



### **B.A. Gonczarek**

I'm here with Thomas Nail, the Associate Professor of Philosophy at the University of Denver and author of recently published book *Theory of the Image*, welcome Thomas. I must admit I was really looking forward to our discussion. When preparing to our conversation I did my research online and I was taken by how well you're received by your students. You students describe you as very knowledgeable and approachable. Your openness is something I experienced myself, so thank you for the opportunity of doing this podcast together. And to explain to our listeners – what we're trying to do here is to (possibly) bridge the gap between abstract thinking and acting, between thought and execution by an exchange between you, as a philosopher and me, as digital toolmaker on a topic of digital image.

My main goal for today is to hear your point of view on the future and possibilities that technology gradually unlocks. Now, I'm aware that the digital image is only a short chapter of your recent publication but I believe that limited scope of our discussion is enough to inspire our listeners. After all, we're all users of digital devices don't we.

To begin, describe to us, if you will, your way of working. What is New Realism and what is your method of approaching problems?

### **Thomas Nail**

If I had to sum up main findings of the book that guides the whole project is that the image we often think about as a mental representation, something as in our brain (in our minds) which is a copy or resemblance of the world outside. I think that's not right, there's definitely something going on but that's a very narrow way of thinking about what an image is.

An image is a real thing, it is something that happens in our eyes and in our brains, that is related to the external world, but that is a tip of an enormous iceberg. That's the part that we see on the surface. Below the surface of the water is this enormous process of the rest of the world, of the enormous processes that we don't actually see which are part of the fabric of the world and forms and media that we use, and it's very active. What we have in our brains is not a copy of the world, it is the world itself just by other means. It is a continuation of the world inside of us just. It's not a question of resemblance but interactivity, of performativity. We are interacting with the world when we see, although we often experience vision as a passive thing that sort of happen to us, but that's actually very active both in our bodies (in our eyes the way they seek out, move and follow and respond to the world). One of the main takeaways was to think about much larger context what an image is but also what the world does. Whether are humans there, or not, there are images, as they sort of they engage each other. The way we interact with the world those images interact with themselves and that interaction is what produces an image. That's a broad definition of an image but the shift is from thinking about images as representation to thinking about images as processes with their own habits, cycles, they sort of interate and respond to each other to produce meta-stable states. They are flowing and moving, but they are also stabilized, so they look static. If you look at an object on a table – it looks like it is just sitting there but it's not. And even when we weren't looking at it, the image is still because the image is real and material whenever we think about that. We're part of it when we view it.

### **B.A. Gonczarek**

As you describe in the book the image is a process by which matter twists, folds, bends and reflects itself into sensations and affections. What was the inspiration to arrive at such viewpoint on the image itself?

### **Thomas Nail**

It's an old inspiration actually, it goes back to the Rome and poet Lucretious. We only have one book of his philosophical poetry – *De Rerum Natura*. In the book, inspired by Epicurus, who said that the earliest Theory of the image as a material process that we have in the history of the west and it's since been transformed by other ideas, but I do think there's something to go back to. For me the inspiration was his poetry and 'Simulacra' – Everything in the world is radiating out images. Images are bouncing off each other, eventually they get to the exterior and fly off to collide mid air with other images. Some people interpret it as there's ghosts flying off of things, but that's not what he says at all, it's actually closer to modern physics and light. He didn't use the language of photons, he used language of simulacra but that's essentially what it is – that things inside of themselves are vibrating with photons. Photons are heat, photons are light, they are constantly vibrating and release waves of photons, and photons collide in mid-air. And for that reason at every stage they actually are making something, they performing and producing. There's no resemblance, but no genuine copies, no originals, there's just these singular processes that refract (like you drop two paddles into a pond and the ripples would key each other and make a new pattern – at every stage you're always looking at some specific pattern of the photons interact with each other. So it's a very materialist way of thinking about what an image is as opposed to the idealist way, which is – it's an idea I have in my brain. And if that's what you think an

image is then only humans have them, only humans can sort of talk about them and they always will fail in representing the original image. There will always be some poorly construed copy of what's out there. If you think of an image of a real, material, singular process, then it changes the way you think about what an image is. What an image is is what an image does. It doesn't represent anything, it moves, it does. So the question is – what are the patterns? That's why I think the visual aspect makes a lot of sense because to understand what images are you need to have an interactive and visual tools to map out what that image is doing.

### **B.A. Gonczarek**

And I believe that's also applicable to the digital world. I found it actually fascinating of how you're shifting perspective here. You name three features of mobile nature of the image and I'd like to ask you about hybridity that you list as one of those defining features. You call it a pinnacle of fragmentation, I'm curious what opportunities fragmentation opens`?

### **Thomas Nail**

When I say fragmentation I don't necessarily mean complete isolated fragments. They are little knots and pieces of strings, always related and connected with another pieces so that the pieces are never fully cut off from one another. This is the way people tend to think about **digitally** as just fragmented bits and bites, ones and zeros – but there are no fragmented ones and zeros that are fully cut off. That sounds opposite to the definition of what we think of binary. The truth is if you just dig below that level – is a signal on or of (basis of digital communication) and look at the material structure of transistor – it doesn't work like that. There is a constant flow of electrons and photons moving through that transistor and they do not always stop at the gate when the signal is supposed to be off – they jump the gate. It's a quantum effect called tunneling in which electron movement actually passes the barrier. The smaller technology gets, the more data we can store, the tinier the gates get. And the tinier the gates get the easier it is for the flor of electrons to pass through the gate and then you get an error, and your computer crashes. And these are happening more often than used to because of the technology. When your computer crashes there's a good chance that's because of the quantum effects of the material movement of the electrons. So thinking about all these pieces it really draws your attention to the creativity and the agency of the matter itself that we're dealing with. **We try to represent things of ones and zeros but what we're often encountering is this very fascinating resistance of the matter itself and that opens new possibilities of working with that matter as opposed to trying to dominate it and trying to stick it into a binary code.**

One interesting question for the digital age and XXI century is what new things might we discover? What new visual or communication aspects if we let the materiality, if you will, to play a role and speak instead of trying to silence it or make it your bidding. What might it say to us? How might we use it by working with it as supposed to trying to master it.

### **B.A. Gonczarek**

Absolutely. I remember from your book when speaking of hybridity you touch the digital foundation of the image saying that

*“Anything that can be coded can be transcoded and then turned into a hybrid of something else.” So the beauty of transformation and allowing for new thing to arise from something that preexisted before opens a lot of new possibilities.*

The other defining feature of Digital Image that you write about is the **Kinetic feedback**. The way I read it, is that the **matter interacts with itself to form of a feedback loop**. I kind of understand that when thinking of computer software opening greater degree and range of aesthetic transformation, but what about a kinetic feedback when, let's we say passively consuming content, by looking at a painting?

### **Thomas Nail**

One of the interesting things in the book that I figured out by researching material structures is that some of the features of the digital images are common to the analog things, there not really this absolute division. If you think about digital culture as immaterial, in the cloud, virtual – it's not. It's fully material. A “cloud” is a huge building filled with hard drives. This vast Internet infrastructure all have material basis and in that sense it is still very analog. And in that sense analog still has many of these features as it has aspects of hybridity. An collage is an instance where you can break things up and reassemble it. You have a kind of hybridity in analog things. But as just in your example in looking at a painting there's a feedback that happens, but we don't often think of it as a feedback. We think of it as a noisy signal on a digital level, a negative feedback loop where we don't want it to go. But that's partially what interesting in analog and digital feedback is that it is taking us somewhere. There's a feedback happening between two systems where both are sort of in control but neither are in total control, and the result is something genuinely unique (kind of simulacra experience, simulacra are meeting, refracting and making something new. When we think about looking at a painting we think of that as a passive reception of an external object. But the viewer is participating in that work of art just by being in that room, even if we're talking at basic photodynamic level of photons radiating off your body as heat, and they are heating up at a very small level that painting. Light is reflecting off that painting and degrading it. By looking at a painting with light we're destroying that painting at a very low level and over time it ends up totally destroying that painting and that's why we have curation. Curators are in this unique position to really see and feel and understand the materiality of works of art. That's a lot of what museum goes don't think about. They feel like these are preserved work with ethereal structure to them. But the preservation process never ends, it's ongoing. It has to constantly struggle against the effects of decay, heat, and light-destruction of the painting. So I think they realize that the painting is more of a feedback loop that you think it is. And it's also affecting you that you're not fully aware either. Its light and coloration is making you more sensitive to subtle differences in light and coloration. Even if you think that you're thinking about the symbolic meaning of such and such. A man by a river or something like that, or narcissist looking at himself in the pond were thinking about symbolic representation of the painting yet there is a material basis that is also working on you that you might not be even thinking about, but it's affecting you. And it is the same way with digital culture and the studies are now accumulating on that for sure. What is the Internet is doing to our brains? What is digital culture? How is it changing us? We're using it for symbolic and representation purposes, but there is vast iceberg of material consequences to the environment, to our bodies, to our brain. To undergo the performance

and the feedback that we enter into when we look at the screen and use some kind of digital device.

### **B.A. Gonczarek**

When speaking of affecting and changing us by exposure to images, you see I'm in a business of supporting understanding, you can call it knowledge communication with the use of interactive whiteboards. And I have a front seat view on feedback loops and transformations of the content. I see how those work as a key to unlock human understanding. In the past the knowledge or concepts were conveyed by text paragraphs and static slides. Now those turn gradually into more visual forms, animation, ad-hoc drawing, into whatever works. So the way I see it, is that we're on a path of getting away from the rigid, formal representations into a realm of smashing bits and pixels, so to say, to form new perspectives and gain new insights. I guess that's in line of your thinking?

### **Thomas Nail**

I think that's right, I think that communication has significantly changed such that it is absolutely much more about feedback and with that feedback comes novelty. Feedback isn't always what you want it to be. And with that what is interesting to me is that when images and words and material structures of how those are communicated – when you get all of those mixed together, when you have text, with digital speed of social media and users – when you get all of that together you're getting some serious feedback transformation in which all of those are kind of pulled out of their original context and make possible new ideas that aren't necessarily what we originally planned them to be. I think the feedback, even being explicitly interactive process, the interactivity makes us realize that we're performing, that we're doing something, not passively consuming. Even if we think that we're passively consuming you're actually generating something to. I think it makes us think deeply about the participatory nature that has always been the case with communication, visual or text-based that we're involved in it, and that makes us responsible for intentionally shaping it, and not thinking that it's this big structure and we cannot do anything. The mutability of communication is higher and more diverse that has ever been.

### **B.A. Gonczarek**

Absolutely. The way I see feedback is that we always thought of the feedback on the cognitive level what worked? What triggered understanding? Was it a (so called) **picture superiority effect** where visuals work better than words, or **spatial processing** evolved in understanding of a concept or **visual metaphors**. But I guess thanks to your insights, I see that it's possible to go deeper, beyond sensations to see the inner-working of three distinctive features of the digital image that you list: kinetic feedback, random motion and hybridity. So I wonder, from your perspective, do you see technology a one-directional enabler that gets us closer to the understanding of reality? Is it so?

### **Thomas Nail**

That's such a great question. On a one hand I want to say – it just depends on how you define digitality? But I think that the other definitions are typical ones of binary structure, so let me give you two answers to that question: Yes, digital world gets us closer to objective knowledge, more communication, transparency, more accuracy. Our pixels get so close now.

The term 'Retina' it's such a great term because that's the limit where they eye can no longer distinguish the pixels. So what you could say on that front – yes, we're definitely getting closer. Look how small the pixels are now, we are getting higher resolution and better accuracy on the world. If that's a description – I disagree with that, i don't think that's why digitality is getting us any closer to reality or anything like that.

My answer would be – yes, I do think that it actually is but not in that way. I think that the thing that getting us closer to really thinking about reality in a different way, is that it's forcing us to realize something that always been true about the nature of the image (whether analog or digital). The closer we get the closer we drill down to that binary structure of ones and zeros the more non-binary processes we start to discover. That's what's interesting about digital. It's the actual conclusion that if we push it far enough we see it break down and see that below that it's actual continuous fluctuation of quantum processes that are not under control. And this reveals to us something novel about matter itself. Something that always been novel, but we haven't comforted it in that precise way. The history of art and media is typically Humans trying to control the world and make it look their way, and do it certain something. There is a minor history to be said there, but for the most part the western history of media and use the technology is to control the nature. But what's interesting to me is that we've reached limits of that control and we're forced to realize that it is impossible project and what we're really have been doing is not successful domination to completely get access to objective reality but that we've been engaged in this kind of feedback loop where materiality of media has shaped our bodies, our senses, our brains just as we've been shaping the world thought all of this media – and that's what I think the truth is to be realize in the digital age. It's not the superiority of the digital image but precisely what the digital image is exposed to us explicitly. So we have to confront that fact.

### **B.A. Gonczarek**

It's certainly getting our thinking less infantile, but do you see any risks that we might not be aware on this path?

### **Thomas Nail**

For sure, the risk is that we will keep trying to find the ultimate way to bypass material processes and the performative act of interpretation. What I mean there is that if you think you can break down the world into totally discreet bits and bytes – that's the danger, because it will drive you absolutely mad trying to produce a clean-cut distinctions between ones and zeros and not realize that there is this material process that will always spoil this effort. The danger is to use technology and media to try to control and essentially dominate meaning and leave out interpretation. Some philosophers that really herald the digital age they imagine – oh, we'll just put jacks into our heads and we will just communicate with binary code, and that we'll bypass all of the messiness of the language. I said this word that might mean something different to me than it means to you and we have base for this messiness which is, in truth, the beauty of poetry and literature. We can just get rid of all of that and just have purely objective truth with binary code. And I think that is the danger, thinking that you can avoid the material and what we call 'an interpretation' but it's essentially performative, collective feedback that is generating something news not understanding some objective state of the world

**B.A. Gonczarek**

Before we close, what you see as a possible outcome of increasing software capacity in transforming digital images? Given the nature of digital image, what do you expect to happen in the near future?

**Thomas Nail**

Guess this depends how pessimistic or optimistic I am.

**B.A. Gonczarek**

Give us your best shot.

**Thomas Nail**

I'll give you both. What I expect when I'm feeling pessimistic is that we will continue with quantum computing to try practically to keep pursuing to break world down into ones and zeros and master quantum flaws and erase any errors, any noise, any fluctuations which we don't want to happen in electron flow. That we will keep on that path and try to continually break things down in an attempt for absolutely non-interpretive objective reality. To think that we're getting closer to that is to me absolutely the danger when I feel pessimistic.

Optimistically I think that technologies that emphasize and take seriously the materiality of the media that they using, (not just as a neutral media to facilitate communication, but as itself a creative thing, something that is changing the world). To recognize the changes that it's having both on the environment, on material world, but also changes that it's producing in us, in our bodies – and to take that seriously and ethically to treat it more as a work of art. The sharing of images, the sharing of text is not neutral communication, it's transformative, it's doing something to us. I think that if you think that's its neutral communication that's subjective you're going to miss that ethical moment. So you're really need to think about that ethical moment. We're responsible for what we're doing to ourselves and what we're doing to each other, and what we're creating. So taking ownership of that essentially and we supposed to be being serious and intentional of what that is the optimistic outcome

**B.A. Gonczarek**

And I join you on this optimistic end. Listen Thomas, it was a great pleasure to talk to you today. It certainly helped me in my exploration of verbal-visual field of communication. But I also believe that your perspective is fresh to anyone that is trying to understand the direction that technology is taking. Many thanks for sharing your insights with us today! And good luck shaking off human's immaturity of perception!

**Thomas Nail**

Thank you.