



SKETCHNOTE BY ELVIA VASCONCELOS OF ALEXANDER GALLOWAY'S PRESENTATION WITHIN THE WORKSHOP "WHAT IS THE DIGITAL DOING? A WORKSHOP IN THE INTERFACE", NOVEMBER 2020.

#NOTALLDIGITAL HUMANITIES: A CONVERSATION

"If you step back to look at it, it's basically interfaces all the way down."

Katherine Bode
and Alexander
Galloway, #NOT-
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MANITIES: A Con-
versation. *Interface
Critique* 5 (2025):
298–324.

DOI: [https://doi.
org/10.11588/
ic.2025.1113540](https://doi.org/10.11588/ic.2025.1113540)

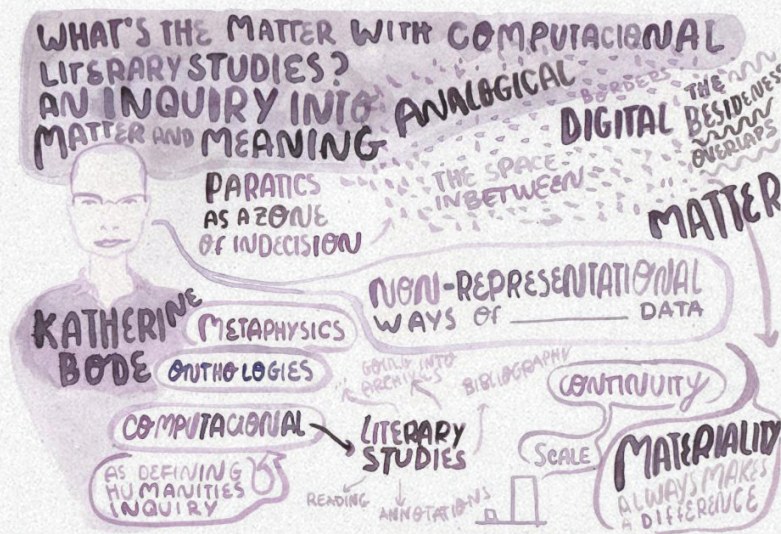
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Katherine Bode and Alexander Galloway



In May 2022 Katherine Bode and Alexander Galloway met online to have a conversation about their interestingly different and enlightening diverse accounts of the meaning of “interface”. The editors who were silently present, recorded the video call that took place between New York USA, Brisbane AU, and Berlin GER.

Where do we come from?



Sketchnote by Elvia Vasconcelos of Katherine Bode's presentation within the workshop "What is the Digital Doing? A Workshop in the Interface", November 2020.

KATHERINE BODE

My interest in digitality and the interface goes back a fair way. My research explores literary production, circulation and reception with data, quantitative methods and digital collections, and I came to that approach because I was interested in historical and empirical questions, in publishing history, in book history.

The way I got into doing that was proofreading my brother's PhD thesis. He's a mathematician working on ecosystems, especially coral

reefs, which involve all these different species, and variations within them, and then the movement of the waves and the temperature and the water flows and levels and so on. I was reading his thesis in 2006, and thinking about the complexity of those models, and it made me look at how this was being done in literary studies, like with Franco Moretti and distant reading in America. I thought the difference between them was fascinating, I mean the direct way complex models were talked about in mathematics versus the extravagant rhetoric surrounding relatively simple models in literary studies, where literary works were generally presented as single data points, disconnected from their “ecosystems”. So that’s how I came to it.

At first I treated data and models in straightforward empirical, historical terms, whereas now I’m more interested in digitality and interfaces as complicating and constituting what these objects are that we’re investigating. So regarding “interfaces”, I would have first thought of them in terms of the complexity of the literary systems, how it’s more than just single objects in time and space. It’s the relation, for instance, between anonymity and pseudonymity, or between first editions and subsequent editions. Now I’m more interested in how that relationality creates the objects we investigate.

On “digitality”, my interest there is in the histories of the digital collections we use, and in media archaeological approaches to exploring them: not as showing the truth of what was in history, but as formations composed through time. So that’s how I came to interfaces and digitality, via the circuitous route of mathematics and ecology.

ALEXANDER GALLOWAY

I started thinking about interfaces because of computers and media

technologies. There's an assumption that interfaces are tactile or physical, an assumption that the interface is the first thing you see, the first thing that you touch. There's a whole conversation around user-friendliness and human computer interaction, human computer interfaces. I remember being really frustrated with that conversation because I come from a tradition that's about revealing the apparatus and demystifying technical scenarios of various kinds. So, any conversation about making things invisible, making things intuitive, really frustrated me.

I wanted to follow a different path. At the same time, I also hit on a weird discovery which is that computer scientists talk about interfaces completely inside code. For example, an object can have an interface, and by an object I just mean an abstract object within code. It was wild to me to learn that computer scientists were referring to mathematical objects as having interfaces. It's even weirder because in some languages they're actually called protocols. This connects back to things I had done before. Soon I had a host of new questions: Can we think of interfaces themselves as technologies? How do they work? It's about codification maybe, encoding, granting access, but then also limiting access. The big moment for me was the realization that functions have interfaces. Even in the simple function you learned in school, like $f(x)$, the parentheses are essentially the interface to the function, and they specify what the function will accept. There is a whole control technology simply inside software.

KATHERINE BODE

I think it's interesting how we both got where we are through connections with other disciplines and from thinking through the richness of how they understand their objects or how they engage with and create them.

There's a tendency in the humanities to view scientific disciplines – computer science for example – as simple or simplistic. I think there's value in recognizing the complexity of those knowledge systems, not so we need to become like them or adopt their methods, but so that there's space to learn from them, including about our own practices.

ALEXANDER GALLOWAY

I like what you said before, that the technologies themselves become defined in terms of their interfaces. That was a conclusion that I also came to.

In a lot of digital technologies, there's a layer structure or a nested structure, like nested dolls. You can think of the passage from one layer, like layers of an onion, that these layers are constantly communicating and interfacing with each other. And, like you said, at a certain point a technology is defined as its interface. The best example might be a web page. In a web page, you have text, which is interfacing up the stack to html, which wraps it like a nested doll. Then other protocols are interfacing with those smaller technologies and wrapping them up until you get a large, accumulated object. If you step back to look at it, it's basically interfaces all the way down.

KATHERINE BODE

I like your idea of interfaces all the way down as a way to think through recursivity without resorting to a "representation all the way down" postmodernism. But I don't know if I agree with you when you speak about the nested structure relating to something like a web page. Or, more specifically, I think that nested structure over-determines our understanding of technical objects because so many of them do function in that way that we might presume they exist in that way, also.

In my disciplinary context, one thing that bothers me about the way that computational literary studies pursues its objects is that it presumes a nested structure: it presumes its objects sit inside or around each other like a series of containers, and that's also an explanatory structure. So when something happens at one layer or level, it explains what happens at the other, which throws us back to nineteenth-century scientific understandings of the natural world. That approach loses the capacity to explore how relationality creates objects because it assumes they exist at separate levels. It's a disciplinary example, but one that relates to broader understandings of technology.

ALEXANDER GALLOWAY

You're hitting on the perils of discretization, right? Like, what token are you looking at? Is it the word? Is it the letter? Is it the phrase? Is it the sentence? Is it the paragraph? And even if you feel like you've chopped up the text in a plausible way, it's still very difficult to capture ambiguity and irony and all the rest. This is why I'm still not really a convert on a lot of digital humanities (DH) methods. The question remains, where are the limitations of the frame, the container? Where's the membrane? These are all complicated technical questions, but also social, cultural, and political questions, too.

KATHERINE BODE

Yeah, definitely, and ambiguity and irony are good examples of things that don't actually exist in text. The container model obfuscates the relations that make these things come into being. Irony requires a situation and relation of production and reception that can make that textual phenomena exist.

ALEXANDER GALLOWAY

Was it Cleanth Brooks who said that form is the thing you can't paraphrase? I feel that DH is a paraphrasing technology.

How do you make a good map, then, where the map has to be the size of the territory in order for it to have some kind of sufficient nuance? Quantification is really about reduction, abstraction, compression. How do you go from a large number of inputs to a small number of outputs, potentially even a single output?

The question should be: What do we want? Are we looking for complexity? Are we looking for aesthetic richness? Or are we looking for decision, reduction, compression, lower resolution?

Medium specificity

KATHERINE BODE

I think that that leads us to the idea of medium specificity. I guess where I part ways with what you're saying is, in defence of digital humanities, that reduction is not all that DH is doing: *#notalldigitalhumanites!*

But the problem isn't quantification, and when we think of it as a mode of abstraction and reduction, we miss out on the productive ways it participates in creating its objects. So, in textual media, there's one way of chopping these phenomena up that you've described, where you say: *here is a document, it contains these subsequently smaller things* (chapters, paragraphs, sentences, words) and that defines it. Or: *here is a bag of words and we can break it into chunks*. And I agree that approach is a type of paraphrasing that misses out much of what makes a medium what it is. But there are also more complex models for dividing textual media in ways that are not

simplifying or reductive, like FRBR (Functional Requirements for Bibliographic Records), which considers the relationship between the concept of works and its diverse expressions, manifestations, and items. Whatever its limitations, FRBR is a medium-specific framework that recognizes the complexity of textuality, including how texts are both concepts and objects, formed by norms and material practices, together.

At the same time, even such complex models are currently limited by their assumption of print conventions when it comes to understanding their objects. FRBR encourages us to think of digital collections as made of multiple works. But in such collections whatever the work was, it has been remade, including by becoming connected and embedded in digital platforms, in ways that we're still in the process of understanding. So medium specificity for me involves the technologies that have formed within disciplines, which in my case include bibliographical technologies, and how they enable ways of thinking about objects with ontologies and models that aren't purely representational or abstract.

How do you think about medium specificity?

ALEXANDER GALLOWAY

I don't know. I struggle with medium specificity because I feel that people are not very interested in that approach. That approach kind of went out of style, and a lot of people are sceptical about any kind of specificity, mostly because of a lingering scepticism toward definitions of all kinds. It smacks of determinism, or essentialism, perhaps, for some people.

There's an additional problem. The computer seems to defy our attempts to be specific about it! Turing defined his machine as

a universal machine that can do any operation provided that it can be defined logically. We have all sorts of rhetoric around the “multimedia” capacities of computers, that they are able to simulate all formats. Add to that the heterogeneity and malleability that comes with networked devices. Computers exist within complex assemblages that are constantly changing and morphing and reforming. All of this seems to push back against any attempt to provide medium specificity.

Despite this I often defend medium specificity. Maybe you can tell in the tone of my voice. In many ways I am just an old-school modernist. I love conversations around medium-specificity. My solution to all these problems is to invert the assumption. What if we don’t assume that stasis, fixity, and legible identity is the only way to characterize something? Maybe things can be characterized through their fluidity, or through their radically non-essential qualities or through a rhizomatic, ever-changing, assemblage-like quality?

That’s how I approach specificity. The key is not to take any of those things I just mentioned as evidence that specificity fails. Instead, I want to assert these qualities as positive, valid ways of characterizing the computer and network devices. A lot of complicated consequences flow from this. I’m not claiming it’s easy. For instance, the political analysis goes topsy-turvy. There aren’t easy answers. But that’s my approach to medium specificity.

KATHERINE BODE

This idea of defining media through fluidity and non-essential qualities is something that I’m really interested in, and I think extends beyond the computer.

In literary studies there’s a tension between media specific and media

implicit. There's great media-specific arguments. I'm thinking about Johanna Drucker's and Katherine Hayles' work in comparative textual media studies, which consider the specificity of textual media through time and post-print and ask how to grapple with emerging forms of textuality? But there's a lot of media implicitness in literary studies: a tendency to discuss writing as if it's separate from media.

Agency of interfaces

ALEXANDER GALLOWAY

What do you make of the fact that computers also *do* things. They do things to users and subjects, maybe in ways that are different to how other technologies do things? I am interested in the shift from what something is to what something does. Computers are doing machines, right? They are ergodic machines. They have a capacity to be executed. Or, I should say, software and code have the capacity to be executed, in ways that are, let's say, more complicated than traditional codes and texts. (Natural language can also be executed, but it requires a social context and fabric in which to execute. The classic case here comes from speech act theory.) What do you make of the fact that a computer has an active capacity for action?

Does that make sense?

KATHERINE BODE

Yeah, it makes complete sense. I think that texts only exist as they have the capacity to be executed, and the technology of the text is also anticipating and addressing practices. So, I'm thinking about how the technology of the book evolved and how it anticipates ways of executing itself through its contents page, through its index, through its page numbers, through all these things that we call paratextual,

but are the operating system for the text. My uncertainty is that I know that there's obviously something different about computational media, but I don't know if it's a *sui generis* difference. Is it something that is absolutely different, unique? Or is it just the way that textual technologies are being manifested now, often and not always?

This question relates to the way we tend to think of the computer as existing in perfect isolation, or the text as in existing in perfect isolation, when, of course, they all plug into a range of systems, and it's just whether those systems are different that I'm not sure of (different in kind rather than in material ways, which they obviously are).

ALEXANDER GALLOWAY

I think that's right.

I often get in fights with art historians and literary scholars around the question of interactivity. Is a painting interactive? Is a novel interactive? Yes, of course, in certain senses. But interaction means something rather different when it comes to computers.

Still, I think you put it well. Interactivity evokes a dynamic between multiple entities. This dynamic can involve human readers and viewers, but it could also be more strictly cybernetic and involve non-human agents that are in mutual interaction.

Interfaces and in/decision

ALEXANDER GALLOWAY

I often think about an interface as a decision. This helps get beyond the kinds of questions like, "is an interface a door or a window?" I never know how to answer that question: maybe both, or neither. Instead I prefer to think about interfaces as decisions. It's a bit like that old line from Kafka, "before the law stands a doorkeeper." The

interface is a door, it's a barrier, it's a law, it's a wall. But 'decision' alone isn't enough. The philosopher and theorist of technology François Dagognet described the interface as a "fertile nexus."¹ Instead of 'decision', Dagognet characterized the interface as a kind of choice, an area of choice. So we have 'decision,' but also 'choice' – put all this on one side. On the other side we have something like Gérard Genette's book *Paratexts*, or in French *Seuils* (thresholds). Interestingly Genette described interfaces not as decision but as indecision, exactly the opposite of Dagognet. Genette wrote that an interface is a zone of indecision between the inside and the outside.

I would like to hear what you have to say about this dynamic between decisions. Dagognet imagined it being very physical. One steps over the threshold. One is either on this side or that side of the threshold. There's a kind of switching or toggle effect. Whereas for Genette, it's a question of indecision. The interface becomes a singularity point, a transductive point, in which material conditions and aesthetic details become ambiguous. In one sense decision, in another sense indecision.

KATHERINE BODE

Meredith McGill has an article called "Echocriticism," so not *ecocriticism*, but *echo* and she talks about reprinting and re-articulation. When I think about this question of decision and indecision, I remember how she talks about this phenomenon where you can find the paratext of a first edition in cheap reprints. Which means that there has been this uncertainty (to add another word in) about what the text is and what the paratext is. And as it is reprinted, as it is manifested or materialized, then there is a determination about what is text and paratext, but indecision remains. So, they

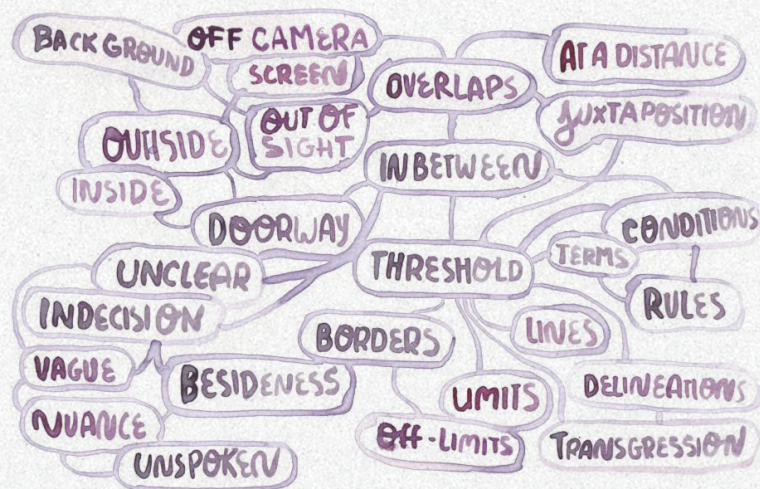
reprint the first edition paratext in the second, so it's the second edition paratext now, but it's also not that paratext, because it's the first edition paratext. That illustrates how discussing choice in terms of either decision or indecision, certainty or uncertainty, doesn't quite get at the way that those acts are shaped by multiple things, and how at the moment of demarcation, they're determined, but indecision remains, and they're not decided forever, because then the next articulation of them revisits that moment and has to articulate it, and might articulate it differently, but is always done in relation to the articulations that form the object and the field of relations being encountered.

So, I would be on the side of Genette and the zones of indecision, but I think that each demarcation determines something that is not a decision exclusively. Perhaps this is a very odd way of responding to your excellent prompt. Yet, I'd like to know what makes the idea of decision and indecision interesting to you. Is it because it's enabling for criticality, or what is it that draws you to those terms?

ALEXANDER GALLOWAY

A lot of people are grumpy about decision, because it gestures back to existentialism, and the free individual who decides. For many, this sense of decision seems inaccurate or, worse, politically dubious. Genette's indecision meant to address this very problem. He wasn't interested in describing a simple relational dynamic between two things, like me and you, or from here to there, or if p then q . Instead of a straightforward relation between objects, indecision functions more like a question. The question might be: what are the conditions that structure a situation? Genette addressed the condition of inside and outside. We might also think orthogonally in terms of a situation plus whatever conditions provide structure to the situation. And if

I understand you, then yes absolutely, one can't always dictate the conditions in which one lives or acts. As Marx once said, we don't make history under conditions of our own choosing. So maybe that's a way to understand the dynamic, a dynamic that is more orthogonal than relational. In fact we were talking about this a few minutes ago, by way of a mereological dynamic of whole-to-part, or system-subsystem or metadata versus data. Computers display this logic particularly vividly. If I were to whittle it down to a slogan, it would be something like: The paratext is massively more important for computers than it has been for other forms of media.



Sketchnote by Elvia Vasconcelos. From the workshop "What is the Digital Doing? A Workshop in the Interface", November 2020.

KATHERINE BODE

Yeah, that was really well put.

When Genette's talking about the paratext, the reason for him that paratext is indecision is because the frame is both citing what it surrounds, and what it surrounds is citing it. So, the indecision is

about the constituted relation, like you say, rather than the nested structure.

I can think about this kind of indecision for a single text or a painting, but when it comes to thinking about the computer, I really struggle. So perhaps paratext is massively more important in the computer, or perhaps we are just more accustomed to parsing paratext for writing and painting. But I find that difficult to think about, which is one reason I admire your work, because of how you engage with these questions across diverse media.

Analog and digital

ALEXANDER GALLOWAY

We might return to our previous topic of medium specificity. Here I often get into trouble, because I have a pretty narrow and somewhat stubborn way of thinking about the medium, and particularly the digital. As a caveat I will admit that I view this all through the lens of a programmer, and an amateur programmer at that. I view this through the lens of variables, and alphanumeric characters, and functions, and screens populated with symbols. I think about the digital in very narrow terms, as a system of representation that uses discrete units. I've tried to formalize this in various ways. We could talk more about it if you want. But what's perhaps more interesting is the dynamic between the digital and other modes of representation. The analogue is usually the primary alternative, but there are innumerable other alternatives as well.

The analogue and the digital are constantly interconnected and interrelated. You mentioned echo before; indeed it's possible to derive this explicitly. As Euclid demonstrated in the *Elements*, the analogue is quite literally a kind of echo or twin of the digital. While

exploring the digital and the analogue, even the most perfectly defined digital objects will, as it were, spontaneously invert and display analogue phenomena. The reverse is also true. Even the most perfectly pure analogue phenomena will spontaneously digitize themselves. This frustrates people who try to claim that the digital is separate from the analogue or vice versa. The two are closely intertwined. Consider a waveform. People often hold up a wave as a pure analogue phenomenon. But waves will have peaks and valleys, which act as singularity points or anchors for discretization. Waves will also regularize themselves in other ways. Given a complicated wave, one can break the wave down into its constituent waves using Fourier analysis. The constituent waves will have regular, measurable wavelengths, all of which is inherently discrete or digital.

So I think the two modes are intermixed. Ultimately it would be wise to think dialectically about the digital and the analogue. The one is always subsuming, interlacing, and negating the other.

KATHERINE BODE

Yes, I 100 % agree with you about their interconnection and love the way you express that.

I'm interested in your thinking of the digital and the analogue as representational modes, but only if we want to use that language. Representation does seem to be the point at which those entangled or interconnected twins come to have particularly different expressions or relations to the world, in your description of them. What your example of the wave makes me think of is Karen Barad's work on the apparatus, which takes us back to the decision and indecision, and determination and indetermination.

Their way of describing the apparatus in quantum physics is that it can determine that light is a particle with a particular physical arrangement of the apparatus. That apparatus is part of light being a particle. But then, with a different physical arrangement, a different apparatus, that light is a wave, it's determined to be that. But in neither case is that a representation and both are analogue and digital, in the way you're describing it.

The way I'd push back on what you just said, is to say that representation is not the inherent quality of the digital because it is also materializing with the real. That maybe takes us back to what you're saying about your relation with the digital as an amateur programmer, and how the digital is representational for you. Because within programming, even the word "ontology" is made into a representational term. So, the whole philosophical framework that is about being and existing is now a representational apparatus.

ALEXANDER GALLOWAY

The use of terms is so wild, how "ontology" gets used in different contexts like that. You cut right to the heart of the matter. The question around representation and the real is tricky though. By referring to the analogue in the digital as co-equal modes of representation, I want to push back against a traditional metaphysical posture that says that the analogue is real and the digital is representational or mimetic. That kind of ideology is powerful, I'll admit. Yet the better posture is to assert that both the digital and the analogue are real, and that both are representational. At the same time the analogue is, as I like to say, "on the side of the real," or gesturing toward the real, in a way that the digital simply isn't. And likewise, the digital is on the side of abstraction, or gesturing toward abstraction, in ways inaccessible to the analogue. Can you have

representation in the analogue? I think you can, but it's complicated. Can you have abstraction in the analogue? I think that's also very difficult, and it might depend on how we define abstraction. In a narrow definition of abstraction, no, analogue abstraction doesn't exist. To solve this, we might need to talk about transduction instead (following Deleuze) or shift into a Marxist register and think in terms of real abstraction.

KATHERINE BODE

Yes, you're right it depends on how we define representation, because there's a way of thinking about representation as participating in the original and copy logic, and another way of thinking about representation, as not epistemological, but ontological, as practices that are provocations or iterations, that are involved in the creation of what is real.

I mean, the representation and real division relies on us thinking about representation purely in that epistemological space, making us the brainy little creatures arranging the world into abstract categories. But – and now I'm coming back to my disciplinary context – if I think about digital collections, which are things I work with, then the original/copy logic of representation is a real limitation. The way those in computational literary studies often engage with these collections is as representations of some analogue real. We get caught up in thinking about them as an abstraction and a simplification, and not thinking about how they extend the event horizons of these 'objects' that are always having to be worked out, that are always having to be reiterated and maintained or else they cease to exist.

So, representation is obviously so much a part of our knowledge practices and systems, but whether it does what it says on the package, I think, is the question.

ALEXANDER GALLOWAY

The funny thing about the paratext is that it's often a narrative of previous ownership. The nobleman puts his name at the beginning of the scroll, then whoever owns it next puts their name ahead of the previous person's name. And like you say, in archives and in digital holdings, that's not something you can ignore. The paratext pushes itself into the document and becomes permanent, even as a liminal element. Other paratextual frames will also push themselves onto the stack, prepending it further.

I'm a materialist first and foremost. But I also want to keep space for the symbolic order, for the concept. Materialists are often nervous about idealism and abstractions of various kinds, usually for good reason. For instance, the young Marx was keen to reject Hegel.

I'm very sympathetic to that. But I also want to save room for the concept, and for some notion of the symbolic order. Subjects and societies are formed, whether they want to or not, within these kinds of complicated libidinal economies. Digital logic is an extension of the symbolic economies. I think we can put the digital symbol right next to the phallus, the semiotic sign, money, and other forms of the "general equivalent," to use the old structuralist vocabulary. In fact, the digital fits into structuralism quite well.

For this reason, I want to retain the metaphysical distinction between the presented and the represented, even if I'm also quite interested in Karen Barad's approach. Barad seems to be describing something separate from both the analogue and the digital. Like quantum superposition, how does that work? Well, it certainly doesn't follow digital logic. The digital cannot do superposition. Is Barad describing the analogue? Perhaps, I'm not sure. Maybe the analogue opens up into the space of the real? I don't know. That would be one

interpretation. Or maybe Barad is describing a separate condition, radically distinct from both the digital and the analogue. The quantum stuff is still an open question in my view. Even people who are specialists in quantum mechanics haven't come to good conclusions.

KATHERINE BODE

I think it's interesting you wanting to retain space for the phallus and money, like keeping the symbolic order alive means keeping it separate, when these are totally real things. And I guess there's maybe a way of hacking back, I don't know if I'm just going off on some random tangent here, but there's maybe a way of hacking back into our media specificity conversation, about how the thing that you're calling the symbolic order works differently with the phallus than with money, but the norms that are involved in keeping those things alive, and keeping them real, and keeping them pressing on us, partake equally, or cannot be divided into symbolic and real? They're citational practices, but they're also fully embodied or materialized.

I think that's the strength of Barad's approach, as, like you said, fanatically devoted to the real and materialist, while still engaging with the way that the iteration of the real cannot be reduced to either symbolic or material realms. That it's both at once.

In/computability

ALEXANDER GALLOWAY

Yes, I agree completely. The symbolic order only ever realizes itself through embodied experience and social ritual. This might be a way to think about the uncomputable. I'm reminded of the early-twentieth-century folly around building a universal formal language. All those mathematicians came to the same conclusion that poets had

known for centuries already. The scientists had some catching up to do. But eventually they devised rigorous proofs showing the limits of discrete rationality. It came in different forms. Kurt Gödel had a version of it. Alan Turing had a version. Bertrand Russell hit a wall in his own particular way. So, I don't know. I'm interested in the digital, not to put it on a pedestal or evangelize about its supposed power or force or something, but to keep it limited to a very circumscribed domain. This allows us to transgress that domain and explore other paradigms that are not reducible to discrete rationality, to the digital, or to the computable. We've mentioned a few of them already. The analogue is one of those domains. Maybe quantum superposition is one of those domains, I'm not sure. And of course, dialectics is one of those domains. There are different flavours of the dialectic. Hegel is very popular these days. Although I prefer the Marxist version. Regardless, I view dialectics to be incompatible with the digital. Computers can't do dialectics, I don't think, at least not digital computers. So, while computability can be rich and exciting, it also gestures toward adjacent domains that are beyond the digital.

KATHERINE BODE

I wonder if part of the difficulty with computation is that, because of its connection to conceptions of rationality, when it comes into play it threatens to overwhelm whatever else is involved. So, back to our conversation about the real and the representational, for the humanities, the rationale is said to belong to this space we were referring to as the real, whereas things like experience and aesthetics are real, but they are real in a representational realm. So, when computability becomes part of the humanities, it threatens to overwhelm these representational reals (experience, aesthetics, etc.) with its real, so that the original-copy logic comes back to

restrict our capacity to explore the potential of computation for the humanities.

I really enjoyed your whole book on computability and uncomputability, but I was interested in how you turn, in the conclusion, to this specific difficulty with computation and ways of knowing in the humanities, by discussing DH. You say that the reification of quantification as providing certainty is symptomatic and important to grapple with, in terms of where critique goes, where criticism goes, when computability is not only defined as the best way of knowing what is real but when our modes of computation are captured by corporatization and capitalism. And you note the value of exploring modes of computation that do not maintain these associations of rationalism-capitalism. I thought it was fascinating that you went to DH to make that point, to which I'd say again "#notallDH". I'm thinking of projects devoted to creativity and care with data. This digital humanities is not about claiming value in scale and consumptiveness and the creation of more and more and more data, but about the need to think carefully and be careful about how our critical investments are materialized with data. That's what the digital humanities are doing really well in some contexts.

ALEXANDER GALLOWAY

I wonder why digital humanities was captured by data analytics? I used to work for rhizome.org and collaborate a lot with computer artists, making different projects of various kinds. When digital humanities hit, I was confused because I didn't know if I was DH or not! I looked at DH and thought, well okay, I'm a humanist of some kind, and I also use computers, programming and making software. But the stuff I made didn't look at all like DH. So, I've always had an unusual relationship to DH. I'm not interested in counting words

in texts. I'm not interested in using linear regression or clustering algorithms. I wonder if you have thoughts about why DH got captured by data analytics? Or maybe I'm wrong. Maybe we can think of net art and experimental digital film and the like as digital humanities too?

KATHERINE BODE

Yeah, I think DH is much broader than the data analytics approach but it's captured attention because it fits an existing regime for talking about knowledge as operating through a discovery mechanism, including the idea that counting delineates what's already there, rather than helping to compose it. As to why this approach has captured attention in the humanities specifically, in part at least, that comes from the humanities believing more in the authority of the sciences than scientists do, at least when they talk amongst themselves.

The credulity about data-based methods is compounded by the treatment of each new one as a shiny toy and the rush to ask, what can it do, and assuming that it is a way of advancing knowledge. It goes to what you've talked about with the opacity of contemporary interfaces, and what you were saying at the start of our conversation about the rhetoric of user-friendliness.

ALEXANDER GALLOWAY

It's deeply ironic that conversations around surface reading came on the heels of what Wendy Chun once described as "the persistence of visual knowledge", i.e. a sharp distinction between manifest surfaces and latent operations. Perhaps that's why I come across as slightly confrontational in the afterword to *Uncomputable* that you just made reference to. There are scholars who claim to be against critique, who also accept the opacity of the registration device. As a consequence, we get a mode of reading based on reading numbers

from an instrument. Perhaps there's nothing wrong with that. But isn't this a form of intellectual de-skilling? I would hope, instead, for reading a number from a measurement device, while also performing critical analysis of the device itself, of the regime of countability. I confronted Franco Moretti once on this point, and he didn't have an answer. The question is: if you count words in *Moby-Dick*, will that tell you something new about the book? In fact, my answer is yes! It could tell you something about the novel. The problem is that it won't tell you anything new *about counting*. And it's this latter point where I want to intervene. Counting, numbers, the integers — these are the things that make up the digital. Number itself is a medium. I want the analysis to focus also on the apparatus, the infrastructure of the device. We can't simply view the device as closed, as a black box. It's not a neutral tool that furnishes measurements of various kinds.

KATHERINE BODE

Yeah, I mean preach. I'm with you there.

What the humanities can do, as well as reading measuring devices, is draw on what is already a rich history of measuring as a social, cultural, and normalizing practice. In terms of counting words in "Moby Dick," maybe it won't tell you about measurement (though perhaps the fact that these words are being counted at all tells you something about the way measuring is being formed, as a social, cultural, and normalizing practice). But it does materialize the text in a different way, it recreates "Moby Dick". "Moby Dick" is different after the word 'whale' is counted.

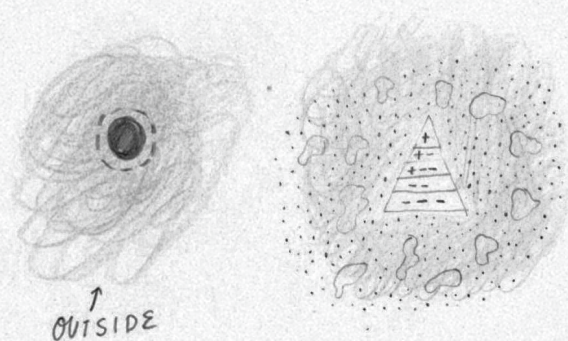
I think there's space to measure in ways that don't treat the results credulously, but still understand them to show something, not because they represent what's there but because measuring does things.

ALEXANDER GALLOWAY

Yeah, no, I agree with that. I'm not a romantic luddite.

KATHERINE BODE

I would never accuse you.



Sketch by Elvia Vasconcelos. From "Process Sketches" for the Artistic Research Lab "Sketches as a Conversation Interface" held within the workshop "What is the Digital Doing? A Workshop in the Interface", November 2020.



Artwork by Elvia Vasconcelos. From the Artistic Research Project "Sketches as a Conversation Interface" conducted while Dorothea Schlegel Artist in Residence at the Cluster of Excellence "Temporal Communities: Doing Literature in a Global Perspective", 2021.

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