting to think about, you know, what does it do? You know, who is who is basically influencing our culture that is created? Who is using those types of tools? And who is using digital technology, per se? What is it used for? And is it you know, is it? Is it a tool? Or is it, you know, a manifestation of society?

PF

Something that it also has to be taken into account, I think, is who makes these tools? And the way in which they are accessible and provided by companies, by educational institutions, for example, and the way that they are shapeable also, because, as we have by now hopefully figured out the tools very much shaped our practice, shape, the content or the creative output that we produce with them, and therefore in the long run, Run, of course shape how we work, because they give us certain limitations, certain freedoms, and stuff like this, while many of them, especially on a very highly professional level are of course proprietary.

Basically black boxes, some of them might not be but many are. So I think this is something that has to be taken into account, and maybe you can weigh in on that, in your experience, how you have experienced working with certain limitations of the tools you use, and where it sort of prompted you to maybe go further to change, to adapt, and to overcome?

SS

Absolutely. So first of all, most of the digital tools that we are using right now are not made in Europe. So, you know, and that doesn't say anything about, you know, well, that basically means that our culture, our way of thinking, is not reflected in those tools. So, you know, I just want to leave it at that, because I think that is one thing. That is a you know, regardless whether it's a commercial entity or not, and they just for commercial purposes or not, it's just not made by our thought process.

PF

Then I want to ask maybe further, because maybe this brings us to the next question, whether we can think of realities or future situations where these tools are designed and manufactured in a different process in a different location by a different group of people in a different way. You know, we've, I think we should definitely talk about data commons.

But we could also talk about design commons, if you will, you know. So it's not only the data that has to be shared, or the raw materials, if you will, that that you try to manipulate, but also the openness of the tool sets has to be discussed, and this is

something that I understand you are also concerned with, for quite a while already. And maybe you can tell us something about your experience there.

SS

Yeah, so, so just a little historical context. So I've lived in the US since '91. And two years ago, I moved back to Europe, literally in May of 2018. And that was because of GDPR. Because I have, I've had the idea of create a different type of business model for one of my startups where I wanted to democratize healthcare, and I said, Well, I want to democratize healthcare and need to have a model where all the data that is captured by people that are, you know, providing that type of data, they also need to be reimbursed. But how do we do this in a way that we make sure that their privacy is actually not infringed upon, and they have data sovereignty and really can understand, you know, what is happening with the data and make their own decisions?

So, um, you know, so at the end of the day, I was thinking about a cooperative model. How would that actually work? And in the US, you know, we have impact investors. And the understanding of what I wanted to do was very foreign [laughs] That was before Zebras Unite became a movement. And I always make a joke: I say: "In the US, I'm considered a socialist or a communist, because I'm talking about a cooperative." And, you know, and here I'm like, Oh my god, you're from the US. You're a capitalist, you know?" So I figured, why don't go back to Europe and create a new model?

PF

And where are you at right now with that?

SS

So that endeavour – actually it turned out that I joined a startup in Berlin and called Polypoly, building a data cooperative, where we are building exactly that model that allows you to become a member of the data cooperative and have full sovereignty over your data. And if you want to rent your data per se, you get the option to rent your data to receive, you know, a financial remuneration. But if you don't want to, you don't want to. So and the data cooperative per se, as a cooperative is sharing the dividend at the end of the year. So if you have, you know, a membership, you basically it's almost like a stock, you get a dividend at the end of the year. So, to me, that is an interesting model.

PF

And when can I inquire more, because just for anyone who listens to this, and has trouble wrapping their head around it? So what kind of data does this entail? What kind of data are people who are part of this cooperative producing, contributing?

SS

So basically, you have to think about it as an app that is on top of your iPhone. And then on top of that app, or you generate, you know, you have basically loaded a lot of other apps on top of it. So every app you using, you generate – automatically – data. And so that data, whatever it is, every single person generates different data, you know, and then you basically can decide which of the data points you want to share or not. It's a very complex system. And literally, we are launching our first 'Polypod,' we call it, beginning of next year. And currently, we are building the data cooperative. So we're basically looking into, you know, very, very big structures and very big systems that allow us to actually have members from all over Europe to work with us.

PF

Okay, all right. I think we should talk about next steps. And, and sort of maybe try to just very briefly cast, at least somewhat of a wish, of a prediction of what comes next and what is what we want to come next?

SS

Well, I think it's a combination, I think one is we – and again, you talk about, you know, cultural creation, meaning that you have to start building new tools. I think that's one thing.

The other is thinking about different models, how to actually monetize, right? Because as cultural creators, it's usually, you know, pretty difficult to actually, you know, make a living from what you do. The other thing I think, what is, for me, what is also important is that we use data, use digital tools, digital technologies, consciously.

And we not only limit ourselves by what is already out there, but really thinking it in like anew. And so for me, it's less about, you know, digitizing existing content that's archiving, that's one thing of the equation, but for me, it's about using digital technologies and, and data per se, to really keenly use it as a positive aspect, you know, that allows us to really look into a creation of a society that we want in the future a culture, you know, that we are, you know, interested in participating in.

PF

That's a good point. I always have this image in my head because we always talk about the tech sector and the cultural sector. Which, for me, having studied computer science always makes me think about hard drives, and memory sectors. So in my head, like I look at society, or our reality in terms of a partitioned hard drive that has different sectors, and it's very hard to restructure, because once you start messing around with the sectors, it's very easy to just fuck something up, you know, and delete some information, or maybe mess up the whole thing. So I'm very interested in thinking about sort of sensible ways of restructuring the relationship between culture and technology.

But not only sector wise, in terms of this is the means of production. And this is the means of production. And of course, we all have to think about monetization. But how can we change the culture in general that, like, if we see culture also, as a third term, that is overarching culture and technology, the culture of cultural technology, sort of second second degree, culture that entails, you know, sustainability, education, political agency, in terms of realizing that everything we do, because this is something that people slowly start to realize, I think, hopefully, that everything happens within this. And it's not something that exists separate from us.

And everyone sort of is a technological producer in some way or the other to some degree or another degree, as you said, not everyone is a chemist, but somehow everyone paints, you know, if we want to use that metaphor, I'm so instilling this kind of responsibility into into our culture as a whole, if you say that European culture, for example, but global culture hopefully, would be the main goal, I think, to to to make people realize that everything they do plays a role.

SS

Absolutely, and I think, you know, I mean, I think, like, the term data ethics is coming up a lot, right? We're talking about ethics, the ethical use of data, etc, etc. The ethics is very much, you know, as a philosophical term, and I think you Paul know, better than anybody else, when it comes to that, you know, how ethics in terms of you know, that term, well, that context is defined, is that we, as a society, you know, really, as a collective now thinking about data, how ethical do we want to use data, that means that we need to learn where the data comes from, what it what people are doing, or what corporations are doing with our data.

So, you know, right now, you know, a lot of people are using digital tools without understanding who they are playing or carrying, yes, or carry, who they are playing, you know, with or who basically, gains from, you know, their production of data.

And then at the same time, you know, how, there are a lot of technologies, and there are companies out there, and there are nonprofits out there, that you really want to educate and make sure so, for me, the future for data in in the cultural creative process in a society where I really want to live is that we make sure that there is an education about data, data ethics, that is ingrained in an education.

So because to me, it's a raw material, data is a raw material. You know, there was a time when you needed to learn how to, you know, plough your field, and now you need to learn how to actually, you know, use data in a way that, you know, doesn't infringe on you as a person. Yeah, but you actually gain from it.

PF

Yeah, I think we can leave it at that. It's a fantastic ending point in outlook for further discussions. So yeah, it was a lot Sabine, thank you for having me.

SS

Thank you.

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And on that note, we come to the end of this episode of the Culture and Technology Podcast. Join us next time as we move from tiny bytes to big buildings: we'll be joined by two architects who'll explore the changing role of physical and virtual spaces to experience culture.

For now, if you're keen to know more about Sabine's or Paul's work, or how we can rewire our relationship to our data, take a look at the show notes in your podcast app. We've gathered a list of interesting links for further reading.

The Culture and Technology Podcast is produced by the Vienna Business Agency – The Vienna Business Agency supports businesses, the economy and the city, developing Vienna's creative industries further and therefore changing the city.

Stay tuned.