



□ Hello everyone, thank you for being in this bunker. We're going to talk about 'crypto', and I guess we introduce ourselves first... So, I'm Primavera De Filippi, I'm a researcher at the CNRS and a faculty associate at Harvard, and my research, since six years now, is on the legal aspect of blockchain technology and the governments' implications... And at the same time, I'm also making blockchain-based art forms: The idea is to use the art as a means to illustrate the legal challenges which I'm analysing in my actual academic research. And then I also have been working a lot with various initiatives trying to design and identify new mechanisms for using blockchain technology as a new government structure for communities and so forth.

/ Hello, good morning... So, my name is Stephan-Eloise, and I am a researcher in cultural data and analytics. I initially started my investigation on music recommendation algorithms – I studied Spotify recommendation algorithms, then I moved to the question of ethics in technology, and especially from a post-colonial perspective, so including the Global South in all this reflection around technology and data modelling and shaping human behaviour. I come, both from a communication sciences and philosophical background, and I also work in the start-up world; currently at a platform for online education called Open Classroom where I'm heading all their developments in Africa. Recently my focus has been a lot on bringing a Global South perspective on technology, and especially around blockchain, which is also how I engaged with Primavera, as we collaborated 4-5 years ago on a project called Bokk – a blockchain for cultural data in Africa – before this Clandestine Talk starts. So, yeah... It's exciting to be invited for a clandestine conversation around this now.

* Dominic Perini here... I am working as a scalability architect and technical lead at Erlang Solutions. Erlang Solutions is a company that focuses primarily on functional programming, distributed data consistency model, scalability and parallel executions. I'm also Co-Founder and Director of MOCDA – Museum of Contemporary Digital Art and I recently founded an organisation called EverKnow, which is focusing on a novel approach to research into customizable smart contracts. As a brief information about my previous experiences; I think the one that is most relevant to this talk is the one where I led a Blockchain Research and Development Team for a global credit card payment provider. This was a unique opportunity to get exposure to blockchain technology which will be discussed again later in the talk. I also had a fair amount of exposure to Natural Language Processing Research and Development, in particular, I founded an organisation that engages in a research and development effort aimed at aiding the police investigations. We joined a consortium funded by the EU in partnership with New Scotland Yard Metropolitan Police and Police of Madrid. And that's it from me.

○ I'm Beatriz. I am first and foremost an artist. I have been an entrepreneur for 20 years in the creative industries, and now, in the last few years, I have been working on a technology company... It's basically a technology platform, a normal platform where people all over the world can communicate only using drawings, so it's really a visual conversation platform, in which you make a drawing on the platform and anyone around the world can reply with another drawing.

Primavera □
De Filippi
Stephan-Eloise /
Gras
Dominic Perini *
Beatriz Ramos ○

And anyone else could add to that conversation, so there is... It's very open, there're not any cultural boundaries, you don't know who the person is, what age they have... Sometimes you don't know if they are female or male, but you get to know a lot of who they are inside, by just making this art together. So, what brings me here is that in looking for how to make that community sustainable, we decided to go into blockchain and use crypto as a way of creating a crypto economy; an economy that's based on the values of this community, and that's what I've been working on for the past few years. So, that's all my experience as an entrepreneur, having companies and employees and working for clients in New York; I'm bringing that perspective into the other side of me, which is a social anarchist, and so... I think crypto is a perfect place to explore these kinds of things.

□ Wonderful. So given all this incredible expertise and difference of background here, maybe we can start by trying to have this initial conversation about how do we each relate to this notion of 'crypto'? Whether that's like cryptography, whether that's like crypto-currencies, crypto-economy and so forth... And like, how do we see crypto actually affecting our life? And how do we each see us somehow contributing to this crypto ecosystem in the different facets of it... Would you like to start, Stephan?

(Laughter)

/ Do I have that privilege to start? Okay, so we're going against the clockwise... So how is crypto affecting my life? That's a very good question... First, and as I think I'm invited here to also bring a sort of naive standpoint on blockchain, or maybe less of an insider, although I have been around these communities for a while, and as a philosopher, I would always start with the etymology of 'crypto'. I think it's interesting to look at it as a starting point – crypto refers to a culture of what is hidden. Crypto means literally in Greek 'what's hidden', 'what's not seen', 'what is being hidden from... from the real world', and from there we can obviously go through a lot of aspects of the crypto communities today... Resonating with what you mentioned, Beatriz, about the social anarchist thinking: crypto is indeed very much linked to a mix of political communities: from crypto-anarchist, social anarchists and also cypher-punk communities... But before that, if we look at the very long history of crypto, and think about the word itself, even before the contemporary acceptance of it, which today refers to a currency, it casts a perspective. The word 'crypto' is designing communities and allowing these communities to affiliate themselves within a set of values that belong to a history of what is hidden. With that very long history in mind, we also might look at them differently...

So, I'm not a historian of crypto but I think it is important to recall that the concept 'crypto' was also very much linked to a science called 'hermeneutics', the science of signs, that the Greeks were, you know, championing, you know. In that, in antique cosmogony, every sign had a different meaning, and so the hermeneutics was the science for interpreting this sign, and make the world-readable, and understandable... And then from there, early with the first religion gathering and structure, crypto became also a way to talk about those who were not part of the religion but were hiding their religion to obey to a dominant religion...

In the Roman empire, there has been some crypto-Christianism for example people who were forced into hiding their beliefs to avoid persecution. The 'crypto-Christians' were the people hiding their religion out of a fear when Christianity was banned across history – disobeying the law and acknowledging publicly another faith while remaining Christians 'at heart'... I don't ask us here to dig into too deep into that history of crypto but I think it's very important to bear in mind that crypto has this double-affiliation or double-route; one is being this religious and spiritual route that relates to how you hide your faith and how you hide something that you deeply believe in because of an oppression and because of a danger... And the second aspect, which is how crypto also became a currency and a value principle for building communities... It's not 100% similar but maybe with secularism, it became more of a political, so in modern times it became more of political affiliation as a way of thinking "Okay, we need to hide ourselves again from the dominant world, from the oppressive structures and maybe build a different distribution, a different value system at core..." Yeah, so crypto has kept in its core value both resistance; resisting to dominant, while hiding, so Crypto encourages a double-agency: an attitude where you can speak a language instead of the truth and it's aloud and even encouraged for your survival... And I think it's fascinating to look at this today when you think of the blockchain world and the blockchain communities because I think we've reached a point, and I know Prima you've written a lot about that and you've talked a lot of that, where the blockchain community became such a dominant! Like the blockchain being a new bad word, and so crypto being the communities who by hiding themselves become dominant...

Oh, and I forgot to mention but, I think you will do that very well soon Dominic, about the cryptographic practices of both deciphering and hiding messages with mathematics and computer sciences – hashing messages... Which also relates to that 'faith + resistance' under a war and hostile time basically... So crypto basically like goes from the hermeneutics of signs and a new way to look at signs – how signs might express something and build a language, but also how you hide your core values to survive... then it becomes a social organisation; how you resist to a dominant organisation to maybe build something different but then become yourself dominant. So I feel the blockchain world today is rooted in that, so to say, playing with these values, playing with this history and at the same time maybe being a new kind of dominant. When we faced the ICO craziness couple of years ago, also clearly shows that... Also if we think of Libra, for example; the Facebook crypto-currency, I think it's very important that we raise all these questions around the values in it and which faith, which value system is it hiding or protecting? ... So that is just my ideas for an introduction, I don't know if Dominic you wanna keep going?-

* No, thank you so much and I think you mentioned some elements that are highly valuable in terms of the resistance and hiding, but what I would like to contribute from my end is that from a computational perspective, we are talking about transformation of information, so hiding gets performed in that way... So, typically we are talking about cryptography, which is something that you mentioned briefly, which is a practice that effectively transforms, encodes information.

And if we look at how this has developed over history there are definitely a lot of military examples that boosted this type of practice. That said, we can see the first examples of cryptography in ancient Egypt around 1900 BC, where we see the first carved inscription that involves a transformation of a pictographic form into another pictographic form... And this apparently didn't have a military practice. But it is true, that later on when this was brought along by Julius Caesar, about 100 BC, we can observe some of the first uses of military purpose cryptography... And apparently, Julius Caesar was known to use a form of encryption to convey secret messages to his army generals in a remote location. And fast-forwarding to most recent times, during World War II, we see the Enigma code, that the Germans brought along, the Nazis, and this gave a boost in the sense that there was a machinery associated that would perform this encoding, this transformation, and yet conversely there was a machinery involved in decoding, which is what happened at Bletchley Park led by Alan Turing. So, I think that recently this is taking even a further spin in what we mentioned and we could see a resistance being put in place when it comes to the crypto-space, the crypto-currency-space, and this is a resistance towards a manipulation of capital from central banks over the world. And I think there is that element. So, I think there is less of an element of hiding, the element of hiding is present in the sense of providing a form of protection for the involved parties but there's definitely an element of resistance.

○ Yeah, I will pick it up from there because from the social anarchist perspective, to me what crypto has, like even the word 'crypto' is hope because... And I never felt any hope with Obama for instance, so... But here is, it's really the potential of imagining and experimenting and figuring out new ways of organising communities, and as much as the space has been co-opted by big banks and big companies like Facebook or it's been co-opted, that we still have these places where nobody's seen anything, nobody's taking... Nobody's really paying any attention and so we can experiment as much as we want, and that's something you can't do, let's say, in other aspects of society... It's very hard. Everything is already pre-thought... There're so many rules and you can't just work within those rules, here there're no rules and we're all figuring out based on our values. So, in our case, I think one important aspect is when you talk about resistance and also decentralization, is: what is decentralisation for people, right? Like, for everyone it's different. And so we see a lot of decentralisation in the sense like, you know, complete freedom from the individual as I got more on the libertarian side or you can go all the way to... Well, freedom... What is interesting to me is how can we achieve complete freedom, freedom as an individual and meaning especially those individuals on the margins; the one's that are always on the other side of the minority, how can we ensure an individual can develop all their talents, everything and fulfil their potential. At the same time, that value which is created goes back into the community. So, there is a sense that each person could have value, but that value would be part of a larger, you know, much higher purpose for the community. And I think that what, up to me crypto brings, especially because it's blockchain technology, it's perfect for small communities or for niche communities to define the values of the communities to create incentives... Because you have a monetary currency linked to these communities, then you can imagine incentives that go along with that community, which is what we are doing.

So in our case, data is a collaborative community... So you can make your drawings, but at any point in time, somebody will or could reply to that drawing and at that moment the drawing becomes a collaboration between the two people or the 50 people that are involved. When you think about that, you have to, we have to think "well what are the models for this community," in our case because it's art; well art for this community is priceless. So, how you deal with an economic system for a community that think that the value that they're bringing is priceless, the market cannot price it and, or cannot... You know, there are things that you can't put a price on, like friendship and love, and the experience that we're having here, right? Like, it's just a something, you cannot put a price to it. So how you think of a currency and a set of incentives that will 'incentivise' the things that you want, the behaviours and the things that you want people to value, or that people already value, and at the same time make it in a way that is sustainable... And also, that work which is interesting, in tandem with other communities as a well, that maybe are completely different from yours, but you can sort of touch each other and benefit from each other's communities as opposed to this centralised thing that, you know; where we live, where... I'm always... I'm a very normal person in society. I'm not a Cypher, cypher-punk or anything like that, but when it comes to the question of, for instance, you know, we had this debate in the States for the last few years about equal marriage. Of course, equal marriage is important... It's a civil right, it's not nothing to do about love to me, it's a civil right; we should all have the same civil rights... Yes, if you ask me about whether it should be only heterosexual, or it should be for all kinds of sexual preference and so on; yes equal marriage, but the question that I really want is, a third option which is: let's abolish marriage, right? Because the marriage of institution is so problematic in my view. So when you have a system in which you only have A to B, and you are always going to have people that think C or D, then it becomes really limiting and I think what these systems could do is to bring voices to all those peoples on the margin... Whether they are the Global South, or whether they're the cypher-punks, but a place in which we all have a voice and that voice is heard and has an impact.

□ Thank you. I just want to say one sentence to follow this because I think it ties to, somehow has a little bit of what your point is; "value is like love you can give it to others but you cannot transfer it"-

○ Ah, that's a beautiful thing-

□ It's really nice, yeah? And-

/ Can you explain that?

□ Well... So, value acts just like love, I can give love to people, I can produce love but I cannot transfer love... If someone gives me love, I cannot give it to someone else, right. And the same thing with value, value is something I can produce, it's something I can give to people but if I value something because, like; you give me a present and I value it, I cherish it... If I transfer this to someone else it's not the same value.

So the whole concept of having this one objective market value that you assigned to things, it's completely of auto services... Everyone has its own subjectivity to what is valuable and what is not valuable and I can give you value, can receive value just like I can give you love and you can receive love but it's not a commodity that I can transfer, I can trade on the market. There is no concept of trading love, right? And I think when you start creating these associations, it's a beautiful analogy I think because we are constantly focusing on this concept of value as being like market value. And because the market says "this is what this is," I can transfer that and the value is going to be the same, but it's not true. The value that we give to the same object is going to be very different depending on who we are and what we need. So, that was just like a little attempt of... It's a beautiful sentence I think, and... Now, coming back to the more philosophical or ideological side, to me, I've actually been, since I'm very little, part of this internet cypher-punks community and so forth, and I was very interested before blockchain, even about cryptography and steganography and all this stuff, and then I saw blockchain emerging, and I really dove into this thing, and I could see two different types of strong ideologies, at least. I mean, there are many, but those are the two main ones. One is the crypto-libertarians, which basically see this technology as a way to somehow escape from governmental interventions and indeed potentially create their own system which they are self-governing etc... But since they refuse governmental or institutional interventions, they always rely on a deep market-based approach to management, to governments because if we don't have the institution governing anything than the market will. So, the problem with this crypto-libertarian approach is that you always see – just like we have seen with markets when it's not protected by an institution – there is this tendency towards concentration and oligopolisation and eventually these decentralized market governments essentially become a plutocracy... And, so the crypto-libertarian approach, which is strong in the blockchain space, to me is somehow talking about decentralization for the sake of decentralization without noticing that they're actually losing their own decentralization through the market concentration... The other one, which actually I'm much closer ideologically with, is the concept of the cypher-punks. The cypher-punks actually like coming into the blockchain space is more because of this desire of privacy, financial privacy. Because, you know, especially as more and more of transactions happen on the internet than there is a need of creating a system so that credit card companies cannot know exactly what we buy all the time. And so this comes, in the same way as the crypto-libertarians, with this desire of disintermediation, but it's based on a much more cohesive and cooperative approach. And what I really like about the whole concept, and this is the basis with cryptography; so if value is – sorry I'm going to make a stupid analogy but if value can be analogized with love, privacy, like the privacy of communication, is very analogy with sex in the sense that-

Intimacy, how-

No, you know, it's actually you need to protect both sides, right? If I protect myself and you don't protect yourself, well, that's a problem. So, the idea is that, and that's actually what the cypher-punks were trying to do.

It's like, we need to democratize the tools for actually acquiring privacy and it needs to be a cohesive and cooperative effort because everyone needs to protect their privacy. If I communicate to you and I have a very secure system, but then you're using Gmail, well I'm not protecting myself either because you're actually leaking my information. And so the cypher-punk approach is, as opposed to the crypto-libertarian, which is very individualistic and it's just like "I just don't want to be... I want my freedom," but it's a very individualistic type of freedom, whereas the cypher-punk freedom is a collective freedom: "We all want to maintain our privacy and therefore we're all going to collaborate together in order to make sure that everyone is protected," right? And to this, I just want to add the last one which is where my research is actually moving towards – which relates to what you are saying, Dominic. So we've seen how things are moving from the initial crypto, which was like hiding and resistance towards another type of crypto, which is more about proof, right? And like proving that something has not been manipulated or that something has happened... And interestingly, when we talk about blockchain today, it's also about transparency, right? Like the blockchain technology provides this proof and transparency that things have happened and therefore greater accountability as to the act of interacting with this blockchain. What I find very interesting is – beyond this crypto-libertarian and cypher-punk approach, which is really anti-institutional in some way – that actually more and more we can see how this technology can also benefit public or private institutions which, by adopting the technology, can increase the confidence that they have, that they provide with regard to the way in which they operate, and this increased confidence is inherently due to the additional transparency and accountability that the technology provides. And so in some ways, it's a very interesting cycle in which we start with this design of hiding from the institution but then if the technology is used by the institution, it becomes a tool for greater transparency and accountability.

○ It's interesting that... Can I add something to it? Because since we are at the Venice Biennale, there's something similar happening with the art world, right? Because their market is so closed, so... It's such a small amount of people who basically manage the whole market, and then of course lack of transparency is huge for the whole thing to exist. So, now that blockchain art and blockchain companies are getting into space and there's this potential to make more transparency in the market, there is a big part of the group that says "that will never happen" because if there is transparency, there is no market, basically, art market. But this other part is saying "by bringing more transparency, by bringing more regulation to the art market, the art market will expand and people will have more trust on the on the art market," right? And so it's interesting because there is this tension between the two and I don't know the answer to what will be more positive... Some people think, like, let's say that if banks adopt blockchain technology, then there's more transparency and more protection for users and that will be good for everyone, but I don't see it that way because I don't trust institutions... So for me, it's like okay, so they're just going to be, just want to be cheaper for them to do the same things that they do anyway, and more efficient. And so I think it's important to think about when we think on the positive effects of big institutions or the way the power structures work co-opting in these kinds of technologies that are built for resistance, that at some point it's really...

It might be more expansive it might be a little step further, right? But it's not what it should or what it could be. And I always concentrate on what it could be, like, "what is the best scenario," and not just be pragmatic and say, "well this is at least the lesser evil."

/ So... All you've said, I mean, I heard a couple of things that really bring questions... First, I really enjoyed what you said, Beatriz, about some human values you can't put a price on it, such as love or friendship... Because that's exactly what Facebook's doing, which like most platforms and most contemporary technologies are doing, you know. Their business model is based on the idea that you can actually put a price on emotions and human values. And it's also very problematic... So maybe I'm not so sure I totally agree with the fact that we could not put a price on human values... Let's say currency, for example, you know, which is a very important topic for talking about crypto because a currency is a stable value that you know, we talked about that already yesterday, but like a stable value that allows human exchanges to happen in some sort of non-... Yeah, in a very rational world, we would say. Like, let's say-

○ A neutral-

/ Yeah, or... objective or like, you know, I don't want to put too many adjectives on that but I just want to point out that human values are, can be dependent to the structures in which they are allowed to be distributed and built. And so coming back to what you said also, Prima, I think, there's a potential paradox between the idea that cypher-punk will use crypto for providing a greater privacy; and so providing like a protective aspect to, you know, human assets and human necessities such as freedom such as privacy etc... So there's a citizen sort of promise in crypto... And we need to democratize these tools that will protect our privacy in order to be able to live together, somewhat, and to fight that lack of transparency. So where I want to go to is to that articulation between the idea of a transparency or objectivity of the values and communities. And I think it's interesting because crypto is at the core of that triangle. Crypto meaning hashing or meaning how you create a language that is indecipherable so that it cannot really be read. So in this, the signs are completely obscure and totally non-transparent, and this is a guarantee to be able to build a community that will have a greater transparency and articulated on values that we want to protect. But then the question is... And I don't want to move too fast to the one aspect that I am sure we will have to go through which is the governance of the community even like-

○ Inevitably-

/ Yes inevitably, as, you know, it's very important... But could we like, just maybe have a deeper... I mean I would like to hear all of you on that question of a transparency and science of signs... Which is at the core of crypto... Because to me, coming from a philosophical background, especially in aesthetics, signs are never transparent. That's the basis of human interactions. And they're basic of all art also, you know...

Art being a certain regime for sign, you know. Like it's not the same to use a signature when you sign a contract or submit to certain corporation or trade or exchange, and having to look at a painting or listening to something, such as a music piece and, trying to understand what's happening there and what's going on there. So without getting too deep in the metaphysics of what art is... What does signs provide a sign for? How do they make sense?

I think the interesting thing about crypto is that it can precisely articulate an obvious conversation on the political implications of crypto, such as you know cypher-punk, social anarchist or, on the contrary, libertarian and like serving the decentralisation movement. It can also lead to a conversation in which crypto, as you know, refers to hashing and the idea of creating language and the status of code... Like computational code and what it means to deal with code and since also one of the problems here is: "what kind of blockchain language are we talking about?" Like, "who can actually code that" and "who can actually decode that?" and be part of that conversation? You know, to be able to be a miner in a community. So then we have the question of governance and of design of the community conversation on Crypto, you know, like what are the values themselves? And how do we make sure they are consensual? And Beatriz, I'm very admiring of what you're doing with DADA because... Because it's a total, like 'non-logo-centric' community. I mean it's brilliant. It's like you ask someone to not use signs such as natural language to-

★ Symbolic representation.

/ Yeah, symbolic representation, I mean it's still symbolic because it's a drawing, but it's not logo-centric, because you know, anybody can create like... Just a sign itself doesn't obey to framework for meaning; you can draw an apple, you can draw something completely abstract... You are still welcome in that community and you are still part of that exchange community and platform. So, I think that would be my question for all of you guys. How do you see crypto being, you know, like, do you feel that crypto is both an experience of values, signs and aesthetic and politics? It's a big question. Sorry.

□ May I just take the opportunity to refine a little bit the question? Because I think this is... Since we all have something that we are actually working on that deals with those questions, I think maybe it will be useful if every one of us introduces also the extent to which we are using crypto as a way of enacting, catalyzing, supporting specific artistic practices or helping artists to actually do the job... So maybe we can present very shortly what is our project on that level and then we can answer this question.

★ Absolutely. So, essentially before I do that, I would like to respond to some of the elements that came up in this conversation so far, and I wanted to touch on the subject of hashing, I wanted to touch on the subject of transparency and protection and I wanted to also bring to the table what I'm also feeling enthusiastic about, like many in the blockchain and crypto space, however, I think there's still very long journey to go in order to provide a transparency and protection and some other values on the table.

And touching on the subject of hashing, just to clarify for everyone... Yeah, hashing is a form of converting information and is a one-way conversion, as you briefly touched on the subject. So there's no way to go back from hashed information. So it's a destructive approach, so, as opposed to traditional cryptography from which you reverse, if you know, the cypher if you know how to go back. So on the subject of transparency, I think explanation is key, and proof that for example, an actor owns an asset or proof that an exchange of an asset has happened into history and I want to bring on the subject to the table also the immutability of this data structure called 'blockchain'. So, effectively there's no possibility to go and alter the history, which gives a degree of transparency and verification. However, what I'm saying is that there's a long way to go in terms of some other values that have received a response in the blockchain and crypto space, in particular, self-determination and the intention to break free from models that are imposed upon us by, say; large corporation government's, large organization towards which we feel sometimes impotent and we don't... We have a limited participation in that. We see corruption happening and so, therefore, the desire to explore new forms of cooperation or collaboration. And I would like to say that although the blockchain movement has brought on an interesting response in this sense when it comes to decentralization, I think there's still a long way to go, because... Exactly for what you briefly touched on, Primavera, which is that this decentralized form of governance typically gets associated with monetary power anyway, so they get somehow corrupted. So, I think what I'm bringing to the table in terms of my effort is a way to cooperatively define artefacts that perform transformations, perform transformations that are recorded in an immutable history and through those I would like to exercise governance. A governance that is built by humans, but perhaps where humans don't have a dominant influence in the sense of democratic participation such as casting a vote. So, I'm inclined to embrace a reality where there's an automation that drives consensus and governance... Which I'm totally prepared to hear your objections about... But yeah, this is where I'm heading. And in terms of EverKnow and MOCDA, which are my start-up initiatives, is something that targets, at first, very creative minds. Because I have also the impression that engineers that I typically happen to work with have the tendency to follow practices that come from a manual or a template, something that has been proven to be working. While instead, I want to break free from this and explore new ways of doing things. Similarly goes for the academic approach, which is introducing elements of innovation, but in my opinion, this could be accelerated dramatically if we were considering a form of artefact that is not a scientific paper but is an artefact that has the potential of performing transformation. And as that being recorded in an immutable history and therefore it is protected by itself, because typically people release, in the academic space, they release a paper just to claim that they were the first reaching a conclusion and coming up with an invention. And yet there's a lot of effort going to come up with a paper and producing a paper and I think this could be optimized significantly. Yeah, this is where I'm coming from.

○ I love, I really love how you're looking at it and would love to use whatever you come up with and experiment with. Because it's really, it's like liberating, right?

Like, you were... You're doing this, creating something that other people can use and liberate their creativity and experimentation, which is what the three of us were doing in our own way. So I have so much to say, I don't know-

□ We have time.

* Pick a subject: governance... Governance is a hot topic-

□ I think it could be useful that you present a little bit DADA-

○ Yeah but, I'm trying to figure out what's the angle... All right, so-

* The inclusion perhaps, and the diversity... Because I think it's amazing what you do at DADA.

○ Thank you. Yeah, but I want to touch on what you're saying, Stephan, there in your question. So... We have a community that – what we said before is based on values that you can't really put a price on them, and so probably the best example would be Wikipedia, right? – that everybody knows. You have a very small set of people doing a lot of work for the greater good without any payment, whether or not doing this for payment. So we have our community that is similar; they're spending hours and hours... These are thousands of people spending hours and hours of their time putting, creating work on the platform. You don't upload anything. You create it with our tools, which are by the way, very very simple; I think they're simpler than Microsoft Paint. So, in an era where you have all these amazing applications for drawings, like brushes and things with which you can create these amazing things for digital art, we just give this very simple, rudimentary tool because it was important for us, for people to concentrate on the communication and not on what you could do as an artist. So anyone, even if you're not an artist, could communicate through this tool, right? So what that made was a community whose first value is to communicate with each other, to connect with each other and... Because it's through drawings, it becomes this authentic process. Like you know, in social media you can invent your own persona, right? When you're drawing you can't... Because, as you were saying before, Stephen, when you do art, it's not only just because it's symbolic, it's also that I maybe, you know, depressed at that moment and that's going to come out. So when you see, with time, and you get to know people because of just a drawing... Remember, we don't know anything else. We don't know their ages, where they live necessarily or their social-economic conditions, and by the drawings that they may be a little bit depressed and then how they get out of the depression or how they fall in love with someone, and then how the break happens... You see that over the years. And there is a connection that happens that is so profound just by witnessing that. But it becomes even more profound when you're part of it. So if you are drawing and you're depressed, let's say and you're making this drawing that is obviously, you're getting that out of your system, and there's somebody that comes and spends hours making a drawing that replies to yours... Just like bringing your up or just like listening to you, or... That creates a very strong connection.

So it's almost like talking through poetry. You connect on a very deep level. So what do you do with that? When you have a community that is like that, right? And how you make it sustainable? Because that's, to me, the biggest question. So, do you use a donation model like Wikipedia? I happen to be very against anything that is, like Maecenas or patrons or donation because I believe that artists give, bring a lot of value and I don't like the fact of that value being something like "yes, we have to support artists" because you know, "let them do their thing," no, it's a lot of value and it should be valued as such, right? So, how do we create a system in which it is not dependant on other people's goodwill, but that is actually the value that is being recognized? At the same time, how do we create a system in which that money doesn't corrupt the intrinsic motivations of people, of doing what they're already doing, for free. And so, going back to Wikipedia, it's known that people do it for self-development, for a sense of community, for a sense of higher purpose of keeping the knowledge of the world uncorrupted... And in that, it's the same. Inside you might be an amateur person and then you're, after a year, you're actually making great drawings, because anyone could learn to draw, and you're learning from others... A sense of self-development, a sense of connection with a community, a sense of higher purpose that we're all here, we're all resisting together, right? And we're all doing this little thing together. So... And also the simple joy of creating, so-

* Can I ask you a question?

O Yeah-

* You mentioned briefly or was it my impression, that the blockchain helped you achieve this.

O Yeah, this is where-

* All right.

O Well, this is what we're figuring out... But I think it's only possible because of blockchain that I can see the solution, otherwise, it would be really hard. So the main thing is when you have intrinsic... Like the easiest way to stop somebody from drawing – let's say you're playing music for love – is by paying them, and then you stop paying them. All of a sudden the mind changes from something that you used to do for free and for pleasure, now is not worth your time anymore. Your mind changes from social norms to market norms. And so when that happens, and this is like very well researched, right? Intrinsic motivations... At the moment that you change and replace those intrinsic motivations for extrinsic motivations, like recognition or money or you know, you win a contest or something like that, the intrinsic motivations diminished or even disappear completely. So all of a sudden your mind goes to, "okay so I can make more money doing this, this is, that's my mind now. Now I'm becoming more competitive, I'm becoming more centred on... I can live out of this, make money blah blah blah," right?

This is very important because at the moment that we start selling digital drawings using blockchain, which is possible, the mentality of these communities is going to change. Being a collaborative community that is doing this for bluff, basically or for yourself or for others, that will completely corrupt the magic that happens, right? So, the question for us is, how you create a system that maintains the intrinsic motivations of each individual? Which one, big one, is the collaboration and the second is how you maintain the social norms so that the minds don't go into being competitive or the sense of hoarding or the sense of speculation and things like that.

* And preserving those values while you get on into a model that becomes economically self-sustainable, right? So that's a difficulty-

O Yeah, and then we go back to what you were saying, Stephan, about currency, right? Because we tend to think about currency just in terms of money, but we have to have some kind of value system... it doesn't have to be money. I would love it for us not to be, you know, a token that equals money but something else. And we could come up with art as a currency, for instance, within this community. So, then you have to think about what are the functions of money, right? And there are three. There is what you were referring to, Stephan, on the exchange of value, of course, it makes it much easier than bartering, right? Because we can transfer value in a much efficient way, there is a store of value and there is a unit of measure, be able to measure how we value things. Like, this glass is one \$1-

* You touched on a very important subject, which I like a lot, which is the fungible aspect of how we are used to store value. What you briefly touched on is a non-fungible way of storing wealth, which is a, for example, a work of art itself. You could trade a work of art on the market and not for money, which is a fungible or a crypto-currency, which is a fungible type of wealth storage. You could store it in another form, let's be open to this perspective. Because I think it is very exciting and it could be a game-changer.

/ Can I say something? There's a flip side to what you're saying. I mean, I totally support this idea that we can, we have to literally look at other valuing processes in like how we might maintain a plurality of valuing diversity, of valuing process within the community, because otherwise, we might end up with a credit score like, in China... But let me just bring something to the table, which also goes back to what I was saying earlier at the beginning of the conversation, and I'd love to hear you, Primavera, on this, but there's one space where values and human values became the currency: It's religion! You know, like in religion, you don't have money for valuing people, you have, you know, norms that are related to a certain idea of spirituality. So like you obey to a certain set of values, that is, you know, kindness, honesty transparency, etc.... So what about how can we explore and how can we make sure, I mean, I'm not anti-religious personally, I would say, I'm personally very much of a believer in terms of spirituality, but I'm not a religious person and I always had that conviction – also maybe being French made me that way – that society starts where religion can be also limited, you know...

So my question is like, how do we articulate that in blockchain communities? And it really also is at the core of crypto as the language hashing the organization the technology, etc... But really, how do we make sure that blockchain is not a new religion. Is it possible?

○ It's already sort of, a new religion-

□ I think it's actually... It's multiple religions. Because there are multiple blockchains, and every blockchain is its own religion, and it's very interesting. Since maybe six months-one year, there is this strange thing of everyone starting to talk about dogmas. Like, blockchain technology has become a dogma. It's like crypto-religions. And we have the Bitcoin Maximalist, which is an actual religion, in which they believe that the code is the law and no one has any possibility, no one should ever tamper with the protocol. And then we have like the, you know, the Ethereum, much more flexible ideas of, "well, we want to focus on the distributed consensus and it's actually okay, potentially, to change the protocol to the extent that the community consensually believe that it is better either for the Ethereum community or for the world as a whole." But basically, we start seeing even those schism. So when we noticed there is Ethereum crypto religion, but then at some point, some people decide to fuck and some people decide not to fuck and you have a schism, you literally have a schism in the, in the crypto-religion of Ethereum and you have now two sub-religions, just like we have like Christianity and all the subsets and then we also have like... If you think about the vocabulary, you have oracles, right? In order to interact with the real world, the blockchain needs oracles that are essentially creating the interface. People sometimes when they think about, "what should we do? should we change that course? Should we not?", and they're like, "well, what would Satoshi Nakamoto do?", you know. And you have people, like Nick Saban, or whatever talking in the name of, you know, kind of like the Messiah or the prophecy and stuff like that. It's very interesting and some of my research has been analyzing for a lot like, the political dynamics, the power dynamics that exist within the different act of the different blockchain communities. And recently I had this fascinating discussion with a geologist, and I realized how it's, in some way, it's much easier to analyze and to look at the power dynamics within blockchain communities from a theological standpoint rather than a political standpoint because politics – is really becoming blurry over time – but politics is really much about, "let's find those compromise between people," that's that theoretically... But now it becomes like, in the blockchain space, there is no possibility of compromise. It's not a desire. It's not about we want to live together and let's find ways in which we can coexist. It's more about, "this is our dogma. You have to follow our dogma," and it's about creating incentive for people to join that religion because then the network becomes more powerful and it's actually like, in terms of analyzing the power dynamics – of course, it's not enough because you always also need the social and political standpoint to understand some things – but it's fascinating how the theological prism is actually providing such interesting insights in the way in which those different communities are evolving. And interestingly so you have again the crypto-libertarian type, things like "the code is law" and with a little hope we're trying to develop the crypto-humanism ideology, as a way of actually, you know, many people are actually seeking those different-

/ You said crypto-humanism?

□ Crypto-humanism, yeah. Putting humans back at the centre. The technology is just a tool to help people emancipate themselves. The government should actually be – and I'm sure you have something to say about that – about the people. Like, how do people organize themselves? And if we look at this crypto self-enforcing mechanism, then it's always going to be technology first and people, that are just like the consequence of how the technology operates, as opposed to the opposite, right? And that's why, again, the question of governance becomes absolutely fundamental in all of the systems because even the system that pretends to be trust-less, of course, is not trust-less. And then you just have underneath. And that's whether it's a theological thing or have political things or whatever you have all those actors that are exerting influence over each other in a very polycentric type of government system. So you don't have one factor that can unilaterally impose the will, you don't have the one sovereign, but you have all those different sub-networks of actors that have, whether it's the miners, whether it's the validator, whether it's the cryptocurrency exchange, whether it's the charismatic leader, whether it's like the people that have the louder voice on the social media which are all interacting with each other trying to influence in order to actually further their own interest. And to me, if we want to think about proper governance for the system so, at the technological guarantees of transparency, decentralisation, accountability and the proof that the blockchain provides cannot actually be achieved without understanding the governance and without making sure that the governance is actually putting the human at the centre of the system. I'm happy to hear your disagreement, Dominic.

* No... There are a couple of things that I wanted to discuss in relation to what we brought up. So essentially, I sense the origin of what's interesting into how we define value, and I came to the conclusion some time ago on; even when we consider the value of a work of art, what is it that we consider valuable about it? Is it the manifestation itself? That we see the tangible evidence of how we perceive a work of art? Is it the transcendence, I heard, also? Or is it perhaps the idea that's behind it, the idea that's behind the manifestation. So is it something... Is this what we are actually trading, and the manifestation is just a reminder of that idea. So this I want to bring on as a question-

○ It's probably all of it, and the significance and the emotional transcendence. It's all of it and it will be different from each art-

□ And that's why the value is inherently subjective because different people will assign value to different facets of the same art piece.

○ And the same person may assign different values to different pieces of art or different values to the same piece of art in different moments of their life.

□ The whole concept I think goes back to the discussion we had before, the concept of having this objective value is just a construction of the current monopoly of the market system, right?

The market value has become the objectivity and when we're thinking "what is the value of an art piece?", when you ask "what is the value?", you don't think about the market value but yet this is what happens. Like when they say, "this is valued 2 million dollars and this is like 200 bucks," right? But what is the actual value that we feel, it's not market value. When you see art piece and you're experiencing and you get this transcendence feeling, it's not market value and you cannot put a price on it. It becomes priced by the market when it becomes a commodity, but the experience of art is not a commodity, and that's where you inherently can only talk about subjective value when you experience the art. And the only way you can talk about objective value, which I think even the fact of talking about objective value in the market system is wrong because it assumes that it's just this homogenization of the values of many different people, right? So today the value that is assigned to a market, to an art piece by the market is essentially the extrinsic value of it, which is this speculative or investor based mechanism of assigning value to it... But we're not talking about the intrinsic value of the artwork. The intrinsic value is what, it emanates from the art and what is creating this relationship with the viewer-

★ And it's subjective-

□ And it's inherently subjective. And the problem is that we don't have tools today to express this value in any other way than the market value because that's the only tool we have, we kind of fall into that. And probably the intrinsic value is even hardly quantitative. It's more like a qualitative value and we cannot really use the same metrics as we use with the market for this.

○ Let me just add one thing that I think is important on the question of value... The market doesn't assign value. The market assigns a price. A price is not the same as value and that is a very important, crucial I think-

□ Well, it's market value. That's what we call 'market value'.

○ Well, it's really a price, right? It's a number. You may be a collector buying something for its significant... And they have all these intrinsic values for that person, but he's paying a price. And that's a very important thing because it's very limiting when it comes to things that are intangible and subjective.

★ But, I will say that the market puts a focus and tries to protect also intellectual property, which conversely is more linked to ideas or is something more of a software thing rather than physical manifestation. So, in that sense, this is the value traded that is also related to these ideas. And I think this is fascinating in the cryptocurrency and blockchain space, in the sense that there's a chance to provide better protection. Because for instance, a physical work of art also deteriorates over time. For example, the idea that was behind the creation of a work of art doesn't deteriorate, provided we have a way of encoding it and this is what is fascinating about digital art because it can be replicated a number of times in an exact form, right? And then we can associate several manifestations alongside it.

/ Can I take, I mean I strongly disagree with the idea-

○ Oh, I love when we disagree-

/ No, but I disagree with the idea that there would be something such as a pure realm for emotion and artistic experiences. And that experience is not a commodity as you said, Prima. I think over the last three centuries, we've seen that experience and taste and education became a commodity in this single idea is even like, necessary for having something such as citizenship. So, let me explain... So I worked on what I call, the Tastemaker machine and the recommendation algorithms and I realized there's something such as Pop Music, there's something such as Cultural Industries and I would say that maybe the Biennale, here is not too far from a Pop Art industry, you know... So, in other ways, emotions are always like, tied to a market value. And it doesn't mean that they are impure or that they are degrading or that they are not real or that there's not a poetic aspect in that... That is precisely the point about folk cultures and pop culture, like popular culture, which is basically, you know, something where we don't value them as, a high standard, but they belong and they exist thanks to an industrial system, you know... They exist because there are media and there is exposure. They are even like, crafted, you know, in a very popular practice... And nevertheless, it still brings some experience and emotion in that. So 'taste', for example, taste became a commodity or long time ago. Taste became a commodity the moment we said art can be reproduced and culture can be distributed and that was necessary for thinking that people can actually emancipate themselves thanks to culture, thanks to books, thanks to records, thanks to school, you know... So, in other terms, the industrialization of our minds and industrialization of our experiences and aesthetic experiences also supported the possibility for people to be, to be citizens and to be educated and to share a common language. So from that, from that standpoint, and I don't think we can, or it's a very utopian way to look at blockchain or technology in general such as something that where we can sort of, protect emotions and arts from any market because the possibility for people to just talk and share expression and agree is that. Your question was probably very, very right... Like, we can answer to both saying, "what's value in art?", is it the manifestation? Like, are we buying basically the commodity? And are we enjoying like the physical commodity? Or, the physical experience of like, these paintings? These specific shows? A specific experience? Or are we enjoying the ideas behind the manifestation? And I think that precisely art has always been a game/a play rather than a game, a play within these two aspects and many other aspects. So I think you know... It's inevitable that we will have if we talk about blockchain in art, and like how blockchain can support different levels of distributing and designing experience, I don't think, I mean we need... I don't think we can just see it as a separate aspect from a market, it is already a market, you know, like-

○ Well, I disagree on that, I think I should because otherwise you just fall into repeating the same frameworks that already exist. But I think what you're saying is very interesting because when you're saying... I take two things. One is, yes, we need a symbolic agreement or otherwise, we go crazy as a society, right?

Like, we need to have boundaries; things that we agree on, on the symbolic sense so that we all know what's right, what's wrong...What's right within our system. But the other side of this industrialization of taste or knowledge is that it's another way of saying standardization and it's another way of saying indoctrination, right? And so to me, what we need to do is precisely the opposite; let's go to a more diverse, more unique, let's go for the uniqueness of each of us. And I think that's what social anarchism is. Not in the sort of quote-unquote 'deprivation' that became the libertarianism in the US, but their actual social anarchism is that is how we organize a society in which based on certain symbolic and cultural agreements, each individual can be the best they can be in its own unique way. And I think that's what blockchain-

□ Yeah, and I think I completely 100% agree with this and I partially disagree with what you are saying, Stephan, because I think the thing that, of course, blockchain is being commoditized, it falls into the capitalist hands and it's actually being used as a speculative tool, but it's not because you see this happening that that's the only way it can go, there is actually a lot of other stuff happening at the same time underneath, or in other realms... And I think it's actually very important to see the problems of this speculation and the 'marketisation' of this technology, but on the other hand, there is really nothing wrong about it... It's just happened. And it's not like, no one can avoid this from happening... But to me, it's actually extremely important not to just fall into this and say, "oh, because it is like this, that's the only way it can be," because there is actually interesting experimentation. And to me, the big deception at the moment of the blockchain is that people are actually seeing this technology and, while initially there were those visions of disruption of like, you know, everyone can create their own currency, which is cool, but yet everyone is creating the same type of currency. We are all replicating the same old model and just actually giving tools for the traditional mechanism of hyper-capitalism to flourish on top of that... But, at the same time, the possibility of experimentation, monetary experimentation is fascinating and it's kind of unfortunate that there is not more of it. And to me, I actually like the possibility that everyone creates their own value, right? Like, if I'm an artist I can produce value, and whatever... This value is subjective. It cannot be assessed in a purely objective way. And the fact, if I could just... Like, where today, basically we have this problem that money is created work debt is created. We have debt-based currency. Instead of having a much more constructive mechanism, where money is created where value is created, right? Which is, if I'm creating value, I'm also creating my own token, my own crypto-currency or however you want to call it. And this is a good stopping mechanism. And whoever sees values in my services, in my projects, in whatever, like the art I produce, then they will see value in those tokens because the tokens are a representation, a direct representation of the value that I produce, because it's a way of accessing this value. Now, the interesting part is, of course, you just need my token to buy my services, it's a very, it's almost a barter system. But if we expand into a much broader ecosystem in which many actors, which produce value, produce their own tokens, and then the value of this token is based part on how many people or how much I want that but also how many people are around me want that.

So, if I'm surrounded by people that really care about accessing your project, your beautiful platform on DADA, then maybe I don't care so much about it but all my friends do, so I know that those tokens will also be accepted by my friends and we create these things that is subjective economy mechanisms, which to me is something that has yet to be explored. And to me, this is one of the most fascinating potentials of this technology. And the beauty of it is that we still have a mechanism... It's still like, some kind of evaluation; somehow quantification of things, but it's inherently to me, to my actual value that I get from getting the service but also to my values, to my value system. In the sense that even if I don't need your project, but I love DADA, I don't really need it because we're friends and I'm sure you're going to give me extra access to the platform if there is any premium... But at the same time, I love what you're doing, and I love what people are doing, which are trying to do, like climate change or helping something, you know, and so I'm also going to accept that tokens, even if I don't need them because I don't actually want to purchase the service, I want to provide additional liquidity to those tokens, and so I'm going to accept them and so every individual becomes an actor in the global economy by choosing what kind of token it accepts and what kind of token it rejects. And for instance, I might say I'm going to reject every single token from whatever oil industry and things like this, you know. All of sudden, what I do, of course in my small system it matters... If I'm engaging into accepting and rejecting tokens, I'm also to some extent globally promoting specific products or services and boycotting others even though I'm not preventing anything from happening, but I'm reducing the liquidity of those tokens. And to me, the interesting thing is, today, instead of having... if I want to start anything, I need to go and get a loan from a bank and I create debt, as opposed to; well, if I expect I'm going to create value, I just issue those tokens and whoever believes in my existing and future value, they will actually accept those tokens, and then you create those local economies that can expand at the global level.

○ Beautiful.

/ So I want to respond to that because it seems like you... I think we all agree in the end, and when I said I disagree it's just like; let's try to have a non-euro-centric or western-centric look at values and experience because when we say experience, it should not be a commodity... I think its very hypocrite because it is, you know, in the philosophy of what an individual is, and what a subject is, you know, it is necessarily a commodity, and what I want to say now is like; we've been talking a lot about values and there is like some sort of like obsession with values... what about, what if we can imagine, you know, maybe some cultures and some spaces and platforms where value is not even a discussion, is not even a concept, it's not even like part of the vocabulary. And you know, what you are saying is some... I mean, I enjoy this... I had this thought, or this vision while you were talking where we could imagine that 'tokenisation' could become a sort of like, new writing... you know?

□ A new what?

/ A new writing, you know? Like a writing process? Like 'tokenizing'... 'Tokenizing' is like defining a value that becomes a sort of, you know, like a common ground for people to actually interact and exchange, and, whatever the token is and whatever he's, the value is decided to be, it becomes a writing process, you know? And from there I would like because a lot of my work was about music and hearing. I also looked at Global South perspective, and by doing that, and again like, when I said I really admire what you're doing with DADA, because DADA is a non-logo-centric community and I think that is a very important take to have on technology; is that, is it possible to have a non-logo-centric approach to technology. Anyway, what I was interested in thinking of 'tokenization' as a new writing process is...What about communities and cultures where writing is not even a possibility? You know, like, there are a lot of what we call 'primitive societies' where writing is not, and valuing, is not part of the social norms, it's not what makes people live together, is not what makes people interact with each other and what interact with nature-

○ But you are talking about economic value-

/ Values in general-

□ I think most people will have values, like, not necessarily every community has an economic value mechanism, but I think everybody has values.

○ Yeah...Well, like, social norms-

/ No!

□ Ideological values-

/ I think that we need to define that because I think, you know, values such as a sort of like minimum standard, or not, or maximum but anyway something that-

○ So what would be an example of a community that wouldn't have values?

/ Well, like, for example, if you take... There's a Shona community in Zimbabwe, okay? So, the Shona community, we might call that value but they will never use the term 'value' to look to, or to explain what they are doing, what brings them together, okay? So, what I'm saying is that this obsession with value might also say something about how we want to shape communities. And so the Shona community, for example, from what I know, and I'm not an anthropologist, but I think we inevitably have to be anthropologists if we are looking at technologies that are per se global, and that bring a potential global impact. So, we always need to look at the values behind technology decentring the value and how we even think of, you know, what the value is. So, Shona community, in music for example - a musicologist I worked with at NYU called Martin Scherzinger, sorry for the name dropping, but I really want to mention his work because it brought a very important perspective - it's been like music in my head all along with my research and my career in a very different aspect of my research, and professional activity and practice.

Basically, he showed that there's an instrument called Lamellophone which is like a thumb piano, we call it Mbira, and so, in musicology, we think that music can be defined with harmony or melody basically, so there are different parameters to analyze music as a language or music as a cultural production and a manifestation of something. We very often look at African music as being totally rhythmic, so it's, in other ways it's like, yes, there's many other paradigms or many parameters than just how many melodies, timbres... But anyway, you have different facets to look at music information, and the way we looked at African music because it was so hard to shape in our writing of music, and our understanding and analysis of music, which, okay, it's poly-rhythmic, it's non-harmonic... So basically we've different writing or a different understanding of music... Put it aside and put it into margins and we'll get back to that idea that we are always sort of fighting, or considering a possibility for margins to exist in what we are doing, so he showed that musicology shows that where we believe that... Shona music is not harmonic, because the Lamellophone or Mbira is a non... We call it 10/3 music, in which there're no stable notes, you know? As opposed to the western music where notes are tempered. So, Bach invented, Baroque music brought that, and so he showed that the way musicians in Shona tribe would play the Lamellophone-Mbira, was... we would see it as highly polyrhythmic, with the existence of what we call 'ghost rhythm'. 'Ghost rhythm' is like a very important concept in groove for example. It implies this idea that the body at some point will create something that makes the music groove, but we can't actually put a name on it, we can't actually identify it, and we can't actually write it down in a score for example. So, Martin showed that the Mbira music is not defined or is not determined by reason and there's a necessity to actually make some sort of like groove reason, but by the necessity to actually make some specific sound appear in the performance. So, harmonics, for example, you are all familiar with harmonics in music, right? So, harmonics are the notes that sound when two notes sound, it's like if it relates to the physics of sound basically. When you hear one sound, you can hear many different notes in it, because the sound frequencies will sort of 'collide' and create other frequencies. So, harmonics are very important also in analyzing music, because it's kind of 'crypto' or 'unseen' or 'unhearable' or 'hardly hearable' sound within the sound, okay? And so, what Martin showed is that the Shona tribe, when they play Mbira, according to the social convention, or the social context for which they are playing music – let's say they're playing for a wedding, or they're playing for a death, or they are playing to celebrate love, or they're still playing to celebrate war – the rhythm will be determined by the necessity of the sounding of specific notes. Those are harmonics, because of the physics of sound if you play very rapidly, you will have some sharp notes sounding. If you play more slowly, you will have more like grave and deep notes hearing. And so, they don't play the rhythm because they want to perform a certain rhythm, but they play a certain rhythm to make sounds that are unheard sounds; to make note sounds that would be otherwise 'unhearable'. So, in that sense the way we look at African music and culture is completely determined by our Western-centric approach and understanding of musicology and sign music, sign, you know? And I think we have to apply the same consideration about values in technological systems and values in-

/ In general... Yeah, absolutely. And that's why I mentioned earlier, we are obsessed with values, because we live, because we bare, we carry along a whole civilization and, that is not so long in the end, because is just a couple of centuries, what is a couple of centuries?

* I don't think I have the cultural depth to cover the subject on that level, but my best guess is that value is derived from the original expectation that we build in society, for example, that we start by getting along and not kill each other, or expect that people respect that you own something, right? This is how we came along this notion of value. Of course, this has been pushed further down the line; I mean, has been expanded a lot in our society. And now is... You touched on a very interesting subject, Primavera, on debt or another economic system that is not based on debt... And I also, as a best guess, is... I came across this notion of debt as a way of boosting an economic model, as boosting the motivation, because it ignites fear in individuals, so the fear of not being able to repay it-

□ It helps slave them into the capitalist machine.

* Absolutely! Absolutely, and that works as a motivation for people to get along and produce something-

□ But yet, produce only within that framework, in which they have been slaved.

* Yeah, yeah... That's right-

□ It's a boost, but it's a very mono-directional boost-

* Not only but-

□ You have to pay back your debt, and the only way to pay back your debt is to acquire the resources in the same extract system, so, because I indebt myself with Euros than I need to collect Euros in order to bring them back... And the problem is that it's extractive... Like, the only way I can get Euros is I need to take them from someone else or ask the bank to generate new debt. But it's inherently extractive, as opposed to a value-based economy which is productive. I don't need to extract value from someone else to create my own tokens because I just create value, I can create tokens-

* This suggestion is very interesting, and you are talking about the value associated to creation effectively, and I'm totally open to that perspective, however, someone might question whether it's got a sustainability in itself, this model, in the way that we perceive sustainability nowadays, because also I'm prepared to argue that nowadays sustainability is not sustainable, because we are-

□ Today's level of sustainability is completely unsustainable, for sure-

* Exactly, so it's a good approach to explore and it might not associate a motivational boost as the debt system is carrying along, but it might be a healthy way of moving forward-

□ I think it's... You are taking the debt base like the stick, right? Like you are afraid, you need to survive, you need to pay back your debt, and therefore you need to work within that particular framework, so, because you have a stick on your back, as opposed to the creation-based, the value-based creation of a kind of money which is the carrot... It's like, well, if you produce there is still an incentive to produce because if you produce, your token becomes more valuable, and then you have more capacity to existing in this system, you have more liquidity. So, it's, of course, the debt base has a very strong influence because it has a big stick on your back, but it doesn't mean that you cannot have a much more beautiful, actually, and productive system, with just as much incentive, accepting incentive is a positive incentive, instead of a negative incentive-

★ Yeah, this is what the majority of people, I guess, will question... Whether the motivational factor is strong enough because it's a fascinating motivational factor to exercise your creativity and wake up in the morning and think-

○ What if it happens already... As we talk is that people all over the world are making art, or research, or doing tons of things or work for no money, just because there are other motivations-

□ I think the challenge is... I think for sure, a positive incentive mechanism definitely works. The danger, that is the big preoccupation, is how do you make sure that it doesn't get exploited or corrupted by the capitalist debt-based model, right? And I want to say something because I want to build back on what you were saying about like, different types of values in Africa especially, because the big problem is basically that we live in, in the western world at least, we live in a very strong capitalist framework, and as we were discussing yesterday-

★ Which is embedded in our culture, by the way-

□ Yeah, yeah, yeah, is embedded in our culture, I completely agree. And also, because of us all living into this framework, then the dominant strategy is playing the field of the game becoming a capitalist of ourselves, and everyone that tries to cooperate gets crushed, because, you know, "oh! I'm doing this because I like doing it and then they come and appropriate it, and then I become a loser and therefore I need to play the game as well, otherwise, I get in dept." There is this very beautiful philosophy; I will then call it 'value', but I call it 'philosophy', because it is a philosophy, which is the Ubuntu philosophy. It's absolutely one of the most beautiful things that I have heard so I will share it because actually, it lives a lot with the question of resilience, of this alternative economic or political system, and it's also geographic, and so, in this community that abides by the Ubuntu philosophy, everything is about fractals... Like the geographical core is fractals, as opposed to we, which is very vertical or triangular, which is like the hierarchy head. And so, actually, they build everything as a fractal, and they operate in a fractal mindset, which means there is no someone up or down. And the definition of Ubuntu is "You are a part of the whole, and the whole is making you", right?

And so the beautiful thing about this is, basically the one example for instance, is the judicial system. So, today in the capitalist western society, the courtroom is a triangle... You have the judge here and then you have the guilty person in the front, and you have the lawyers, then you have like more people that are all judging that person in the centre. In the Ubuntu system, the person that is being accused is at the centre and then is surrounded by his closest people, his families, friends, and then more close people, and then the judge of all at the border, at the border of the centre. And because they are not judging just this guy, they are judging the whole community, because the community is actually the one that is also guilty, they have not helped that person, to avoid this person from doing something bad. And so, the whole idea is that if you start thinking of individuals as part of a community, and the community that is shaping the individuals, then, there can be no... Like, everything is a collective responsibility. And, what happens is that in those type of system, cooperation is the norm; cooperation is the dominant strategy, and if you do not cooperate, if you compete, it's your defect, then you're going to be accused and people will try to understand what did we do wrong for this person to become a defector, and then we will try to fix the society, the community, including the person, but we're not just going to take the person out and put it in jail. So, it's an extremely resilient system. It's very hard for the factor 'competitor' to actually rise in that system because they get punched back not to pull this stick but to the carrot... "Let's make sure that this person that stole doesn't need to steal; why did this person steal? Because we, as a society, put it on a situation in which it was necessary to steal." Now, this is the end of the parenthesis, going back to the crypto-system, what happened basically was that, as well, when the 'colonisator' came in and take the power-up and brought the power at the top and then he created a pyramid, and this absolutely resilient system, because of this radical disruption-

★ They manage to reject it-

□ As... No, they lost the power, and their authority became-

★ So it was affected.

□ But because of this disruption, right?

○ By force.

□ By force. So, where I want to go back to the crypto, or today's lecture, whatever, is that today we are in the same system... We have this absolutely incredible resilient system which is capitalism, which is the 'mono-tokenisation'... And the only way that we can actually bring this cooperative model back, is by actually creating new forms and a disruption could be one solution, but I don't think we need a disruption, it's just about having this recreating the power at the bottom, and creating a resilient eco-system in which cooperation becomes the dominant strategy, and then, to some extent like, capitalism just become one of them but because we have many clusters, many other communities, then the power automatically starts coming back into the bottom, and there is the found.

And it's not about... It's not a disruption in terms of, let's destroy the existing capitalist system; it's about making it one out of many. And giving people a choice if they want to play the market game, they can play the market game, if they want to play the cooperative game, they can play the cooperative game, if they want to abide by the Ubuntu philosophy instead of the individualistic philosophy they can, right? And today the problem is that we don't have those alternative settings, there's no room for this type of things to flourish and to emerge.

/ Can I add something? Like see, what you just said, because, thank you so much, because fractals are, actually, were what was on my mind and when I mentioned that, Mbira music, it's about fractals, and it's, I would even go further... Like, there's a researcher who showed how fractals are actually the principle for organizing every African primitive society, I mean not every but, he studied Nigeria, he studied different areas, then he studied also how the spatial organization is fractal per se. So if you take a picture, like an aerial picture of the village, you will see that the fractal principle is everywhere. The way the house of the chief is organized will represent or will be fractal itself, because it will be also duplicated on the whole organization of the village, and you can even find that, or that that's the question I think, but he was observing how this also applied to social organizations. So, in other terms instead of having like, that anthropological believe that we have one father, one mother and a child and that this is pyramids, you know, organization. He would look at like, how power is being distributed within primitive African societies under a fractal principle. So, in some way like if your great-grandfather was the head of the community and you have to share it in a certain way with like his neighbour, or he's son-in-law or a brother-in-law or then you will have like that same principle applied to different level of social organization and power distribution. So, I mean, it might sound very abstract, but in the end, it's like a very interesting and fascinating way, especially if we talk about computing, and we know that computing allows us to like have absolute... And this is the first time in history I think, in the history of civilization where we can actually look at culture and civilization with, by looking, by searching for different organizational principles, then what we are, you know, the human mind has been obliged to or limited to because of our cognitive capacities, you know? So, coming back to fractals and a resilient or vernacular technology, what you're bringing, Prima, is also important, but I'm not sure, I want to ask a question, I mean, I would take this conversation or the question for me now would be, how fractals are sort of like inside everything. It sounds very like a tautology but it is actually, is a case, you know? So, I do believe that blockchain and crypto, as an organization, can actually allow this, or could bring maybe a fractal organization to life? Or to a more global perspective? But the question is... In fractals the... So the enemy is... because we also said that... we also agree that there's always like a resistance principle in this organization, and resistance and resilience are always kind of close to each other, you know? You're resilient because you're fighting, or you have like experience, something that you don't want to experience again, and so you like, create that, you know, resilient principle-

/ Yeah, it's chocolate time!

* Sorry, I just thought it's good to have a little boost.

/ So, the question is like, how do we make sure that we can still identify something we don't want, within that fractal blockchain principle? Like so, in other words, the enemy is, let's say, the capitalism, and that is also why I said earlier we should not just always *exteriorize* the market, you know? Because the market is always a little bit inside and so, the enemy is always a little bit *inside* as well, you know? There's nothing as such as communities based on pure values or pure good principles, and like, a *bad exterior*, you know? So that's where the governance conversation is, where I think it needs to be really brought, you know? Like the governance is how do you really integrate the possibility to have like accident, to have failures, to have... And also like, bring back the people, as you said, who were the bad cop, or the bad guys? Like, how do you actually deal with that?

□ I think that's a mistake to say that we want to eject the enemy, and I don't even think the market is the enemy at all, it's just about-

* The capitalist market... The market in general.

□ No, no! I mean, it's not the enemy! It's just one creature. The problem is that we want to have a choice, and maybe whatever we are designing today is worse, we don't know. The problem is that we have no idea. So, it's not about saying "you are bad, you are good," it's not about having this pure value system. It's about saying "let's create a field of experimentation, 'let's have the market system which is shown to have some benefits and has been working to some extent in some fashions, but let's also have alternative mechanisms that we can experiment, and many of them will probably fail because we will probably just theorize something that doesn't work in practice'"-

* I might raise a point that you probably don't like, some of them will maybe hit a barrier, and this barrier is likely to be imposed by the capitalist model-

□ What do you mean a 'barrier'?

* Yeah because, effectively the capitalist model is in control, say, of the military, and when that comes in then all your experimentations might be cut...

○ Before we go on that route, I want to go back on your original question and sort of tie it into what you are saying now. It's very interesting to pay attention to your own systems, and how we're applying to while we are designing these new things and experimenting. I always saw myself, and I'm sure this is a very personal point of view, I'm from Venezuela, so I'm from the Global South and I moved to New York, lived there for twenty years, and specially, I didn't feel this much as an artist, I think... I don't think I've felt any discrimination as an artist, but I definitely felt it as, in the 'tech world', right?

I'm a woman, I'm a Latino, I have an accent, even though I'm an American citizen, I'm still looked, you know, from the outside, and so, I just saw myself of this, you know, this construction, because that's my reality right? Then, when I started, and I'm the one designing this system for a global community and a lot of our artists are, let's say, from South of Chile, from some small towns in Peru, from a small town in Kenya, so, and even the European ones tend to be from some rural area because they want to be 'off the grid' type of people, right? So, they are paying the price of being 'off the grid', and so, then I see myself as one of them, and one big lesson that I learned through this processes of talking through a community is that, because I saw myself as one of them, doesn't mean that they see me as one of them. And so, I'm designing this thing for the most part, like, you know, is very collaborative, even how we design their incentives and all of this, but at the end, it's a centralized entity, and we have the control and we are the ones designing it... And then I understood that there was actually a thing called 'erasing' the differences. So, I was basically being guilty of 'erasing' the differences between some of the people in those rural areas in the Global South, and myself. At the end, even though I saw myself being on the majority, and the minority on my own reality, I was still, you know, brought up wealthy, in Venezuela, and I still lived 20 years in New York as an entrepreneur, and as a successful artist, and so, I still was very much part of the system and I was acting as if New York never had an impact on me, right? I was acting as if having my social-anarchist ideas were predominant, when in fact my point of view is very western, and very elitist in many ways, even without knowing. So, the way I approach this, I've now been guilty of that, apart of trying to bring as much as possible all the voices from our community, but, that, you know, that's again another governance question, and you have to create the conditions, and the conditions are not there, so what do you do? So, the first thing that I, and I think it's been making a big difference, and it ties into what you were saying in terms of, well, do we call it value? Because that's how we call it... It's a framework. Is the stress changing the vocabulary of how we refer to things, and bringing it into a place that is more coherent to what we're trying to do. So, I'd give you specific examples; while working with a team, if you are in the tech industry, well, it's very normal to say, the user did this, or how we make the user do that. Well, this community, I feel very close to them; we know all their names, we know who they are, and it's like, they're not users! A design team, don't call them users! They are not users, because when you are thinking about users, you are designing a specific way, when you are thinking about your friends, you're designing in a different way. And so, DADA is not a brand, right? I hate the whole 'brand'... So, what is it? And so we were a tech start-up in New York, and so we have a team and we have statistic holders, and we have a board of advisors and a board of directors, and we have investors, right? And, all of a sudden it's like, okay, so we are doing something that is completely contradictory to the structure of how we're formed as a... We are a company! And, a company has very specific structures, and very specific goals. They are no longer in tandem with what we're trying to do. So, what do you do? Okay, so blockchain helps a lot in terms of making that a little bit more abstract so you can experiment more, but the fact is that we still have investors, we will have to hit metrics, we still have to do certain things or we don't get money, right?

So, what I've decided, and my Co-founder Julie agrees with this, and I think since we've been thinking about this in this way, it has completely expanded our possible potential, is... I just felt very limited the fact that we were a company. And we had to hit metrics for investors. So, we're thinking about it in terms of art: DADA is a work of art, the system is to me art. I'm looking at it as an artist, and when you look at things as an artist, all of a sudden, all those limitations that you had because of the metrics that you have to hit, and because of the ways that disappears... And then the potential is extremely expansive. And so, the same will be to how you treat governance, how you treat those values or those principles, how you do hit in a way that is completely outside what we are used to so that you come up with new things, or more authentic things from the community. And it becomes abstract, but I think it makes a huge, huge difference when it comes to not being western-centric, or condescending or trying to fix things for people that have completely different realities than yours-

/ And language.

○ And language is a driver of that. It's amazing.

□ Can I use this opportunity? Because I think, the time is actually going very fast. But, I would like to use this opportunity to actually go back into the question of how blockchain technology is actually providing something new, like a completely different mindset and approach to many things including to art. I want to use this opportunity to present what I'm bringing to the table, in terms of my artistic practice, and my attempt to use blockchain technology in order to actually create a paradigm shift, right? And the idea being that... So, my art project is like the Plantoid, and the idea is... The attempt was to create a blockchain-based life form. So, creating a creature, which is itself an art piece, which has new capabilities that traditional art pieces do not have: One is the autonomy, the sense that it can operate independently of any external parties control. Self-sufficient, in the sense that it has the capacity to collect the funds necessary to sustain itself over time, and, like any other life form, is capable of reproducing itself and so, the Plantoid is this kind of, like, Android version of a plant, which is, the body is the sculpture, but the mind, the spirit of the Plantoid is a smart contract on Ethereum. And so, the way it reproduces itself is that it receives monies and at some point, there is enough funds in order for the art piece to reproduce itself, and this is when the government kicks in, and so, the consulting advisory board of the Plantoid, which are basically the people that have funded it, will select contribution that people will submit to the Plantoid, and every, the vote will be weighted with the actual amount of funds they have given. And so, the governance is such that the more you contribute to the reproduction of the Plantoid, the more influence you have in selecting the way in which it's going to evolve. That's why you get this kind of strange evolutionary algorithm. But the underlying idea is twofold: One is, well, we can now, thanks to blockchain technology, we can give economic urgency to inanimate objects, potentially also animate ones, like plants, but at least for inanimate ones. And this economic urgency is to some extent enabling them to operate according to specific rules that we have been specified in the home government.

And all of a sudden we have, like, these new experimentations that happen, in which artists are no longer the focus of intellectual property, or anything: Artists are actually servant to the art piece. And so, the idea with the Plantoid is that, once it has accumulated enough funds, people submit proposition; artists, designers, whatever, submit propositions about how they envision to produce the next version. And then, at some point, the Plantoid will transact, and execute a smart contract transaction to transfer the funds to the selected winner who will then be hired by the Plantoid commission or by the Plantoid, to create a new copy of itself. And the interesting thing here is that, this is actually a new paradigm that was not conceivable before because simply it was not possible to provide this economic urgency to a thing. Now, instead of sending money to an artist, and hoping that this artist will somehow continue to do works that we like, we can actually fund the artwork itself, and the artwork will then choose, select, elect who are the artists that are entitled to reproduce the art piece. And, the interesting thing here is of course that we still need some level of governance... So, there needs to be a mechanism incorporated within the Plantoid, that can figure out, like, how the selection will be done, and of course, until we get a proper AI system codified into this smart contract. At the moment, it is based on humans, which is completely okay. The other thing is that, this model is also providing a potential economic model for artists, right? And so, as any blockchain system, there is also a Ponzi scheme involved. And so, whenever the Plantoid acquires enough funds to reproduce itself, it's sending some funds to its parent, to the Plantoid that created it, and it's sending also a small percentage to the artist that has created that particular instance of the Plantoid, and-

★ What's the reason for the presence of that Ponzi scheme, if I may ask?
Is it part of a plan? Or-

□ Yeah, yeah. It's part of actually creating an economic model for this, so the idea is that, me as an artist-

★ As an incentive?

□ As an incentive mechanism... So if you take the copyright mechanism of "incentivization, it's based on scarcity and exclusivity, right? As an artist, I have an incentive to keep all my artwork closed up, and then only if you pay for it, I'm gonna show it to you, only if you pay, you might be able to reproduce it or, like, create derivative works. So, it's a very exclusionary and scarcity-based mindset based on intellectual property, right? So we created artificial scarcity in order to enable artists to fund themselves. This model, and that's where the Ponzi scheme which is not a Ponzi scheme, it's a pyramid scheme.

I know, Ponzi sounds bad, it's a positive pyramid scheme. But the idea is that, me as an artist, if I actually create this piece, all of a sudden my incentive is, one, to communicate it to the maximum because the more visibility the art piece gets, the more potential it will receive funds.

Secondly, to encourage the remix and the creation of a maximum of derivative works, because the more this particular branch of the species of the Plantoid will reproduce, the more I'm going to get potential return on investment, or return on, like, royalties if you like. And so, as opposed to have this scarcity-exclusivity mindset, you actually have a maximum dissemination, and maximum encouraging of reproducing the work, of making it evolve in ways that follow my own criterias. And so, when I create the work, my goal is to create the most interesting one, because, like, to create the characteristics of the work that will be the most popular, and that people will want to remix, right? And so, it creates an actual very positive ecosystem, in which artists want their artwork to reproduce, and, but at the same time, it's not everyone has the capacity to make, like, millions of art pieces, right? So, in this way it's also creating a tool – and that's like, that's the protocolism – but it's also creating a tool by which the artist can actually give to the community the responsibility to making the art evolve. Since it's kind of like, the open-source model of, like, Copyleft, but it's actually about the artist, and it's interesting because it's... As an artist that created this particular model, the capacity is expanded, because you all of a sudden have a worldwide possibility of people that will contribute to expanding the body of your work, right?

○ It's a beautiful thing.

□ Which is really beautiful, and to me those are specific things, so one is, like giving economic agency to the artwork, secondly is actually giving priority to the artist. The important thing is not that one artist can create a lot of works, the priority is that that artwork can reproduce the maximum, and it doesn't need to be always the same artist that reproduces the artwork, the goal is that we have a maximum variety and evolution, etc.

★ How loyal or how compliant it has to be to the original idea? Or can it take diversions?

□ Well, that's the evolution of the algorithm, I think. So, every artist that creates one instance, can codify the DNA. So, you can create constraint obligations and every descendant of that particular instance has to fulfil all those criterias, and then... But everyone can add more. And so, that's how you have like, this Darwinism thing, in which, if you create something that has beautiful properties, then people will want to reproduce that one, and that particular branch will evolve a lot. If you create properties that are not at all appealing, they are not fit to their own environment, then very few people will actually want to reproduce that one and it will fade. So, every artist chooses what is the scope of additional creativity; I mean, the creativity is actually infinite, but, what are the constraints that need to be incorporated into every single descendant, because they are part of the genetic code.

/ So, what about people who don't... I love protocolism, and I think you actually refine so much the expression of it that it's getting somewhere really interesting, but what about people who don't want to be, who are not even, like, so the same way we've asked yesterday...

Like, people who don't even want to be part of this contribution network, they might, you know... Maybe history will show that they have invented, like, a pain in a certain way, or created something that might belong to the same kind of protocol, but their gesture was not meant to be part of something; their gesture was just meant to be, you know? Like-

○ I think I can answer that-

/ Like, what about people who are in the margins? People who are... Other cultures, other tribes, that, you know, we don't write for, that don't subscribe to any writing, or any protocol, or any organizations-

○ So, the way I see it... I'm sorry... The way I see it, it's because I want to tie into what you were saying, Primavera, because, for me, when I got into blockchain, Plantoid was one of the first inspirations. It really opened my mind into the possibilities of this. So, in a way DADA is really similar to Plantoid, in the sense that is the system, it's not the artwork, it's the system what controls and reproduces itself. And, it's not the artist is the centre, or, let's say, the community is the centre, or the art-making is the centre; so it's about allowing people to just do art! That's the most important thing! So, the economic incentive is within the system, but it's incentivizing people to make art. And I think that what you are doing, with Plantoid, answers that question that you are saying, because you can make your own rules, but in the case of DADA, there's so many entry points to do precisely that... For that person, who just does this type of things, of course, it's limited in the sense that is digital, right? But, there's so many differential points to do what you want, that if the system can sustain you for doing what you want, in our case, that system of incentivization, which is the same for us; it's like, you want to incentivize that piece of art to be used and remix as many times as possible, and just have as many people as possible collaborating within, because you are always going to have a way to track every contribution-

/ But that's not what I'm asking-

○ No but, but hold on... And then, if you are incentivizing that kind of collaboration, and you have people on the margins, like, we have some people like that right? That, they do their own thing, and they belong to this community because they can actually do their own thing in there, and so... No? That's what you are asking?

/ No, I'm asking... Let's imagine that some people don't want to belong, you know? Like, some people don't want to refer to any system. And it's actually interesting, because that's exactly what the cypher-punk movement is all about, or like, the crypto-anarchist movement, also. So in other ways... it's fine, I mean, I totally understand, protocolism as some sort of rhizomatic organization, that will spread a little bit like the open-source philosophy, or Ubuntu philosophy also, like, will spread some sort of like principles? And, you know, not forcing anybody... It's not top-down principles that are interpreted by the people themselves.

But I'm just saying, how do you just make the possible critique of this system? I mean, some people don't want to be contributors of anything! Some people just want to express something in a way. And they don't, they don't, you know, because they don't have to...they don't even want to be part of some community or system that will make them, maybe safe, up to a certain point, you know? Like, so, it's-

□ Also, I think just like not everybody needs to be an Impressionist, or a Dadaist, not everybody needs to be 'Protocolist', that's the first thing, so if you don't want to be part of a particular-

○ Is an opt-in-

□ Yeah, it's completely opt-in... Like, artists can maintain their copyright and do whatever they want-

/ But then I think where I'm going, the 'opt-in' thing is also very much, you know, based on an idea of, like, individuals, you know? Like, if you take-

* I understand where you are coming from, but I would like to ask you a question. If I may-

/ Yeah, yeah-

* Do you think that those individuals you are talking about are not prone to contribute, or they are feeling perhaps encased into a formal contribution that they are asked to-

/ I'm talking about people, that, you know, that's the same question that I'm asking since the beginning of this conversation, which is something that's unheard, something that's invisible, some people are unheard, some people are invisible. And these people are not even aware that they are unheard and invisible. And they remain... We might just let them be, you know? And I'm asking all this because I want to comment, you know, like, it's something that also, it's part of my identity, because I was born partially deaf... So, it's, you know... I'm constantly considering the possibility for something that is not heard, something that is not visible, because we, you know, we might use as many protocols, and as many writing tools as we want, something will always escape to that, and it just has to be this way, you know? It's just as a possibility for something to be, that is not part of what the rules were building. So, what I'm asking is: So, the real like... If there's a prejudice in technology, and, no matter what kind of technology we are building, and it's prejudice for universality, you know? Like, we always think that, and, you know, you can think though it's, like, good values-

* Not necessarily, I think this is maybe something to you-

/ Can I just finish? Sorry, I just want... Because otherwise I'm not making myself clear.

* Okay.

/ You know, and I don't want to... So, the prejudice for universality is not that, you know, they're top-down situations, in which the system says "oh, you only knew...", you know, "you are all the same and you're all going to be part of that system", you know? But the prejudice for universality is, nevertheless, that something can be encoded, that this thing can be encoded, and can be part, potentially, of that system, you know? But some real like, and I think that creativity and artist specially, and like, human forms and life forms in general, don't care about that. Like, they just are and they just know, like, they just belong to radical different worlds than ours. And that's where I stand, in the idea that diversity is always linked to a certain complete foreign system, and complete foreign language, and complete like, no common measure possibility, you know? And that's just... My question was how you might discover that some people were affiliated with some kind of protocol. But nevertheless, they never were aware of this. So, that fact, you know? Is a question of agency, really. I think it's a real question of what agency do we give to those who are not part of the protocol.

O Well, it's of how open you make it, but it's also we are all multi-faceted people... And so, when you are talking about these platforms, you know, that's just a little part of you that is in these places, and then you are all this other, you have all these other roles. So, for me, I don't know if it's possible to do something without prejudice, but what I know is that I'm focused, precisely, on the people who are invisible and on the shadows. This is not something that I'm doing for me and Primavera and our friends. We can make money if we want to, as artists, or we have other options, not as artists. There are people that the only thing they can do is art, and they can pay the rent the next month. And they know that and that's how they live. So, me, and they are not noticed because they don't have the access, and because they don't live in Europe or in the US, right? So, how... We create a system in which we actually put light on the people that are on the shadows, and let them be. And so, the way for me to do it, I think, we are experimenting, is, well, first of all, one value for us, or one principle for us, is: people should be able to make art regardless of their skill levels, regardless of what they want to say, I mean, especially regardless of what the market wants. So, they should be able to create, collaborate and experiment, without any pressure to produce. So, how do you do that? Well, when you have a collective, and we haven't talked a big one in crypto, which is 'ownership'.

□ Yeah.

O Right, but when you have a collective making artwork, or making value, and that value is collectively owned, then you can start thinking about, in our case, well, a percentage of that value that's created is coming back to the community in the form of basic income, if you have someone who is doing their own thing for their own sake... For whatever reasons, they can still survive, and keep doing what they're doing, because they are going to have that baseline, and you also need the baseline for people to act on intrinsic motivations, otherwise, you need the intrinsic motivations, because you need a survival mode.

So, how you take people out of 'survival mode', give them a... Or 'give us' a baseline, so they can do whatever they want to do, and hone their skills, and experiment and explore as much as they can, in the way they can. That's freedom for me.

/ Taking people out of survival mode can be interpreted in many different ways, you know? Like, that's precisely that principle that allowed colonialism, you know, or like in like-

○ I'm just talking about-

/ I'm just... Because that goes back to the question I'm asking, you know, which is basically – and that's a political conversation that we can't ignore – that's really all I wanted to point out, which is like there must be a possibility for something completely foreigner to coexist with that.

○ We have to do it as open as possible.

□ Yeah, and I think I understand your question, but I'm not sure why you are asking that question? In the sense that, I don't think anything, right now, to me like what we're talking about here in terms of blockchain and providing tools mostly for artists, but potentially for other people, is not exclusionary. It's actually we're adding something; if people don't want it, they don't take it, like, we had... This is not imposing, quite the contrary. No one is trying to impose anything here. It's actually trying to provide new means for experimenting with alternative to the existing model, but the existing model is there. And if people like it or dislike it then they stay or they leave, right? So, all that we're doing here is actually providing new means for people if they want to experiment with those new means, then they can. And we're actually creating tools for artists to experiment with new business models, whether it's DADA, which is creating some forms of collective compensation system, whether it's Plantoid, which is creating some forms of ex-ante funding system for art, which potentially also rewards artists afterwards, but it's... No one is trying to say this is the right way. There is no right way. Anyhow, there is like a multiplicity of possible ways that will be good or bad in a particular setting, but it's not about like, it is quite to the contrary, to me those are tools that can actually enhance the capacity of people that might be marginalized in the current system, that now all of sudden they can actually, well, they can create their own currency, they can actually collaboratively engage into some community of art, they can participate in, like, the evolution of something. So, those tools are potentially helping the people at the margin, but of course, they are not forcing them to join into that system.

○ And also, just to add to that, it's worth thinking about these things as they have a life of their own. So we are also, at some point, just surrendering all the control of the thing that we're creating, which means that it could go anywhere... But the trick there is, how you make sure that it stays within those people that you want to empower, or those type of creativity that you want to empower, to keep happening and not to be disrupted or corrupted, right? But we're surrendering the control so that it can become something bigger.

□ The thing is that we are in this wonderful time, which is like; this is my own fascination for the blockchain, I think it's an incredibly interesting observatory and laboratory, right? It's a microcosm in which you can play around; we can do some alchemic experimentations and looking at these in order to see what works and what doesn't work, even that particular small ecosystem, because it's still relatively small, and then potentially, once we have elaborated something and we have tested it within those communities, if it works we can try and think about how we can transpose it into different settings. But right now the focus is really like, there needs to be a space of experimentation. There is no space anymore in the world, maybe in virtual games, but we cannot experiment with governance, we cannot experiment with economies because there is no space!

○ And also learning, just learning for-

□ And learning from... And maybe there will be a lot of mistakes. I'm sure most of those models might fail and then we will learn from the failures and we will improve them, but it's all about providing new ways and new alternatives of experimentation.

★ In fact, typically we don't question the individuals on whether they can be part of a model such as a protocol model... We actually question if the model is fit to give an answer and possibilities to these individuals that are typically excluded. So we are trying to be as inclusive as possible as we expect, especially my type of work. So I come from our perspective where inclusion is key and I always question the model that I bring along, and I would like the whole crypto movement and the whole blockchain, to keep doing so, because I'm seeing, and this was briefly touched before as a subject, that, although it worked as a disruption in what, back then, happened to be a few years ago, relatively stagnant IT industry, it brought on disruption that was very beneficial and ignited a lot of creativity. And my fear is that now, that we scratched the surface and we brought along, say, the two major efforts of Bitcoin and Ethereum, that we carry on following that sort of approach, instead of experimenting new approaches... Because, typically what I see is, yeah, plenty of all the blockchain effort, that are introducing minor changes, not step changes. So, it takes a lot of courage to go on a revolutionary side on that-

○ And a lot of imagination, I would say.

★ Absolutely. And I would encourage people to keep doing so. And especially when it comes to governance, and, before you ask me a question about governance, or whether the human should always be involved or if we could be led by an automatic form of AI, I think we should be open to new possibilities. Because I think what I'm observing is that, in terms of latency and in terms of capacity to govern this system, we are hitting some limitations already. So I think we need to acknowledge that, as a blockchain researcher, blockchain new start-ups, and acknowledge it and try to change the model, try to change the approach. That's where I'm coming from.

□ Yeah, so to me, I think, again, it's about experimentation.

The AI model, we discussed it yesterday, it's not about AI, it's about what is the AI that we are framing, and for me it's like, the government structure, like, there are different layers, right? So you have the governments of the blockchain, which is a big deal because all of those guarantees depend on the actual non-manipulation of the underlying infrastructure and otherwise, there is no proof, there is no accountability, there is no 'trustlessness' at all. So, there is the question of what is the underlying government of the blockchain infrastructure, which we yet have to resolve, because we have either a plutocratic system or we have a centralized system, today. But then we also have these second layer governments, which is; if we deploy specific applications on top of a blockchain, and in that case, we need to somehow assume that this blockchain operates as stated, then it's the same thing like, we create those new applications, those new organizations, decentralized organizations. And it's actually, again, quite disappointing when you look at what are the values government structure, that people codify on top of those decentralized organizations, which are, I don't know why they call them decentralized organizations because the government's super centralized, or super market-driven. And again, the problem to me is that we, basically, we have very few models of governance in our minds. We have democratic, and unfortunately, we cannot use the democratic one on a pseudonymous blockchain. So that one is out. And then we have plutocratic, market-driven... Well, that's pretty much what everyone is actually doing within the blockchain space, and it's kind of like, it's a paradox because if the goal of actually deploying at the centralized organization is because you want to have a distribution of power, then, I mean, if you're talking about decentralization, how you have like the decentralization of the infrastructure, which arguably is decentralized, but if the power of the infrastructure is centralized and you didn't achieve anything. And to me, the paradox that is existing today is between... Or for the sake of distribution of powers, you're actually using a decentralized infrastructure, but this decentralized infrastructure, because it doesn't come with a proper governance, is leading to a super concentration of power.

* Absolutely.

□ And so, like, this whole narrative, the whole, "let's do a decentralized system," without coming with a proper government infrastructure, will never work, and the problem is that our minds actually have never been acquainted to a distributed governance system that is not market system, right? And that's why I think we have this opportunity, with the blockchain, to explore and experiment those alternative form of distributed government, right? And there is a few initiatives that are actually doing it, but, it's still very experimental and we actually need to deploy, like, we need to test it with communities and the only way, like the same thing, like, the market is theoretically a very nice decentralized system, but, you cannot just look at governments in a static manner, like, statically Bitcoin is a decentralized system of governance. Dynamically, if you actually look at the dynamic governance of it, then you should take into account the progressive economies of scale and concentration of power, right? And market is this thing that is theoretically decentralized, but in practice is never decentralized. We don't have one market that maintains a decentralized, a distribution of power, unless there is a governmental intervention to actually enforce competition on the market.

So, either you create a plutocratic model and then you have an institution that makes sure that the plutocracy is not being concentrated, or you if you don't want the institution, then you shouldn't actually adopt a market system and then we are left with nothing. We don't know. We don't have a-

○ Let me add just that, free markets, in particular, tend to produce a 'winner-takes-all' distribution of outcomes, which is why it becomes plutocratic, right? And so, you tend to have star systems in which few people gain most of the benefits, and a long tail of people who just get nothing, right? So, and the problem is that technology amplifies 'winner-takes-all' distribution. So now you have free markets being amplified by technology and this ultra concentration of power and money in a few. So, we have to think about systems, and what you say is true, like, the only times in which we have seen the market producing that stable middle-class was when it was heavily regulated, right? So you need those levies. So, to me, it's like, okay... So, how are you, how you go out of all of that and create something that is new and gives different outcomes?

□ How do we get like, a fresh mind without being indoctrinated by everything that you know today-

/ Well that's exactly what I was asking this about, the fact that you don't... No, but that's exactly where I want to, you know, why I was asking why we don't, we might not... Do we need a system? Like, really, do we need, if we can't envision, you know, a habitable world-

○ But a fractal is a system, right? A fractal organization would be a system, like that's what... Some types of organization, right? Maybe we shouldn't call it a system because maybe system implies some kind of standardization, but an organization that would be like a fractal, organization that will be different, very different nucleus of the ramifications of different communities, or different motivations, or interest, or whatever. Yes.

* No, I have a proposal to respond to this request of what we should focus on, and I think the newborn, say, blockchain industry rather than being stagnant itself in how it's been conceived so far, I think it should put its effort primarily on types of governance, on new approaches for governance and give up this intention to provide this decentralization at that level. There are different levels of decentralization, and there are some that, to me, look more interesting than others, because the current decentralization was motivated by Breaking Free from the control and possibly corruption of a centralized system. But actually there's no one that has succeeded in terms of scalability and latency; the only system that succeeds in bringing on board that many involved actors, that many people, are centralized systems. They work better. So let's face the reality.

○ But they are more efficient-

* They are more efficient; they consume less electricity, resources-

□ Yes, of course, centralization is always more efficient, but they do not come with those technological guarantees that the blockchain provides. Like, if you have a centralized government of a blockchain, then there is no accountability as to the fact that it cannot be manipulated, like history can't be changed, and you can't be censored-

* I would go towards a centralized approach that is devoid of the meaning. So, for example, an opaque-centralized approach, in which if an actor has a motivation to take control of that, there's little that you can do. On a decentralized approach, only verification can be executed. So, the actual data can be stored somewhere else. And, I think I would be in favour of bypassing this problem because simply I noticed that we are not capable of resolving it right now, bypassing focusing on come on governance, which is a far more interesting problem. And also, in terms of decentralization, what I find very, very interesting is to break free from how currently, the way we operate and we interact in society is defined by five major organizations out there, which are large corporations that define effectively how we will operate on-

□ The Internet companies.

* The Internet companies, the social, social. Yeah; Google, Facebook, Amazon, etc... I didn't want to bring names on the table, but that's what I'm referring to... So, that they effectively define how we operate and typically I sense that creative minds find themselves encased. So, we are pretty far from what you, Stephane, reckon would be an optimal solution, which will provide inclusion also for... Or even not inclusion as you as you mentioned-

/ Yeah, I think, just to clarify. I'm not... I think we just need to think also that they might not be a solution. Because of the fact of thinking technology as a problem solving thing, is always like trapping us into the same, you know, paradoxes and domination/dominated, dominant/dominated... So, I'm just... And that's why I really think that Dadaism was about that. It's about, like, there's a power for imagination that is also a political thing, you know? Like, when I say, what about the unheard? What about the invisible? What about the people who are not even like, who don't want to be part of they don't want to subscribe to any sort of organization, because they might not need so, and that goes... Let me take it further, you know, if it'd make my argument clearer, which is what about the unanimated object? What about the natural resources? What about the plants? You know? Like, we might have to surrender, at some point, to this idea of individuals and subjectivity and mind, to just accept that some things are, and inside the mind itself, you know, like I say, I love... So, governance. Because it's the word we've been using to sort of trying to make this conversation go somewhere where we can actually get an idealist standpoint in governance discussion, right? So governance is also about, you know, how do you... Unexpected things, you must take them for what they are; they are unexpected. So, the same way you govern a community, you govern yourself. Sometimes you might have some thoughts, imaginative visions, some potions, some emotions, that are completely new, and they don't fit into any language.

They don't fit into any potential, like, prediction of, and that's one of the essences of the artistic expression also. So, I think, I just wanted to try maybe, take the blockchain, I mean, I think that we might need to go back to blockchain versus crypto, like, crypto... blockchain, it might be... It's an infrastructure. It's a language. It's a computing power, but crypto is not just blockchain. And I think that this eventuality, this possibility, must also be part of any conversation on blockchain so that we make sure that we're not designing blockchain out of some sort of super power. Yeah, super power system, basically.

□ Yeah, I want to, I think it's... of course, like, hopefully, nobody thinks that, at least not in this bunker, but I think like he's actually-

/ But some people do-

□ Some people do.

○ I think it would be great if after this conversation you just keep us in check, once in a while, in each of our projects-

□ But I think there is a distinction, so there is the approach of many people outside of this bunker, which see that blockchain is this trust-less infrastructure, in which we can codify everything and everything is like self executing and we don't need humans anymore, you know that, like, that those corrupted minds, right? And this is like, on the one hand this concept of 'trustlessness' does not exist, because trust is just somewhere else and you're just shifting trust from a centralized institution to a decentralized network of miners mostly located in China, but secondly is also like, do we really want a trust-less system? Do we really want a system in which we don't have trust relationship and in which everything is just pre-codified? Of course not, no one, except some people outside of this bunker, wants that. On the other hand, I think it's also important to look at technology as an affordance, right? And whether it's cryptography. Cryptography is a fantastic thing, it brought the possibility for people to communicate in private. And this is actually... that doesn't mean that cryptography is resolving everyone's problems, but it is an affordance that is necessary for this actual communication to take place in a private manner, that, and the blockchain I think is another one of those are affordance, right? So the goal is not really to create a trust-less society, I think none of us is really trying to do that. However, if the goal is to actually build trust, right? The blockchain technology, to me, is actually this mechanism that is building confidence. So you can build confidence in a particular infrastructure and because of the confidence that has been enshrined into the operation of the infrastructure, then it actually becomes possible or easier at least to create trust relationship on top; because I don't need to trust Facebook about everything that they are doing, because I know that they are constrained, at a particular degree, in some operations and those operations I have confidence in the way they operate and because of this increased degree of confidence, then I feel much more comfortable actually taking the trust relationship to this person, to this institution, or whatever I'm interacting with.

So to me in the same way as cryptography was a required affordance for peer-to-peer private communication, then blockchain is an affordance to create this confidence and this accountability in the people I interact with, which the ultimate objective is not to get rid of trust, it is to create the building blocks on which trust can actually be rebuilt and restored.

* Okay, I wanted to say one thing about cryptography, and the possibility to engage in private conversation, which is appealing from one end, but also dangerous from another end. So, in some circumstances this is a tool that might be used for purposes that are not generally perceived as 'positive': for instance the notion on how to build weapons is circulating very, very fast. And even the funding of this operation circulates very fast on blockchain-opaque system that don't give the possibility for a centralized authority to inspect so-

○ And another one would be like, sexual abuse for children.

* Absolutely, Absolutely. So, I think to an extent, it is fascinating what crypto-cryptography enables you to do. But from the other angle is also quite dangerous, and we need to be aware that by decentralizing we also open up this can of worms.

□ Absolutely, and I think that's it. That's like, every technology is a dual-edge, right? Every technology that can be used for amazing beautiful things, can also be used for terrible things. Right?

* Absolutely.

□ And the problem is that there is no possible way in which you can provide one and prevent the other if it's not from the outside by creating social norms, institutional norms, whatever system, that is actually promoting certain usage and punishing other usages, right? But, I mean, that's like the problem with like Tor and like with everything is like, a technology that is sufficiently secure to enable activists to communicate privately, will also be sufficiently secure to enable terrorists to communicate securely-

* Absolutely.

□ And the question is: do we just want to get rid of the technology because there are potential terrorist uses? How do we actually want to promote the positive use of the technology and try to dissuade to the maximum the negative usages, right?

○ I will agree with you that it's possible to create this incentive to, like in our cases is very simple, either it's completely open you can draw anything and you can be anyone. So, of course, there will be people drawing dicks, right? Or, that is... so you create the incentives, but also you design the system in a way in which there will still be people drawing dicks, but they may not have the motivation to do it, because nobody's going to see them, for instance. They could still do it, but it won't have an impact, right? So, you can still do that.

□ And I think they have also the power of the community, so, to my platform, which I think I showed you the Capshlagg, which was basically not similar to that, but like a blank canvas where everyone can write anonymously and delete other people, and at the beginning we were really afraid, like, we started it in like 2007 and I was like, oh my God, this is going to be full of dicks. I was like, you know, or like insults and whatever. And interestingly, of course, you cannot avoid the dicks, they always happened, but, because it's a community thing, it's super cute, like, whenever there is a dick coming up, all of sudden the community doesn't even delete it: transforms it! And then you see this dick that becomes like an animal or become a face, you know, and so you have this community moderation, but it's not based on censorship, which is really important. We don't decide: or you can flag it up and down, no. The community itself will react because the social norms they don't want to see this dick, and so, they just change it and make it evolve into something beautiful.

○ Yeah, and I would say that when you're left by itself when you don't have that type of community social norms, what happens if you hold to there, there are hundreds of this real-time drawing applications: It's all dicks and all like-

□ Because there is no community behind-

○ Because there's nothing that would prevent that from happening. So-

□ But I think is not so far like, the problem that you were raising, is, of course, like, whenever you are in a closed system where it's basically just terrorist communicating with each other, of course, good luck, you know. However, when you're in a community system and some people want to see something like, let's talk about hate speech. Right? So, the community might not actually want to be in a system in which there are hate speeches, and they can... they can moderate actually somehow-

* This moderation element is what I want to bring on the table-

□ It doesn't need to be top-down. It can be community-driven.

* Or it could be automatically driven, that's my hope.

□ That's the problem with AI, or like content ID, and all this stuff and then they start censoring everything that they think might be bad and most of it isn't bad-

* No, obviously with current systems I would not be in favour of that, especially if they are driven by machine learning, which it tends to be biased and-

○ But the problem, I think, before you, I will oppose to this very objective pragmatic example, and this is what happens with Facebook on these things. But if you were... the people that draw nudity in DADA, very often we don't censor anything that's art. Right?

How is an AI going to differentiate between a beautiful dick that somebody did because it's actually an anatomic study and a dick that somebody just did for the purpose of trolling. There's no way. You cannot do that. You need a governance system on top of it-

* And also a monitoring, I would suggest.

○ Specifically, I think, a system of incentives that-

* But, some people have, I'm referring to people that don't have the intention to participate positively in a community. They want to disrupt things perhaps, they have the... They come from this background. They have this type of motivation-

○ That's incentivizing them.

* Yeah, but if these people are feeling excluded they might develop an incentive of their own that is just to disrupt a system, and effectively I am talking also about cases in which trolling is even leading to people committing suicide or something very, very bad. So, and this has to be taken into account as we develop a system with a governance and with an inclusive and independent sort of approach.

○ Of course, that is like, what I was saying yesterday: DADA is completely open; we don't censor anything, that's a principle. There is no censorship whatsoever. It's open to anyone yet there is no trolling and there is no bullying.

* But you can afford keeping it that way until an accident happens, and then things get pretty sour.

○ Well, the thing is that what's preventing that from happening, is the actual system and is a community. So, it does neutralize that kind of behaviour.

* That's an optimistic way of seeing it.

○ No, it's not optimistic! This is objective because it's actually happened; I mean, DADA has years and what I was telling you yesterday is not, and this is what I think it's important and going back to the way you see things, right? Like it's not that this is a beautiful community where everybody is nice and kind. We all, I mean this... we have people who are, you know, mental issues, illness, you know, like there's all kinds of things there but you can see the same people behaving toxically in Facebook, and in Twitter and they don't behave that way on DADA, and I think that the incentives, again, are the main, the crucial differences, because when you think about the social networks, the thing that it's, because of the business model of social networks, like Twitter and Facebook and Reddit the social, the business model is based on growth at all costs, so that you can get as many data that you can sell, right? That's the business model. We know now that the fastest, easiest, deepest way to engage people is outrage.

So if outrage is what causes the deepest engagement, and for your business model you need the most engagement possible, then you are going to incentivize outrage and the algorithm is going to incentivize outrage, and so it's a circle, a vicious circle. Right? So if you think of it completely different, and this is why it's so important crypto in the equation, is how we figure out different business models or different... I won't even talk about business model as a different way of self sustain for this projects or communities, in a way that the incentives take care of the behaviours of the community, and automatically that governance will be filtered by those motivations.

* Can I ask you just a brief question, and then I pass right over to you. Now, how do you recognize the fact that for example nowadays people relate in an empathic way towards character, mainstream character, like the Joker in the recent movie. So, this to me is a type of feedback that I want to interpret about our society. And he is a different Joker compared to the one that we used to relate to when we saw previous movies. This went mainstream and it got a lot of people involved. And I think the message is, yes, there's something unpleasant for the individual that goes ahead in our society and that is a reaction that people are inclined to relate to, as opposed to the one that you are bringing on the table, which I think is much more constructive. So, but how do you relate to a mainstream event that is going in that direction? How do you involve as many people as possible in an effort that is more constructive and more cooperative?

○ What I'm saying, I think it is, in the base of... the basis are the incentives that is what... A motivation is what drives our decisions. So if you incentivize the motivations to collaborate, that's going to have an outcome that is different from incentivizing motivation to compete, right? So, competition is going to try the 'winner-takes-all', outcome, while core collaboration is going to try to a cooperation type of organization, right? So, and it's not that one is better than the other, because collectivism can be really bad too. It's just that, on the very basics our behaviour drives our decisions, and what these companies are doing is basically modifying our behaviour.

□ Yeah. I think this is like an illustration of exactly, like, the media has so much power to actually change the mindset of people, and today our medias are like, what are those, our social medias are like, the Hollywood industry and whatever not. They are actually passing a very specific type of message. And what we want to do is actually pass a completely different type of message and actually create an alternative or a coexisting parallel system, in which the message is actually "we want to all collaborate" and the intuition, you know, so I think a lot in community in terms of gravity as opposed to boundaries. I don't think like, whatever, I won't define communities, but the gravitational force, right? Is a fundamental thing that makes people orbited around the particular community. And today we have these very strong forces around, all those like, traditional social media, whatever, very, very strong. It's really expensive, costly, for her like social cost to move from one to the other.

The question is can we actually create systems which start small, they start with like a small gravitational force, but it's people that are very aligned with those values until they really, they really become stronger by cooperating. And if we actually believe that cooperation will lead to a maximization of the happiness, I guess, or a level of the of the creativity, of the production, of the value of those communities; as people gather around this gravity, they become stronger, they attract more people, the gravity becomes stronger and eventually more and more people start orbiting, and there might be a point, maybe in the long term, in which the cooperative model has become so strong, kind of like Wikipedia. Wikipedia, there is no way any commercial encyclopaedia could ever compete with Wikipedia, because it has attracted sufficient gravity that everyone is already there and, the co-operative model is so much more productive than the competitive model. And so if we manage to create those small spaces of cooperation and experimentation and if there is an initial group of people around, that enjoys that, that actually feels better, that actually feel that they are producing better value, then we can hope that more and more people will eventually move, and the ultimate long-term ambition, if we succeed with our experimentation, is that you don't need to fight the existing model, because people will just naturally 'orbitate' away and towards the co-operative model. And that will be a point in which it actually makes sense to just go to the co-operative model. And so, to me like, that's the feel like we are not even competing with the competitive model. We are just creating an alternative space, even if this never happens and this still maintains the main gravity, at least the people that are aligned in values, and the Joker people will stay with the Hollywood. That's fine. But the people that do not like Joker they can come to those alternative models and they can increase the value of those models and you know, at least they can peacefully coexist. And if one day we manage to become stronger with the collaborative model then it's going to shift and then they would just collapse, out of nothing, because there is just no more gravity there, right? But, because the time is gone I will suggest, I would like to, as an ending, if we can each say like, what is the very soft message that we want to give to the brother crypto-community?

★ Yeah, go ahead...(talking to Beatriz Ramos). Okay, the short messages kind of echoing what I said before, in the sense that yeah, we went one step ahead into exploration. Let's keep exploring. Let's keep trying to build something disruptive in a responsible way and with tools that impede disruption by single individuals who have intention to create a lot of damage, so that's my message.

○ So, I will take it from there. I think I hope that we keep experimenting as much as possible as we said, but I will, this is for, you say for the crypto-community?

□ Yes.

○ Okay, so specifically for the crypto-community? I think one of the biggest problems is that I see people just bringing the old frameworks into this new technology, and I think the danger there is that they're still calling it innovation and new systems when they're really the old ones.

And so I think it is really not because people are evil or they just want to make money, there's some like that, but for the people who have good intentions, I just think it's very difficult to think about new things, it requires a lot of imagination and it requires really a deep-

* Exercise to-

○ Understanding of your own self and your surroundings, and so, I think experimentation is what drives that and allows for that to happen.

* Absolutely and go the unconventional route, force yourself to try to break these embedded models that you have inherited, and try to think unconventional, creative as well I would say, but mainly unconventional.

○ Treat it as art.

□ And yeah, I would add to this, my own invitation to the crypto-world is actually, I think artists have so much to contribute; because if there needs to be creativity it needs to be creativity like: how do you get outside of this box? And it's super hard, even as an academic. It's super hard to think outside of these, like, big, even if maybe you have a larger box, it is still a box, and I think artists have this wonderful capacity of imagining what could be? And thinking completely outside of the box and, I believe the actual disruption that might come within the crypto-world will potentially be the best inspiration. It's actually like artistic thinking and also, in addition to this, I think especially when you have those technologies that are not yet mature on and so thought, there is this thing that I've been observing a lot is that everyone has a particular type of constraint, right? So, if I'm an engineer I'm constrained by functionality. If it doesn't work, I cannot do it. If I'm an entrepreneur, I'm constrained on return on investment, if it doesn't make money, I won't do it. If I'm a lawyer, I'm constrained with the legal system, if it doesn't make sense on the legal system, I cannot do it. And the artist, actually, has this beautiful lack of constraints, and indeed most of the incredibly interesting innovation in the blockchain space, at least, I have seen it coming from artists, because whether it works or not, it doesn't matter, what others return on investment we don't care, if it's not legally compliant, even better, (laughs) so, I think I'm actually like: Do things that don't work, that don't make any sense and yet it's there and that could touch... that's what then can inspire other people from the real world to then look at what has been done, what has been imagined by the artist, and then try and make it make sense in the whole framework. But the initial innovation comes from the artist.

* I agree.

/ I want to just remind me of something, you know, Nietzsche would write about painters and he would say that the Renaissance painter, in spite of having matters that were imposed by, you know, the power. So basically they had to paint Christianity and Christian matters and the most interesting thing about Renaissance painter is that they would be able to express the contrary of what they had to paint just by, you know, their own creative gesture.

And I think that's probably the most beautiful thing about crypto-concept which is like, you know, indeed you are encoding something that you can't get back to, so, in some ways, you're like, you know, there's a real question there, which is how do you allow crypto to remain transgressive so that it can not include in a way that you know, we have to include impaired or Z, dominated or to minorities, but in the sense that we can always open a possibility for something that is not there yet, to coexist and maybe shut down the system in the end, because the whole point of having a system is also to be, you know-

* Questioned.

/ To be able to collapse.

* Yeah, yeah.

□ This is wonderful, we should... we should go into bunkers more often. Let's find a bunker in Paris or something. Anyway. Thank you, everyone. That was wonderful.