

Demetri Kofinas: What's up everybody? Welcome to another episode of Hidden Forces with me, Demetri Kofinas. Today, I speak with John Borthwick, CEO and co-founder of Betaworks, an internet studio that builds and invests in social, data-driven media companies including Giphy, Dots, Bitly and Chartbeat, Dig, Kickstarter, [00:00:30] Tumbler, Tweetdeck, OMG Pop, and hundreds of other companies across the internet.

John's first company, DWP Studio, was founded in 1994 as one of the first content studios in New York Silicon Alley and later acquired by AOL Time Warner. He currently sits on the board of WNYC, Data and Society, and Rhizome at the New Museum here in New York City.

In this episode, we blur the line between man and [00:01:00] machine, between self and other. We reconsider our place as the observer and user of technology in an increasingly inter mediated universe of digital experience. We imagine the future of consciousness and explore theory of mind so nebulous and incomplete that it confounds the intellect, contorts experience and assaults our very notions of humanity, our sense of identity and our assumptions of agency.

How do we design our machines with ourselves [00:01:30] in mind? Who are we designing our world for and what do we hope to achieve as we dissolve into this immersive, technological future of super intelligence, disembodies consciousness, relativism and simulation. As always, you can gain access to reading lists put together by me ahead of every episode by visiting the show's website at HiddenForces.io.

Lastly, if you are listening to this show on iTunes or Android, make sure to subscribe. [00:02:00] If you like the show, write us a review. If you want a sneak peek into how the show is made or for special story lines, told through pictures and questions, then like us on Facebook and follow us on Twitter and Instagram at @HiddenForcesPod.

And now, let's get right to this week's conversation.

John Borthwick, thank you so much for coming on the program.

John Borthwick: It's a pleasure.

Demetri Kofinas: I'm very happy to have you here. I was just reminding you where I first saw you. I don't think we ever met. I don't think I ever introduced [00:02:30] myself to you but I went to ... The Daily News does these Innovation Panels, who are talks or events. They had put together this panel on fake news and you were one of the panelists on that mock debate. I found your perspective very interesting. As I said, for preparation for this interview, usually when I speak with people I have an opportunity to review their work and get a sense of their belief structure and everything else. You have, obviously, a great body of work with Betaworks and the stuff you guys pump out of that but [00:03:00] as far as your perspective, I think I have a sense of you seem to be a very philosophical person and you seem to be more of a visionary than the average entrepreneur, average VC. I know you are not exactly a VC and we will get into that.

Why don't you give a little bit of a back story. Who is John Borthwick? Where did you come from? Where did you get your start? You know? All that.

John Borthwick: I'm in the business or I love to build things and so I am first and foremost a builder. I started in this industry as [00:03:30] an entrepreneur, early. We are talking about '94 and '95 and my first company started up in '94. I've been part of building companies, a succession of companies. As you said, Betaworks, we refer to it as a studio but we're a hybrid entity where we build and we invest and we also do accelerated programs. We're, sort of, across the spectrum of the ways of building [00:04:00] things. Either you build something yourself or you invest in it or you participate for a period like an accelerated program. Those are all the things we do but we do it in a very sematic ... we have sort of a sematic overlay because we have a viewpoint around the world. Right? And we're trying to both build companies, invest in companies that adhere to that viewpoint.

Demetri Kofinas: When you say viewpoint, does that mean that you have a value set and/or is it also about a vision about where the world is going to be in 5, [00:04:30] 10, 20 years and wanting to invest around that.

John Borthwick: I think it's both. We have a perspective on the world and we want to build towards that. It's informed or sort of underpinned by value-set. So we are based here in New York City. That was a very purposeful decision. I thought about starting Betaworks either in New York, in London, or in California. We started Betaworks about nine years ago so it was a while back. It [00:05:00] seemed back then ... I thought London was too immature as a market back then to start it up in London. There wasn't enough pieces present and I can talk about what those pieces were. I thought that New York was the right place to do it. And I thought that California was already too mature.

So what we do is different and I think that it would be easier to do that and build that in an emerging market like New York where you had emerging market and [00:05:30] emerging disciplines. You had technology but you also had an incredible amount of strength and bench in design community. Whether that be in advertising. Whether that be in the arts, in the creative community, in the fashion community ...

Demetri Kofinas: That's true

John Borthwick: And in finance, which we do less in but bring those altogether and that as tech would inform and transform those businesses there'll be opportunities that will arise out of that. But working with those people would be the core of what we do.

Demetri Kofinas: In fact, I remember [00:06:00] 2007. It's changed tremendously. I think that's when you founded Betaworks. The technology community, the tech community in New York, has evolved and grown tremendously in that time. It's interesting, also, you mention about the complimentary communities in New York, I think you guys invest in a lot of media companies or companies that work in and around media. I think that also makes sense for New York.

I do want to get more into this. I do want to ask you, though, before that, just for a context for me and for the audience. You said you got into this area around '93, '94. [00:06:30] I know you went to Wharton. When did you finish your MBA?

John Borthwick: '94

Demetri Kofinas: '94. So, that's basically the starting gate. So you were in at the early stage or middle stage ... right before the bubble started to blow up in technology. What was your first go-around there? What was your experience and what was your position in this industry at the time?

John Borthwick: When I started out it was very early. Right? And so it was almost too early. It was when I came out of grad school in '94, it was pre ... there was a browser [00:07:00] but there wasn't Netscape browser yet. And I'm sure some listeners don't even remember the Netscape browser because they use Chrome or Safari today. The world has changed a few cycles since then. But it was very, very early days. I remember, I looked back and I think that there were a few thousand fully supported websites at that point so were talking about early, early web. I'd come across ... I'd been fascinated by [00:07:30] networks and digital technology. I came across the web because a friend of mine was working at the AI Lab up at MIT while I was still at school. He called me up and he said, "you've got to come up here and see the world wide web". This was in '93. Back then, there weren't any terminals on the world wide web so I drove to Boston from Philadelphia to go see the web. Kind of a bizarre thing.

I remember when driving back, [00:08:00] like I had sweaty palms. I remember driving back and thing I need to get back really quickly because the whole world has changed. I gotta get out of school and I gotta get going because the world has changed. I think that it was the beginning of what would become the most transformative medium of communication and of media that we, as collective humanity, have ever created, was just starting to take hold. Yet [00:08:30] you could see the power of distributive publishing and being able to create and publish on the edge, which is what we are still doing today. Albeit, with far more sophisticated tools.

Demetri Kofinas: The internet has been completely disruptive to media. It's disrupted everything. Let's bring it back to 2007 and from then to today. What is the mission or how do you see your mission for Betaworks? How do you invest around that and [00:09:00] how does your work express that vision and mission?

John Borthwick: You're really trying to peel back and understand the values a bit. I think in the early years I used to think a lot about changing ... go back to the enforced, only connect, right? Figuring out how we could transform and encourage connection between human beings across the network. I think that was a tremendously powerful component of what this media [00:09:30] brought to the world.

I would say that about five years ago, it started to become apparent that only connect wasn't enough. Just being able to connect people, whether it's through a social network or

through a simple communication back and forth, was not providing, in many cases, real tangible effects in the world. I think that social media has been a transformative component [00:10:00] of the internet but I think that in many ways, my assumption that only connect, would lead to a lot of other things and would lead to real transformation in society and in culture. And I think we're still working on a lot of that because I think that it's the scale of the connection has happened far greater, far faster than most of us would have expected. It's amazing just how many people and devices are now on the network. And the number of connections that [00:10:30] take place every millisecond is just amazing.

But the social change has lagged and the cultural change has lagged a bit of some of the technology.

Demetri Kofinas: I think that also touches on the issue of news, which is something I want to get into because you're really talking about the quality of those connections. Certainly, we see a lot to be desired with these social platforms like Facebook, for example. With the type of content that percolates through the platform and that people are drawn to or see based on what the [00:11:00] algorithm promotes. I do want to get into that. There are a great many thing that I want to get in to. To lead us there, I want to ask you, how important is your vision of the future in determining what you invest and what you promote through Betaworks and how much time do you spend thinking about that?

I say that because before I sat down to talk to you, I was thinking about how you expressed, I am familiar with the story of you going up to MIT and thinking that web, the revolution [00:11:30] was here and you were gonna miss it if you didn't get back. I just thought, if I had to think, in very specific terms, what the future's gonna look like from now, I realized, I have no idea.

So, there are certain things that I think are going to be really important like sensory experience and how that's going to change. Obviously, artificial intelligence and data and sensors and their ability to gather data and all of those things. How do you think of that future?

John Borthwick: Let me answer it a few [00:12:00] different ways. The first is, let me talk about processes. Part of the reason we build things at Betaworks and we are so engaged in whether it's building ourselves or with our accelerator program is that we wanna stay and remain very close to the actual technology and to the process of building new things. When you think about a frontier technology, we've spend quite a bit of time in the last year working in voice interfaces and trying to [00:12:30] understand how we, as human beings, are gonna start to be able to talk to computers the way we talk to other human beings today. Whether that be through an Alexa interface or through talking to your car or to talking to other things.

Part of the process for us at Betaworks is thinking conceptually about new technologies and how they are gonna impact the world. But it's also marrying that with actually participating and building. [00:13:00] I think about us as very much as ... if you think about anthropologists, it's like we're living in the tribe or in the experience. We're actually not

just sitting back and studying and looking at data. We're actually wanna move and go live there and really understand the work flow.

The way that I work and the way that I think that to me is the only way I can really understand a new technology. Whenever we've start exploring a new technology, I will [00:13:30] often either build something myself or try to create something in it because I want to see and feel and understand the technology. So it's a very tactile, hands-on experience that we try to have with the technology. That's from a process standpoint how we think.

We also have a set of workflows, a set of themes and areas that we're interested in and that we're gathering data, gathering research and trying to form a perspective on. [00:14:00] That is a more typical research function. But it's really the marriage of that research with the actual process of building and participating that is core to what we do and how we do it.

Demetri Kofinas: There are a couple of quotes I have here from an article that you wrote some years ago for Wired. I'm gonna pull one out right now that I think is relevant to what you're saying and where I'd like to take this conversation. " Computers are no longer that other thing, that other object. The line between machines and humans is becoming [00:14:30] indistinguishable."

I think you are touching on that there and one of the things I have found very interesting about your perspective is the way in which your focus is on the human experience. How we relate to technology. How it changes us. How it relates to us. That whole interconnection. My interest, what I find most interesting is how that's going to change the human experience drastically. It already has, obviously, in tremendous ways. But [00:15:00] there are a number of things, some of them that I know concern you that I've seen you specifically write about or think about and some of them I certainly think they are relevant and I think you probably will too.

One of them is the question of free will.

John Borthwick: So, Demetri, can I just slow you down and jump in there.

Demetri Kofinas: Sure.

John Borthwick: I wanna underline something, which you read in that quote, which I wanna make sure it's clear because I think it's very important is that when I first came to this medium, I viewed cyberspace and the internet as being other. [00:15:30] As being us building other. What I was saying there is something which I think that sometimes four, five, seven years ago we really started to, that other became indistinguishable from our human experience. I think now we're very much in that liminal period where we are starting to integrate technology into ourselves. Our ability to actually [00:16:00] understand the distinction and the line between the human network experience is becoming increasingly hard and blurred. I increasingly think about ... In the early years, I

thought very much about other. Now I think about this integrated experience, which I think is fundamentally different.

Demetri Kofinas: Even listening to you talk about that I am trying to get in your head space there and see how I would begin to think about that in that particular perspective. Even [00:16:30] though I read the quote, I don't think I fully appreciated what you were saying. On a superficial level I do. There are a few things that emerge from that. One is this notion of self. We've actually done a show specifically on this. On the Protestant Reformation and the creation of the individual in Western society. It's interesting because there are many in the philosophical community, whether they are coming in from the standpoint of meditation, from a spiritual standpoint or whether they're coming to it from a technological standpoint, that view the self as an artificial construction.

These [00:17:00] questions are very relevant. That also deals with the question of free will as there are many philosophers who also question our ability to have free will. There are neurologists and are scientists who would dispute that as well. How does the self-evolve in this world and what is the place of free will should there be some sort of continuity of self in this increasingly inter mediated world where we have virtual reality, we have augmented reality and we have all these inter mediated sensor experiences? And that, of course, will bring us to [00:17:30] another question, which I wanna touch on, which is truth and what is true in an increasingly inter mediated, technological future?

John Borthwick: I don't get an opportunity to think about the metaphysical, the broader components on the broader landscape of self that often. My hunch is that we've moved into this world, which I refer to as post-reality, what I think about as post-reality. We've seen these over [00:18:00] the last years, the emergence of fake media. We've seen this concept of, the idea of objectively, verifiable truth has been questioned in so many ways. I think that now what's starting to happen is that we are, as human beings, my reality is a processed reality. Whether it be the colors I am looking at right now. Whether it be the sounds I hear. Everything [00:18:30] is going through a filter and is being processed. There's subjectivity to that, that I think just exists. As technology is being integrated into that subjectivity, I think we're having now this integrated sense of self that is being created that is an extension of the human self.

I think that we can talk about artificial intelligence and super intelligence and all that [00:19:00] concepts that people are talking about but I think, actually, as a culture and people living today, many of us have crossed the chasm already where we are already living in that sense of extended self. Where we have this sense of the network, of all the communications like tentacles we've had at any one point in time. I think that the concept of self is being extended and is changing. Yet, like I said a few minutes ago, it's not clear to me that we're actually [00:19:30] capable of observing this because we're participating in this process and there's transformation.

One of the things that I think is really important is that, and I'd be happy to discuss why but I'm not really sure totally why, but it feels to me, intuitively, very important that we in the

next five, ten years have a sense of demarcation of what is human. What is the boundary of ...

Demetri Kofinas: Human consciousness, when you say human? Or do you mean the human animal and the totality of the human [00:20:00] experience as it existed on the plains of Africa.

John Borthwick: Let's start with the body. Just the physical body. What criteria do we assess that that is a human being. If I'm looking at one human being whose had 30% of their body has been either extended or has been replaced or has been augmented in some way by technology, is that still a human body? So, that's the body and then we could discuss the mind. I think about [00:20:30] them as two separate things. That's a question which I think we need to, as a society, we need to understand that because that concept, I think we need to have a concept of organic. Of what is an organic human.

Demetri Kofinas: The body, bionic, biotechnology. That doesn't present a problem for me. It presents, obviously, a problem in terms of competition in sports and other areas where bionic human beings will be superior to organic human beings in all sorts of endeavors. For me, the really [00:21:00] scary, sort of confusing part is the mental part. The conscious part. That makes sense that you separate both of them. That, to me, is the most profound ... It's interesting, you probably are familiar, you probably have read Nick Bostrom's book, Super Intelligence.

When I first heard Nick talk, he used an expression of applies philosophy for what artificial intelligence engineering is. That really stuck with me and it really helped to elevate the problem and clarify it because philosopher's have been debating these very essential, basic [00:21:30] questions: what is good, what is evil, what is the nature of reality, these things forever. We have never come to a clear conclusion. Here we have to solve that problem, solve many of these questions, answer many of these questions to proceed forward. Not just effectively, but safely and with integrity, integral sense of the human being. Also bring philosophy and the importance of philosophy into the public sphere, into the public debate in the way that it never did before.

John Borthwick: Right.

Demetri Kofinas: Developing a theory of mind, a theory of consciousness, these sorts [00:22:00] of things.

John Borthwick: I would argue that in the last 50 years has been a dismal 50 years for philosophy. I think that it has been very much a laggard in the real sense as we think about artificial intelligence. It needs to be ... There's a lot of work that needs to be done there. I think it becomes a discipline, it moves it much more into the center of our thinking.

Demetri Kofinas: How do you think that we go about doing that? In other words, before maybe you say that because I do want you to touch on that. Maybe we can establish the imperative of the [00:22:30] problem or what the problem is for those in our audience

who may be unfamiliar. What is, in your view, makes this so important. We're talking about AI in this case, let's distinguish between narrow and general. I assume we are both discussing general here or good, old fashioned AI.

John Borthwick: That's an assumption that I wouldn't leap to because I think that so much of the work that is going on in AI today is actually an extension of machine learning and the massive dividends that we've seen from [00:23:00] data science and the incredible both acquisition of gaining of data but also our ability to process all of that data and to execute on narrow AI implementations. I think that all too often, the line between general and narrow gets blurred.

I created a bot for myself about two years ago just for fun because we're learning about bot technologies. If you asked Botwick, which is my bot ...

Demetri Kofinas: What a convenient situation that your name is [00:23:30] so conducive to being altered in that manner.

John Borthwick: So, if you asked Botwick two years ago, I don't know if it's still funny, but if you asked Botwick ... Which I stood up in a weekend, right ... Which is just basically just regex scripts ... But if you asked Botwick, "Are you an AI?", Botwick says, "Are you an investor?".

Demetri Kofinas: That's a very human answer.

John Borthwick: Yeah. But that blurring between general is really very important to highlight because I think that so much of the work ... You go back to Bostrom ... So much of the work [00:24:00] he talks extensively about utility functions. So much of the work is about, for lack of a better word, turning the world and our human experience into a massive utility function that needs to be solved. I do not think that that is what human consciousness is. I think that we have to ... Part of the ... You asked, let's go back to the original question, you asked what is the work of philosophers.

I think part of the work of philosophy [00:24:30] is actually to articulate what is the human experience and what is the breadth of the human experience. I think that in a very real way this technology is so seductive. I think that our ability to amuse ourselves to death is so great that if we don't highlight what distinguishes the human experience and what we want to actually, what is different about what can be achieved computationally versus what human beings [00:25:00] do, if we don't highlight that, we're at risk of fully merging with the network and creating a super intelligence which will actually ignore so much of the intelligence that we have as a species.

I do think we're this, not now, but this generation, next generation this liminal crossing point into new forms of intelligence. I think so much of it is actually [00:25:30] in our hands as creators and also as users of this technology.

Demetri Kofinas: When you bring up Bostrom, two things came to mind when you talk about the utility function. One, a media case for people to wrap their heads around that I think is easy to understand is in the case of narrower AI with respect to autonomous driving vehicles and the dilemma, for example, if I'm driving my car, how does the car decide if it should put me more at risk of getting into an accident or hitting a child that is on the road? Already there are cases ... [00:26:00] If you hit a child, a 10-year-old child, that child is worth, monetarily speaking, far less in a court of law than a 50-year-old adult, male, at the height of his income generating potential.

So the marketplace and the law has already assigned values, in a way, to people. This is a case where we are looking to explicitly provide values for all sorts of things, including human life. I think to go further to the point of Bostrom, he makes something that I think is interesting, he makes the point in various ways, I don't know if he's made this explicit [00:26:30] point but let's say that we want to ensure that human beings will be happy. How do you define happiness? That inability to define happiness could lead to all sorts of perverse instantiations of the AI in a good attempt to fulfill our goals.

I think that brings us back, again, to the philosophical problem of how do you get there? I'm coming at that saying I don't know. To me, the entire spectrum of the problem is so complicated that I [00:27:00] would not know from where to begin to solve it. There are many things that I do want to discuss with you about that are more practical and more immediate but this, I thought, since we got there, I thought we could at least ... I just want to see where your head was at with respect to that.

John Borthwick: I believe that the complexity of the human experience and the depth of what it is to be human is something that we need to explore and elevate as we [00:27:30] simultaneously elevate the incredible ability that we have to use machine learning and to apply utility functions to every corner of the world. Let me tell you what that means for me personally. One of the questions that I've had is, for maybe upwards of two decades I've asked myself a question: does true genius exist? Does [00:28:00] step function, real genius actually exist?

I've been fortunate enough to meet a few people in my life who I've thought, this person is just orders and magnitude smarter than me and more capable of connecting. I often think about genius and intelligence at just the ability to be able to connect in simultaneously different layers. Which, by the way, worries me sometimes cause I think whether I'm applying computer metaphor to the way that I'm thinking about human intelligence, which worries me.

Demetri Kofinas: An issue [00:28:30] of language. That's something else that's very interesting.

John Borthwick: As an exploration of this question, I decided about five, seven years ago to actually out and say okay, I'm just going to read about some people that people generally thought were pure geniuses. Every year, I would sit down and take off a set of biography's I was going to read. At the beginning of 2016, I decided to do something

different which is I decided to ... I said, okay, I'm going to read a Shakespeare play every month.

Demetri Kofinas: I've heard you've been reading King Lear [00:29:00] or you did.

John Borthwick: I've been reading a play every month now for year and a half. I did it because I wanted to explore genius, right? I am now, for me, question asked and answered. After 15 years of thinking about this. Definitely asked and answered. Here's an individual that exists at state of genius that I did not ...

Demetri Kofinas: Shakespeare?

John Borthwick: Yeah, which, I didn't believe I could recognize.

A second thread [00:29:30] here that I have become fascinated by in reading this is that there's a media critic who wrote an awesome book, which claims that Shakespeare actually created what we consider to be human. The idea that Shakespeare's construction of narrative and construction of character has actually informed how we think of sense of identity as human. This is a book by Bloom, which is titled, [00:30:00] I think, just that, Did Shakespeare Build the Construction of the Human.

I think that, as I've been reading, I find ... I haven't talked much about this. I mention it once somewhere else but I don't talk much about it because first and foremost it just feels pretentious.

Demetri Kofinas: At talk about Shakespeare?

John Borthwick: Yeah. I'm sorry to say that but it does. It just feels like it's like what the fuck are you doing? The next reason is that I found it really hard. I, as an adult, I read [00:30:30] more than I've ever read in my life. Each year on, year out. I'm reading more and more. But I'm reading in short fragments. I'm reading mostly non-fiction, mostly little chunky ideas. To actually immerse yourself in that kind of language is, I found, at least me personally, very hard.

Like anything, if you persist you get there. I found a different world in there. That different world I found has informed [00:31:00] or is informing me my perspective on that question of what that other side to what it is to be human. I think our ability as human beings to create and to create art and to create works of art that are represent our species and our humanity is the core of what philosophy needs to start to really expound upon and fill in the color on. [00:31:30] I think the other side of our collective brain, the utility function, is ... That one is getting fed.

Demetri Kofinas: Have you ever read Nietzsche?

John Borthwick: Yeah, a long time ago.

Demetri Kofinas: His commentary on tragedy on the Greeks was something that when I first read him I didn't really appreciate what he was saying but to sort of follow your thread, I've also taken more interest in and seen greater value in the arts and in mythology also. [00:32:00] That actually brings up something else, which I did want to talk to you about in the application and we'll get to that. You cited the story of Icarus and that's something I wanted to get into with you with respect to this hubris versus complacency, which is interesting. I hadn't seen the complacency side.

John Borthwick: I think most of us ... I had forgotten that, too. It was only when I went back and read the original story. You've got Daedalus and his son Icarus. He frames it as both hubris and complacency. If you fly too high, the wings [00:32:30] will melt and that's the allegory of hubris. Yet if you fly too low, you will fly above water and the wings will get wet and you're toast also. Its complacency and it think that that's the ... Those are the upper and lower boundaries of where we need to.

Demetri Kofinas: It's also an interesting metaphor for the place of humanity. In my view, the way I read that myth it also speaks to the notion that if you fly too high, you've reached [00:33:00] the territory of the gods and that is too high for a human being to go, which I think is very relevant to where we are today because we are approaching that level of ... Certainly, our conversations, many conversations of people in the Valley, are around these ideas of immortality.

Before, though, we move to that area, there is something that I wanna ... We could go anywhere. But it's interesting, when you brought up Shakespeare and how ... I was not familiar with this thesis that he, in fact, was somehow responsible, in a way, for the Western [00:33:30] turn toward the creation of individual or the self, it sounds like you're saying.

John Borthwick: Creation of the self. Creation of the concept of character. Right? I think that the idea of being able to, in a narrative sense, define a character. Then also articulation of those stories. You talked about mythology. But I think many of them pass through Shakespeare but he's articulated the cannon of myths [00:34:00] and the narratives that we, as particularly Western society, have grown up with. They're all in there.

Demetri Kofinas: Oh yeah. So many of modern television series that are very popular, pull from that. Did that book that you read, did it mention Julian Jaynes Breakdown of the Bicameral Mind at all? Is that a book that you've read or are familiar with?

John Borthwick: No.

Demetri Kofinas: It's interesting because the thesis there, ultimately, I didn't find it convincing although it's a very popular book from the 1970's, I think is when it was written. The thesis was that the ancient Greeks, [00:34:30] certainly the Bronze Age Greeks, at some point that changed but there was a duality of mind.

The gods, the thesis was, the gods were really a manifestation of this bicameral mind. That was the executive function that was separated from the other part which was more passive. That consciousness developed in this breakdown of that bicameral mind. It just sounds very interesting. It sounds like it's somehow related to what you're describing there with Shakespeare.

We could keep going [00:35:00] on and on but in the interest of time, I wanna bring it back a little bit to this notion of ... When we were talking about the intermediation of reality with digital technology. One of the things that you talked about and that I mentioned as well is this notion of truth and trust. I think that's extremely relevant because of this contemporary debate around fake news and synthetic news and being able to determine what is a fact. What is real. It turns [00:35:30] out that this is also a quote that you've quoted. It's not your quote, obviously, but I'm gonna say it because you quoted it at the Daily News Innovation Lab where I was at. It was an Orwell quote. "Reality exists in the human mind and nowhere else".

I think that brings us back again. To circle back to something you were saying which is we're having to reckon with the fact that reality isn't as real or isn't as concrete as we thought it was. In fact, we're living in a simulation, at the very least, of the mind, of the brain. How do we step [00:36:00] in to this new world? One place where I think that is a very immediate problem is in the place of news and information. On a practical side, I also want to ask you, what are you seeing that is happening in that place that can, potentially, combat this problem of providing contextualized, meaningful, verifiable, trustworthy information in this disintermediated world?

John Borthwick: You're trying to back, right? You're trying to put the genie back in the bottle and say just tell me what [00:36:30] everything is. Just label the truths from the lies and the bullshit and we'll be just fine. I think that ...

Demetri Kofinas: That's a big problem.

John Borthwick: I do think this: is that what we've been talking philosophically about a whole set of things that relate to AI and technology and society and culture. I think that we haven't really touched on the corporate role in this. I think that the fake news problem, [00:37:00] as it stands today, is that you could make significant amount of progress if a few companies actually fully engaged in that as something that needed to be solved. Right?

I do think that there's ways to ... Whether you're using analogies as spam or whether you're using analogies as in the early days of ad tech, we've seen how data and machine learning can be applied and preferences and understanding of the origin of [00:37:30] particular items whether it be news items or whether it be spam emails or whether they be low quality ads. These platforms, particularly Facebook, have a tremendous amount of power to actually get rid of the worst of the worst. There is a very difficult gray space of stuff, which we're going to have to, as a society, both learn to live with. We're also going to have to, as a society, learn to see how we can navigate the influence [00:38:00] pedaling around that.

We've seen ... The first wave of understanding has moved through, post-election, was, oh my gosh, all this, some of this, a lot of what's out there may not be true.

I think what's now actually people are starting to see is the amount of investment that's going on in the amplification tools. Whether they be bots or sock puppets or other tools that have been used to amplify these [00:38:30] particular stories and these fake news stories. At Betaworks, we saw ... Our data science teams saw evidence of, what we refer to as media hacking because we're gonna have to meme down about three years ago. I wrote a bit about it. There was incidences.

There was an incident with a chemical factory. A news story about a fire at a chemical factory that was completely fabricated and structured. It looked like a legitimate CNN piece of news. It didn't actually [00:39:00] catch hold. I think that the people, it became pretty clear, that it came out of a troll agency that the Russian State government had set up. But the story didn't actually move around the network or take hold.

I think that what the difference is today is not only the fabrication of the story but understanding how to make those fake stories actually take hold. That's not just about spending ad dollars around the particular [00:39:30] story. It's about finding individual hooks in the story that have some degree of resonance with something, which is either happening or which people believe is happening and so that becomes the thread that then gets pulled out. So that thing that story, it has a thread you could see that people were pulling on that had to do with people's distrust of Hilary Clinton. The people's distrust of institutions and of parties about the incident that somebody had [00:40:00] actually been killed. Right? So the thread that gets pulled on.

I think that generally ... Number one is that I wanna highlight the role of corporations and their platforms, specifically Facebook but also Google. On the Facebook side, there was the ad by, which got a lot of bitchin' the last two weeks.

Demetri Kofinas: What was that?

John Borthwick: This was about the fact that the ... Facebook acknowledged that there was a purchase of ads by Russian trolls [00:40:30] in order to accelerate and amplify some of the fake news stories.

Demetri Kofinas: During the campaign.

John Borthwick: During the campaign there was ad buys. But also, separately, there was another story, which relates to this which I saw which is that the Facebook team had started to institute an editorial overlay where they are identifying stories that are not real, that are false. And that they are flagging them or removing them. There was a story in the case of Holocaust denial. [00:41:00] The Facebook guys had determined to remove those stories in four countries. In Israel, Germany, and two other countries. I forget which ones. But they've decided to leave them in for other countries.

Demetri Kofinas: That's so interesting. That just speaks to the point that it's not a question of truth or voracity making an independent determination about what is fact and what is not. But instead, what is the relative effect of this in this particular area, with this particular audience.

John Borthwick: Right. And what's the value of it as a media transaction.

Demetri Kofinas: That's fascinating.

John Borthwick: I think that this is [00:41:30] a complex system. But I do think that the ... When you think about the amount of work and investment that has gone in to advertising over the last 10 years online, if a portion of that could be applied to this problem, I think we'd make real headway.

Demetri Kofinas: There are two things that you are touching on there, I think. Certainly, these are the two major sources of the solution that I believe are available to us. One is the design architecture. There are people recently like Tristan Harris talks about this. [00:42:00] How do you reward the idealized self over the immediate gratification? The self-indulgent. The one that wants the chocolate cake now versus the one who, in the long term, he wants or she wants to be in better shape.

And then the other one is the business model. Let me ask you about the second one, which is the business model. Right now, the internet grew up around advertising because in the early days of the net, no one was going to pay for digital wares or stuff they were gonna read online but that's changed. [00:42:30] People have shown they are willing to pay for things online. Do you think we are at a place today where content, great informational content or content that's embedded inside of educational technologies that accelerates learning for individuals, that provides real value ... Is that something that people are willing, do you think, to pay for? And is there a role for subscription and other types of business models that are not ad reliant and that could be a big source of ...

John Borthwick: Yeah. You talked about architecture, right? [00:43:00] I think that we crossed an important bridge as a culture and as it relates to this when it was decided that a series of decisions led to the ultimate decisions that payments would not be enabled in the browser. Even before the mobile web, I think if we ...

Demetri Kofinas: You are going back to the 90's you're talking about.

John Borthwick: Right. If we had enabled payments in the browser, I think a lot of this would look very different. I really do.

Demetri Kofinas: Like iTunes.

John Borthwick: Yeah because what is iTunes? It's a browser. [00:43:30] It's a proprietary, closed browser that Apple ... I can't publish into iTunes, personally, without having to go through Apple screen. But it's a form of a browser. I think that if we had

enabled payments in the browser, we would rewarded part of the media content experience towards paid media and enabled things like micropayments.

I think that you're seeing with the emergence moving to now into the crypto world but when the emergence was the blockchain in the Ethereum and [00:44:00] the ability to have smart contracts. We're now seeing the reemergence of, some people call, the re-decentralization of the web, which I think is pulling some of that back.

But I do think that from a media standpoint, the business model has dictated and has accelerated the cycle of both platform dependency but also of thin, crappy content feeding ... [00:44:30] we've gotten into this vortex.

Demetri Kofinas: The content is shit.

John Borthwick: Yes, of driving the content down the tube. The monetization has gone with it. So people are making less and less money as it spins faster and faster.

Demetri Kofinas: It's kind of like eating your own vomit. Not to be crude but your audience is getting dumbed down. The more lucrative audiences are the ones that are more intelligent, more capable. Those are the people you wanna target. If you're feeding your audience crap, they're [00:45:00] gonna become increasingly less valuable. And that's across the economic spectrum.

John Borthwick: Right. Then you tile on top of that. I think that Tristan is doing some amazing work and he's very articulate about the mechanics that have been tiled on top of that because I think that we have taken the attention, we've hacked our brains and taken the attention, our human attention to the casino. We've done that willingly because [00:45:30] every time we respond to a notification we're implicitly saying my attention is more valuable to that notification than it is to another human being or to a human experience or to just what's going on in the world and what you are seeing in front of you.

I'll tell you something. I was talking with a colleague of mine about it last week, which I thought was fascinating is that so there's this incident [00:46:00] a couple of weeks ago that of a US Navy ship collided with a tanker. I haven't seen if there's been any revelation on what's actually happened. But this is what, in my world, from my perspective, what I fear happened. I fear that everybody in the US Navy ship was staring at computer screens and the models were saying no, the tanker is going past us. Not a big deal. Not a big deal. And nobody was fucking [00:46:30] up on the bridge looking with their eyes. Because how could you have ... Maybe there is something weirder that happened here but how could you have a tanker collide with a ship? It's just like they kind of ... I've never been on a tanker but I've seen they move slowly. I mean ...

Demetri Kofinas: That's very interesting.

John Borthwick: Something really weird. I think that day in and day out that's what we're doing with our attention.

Demetri Kofinas: That's very interesting and yet we have these legacy systems like our [00:47:00] nuclear umbrella that rely on good information. I think that's interesting. Thank God that, at least, that is a sneaker net that operates on floppy disc but still nothing is totally secure.

Also, it's interesting. You brought up blockchain. That is something that I wanted to speak to you about because, for me, blockchain and any type of peer-to-peer technology or protocol like that is a source of a major solution for a problem that we face as we move forward in this increasingly technological, inter mediated [00:47:30] world where we rely on these central points of clearance and communication and verification in order to maintain autonomy. That brings us back to that notion of self and the individual. If we want to maintain ... Do you want to say something?

John Borthwick: I think the yes bot, right, so I would have 10, 15 years ago just said yes, yes. Right?

Demetri Kofinas: To what part?

John Borthwick: To the, my assumption is that the decentralization and just being able to push the ability to publish into more people's hands would be, inherently, would lead to [00:48:00] good outcomes. I do think that as we think about the re-decentralization of the web, we have to learn from the last 15-20 years and say, okay, what is actually our intention from a design outcome standpoint. What is our intent? What do we want to create? Because I think that what we should learn and what I now believe is that the technology, in and of itself, is not going to create a naturally, a beneficial outcome [00:48:30] for whether it be our ability to publish, whether it be our ability to have a more informed society, whether it be our ability to have more participation in our society. That will not happen inherently by just pushing to the edge. And so that's the bot. So, yes bot.

I think that we need to design for that. We need to think about that because I think that just this underlying techno-utopianism, which is I certainly have ... 20 years [00:49:00] ago, for me, it was just about will you just give people the ability to publish and that will be enough. I think that ... I'm now coming to that with a different perspective.

Demetri Kofinas: Every time you talk, you make me rethink certain things or how I wanna say something or how I'm thinking about it. I think that techno-utopianism you refer to, for me, it is this longing, this desire to find a way to express technology that is consistent, inherently consistent with human values and the way in which humans self-organize. [00:49:30] There are so many redundant constraints on totalitarianism in human society. Even when totalitarianism societies emerge, they can't last forever. But what's really frightening about these technologies as we move forward is we're creating such powerful tools that enable those that understand them to use them in all sorts of ways. And I think that's the scary part of it, which is, for me, like when I talk about blockchain, it's part of my hope that we can create this protocol and [00:50:00] we can build platforms and we can build technologies and software on this protocol that is distributed so that there isn't the capacity for one part of the network to control everything

But it brings us back to your point, which I recognize, which is what do you design for? How do you do that? I don't know. Do you see promise for this technology? What is your sense of it? There isn't ... Clearly, there is no golden bullet or silver bullet but what do you think?

John Borthwick: I think that we're now in the thick of it, [00:50:30] right? We're in the arena. We're in the middle of this incredible period of 30, 50 years of reconstruction of our reality. Where we are really going in and understanding and constructing a new sense of reality. I think that the urgency, for me, is about being able to fully integrate what is human into that.

I think that we're on [00:51:00] the field and we're working on and figuring it out.

Demetri Kofinas: That is the urgent problem for you. This ...

John Borthwick: That is the urgency.

Demetri Kofinas: To clarify what you're ... If I understand you correctly, the urgency is in defining what it is to be a human being. What is the essence of the human experience? What is it to be human? And to safeguard that so that in this transition we don't lose that and we don't lose ourselves.

John Borthwick: Right. Right. Correct. You can wake up in the morning and think that there are reasons to despair but I think every [00:51:30] day, I am seeing remarkable individuals, humans, create things that are giving us the opportunity to reframe, restructure, reexperience the world around us and the way we communicate. So I think it's very much still under construction. We have a, today, a handful of companies who've a tremendously powerful position in the network.

But I think in most cases, you can look at them and say I'm really not sure how important that will be in ten years' time. [00:52:00] I think that we are still seeing the march of technology reinvent the platforms and the ways we do what we do. The way we communicate today is radically from the way we communicated five years ago. Right? Five years ago, I think predominantly, email. Ten years ago, it would have been email and maybe instant messaging. Today, it's email, still a bit, but most of my communication [00:52:30] or much of it is now in texting related apps and whether that's, depending on your flavor, whether that's an iMessage or a Snapchat or a WeChat or a telegram. So much of our communication has moved up into those apps and into those experiences.

I think that the technology and the interfaces, that we, day and day out, use and that evolution and that march of invention of new interfaces is giving [00:53:00] us new opportunities to redefine these problems. But the underpinnings are very much what you said and the urgency is very much what you highlighted, which is how can we create this next layer of technology and this next set of experiences to integrate the human experience in there.

Demetri Kofinas: So, it's fair to say that you don't look to find the technology that is what we really should be betting on. It's more that your focus is on the day-to-day, diligent maintaining of philosophical [00:53:30] perspective around these very basic sense of what we want to achieve. That if every engineer is meditating on that every day and that we, as a society is focused on that, that that is the best bet for achieving the type of outcome we want rather than saying, okay, this blockchain technology is going to disinter mediate and distribute power.

John Borthwick: I think it's a combination of both because if you talk about blockchain, specifically, the people who have been working on the protocol there at blockchain for the last five years and there are tremendously [00:54:00] interesting and hard problems that people have solved and are working on. Those things take time, particularly at the pursuit of the protocol layer. There's a lot of work that just requires time and investment.

But I think it's like having that ... it's not just, okay, if I re-decentralize or if I decentralize a transaction or a piece of communication, that will suffice. It's understanding what is the nature [00:54:30] of that piece of communication or that transaction and thinking about the intention behind it. Because I think that a lot of what we did in Web 2.0, what some people call this generation of things that we're still now working on but now we're moving into a 3.0. But what people refer to in the Web 2.0 world is only connect was good enough. Right? If I can only connect you. But you take very concrete things like you talk to Wael Ghonim [00:55:00] about what happened in Tahrir Square. So he was the individual, who worked at the time, at Google and was there in Tahrir Square during the uprising and used Facebook to enable Facebook groups to enable, to basically overturn a government.

Yet, you talk to him about it, on one hand he'll talk about the incredible power of the network to convene and to get people to communicate [00:55:30] and to the Square to rebel against Mubarak government. On the flip side is that the social fabric of being able to actually get that movement to do something afterwards was severely lacking.

Demetri Kofinas: Sure.

John Borthwick: Same thing with Occupy Wall Street. Same thing with ...

Demetri Kofinas: The quality of those connections.

John Borthwick: Yes, the quality of the connections and how can you actually turn these into movements that actually drive real social change. Because when you think about what we have to do as a society when you think about universal, basic income. When you think about some of the changes that [00:56:00] we need to do to our society. When you think about environmentalism. These are massive challenges that we, as a culture, as a species, face. Unless we can use the network in a constructive way, to actually drive real, long-term, social change then all that we're doing is just thumbs up, likes, you know?

Demetri Kofinas: Right.

John Borthwick: Sort of like, that was cool, Demetri. It has its place but that ain't enough, right? It's just like that's not why we built [00:56:30] all this technology. That's not what we're here for and it think it's keeping everybody's eye on that because we are trying to recreate the world and society and to make it in to a more open and inclusive place. Just by applying more open technology to that doesn't necessarily mean you get to the outcome.

Demetri Kofinas: Right. That's the hubris side of the equation and the thumbs up is the complacency. John, I feel like we could, we would, there were many things that I wanted to get to with you, especially with specific companies and [00:57:00] what different people are doing in the space but we've got to wrap it up. Thank you so much for coming on the program

John Borthwick: Oh, it's a pleasure. It was fun talking.

Demetri Kofinas: It was a great conversation. Thank you.

John Borthwick: Thank you.

Demetri Kofinas: And that was my episode with John Borthwick. I wanna thank John for being on my program. Today's episode was produced by me and edited by Stylianos Nicolaou. Sound engineering is Ignacio Lecumberri. For more episodes, you can check out our website at HiddenForces.io. Join the conversation [00:57:30] through Facebook, Twitter, and Instagram at [@HiddenForcesPod](https://www.instagram.com/HiddenForcesPod) or send me and email. Thanks for listening. We'll see you next week.