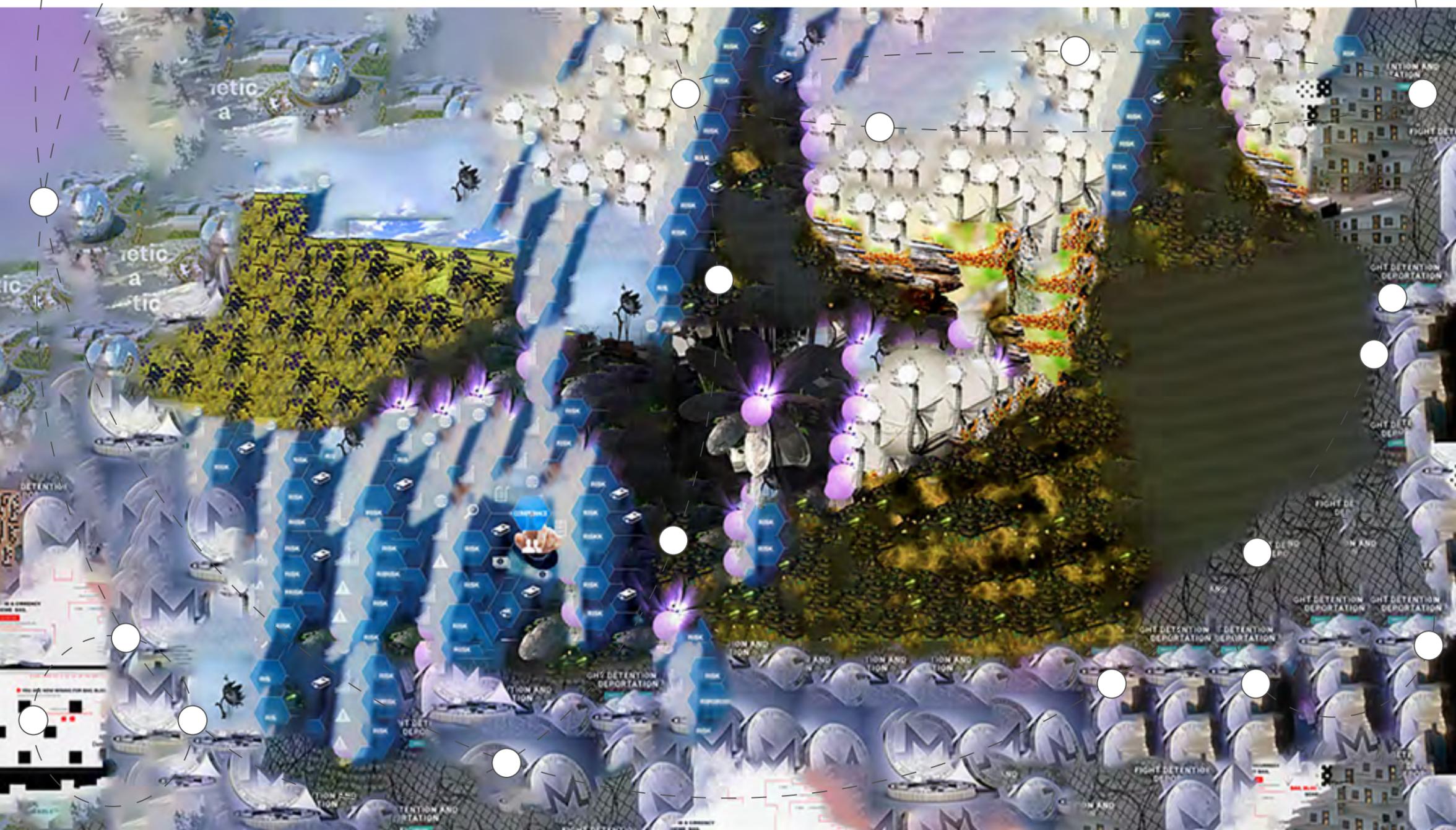


# A Blockchain Art History Timeline

From Archaeology to the Moon | Feasibility Study





# What Is A Blockchain Art History Timeline?

Most artworld engagements with blockchain technologies have focused on the business of art. Artworld business stakeholders and start-ups are developing blockchain technologies to track ownership and provenance and provide an infrastructure for fractional artwork sales. By contrast, the impact of blockchain-based tools on practices of curation and collective decision-making have been less considered but will nevertheless come to have a major impact on art history since they will play a part in determining which artworks enter into “the cannon” and which do not.

A Blockchain Art History Timeline is, therefore, a cross-disciplinary, real-world experiment to explore the potential impact of blockchain-based collective curation through the perceptual lens of art history. The idea is to create the world’s first timeline that will chart the rise and influence of Blockchain Art (and Crypto Art) and, crucially, to use blockchain’s new decentralised curation tools to do so. Such a timeline would be a powerful provocation, asking who gets to write the history of art, shape its narratives and control its value in society. Conversely, this is an interesting use case for blockchain technology and organizational practice. This report offers a proposal for such a timeline, outlining a technical approach and the processes necessary for its creation, as well as a potential strategy for its visualisation. It also presents the findings of the art historical, curatorial and artistic research that underpins the development of the timeline: examples of milestone artworks, a discussion of the conceptual frameworks of the project, and a consideration of the uses and limitations of the timeline as a form.

This feasibility study is the result of a collaboration between Cadence Kinsey PI (UCL) and Ruth Catlow, Co-founder and Artistic Director of Furtherfield/DECAL.



# Why Do We Need A Blockchain Art History Timeline Now?

Ruth Catlow

The idea for a Blockchain Art History Timeline grew from two conversations in the Spring and Summer of 2019: one between myself and Marc Garrett, with Marianne Magnin at Arteia<sup>1</sup>, and another with Primavera di Filippi, an artist and law researcher.

The first had a kernel of mischief. We thought (and still think) that both art and blockchain technologies hold emancipatory potential. However, in both realms significant obstacles prevent the realisation of fairer, more dynamic, and connected ecologies and economies. There is the mystique surrounding value and markets in artworld ecologies and the fact that the decentralization of control and innovation by blockchains has not been matched by a decentralization of understanding and equity. We also realised that timelines have the potential to make us mad! Deeply centralised, top-down structures of control, we agreed that they omit the things that we most passionately care about. That they separate artworks from the communities from which they spring, misrepresent what actually happened, and that they lose sight of what was important about those things. Yet we also felt that they had the potential ability to reveal who has the power to determine and decide what is important to us all.

The second conversation, with Primavera, concerned the lack of critical engagement by the artworld with the conceptual range and depth of artistic work taking place in the crypto/blockchain space. Active communities of producers have formed around platforms and decentralised markets for the new digital art scarcity. While some have tended to acquiesce to the logic of art's primary status as commodity (more art, more money, yay!), others have explored the potential for self-organisation and participatory practices offered by blockchain-enabled collective decision-making and coordination. These are executable artworld manifestos, experimental models of artistic solidarity templated and shared translocally. Programmable artworks, collaborative DIWO (Do It With Other) practices, generative artworks, artworks to take apart surveillance capitalism, artworks to address carceral injustice, cyborg artworks, evolutionary social artworks, experimental art ownership mechanisms...all of this and more. As there was with art after the Internet (in the mid-noughties) there is a diverse body of

artwork, with a lot to tell us about our times, that is in danger of falling into a darkness largely unexplored by critics and historians.

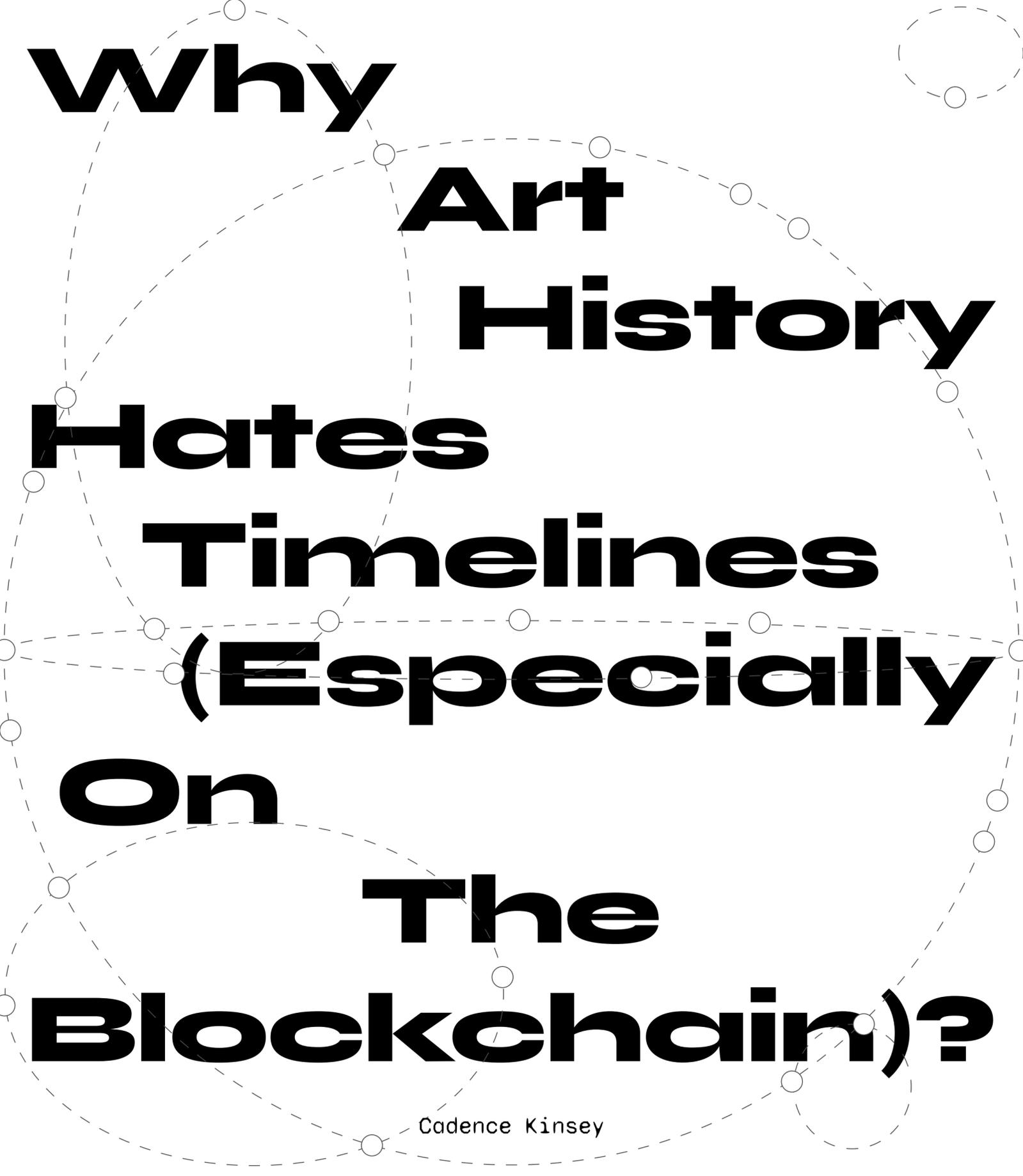
The Blockchain Art History Timeline project is therefore intended to expose antagonisms, promote understanding and stimulate collaboration and innovation between three communities of art, business and technology. Critical art practices since the Internet have had an uneasy relationship with both artworld business (including artworld establishment) and, more recently, blockchain technologies. These last two are commonly perceived by the first as capitalism's youngest and most dangerous twin offspring, prioritising the wealth and power of a tiny elite over... life. Our Timeline would knowingly inhabit this difficult space. But it would do so as a critical practice in its own right, using latent strategies to foreground (rather than forget) the ways that this technology has become embedded socially, culturally and historically.

Gripped by the potency of this plan we have discussed it with leading artists, activists, curators, art galleries, developers and tech start-ups. The fact that this feasibility study uncovers more compelling questions and openings than it answers or bridges may be an indication of the diversity of potential stakeholders - partners and audiences. But, like the timeline itself, it will support conversations in which rhetoric meets the reality of what is conceptually and technologically possible and, most importantly, it will provide a site for discussion about what is desirable and for whom.

<sup>1</sup> Arteia, is an art/collections management start up, using the blockchain as part of their provenance offer.



Blockchain Artwork psychogeography, Based on Plantoids Artwork, Studio HYTE



# Why Art History Hates Timelines (Especially On The Blockchain)?

Cadence Kinsey

If we are asked to close our eyes and think of a timeline of art, I suspect that many of us will imagine a line running across the centre of our page or screen. The line will most likely be straight and solid: a simple line that seems to say or do very little in and of itself. We will assume that it runs left to right because somewhere, somehow, numeric indicators have suggested to us a sense of progression in this general direction. Small spurs may project out from either side of this line with a name, a concept, a title, or maybe even an image, suspended miraculously at the end of each and dangling precariously over a large blank expanse. We are told that this is a representation of time but, really, we know that what we are being asked to construct in our imagination is a representation of history.

When the art historian Alfred H. Barr sketched one of the first attempts at a timeline of art in 1936, the line was neither singular nor solid and it did not run from left to right. Instead, the diagram featured a sprawling mass of black and red arrows that worked their way both across the page and from top to bottom. Yet, despite these apparent differences, the logic at play in Barr's timeline would be remarkably familiar to us: at its heart was an attempt to produce a representation of artistic progress that was indexed to time, and which would be underpinned by a seemingly naturalised directional flow that riffed on culturally specific reading habits. Looking at Barr's timeline, we see that Cezanne gives us Fauvism in Paris, which gives us Expressionism in Munich. Seurat gives us Cubism in Paris, which gives us Constructivism in Moscow. All the while, time is passing. Although lateral connections were accommodated by Barr's diagram, the ultimate direction of flow was only ever going to be one way, culminating in one of two possibilities: Geometrical Abstract Art or Non-Geometrical Abstract Art. In fact, these represented but one true possibility for Barr: the inevitable development of abstraction as the privileged category of western artistic achievement.

Created during Barr's tenure as the first director of MoMA in New York, this diagram was initially published on the dust jacket of the catalogue for the 1936 exhibition Cubism and Abstract Art. The central thesis of this exhibition was that abstraction was an inherent part

of the development of modern art: an argument that Barr would seek to condense in the visual form of the timeline, drawing on the use of a pseudo-scientific diagram as an apparently objective strategy of representation. Like the museum itself, whose spaces were divided into distinct categories of genre and media, the timeline not only sought to organise and structure knowledge but to do so in a way that would downplay the highly subjective logic behind it. Like the galleries of a museum building, Barr's timeline represented an institutional protocol dedicated to the construction of a particular history and, hence, the production of power.

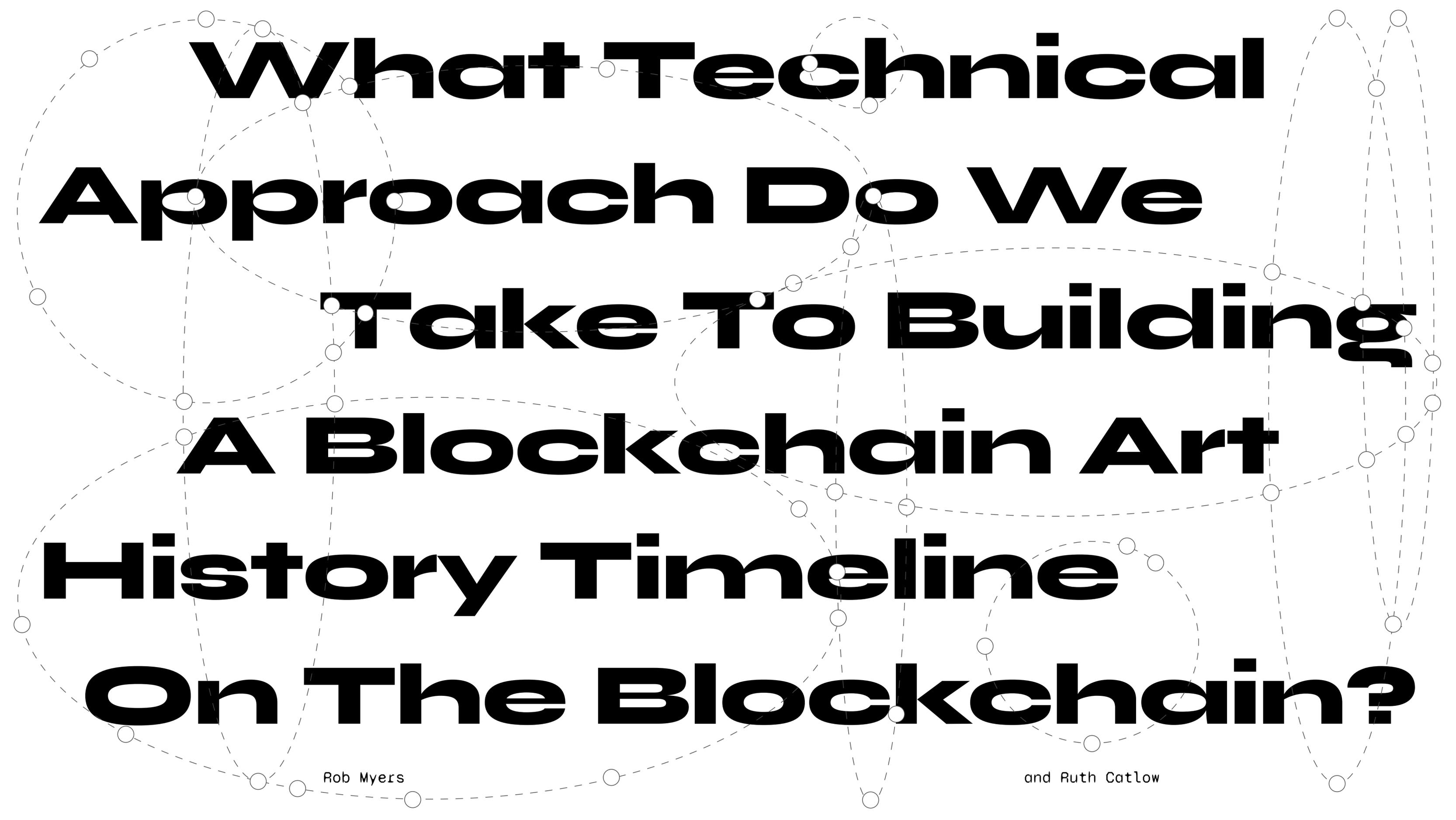
All of this clearly begs the question: what is there to like about timelines? Well, as one of the contributors to this project put it, Barr's timeline could be 'usefully wrong'. In other words, it serves to tell us how not to do (art) history. It can show us how both individual and institutional power is enacted through the most subtle of means, and how those means are underwritten by centralising and colonising tendencies of categorisation and representation. It can reveal to us how the very structure of a diagram produces an argument. And it can tacitly remind us, through the large, blank, void that usually lies unacknowledged behind or beneath the timeline, that something is almost certainly always missing or has been left out.

A Blockchain Art History Timeline, then, is likely to serve primarily as a provocation since it has the potential to not only reproduce but actually intensify these problems. The rigid linearity of time that the blockchain models and its claims to permanence, combined with its black-boxed status, clearly risks amplifying forms of cultural (and data) colonialism and exclusion. And its close association with finance and the art market could further entrench an understanding of the timeline as a tool for the production of capital (whether social, cultural or economic). But all of this may equally be a part of its political potency and a Blockchain Art History Timeline might hope to produce an intensity that exposes, and maybe even explodes, its own limitations. By not simply creating a timeline of blockchain art, but by actually using blockchain-based tools for decentralised decision-making, and hosting it on the blockchain, such a timeline could offer

rich possibilities. It could engage forms of collective curation that disperses power rather than seek to produce an authoritative record. It could structurally embed the dynamic historical and technological contexts in which the works of art were produced and that add meaning and value to them. And, by capturing the process of decision-making, as well as its impact on wider collective structures, it could call into question the very means by which any history comes to be written.

The critical and art historical challenges of this project unfold from the central question of what it means to create a historical record that cannot be unwritten, and to find meaningful ways to play with the protocols of authority and priority that the blockchain foregrounds. Such a timeline would therefore seek to allow for multi-subjective perspectives and not force consensus. It would be tacitly open to use and misuse, but the technical infrastructure would retain and accumulate versions following changes. Its linearity would be rerouted to take into account the circular or repetitious aspects of time and, in so doing, would encourage us to look backwards as well as forwards. The affordances of a Blockchain Art History Timeline would not be those of Alfred H. Barr's, but neither would it overwrite what was usefully wrong about it.





**What Technical  
Approach Do We  
Take To Building  
A Blockchain Art  
History Timeline  
On The Blockchain?**

Rob Myers

and Ruth Catlow

The creativity that has been unleashed by artists working with blockchain as a subject and medium indicates the potential for using the same technology to transform thinking about art criticism and art history. By using well-tested blockchain platforms and development methodologies, we can bring both popular and expert opinion to bear on the many problems of establishing an artistic canon in entirely new ways. This project mobilises both human and automated processes, therefore our technical approach considers how different communities of artists, developers, activists, curators and thinkers - from the emerging blockchain artworld as well as other established artworld ecologies - might collaborate in building the timeline and so explore and build new practices and discourses around this new technology together.

## Aiming For Inclusion and Rigor Using A Staged Project Approach

The technical approach to building a Blockchain Art History Timeline instantiates our best efforts to balance wide socially inclusive participation and technological innovation within a rigorous and fair organisational and technological process. Our intention is to achieve a legible and meaningful outcome that will provide value to people in the blockchain space, the artworld, and in wider society.

To encourage productive exploration of blockchain technology, our approach uses one DApp and three different DAOs (Decentralised Autonomous Organisations). DAOs are: blockchain-based organisations for automating the pooling and distribution of member resources and decision making. In a DAO, a network of peers encodes its rules for decision-making into secure, decentralized software. This software then “becomes the arbiter that tallies votes and carries out the will of the people.”<sup>2</sup>

Our timeline creation process demonstrates the three main use cases of DAOs: asset management; collaboration on a task; and crowd curation.

Using a staged approach to the submission, evaluation and final selection of works we create a funnel with a wide catchment and a mechanism for exercising collective discernment about the works featured on the timeline. By selecting the most appropriate technologies and platforms for different stages of the project we hope to highlight and demonstrate the conceptual and technical range emerging in the space.

Where a more complex but less accessible technology was available, we have chosen the more accessible. Where a more accessible but less on-chain technology was available we have stayed on-chain. By doing this we hope to gather and share the most value for all involved for each community we are inviting to participate. The technologies that we have chosen for this project are as follows:

## Stage 0 : Blockchain Based Community Building and Fundraising

This feasibility study and the creation of a community channel on Telegram or Diaspora is the first step to growing community engagement towards the realisation of the Timeline. This will be followed by the creation of a Moloch DAO to build investment and interest in the project.

### Platform - Moloch DAO

[github.com/MolochVentures/moloch/](https://github.com/MolochVentures/moloch/)

The Moloch DAO platform enables people to pool their resources and prioritise which blockchain development projects to fund, and has proved very effective at this task. Although we are using it to fund what is notionally a single project here, the project has multiple stages that need organizing and funding separately. And once we have completed this project the community that will have assembled around it can propose and fund other blockchain and crypto art projects.

Funds can be “staked” by sending Ether as Wrapped Ether, or fiat currency can be sent as DAI (one example of a cryptocurrency designed to minimize

the volatility of its price, called stablecoins<sup>3</sup>), buying membership tokens with this stake in the DAO. The members of the DAO can manage the allocation of these staked funds and offer them as a reward for performing work that the DAO votes on. If a member becomes dissatisfied with the decisions made by the DAO they can withdraw their funds in a process called a “rage quit” and take out an amount of funds proportional to the tokens they hold in the DAO.

This makes the project blockchain-organized from the start, providing a transparent mechanism on the Ethereum blockchain for both gathering and allocating funds.

## Stage 1: Submission - Artists and Curators Submit Works Through A Public Open Call

The aim of Stage 1 is to access and engage the widest possible network of communities to submit blockchain art, crypto art (and artworks that belong to the pre-history of these genres) to the timeline. Contributions are invited, via an open call to international networks of artists, developers, curators and academics. Metadata about all proposed artworks (eg title, artist(s), date range, description, url, categories, keywords) is registered on the blockchain via a bespoke DApp

### Platform - Bespoke DApp

[dappuniversity.com/articles/ethereum-dapp-react-tutorial](https://dappuniversity.com/articles/ethereum-dapp-react-tutorial) | [ipfs.io](https://ipfs.io)

There are blockchain art curation platforms for “Rare Art” (editions of digital images registered on the blockchain and traded electronically) such as RareArt.io and Known Origin, but we wish people to be able to submit art of all kinds, on-chain and off-chain, online and offline and particularly art that they do not themselves own.

To register these submissions we will commission a bespoke Ethereum DApp that allows anyone with a Web3 wallet such as Metamask to place a link to and a description of a work that they feel belongs in the

history (or prehistory) of Blockchain Art onto the Ethereum blockchain, in the form of a hash identifier for a JSON metadata block stored separately as a file on the IPFS distributed file system.

Once commissioned, the implementation of the DApp can be subsidised with funds gathered during Stage 0.

The advantage of this approach is that it is a well-understood technical architecture that combines democracy (anyone can submit work) with good social safeguards (submissions are not stored on-chain and need not be displayed in the front-end if they are offensive), while reserving more qualitative judgements for later in the project. It also requires minimal technical knowledge and investment on the part of users - nothing is required to participate other than an Ethereum wallet web browser plugin and some Ether. And if we were to use the Gas Station Network and “meta transactions”, users would not even need the Ether at this point.

## Stage 2 : Evaluation - Is It Blockchain Art, And If So, What Kind?

At Stage 2 we use a DAO to assess, validate, collate and sort all submissions according to whether they belong on the timeline, and if so within which categories. We anticipate that some categories will be more populous than others. By making it possible to compare like-with-like, and monitor the range of practices represented, this sorting process will support the next step of the curation process.

### Platform - Colony

[colony.io](https://colony.io)

Colony uses DAOs to “manage” work in a decentralized manner, like a more configurable and transparent Amazon Mechanical Turk. We can use this to pay people to categorise works following instructions, rather than using judgement.

For example we would provide a matrix of Blockchain and Crypto Art categories into which people would place works or exclude them from. If each work is evaluated by two people, disputes could then be resolved by a dispute resolution team of trusted people.

In this way we decouple evangelization (which is limited to simple submission of work in Stage 1) and evaluation (which is unleashed in the discussions of Stage 3) from the identification of and allocation to categories that is so important for this project.

### Stage 3: Evaluation - Is It Significant Blockchain Art?

The aim of Stage 3 is to create a shortlist of artworks that are significant to the blockchain and crypto art genres. In doing so it tests the capacity of DAOs to leverage the wisdom of crowds on matters ordinarily left to the judgment of individual human experts such as ranking the subjective quality of objects.

#### Platform - DAOstack

[daostack.io](https://daostack.io) | [github.com/daostack/alchemy](https://github.com/daostack/alchemy)

The DAOstack DAO provides excellent support for discussion and voting which we can use to decide the critical notability of artworks proposed in Stage 2. The resources to be allocated here are not financial but reputational. Using GEN, a cryptocurrency that manages attention within the DAOstack ecosystem, participants build reputation to influence whether or not a proposal rises into the collective attention of the voters.

Using a separate DAO for discussing and evaluating artworks allows the community involved with the project to focus on the tasks involved in each stage and to experiment with a wider range of blockchain technologies. A number of questions remain here about who would be invited to join this part of the process - our inclination is to maximum openness - in which all participants are motivated either by curiosity or passion. They join because they want to dip their toe in

blockchain waters and learn about the relevance of these systems to their interests. Alternatively they are passionate about or invested in the topic and want to see their favourite artworks on the timeline. However the categorisation and sorting process in Stage 2 is partly designed to ensure that a range of genres are represented and to enable active communities of artists and collectors in one genre or other to have a say about work in other genres.

### Stage 4 : Canonization - Artworld visibility and legitimacy

All the important decisions having been made by the crowd, this final stage ensures the accuracy and detail of information added to the timeline.

#### Platform - Custom Contract and Uploader

[dappuniversity.com/articles/ethereum-dapp-react-tutorial](https://dappuniversity.com/articles/ethereum-dapp-react-tutorial) | [ipfs.io](https://ipfs.io)

Finally, once the shortlist of canonical blockchain artworks has been chosen by the Stage 3 DAO their details can be uploaded to the Ethereum blockchain using another bespoke DApp. As with the Stage 2 DApp, once commissioned, the implementation of this DApp can also be subsidised with funds from Stage 0. This process could theoretically also be managed via the same collaborative work DAO used at Stage 2.

Because we will control the content of the data that is uploaded in this stage we can ensure that it is appropriate to store it directly on the blockchain. This data should include catalogue, critical, and category information for the artwork, an image thumbnail if we have funding for enough gas (the fee paid to the Ethereum network for executing code and recording data on its blockchain), and an IPFS hash of a larger image of it. Placing as much data as possible on-chain ensures that the chosen artworks are memorialized permanently on the Ethereum blockchain.

# General Technical Design Considerations

## Blockchain Identity

One consequence of this staged approach to technical design means that people may participate under different identities at each stage of the project. This may seem strange, but let us explain the rationale for this method.

Tying participants' identities together across the different stages of the project is not a problem - if participants wish to do so they can simply use the same pseudonymous Ethereum address across each platform.

Not tying people to singular blockchain identities might appear to make the project vulnerable to a "sybil attack" in which people register many cheap digital identities (in this case blockchain addresses) and "stuff the ballot" with votes that appear to come from many different individuals but in fact come only from a few.

Stages 0 through 2 avoid this by asking users to identify rather than evaluate artworks. This means that there is no point to registering additional identities once an artwork is proposed and categorized. So a sybil attack is pointless here.

Stage 3 is controlled by invited users, and Stage 4 simply implements their decisions. So a sybil attack is not possible here, and in the case of Stage 4 would be meaningless as we will be uploading the data from a single account that we control.

## Blockchain Co-ordination

There have been exciting developments in using blockchain technology to co-ordinate decision-making and resource allocation for cultural initiatives. "Token Controlled Registries" and "Bonding Curves" use game theory and economic theory to motivate and reward individuals to reveal their knowledge and opinions of bodies of work and cultural projects.

Moloch's staking and "rage-quit" dynamics in Stage 0 are related to this work, as are the DAOs used in Stages 2 and 3. But to ensure that the early phases of the project enable widespread participation without the assumption of an immediate economic return, and in order to be able to control who participates in the last phases we need slightly less cryptoeconomically advanced approaches. We are asking for knowledge and then paying with the possibility of permanent canonization rather than crypto-tokens. Simpler is better when implementing this.

<sup>2</sup> [An Explanation of DAOstack in Fairly Simple Terms](#)

<sup>3</sup> [Stablecoin on Wikipedia](#)



# What Is Our Visual Approach To This Collective Art History Timeline?

Studio HYTE

Our approach to A Blockchain Art History Timeline is defined by three concepts inspired by features and capacities of crypto and blockchain technologies and art historical debates about the use of timelines. It also seeks to communicate both to viewers and contributors to the timeline, through its collective construction. A user's journey through the website and timeline is depicted in the following demo animation:

[vimeo.com/443439158](https://vimeo.com/443439158)

## 1. Time as Spiral

Blockchains are special kinds of clocks. Inspired by astronomical clocks and charts we have organised artworks in a chronological spiral, starting with a piece of blockchain and crypto art prehistory, 'Boggs Bills 1980-90s' in the centre. As users navigate away from this starting point the background colour subtly changes, visually indicating the progression of time and allowing the user to easily understand where and when they are in time (Image 1). They navigate through time, space and the connections between artworks within the timeline.

This allows users to navigate between artworks via a way that embraces the complexities of how artworks inhabit time (temporally), space (media) and concept (contextually). This vision is in direct opposition to the oversimplification present in conventional art history timelines which privilege a more centralised top-down view of what qualifies as significant art.

## 2. Collective, Subjective Perspectives

Users can navigate the timeline and artworks in two ways: via a 'diagrammatic view' (Image 3) and a 'psychogeographic map' (Image 2). Both of these follow a psychogeographic approach which emphasises a collective and subjective perspective of cultural history. When submitting artworks to be included in the timeline, contributors will be prompted to include five (approximately)

contextual tags which serve to highlight and communicate the themes and relevance of artworks to a timeline. Each artwork will be visualised in context, revealing the nature of the scenes in which artworks are created rather than purely heralding individual practitioners or artworks.

Each artwork will require the submission of text (to be used in the diagrammatic view) and images (to be used in the psychogeographic map).

### Diagrammatic View

From the diagrammatic view the user can navigate to other artworks which share the same tags (Image 4). Thematic connections are made across time and artworks, enabling users to simultaneously navigate time and concept. The visual language of this view draws inspiration from astronomy diagrams, this aesthetic serves as a visual metaphor for the science of prediction core to blockchain functionality. The diagrammatic view will also contain timestamped details of the author of items of content that can be toggled on and off.

### Psychogeographic Map View

Within the psychogeographic map view users will be able to navigate through a visual and visceral point of view which is constructed using five image tags which accompany the text based tags. Connections between these image tags are constructed using rudimentary predictive machine processes<sup>4</sup> which meld together artwork and context. Allowing users to navigate the visual and contextual landscape of Blockchain Artworks and their associated contexts.

## 3. Prediction

Prediction is the third and final characteristic which comes into play throughout the visual identity we have created for A Blockchain Art History Timeline. Our designs explore this characteristic through aesthetics as well as process in order to play on the concept of speculation which is integral to the cultures and functionality of cryptocurrency and the blockchain.

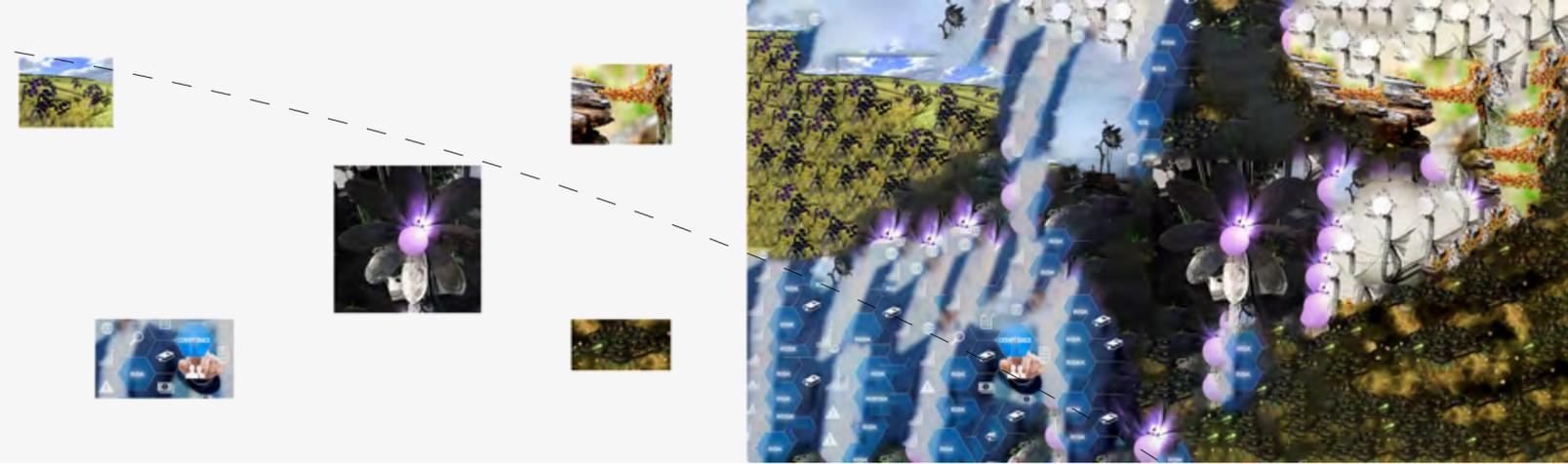


Image 10: Plantoids Before & After Content-Aware Fill.

Astronomy and astrology diagrams became a key visual reference for the ways in which complex information about space and time can be communicated.

Prediction was also important in terms of process when constructing the psychogeographic map. These images were created using predictive machine processes, which filled in the gaps between artworks and image tags. Exploring how content-aware tools can be used as a tool to predict aesthetics and contexts. (See image 10, before and after prediction process)

In summary, our vision for the timeline is for it to look forwards to the future as well as back through time, however we hope that through navigation the two can become a blurred, simultaneous experience. Playing on the notion of prediction as an integral aspect of the blockchains functionality, as well as an ode to the contextual connections made through artworks in non-linear time. Blurring the aesthetics of the future, present and past.

<sup>4</sup> We are currently doing this through subverting Content-Aware Tools predominantly used to touch up photographs. There is scope to explore similar predictive machine processes at a later stage in the project.

Image 1: Homepage, Featuring Spiral Chronology.

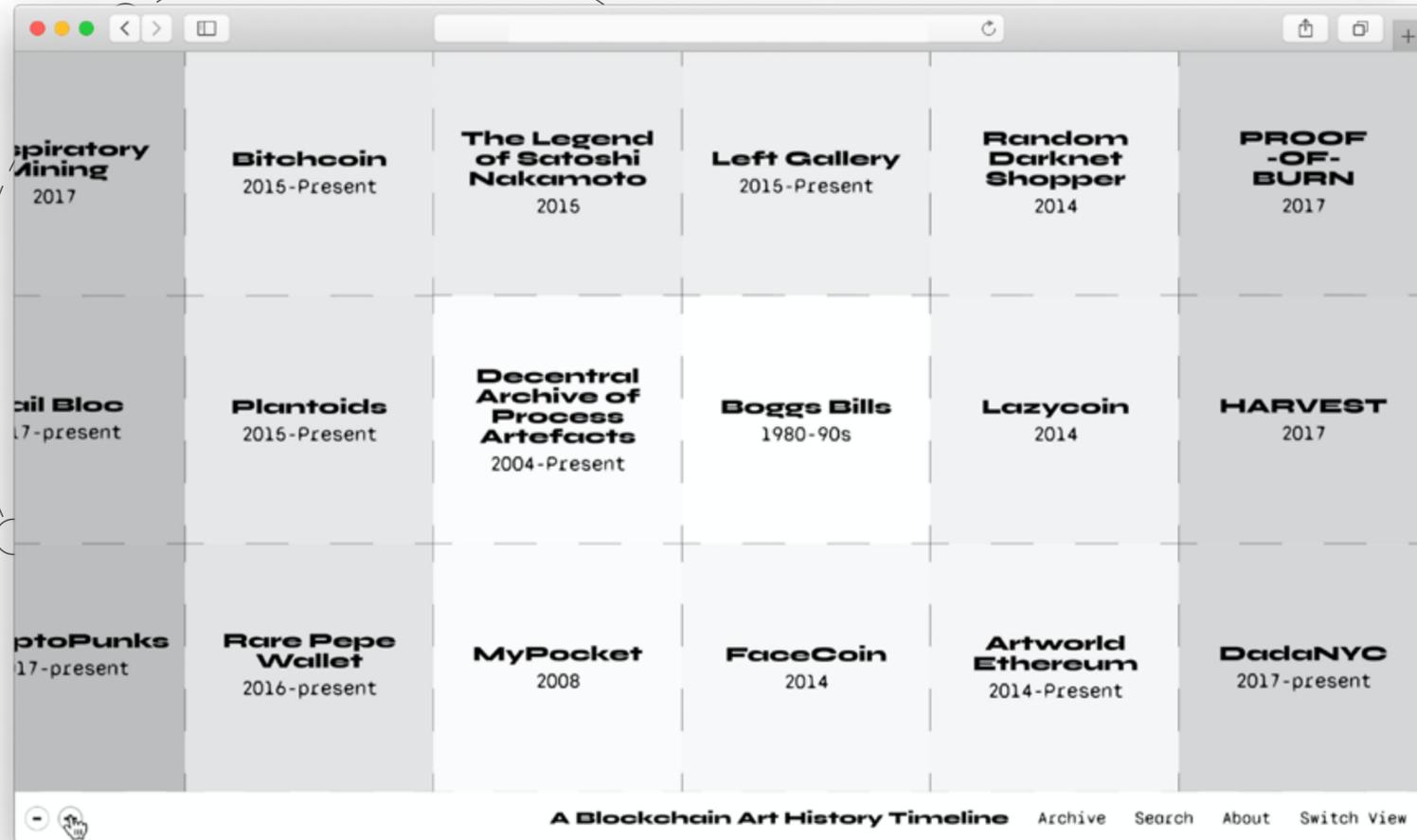


Image 3: Plantoids Diagrammatic View, featuring contextual tags. Each white circle represents another artwork.

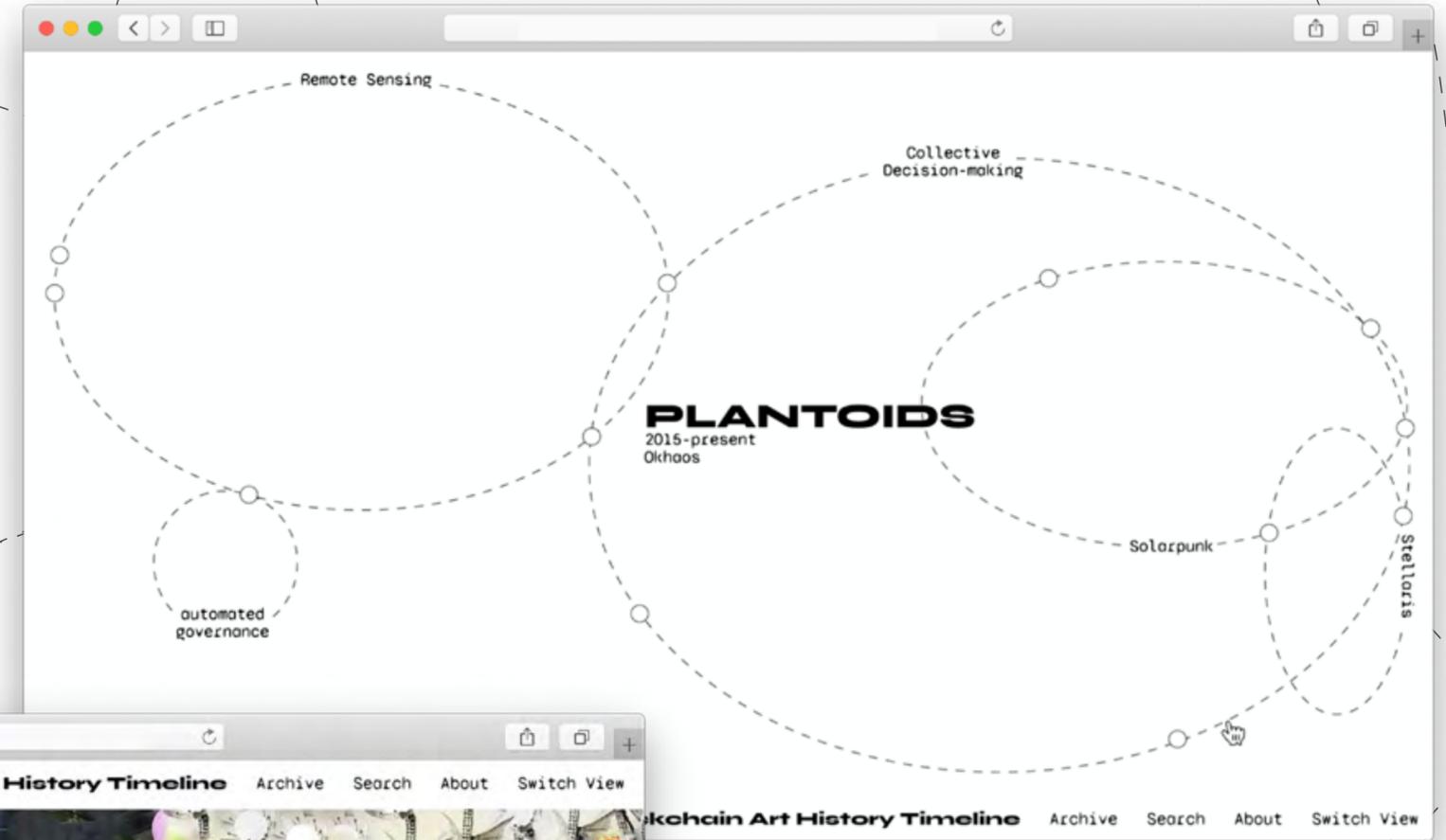


Image 2: Plantoids Psychogeography view, melding image tags and artwork together using the content-aware tool.

Image 4: Navigating through artwork tags from

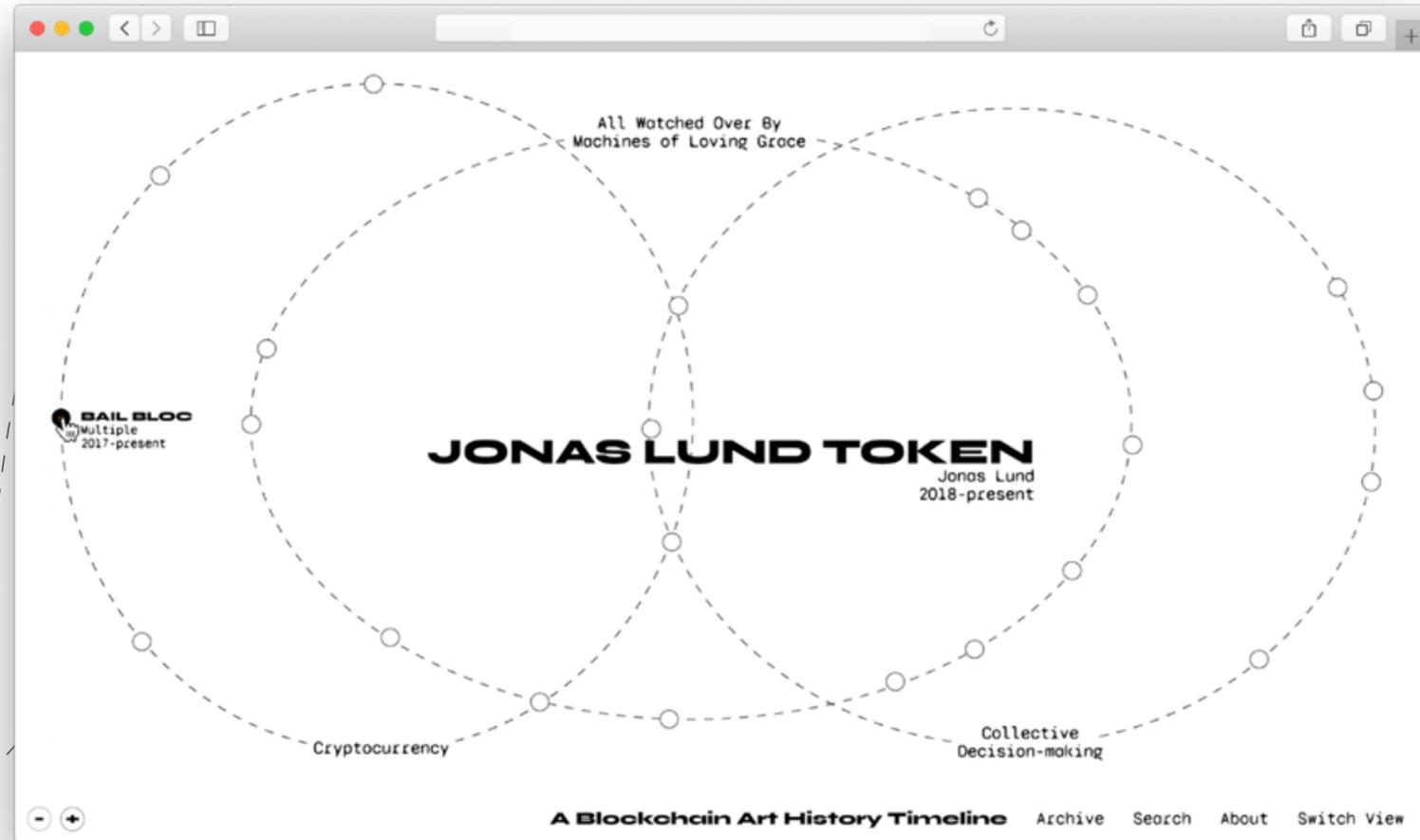


Image 6: Bail Bloc project page.

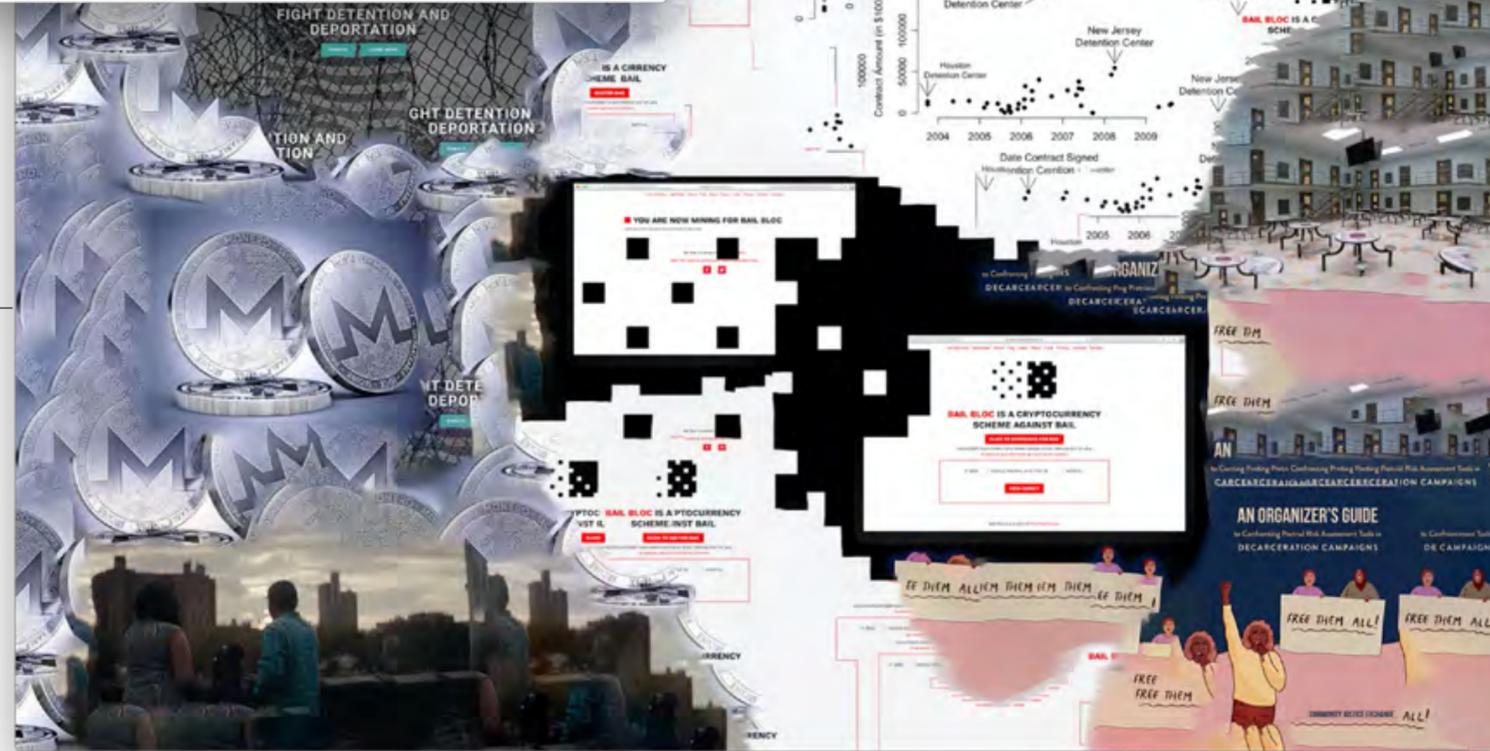
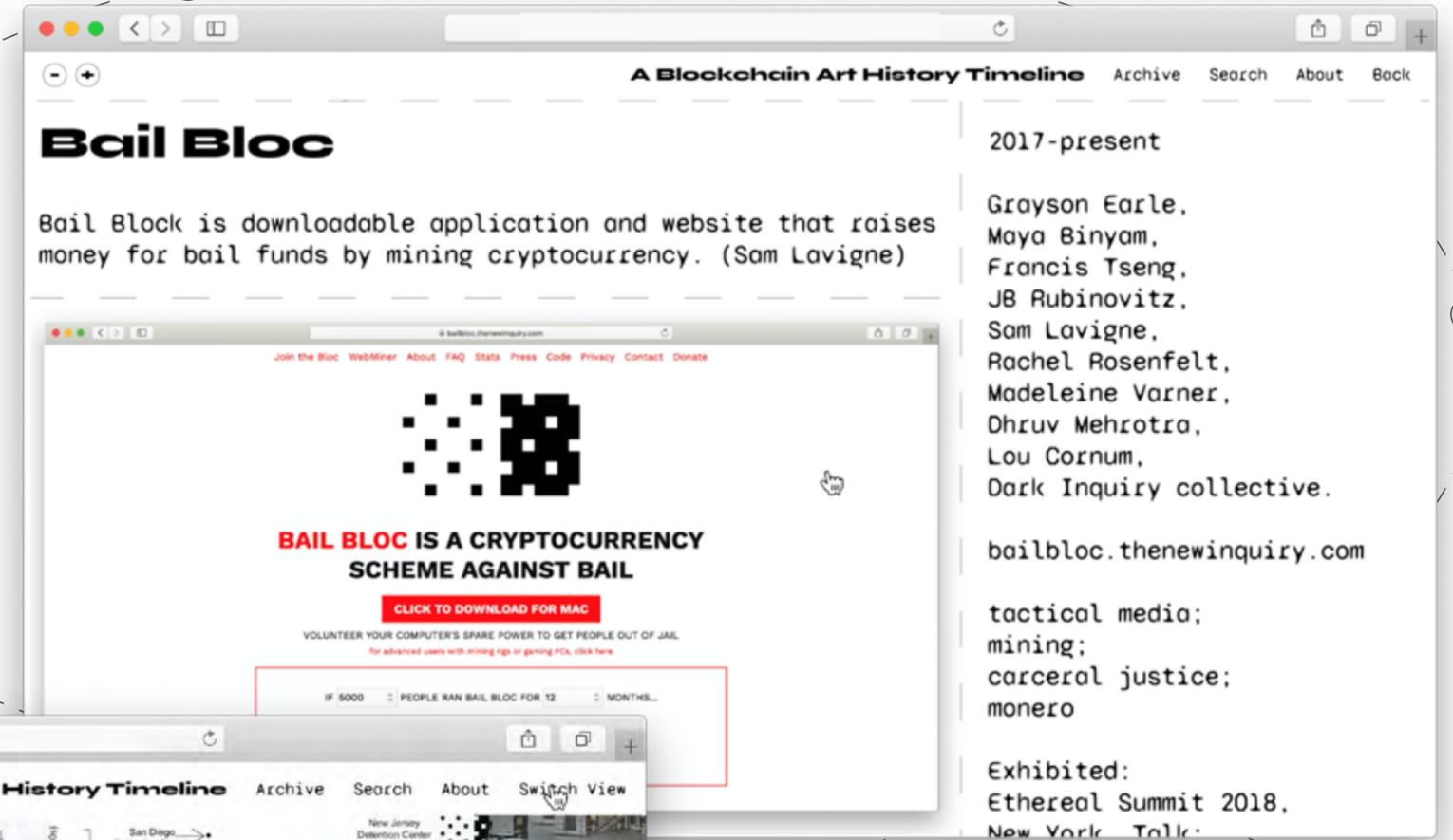
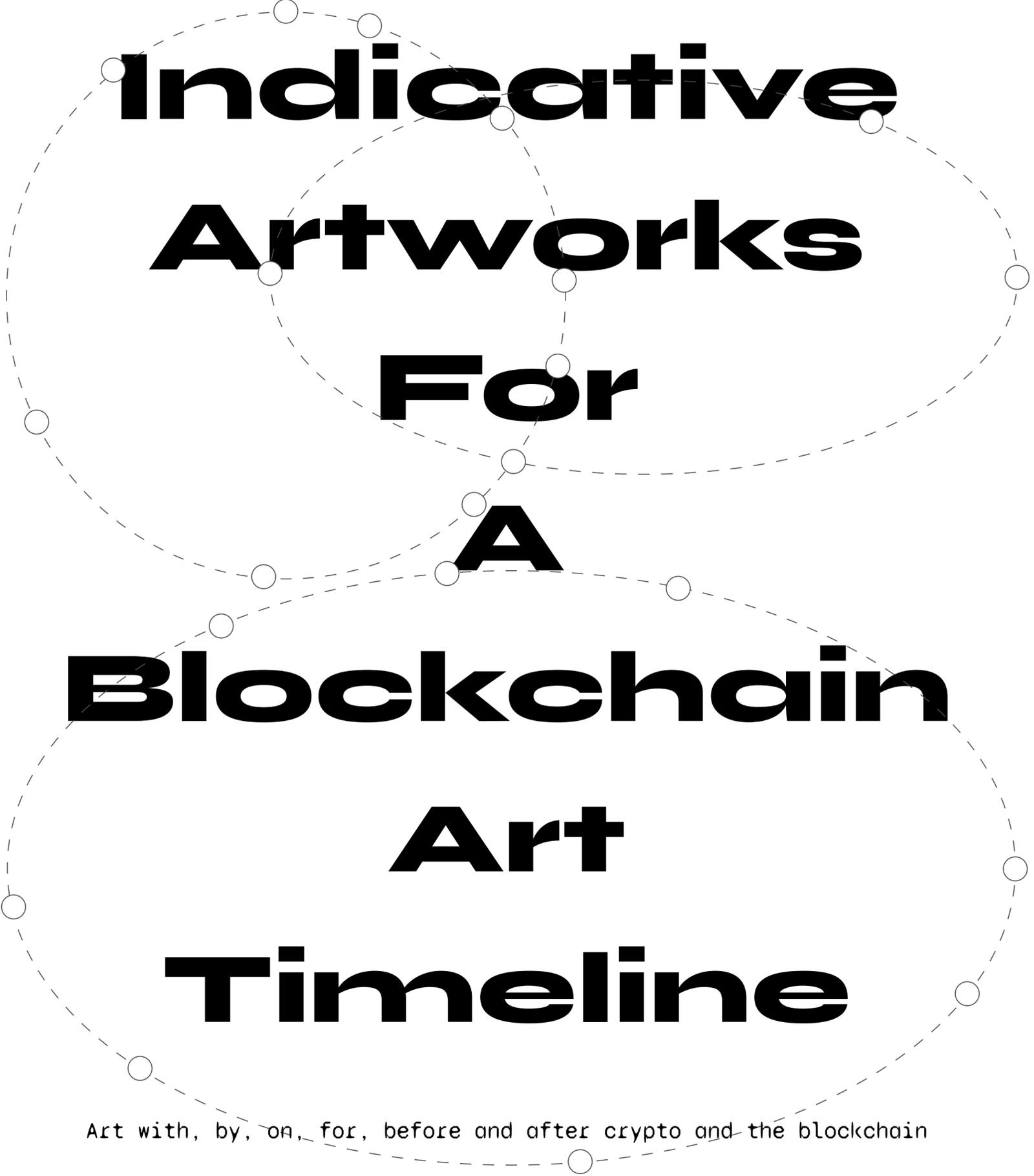


Image 5: Bail Bloc Psychogeography view, melding image tags and artwork together using the content-aware tool.





# Indicative Artworks For A Blockchain Art Timeline

This list of indicative milestone works was compiled in conversation with a group of practitioners, researchers and writers all with expertise and experience of working with art and decentralised technologies. Our intention was not to pre-empt the work of the collectively created Timeline but to indicate the potential range of practices under consideration.

The works selected were chosen for their historical, conceptual and technological significance and not simply precedence, as well as the wider influence of these works upon the field of blockchain and crypto art. It extends the historical period by identifying artistic approaches and artworks that are proto/pre-blockchain or pre-2009.

## About The Selection

Our selection builds understanding of the prehistory of crypto and blockchain via artworks that connect back to technical antecedents and internet art. Some works have particular attributes of obvious interest to both blockchain and art historical audiences such as proof of work, artist transactions, the 'authentic fake', surveillance capitalism etc. Another forerunner includes a collection of artifacts of cypherculture.

The selection also probes artistic and technological motivations for working with blockchain art/crypto art now. Some projects interact with the real world by being embedded in communities of artists, seeking to gain some autonomy in the art world, to route around institutional hierarchies and achieve greater funding transparency. Others distribute artistic authority and autonomy to multiple individuals (and sometimes machines).

Some works evoke posthuman fantasies about cyborg life, evolutionary lifeforms, or the catastrophic consequences for creatures and the environment of an entirely commodified life. Others are designed to be interacted with by different specialist or mainstream audiences. They collide real and fictional worlds through LARP, or they work as puzzles or as provocations to inspire misuse. All of them raise questions about the agency of the human subject in a globally networked society, often challenging the value of a

user to the technology or platform, and resonating with discussions about the centralisation of the Internet today.

## Some Questions Remain

A number of unruly questions troubled the selection of indicative artworks, and continue to demand serious consideration as the project progresses.

- Who will participate in the co-creation of the Timeline and how will their contribution be recorded? High levels of transparency are needed around how this process is conducted and structured.
- How do we avoid biases in the processes of selection? This indicative list features work predominantly by practitioners in Europe and North America. How do we achieve a wider global representation?
- To what degree can the curatorial process and the singularity of the curation be decentralised. How do we ensure that this process remains democratic? eg. What guidance will contributors receive about the terms of participation, and the aims of the timeline to represent a field of practice?
- While the structure of the project is immutable, should the “milestone artworks” themselves, and their metadata, remain editable? How do we enable artists to remove themselves from the Timeline?
- How do we enable relations between the pieces/artists to be recorded (e.g. artistic influences, collaborations, co-exhibitions, memberships of a movement/collectives), to give emphasis to the communities and contexts in which the work arose.

This initial process raised critical questions around bias, primacy and authorship. Transparency is understood to be essential to the project’s viability, as is clear communication and guidance on its aims and intended function.

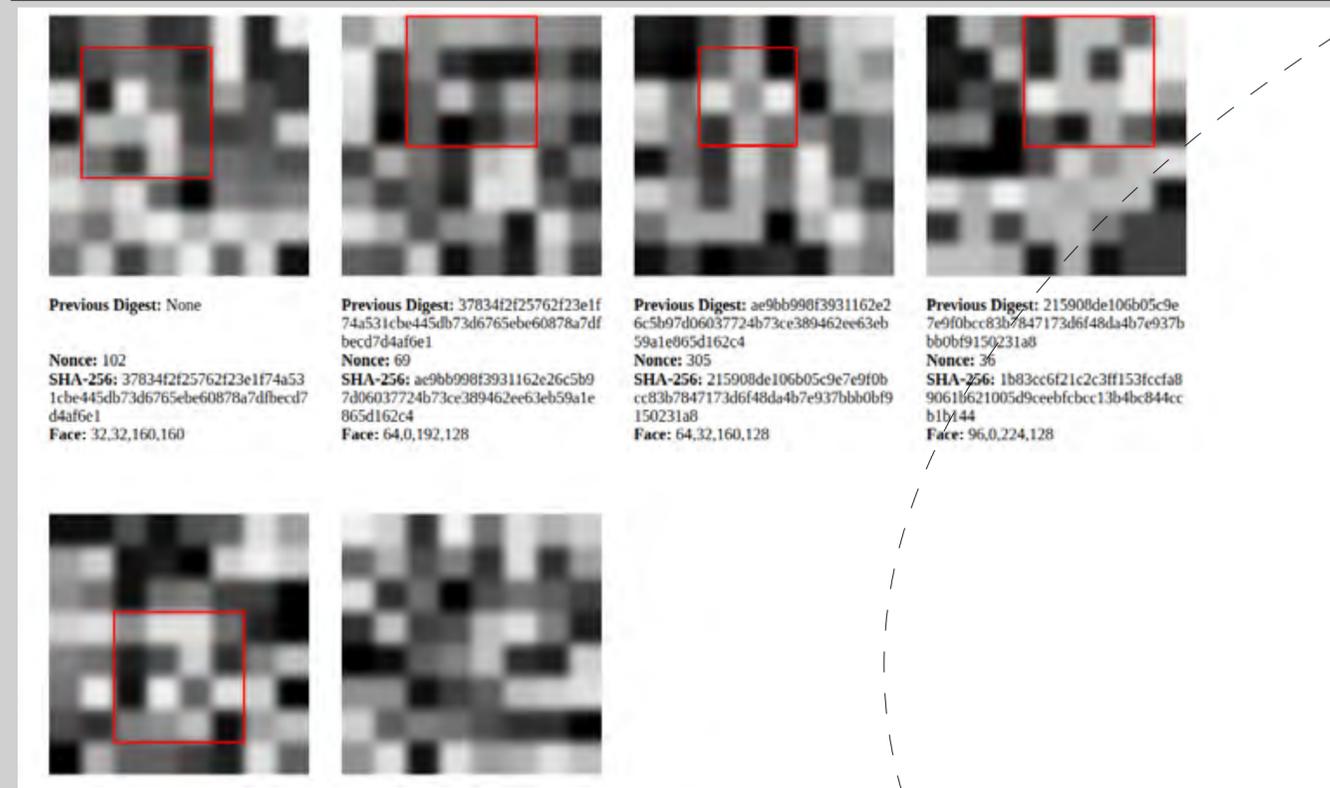
Images produced with permission of the artists.

<b>Boggs Bills</b> 1980-90s	<b>J.S.G. Boggs</b> (1955-2017)
J.S.G. Boggs issued reproductions of money in exchange for services and exhibited the receipts and documents from these transactions as art. “Boggs’s carefully hand-drawn reproductions of money include(d) such alterations as impersonating, caricaturing, and/or defacing the engraved images, as well as counterfeiting official signatures. (...) Boggs also annotate(d) original bills, thereby drawing them into his artistic transactions and thus, in effect, withdrawing them from circulation.” (Dalia Judovitz, Unpacking Duchamp: Art in Transit, 1998, 238).	
<a href="#">J. S. G. Boggs</a>	money as art; blockchain/crypto art prehistory
<b>Decentral Archive of Process Artefacts</b> 2004-present	<b>RIAT</b>
A mixed-media presentation of a collection of crypto-art and artefacts that exist to make cypher-culture readable.	
<a href="http://www.dataloam.org">www.dataloam.org</a>	cypher-culture; archive; blockchain/crypto art prehistory
<b>MyPocket</b> 2008	<b>Burak Arıkan</b>
Tracing both a personal history of expenditures and universal financial forecast MyPocket exposed the artist’s bank transactions to everyone in the form of an RSS feed.	
<a href="http://burak-arikan.com/mypocket">burak-arikan.com/mypocket</a>	surveillance capitalism; data asymmetry; prediction; blockchain/crypto art prehistory

<b>FaceCoin 2014</b>	<b>Rob Myers</b>
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Proof-of-Work (PoW) is the original consensus algorithm in a Blockchain network. It is used to confirm transactions and produce new blocks in the chain. PoW systems solve problems that have no other merit except being hard. For this reason they are criticised as a waste of energy. Artworks are proofs of aesthetic work. FaceCoin implements an alternative proof of work system in which the "useless" work performed is that of portraiture, (mis-)using machine vision algorithms to find imaginary faces in cryptographic hashes represented as bitmaps rather than numbers. (source)

[robmyers.org/facecoin/](http://robmyers.org/facecoin/) proof of work; machine vision; portraiture; alt currency; ethereum



**Exhibited:**  
[robmyers.org/facecoin/](http://robmyers.org/facecoin/)

**Connections/ influences:**  
2015 Trading Floor, Pakhuis De Zwijger, Amsterdam, Netherlands; The Human Face of Cryptoeconomies Furtherfield Gallery, London, UK

**Selected Articles:**  
[Ben Luke, 'Artists as cryptofinanciers: welcome to the blockchain, 13 June 2018](#)

<b>Artworld Ethereum 2014-present</b>	<b>Rob Myers</b>
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The status of this artwork as Art is confirmed or denied with a click and registered on the blockchain.

[robmyers.org/artworld-ethereum/](http://robmyers.org/artworld-ethereum/) art as contract; ontology; smart contract; ethereum

<b>Lazycoin 2014</b>	<b>Sam Lavigne, Brian Clifton, Karl Ward, Jon Wasserman, Surya Mattu</b>
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A physical currency that anyone can mint by doing nothing. A currency for storing non value.  
[lav.io/projects/lazycoin/](http://lav.io/projects/lazycoin/) whitepaper; alt currency

<b>Random Darknet Shopper 2014</b>	<b>Carmen Weisskopf &amp; Domagoj Smoljo</b>
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An automated shopping bot randomly purchases items with Bitcoin from the deep web and has them delivered to the gallery.  
[www.bitnik.org/r/](http://www.bitnik.org/r/) darknet; deep web; bitcoin; anonymity; legality

<b>Left Gallery 2015-present</b>	<b>Harm van den Dorpel</b>
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A gallery that produces and sells downloadable objects, the ownership of which is stored in a blockchain.  
[left.gallery/](http://left.gallery/) gallery; ownership; digital scarcity; bitcoin

<b>The Legend of Satoshi Nakamoto (TORCHED H34R7S) 2015</b>	<b>Marguerite deCourcelle with Rob Myers</b>
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TORCHED H34R7S is a crypto puzzle within a physical oil painting that took three years to unlock.  
[Vice Article](#) painting; crypto puzzle; bitcoin

<b>Bitchcoin 2015-present</b>	<b>Sarah Meyohas</b>
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BitchCoin is a digital currency backed by the photography of Sarah Meyohas at a fixed exchange rate of 1 BitchCoin to 25 square inches of photographic print. BitchCoin allows art collectors to invest directly in Sarah Meyohas as a value producer rather than investing in the artwork itself. (artist's website, source)

[sarahmeyohas.com/bitchcoin](http://sarahmeyohas.com/bitchcoin) tokenization; paper wallets

<b>Plantoids</b> <b>2015-present</b>	<b>Okhaos</b>
A blockchain-based artwork that harnesses the forces of automated governance to propagate Plantoid offspring through collective decision-making. Viewers are encouraged to tip the Plantoids by sending money to any of the sculptures they find beautiful. Once adequate funds have been acquired, a piece of software triggers a commissioning process to create a new Plantoid sculpture that lives, feeds and reproduces on the same blockchain. (based on source)	
<a href="http://okhaos.com/plantoids/">okhaos.com/plantoids/</a>	governance; funding; collective decision-making; ethereum; bitcoin; nature 3.0; diwo



Okhaos, Plantoid.

**Exhibited:**

New World Order, group exhibition tour as part of the European collaboration project State Machines, Furtherfield Gallery, London (20 May - 25 Jun 2017); Aksioma, Ljubljana (11 Jan - 9 Feb 2018); Gallery Filodrammatica, Drugo More, Rijeka (15 Feb - 9 Mar 2018)

**Connections/ influences:**

Jaya Klara Brekke, Elias Haase, Pete Gomes, Rob Myers, Max Dovey, O'Khaos, Paul Seidler, Paul Kolling, Max Hampshire, Lina Theodorou, Corina Angheloiu, James Stewart and xfx (a.k.a. Ami Clarke)

**Selected Articles:**

- [Jason Potts, 'Do Plantoids Dream of Electric Arts Council Grants?' The Conversation, 13 Dec 2015;](#)
- [Giulio Prisco, 'Plantoids: The First Blockchain-Based Artificial Life Forms', Bitcoin Magazine, 26 Dec 2016;](#)
- [Kat Mustatea, 'Meet Plantoid: Blockchain Art With A Life Of Its Own', Forbes, 31 Jan 2018;](#)
- ['Why crypto collectors are spending thousands on cartoon cats' CNN Style, 6 March 2018](#)

<b>Rare Pepe Wallet</b> <b>2016-present</b>	<b>Joe Looney</b>
Rare Pepes are cards depicting the infamous frog, traded as XCP assets over the Bitcoin blockchain. (source) The Rare Pepe Wallet is a tool created by developer Joe Looney that makes it possible to buy, sell, trade, edition, gift and destroy digital artworks. (Jason Bailey, Artnome: source) Based on an in-joke that becomes real, The Rare Pepes project is among the first to use blockchain-enabled scarcity to play with artworld-scarcity.	
<a href="http://rarepepewallet.com/">rarepepewallet.com/</a>	tokenization; collectibles; markets; games; platform; community

<b>DadaNYC</b> <b>2017-present</b>	<b>Beatriz Helena Ramos,</b> <b>Yehudit Mam</b>
A social network where artists speak to each other through drawings with a decentralized digital art marketplace on the blockchain	
<a href="http://dada.nyc/">dada.nyc/</a>	community; collaboration; platform; drawing; diwo

<b>HARVEST 2017</b>	<b>Julian Oliver</b>
HARVEST uses wind energy to mine cryptocurrency, the earnings of which are used as a source of funding for non-profit climate change research organisations. Taking the form of a 2m wind turbine with environmental sensors, weatherproof computer and 4G uplink, the machine 'feeds' from two primary symptoms of our changing climate: wind gusts and storms. (artist's website, source)	
<a href="http://julianoliver.com">julianoliver.com</a>	energy; climate change; anonymity; zcash



Julian Oliver, Harvest, 2017. Credit: Alexandra Magnusson

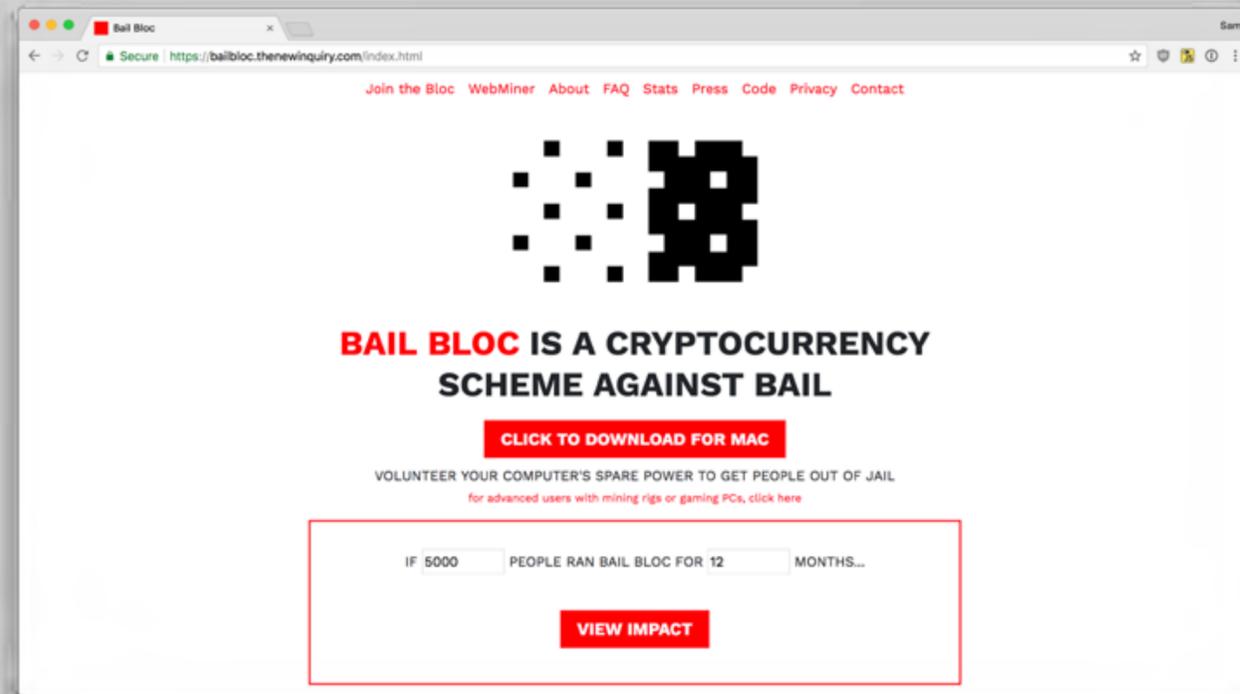
<b>Exhibited:</b>
HARVEST, Konstmuseet, Skövde, Sweden (2017); The Work of Wind: Air, Land, Sea, Blackwood Gallery, Toronto, Canada (2018).
<b>Connections/Influences:</b>
Eduardo Navarro, Xiaojing Yan, Lisa Myers, Tania Willard, Tega Brain, Bengt Sjölén
<b>Selected Articles:</b>
<a href="#">Filip Visnjic, 'HARVEST - Mining cryptocurrency with wind to fund climate research' Creative Applications Network, 18 Sept 2017;</a>
<a href="#">Aurelio Cianciotta, 'Harvest, clean cryptocurrencies for climate change', Neural, 2 Feb 2018;</a>
<a href="#">Jeroen Nieuwland, 'Considerations / Meditation, on Julian Oliver's HARVEST: Wind energy used to mine cryptocurrency to fund climate research', undated;</a>

<b>PROOF-OF-BURN 2017</b>	<b>Various</b>
A theatrical performance piece exploring the construction and mediation of value through the action of burning money.	
<a href="http://thefutureofdemonstration">thefutureofdemonstration</a>	money; proof; performance

<b>Respiratory Mining 2017</b>	<b>Max Dovey</b>
Respiratory Mining uses human respiration to mine crypto-currencies.	
<a href="http://maxdovey.hashbase.io/Respiratory_Mining/">maxdovey.hashbase.io/Respiratory_Mining/</a>	mining; energy; currency; bio-capitalism; monero; performance

Bail Block is downloadable application and website that raises money for bail funds by mining cryptocurrency. (Sam Lavigne)

[bailbloc.thenewinquiry.com](https://bailbloc.thenewinquiry.com) tactical media; mining; carceral justice; monero



**Exhibited:**

Ethereal Summit 2018, New York;  
Talk: conversation on Bail Bloc with Maya Binyam, Grayson Earle, Brett Davidson  
and Ana Maria Rivera-Forastieri, 12 Apr 2019, MoMA PS1

**Connections/Influences:**

Mari Bastashevski, Tega Brain, ...

**Selected Articles:**

[Brendan C. Byrne, 'Utopian Mining: Bail Bloc uses your excess computing power to challenge the prison-industrial complex', Rhizome, 15 Nov 2017;](#)  
[Daniel Penny, 'Can a Social-Justice App Be Art?', The New Yorker, 17 Nov 2017;](#)  
['Bail Bloc Founder Says How Monero Mining Can Help ICE Detainees', Cointelegraph, 3 Apr 2020;](#)

TerraO is an artwork and prototype for a self-owned, self-utilising forest. Over time the forest sells its raw materials, accumulates capital, buys itself and expands to new territories. (source)

[terra0.org](https://terra0.org)

sovereignty; automation; nature 3.0; ethereum



**Exhibited:**

Fiber Festival, Looiersgracht 60, Amsterdam (12-21 May 2017);  
Becoming Earth: Engineering Symbiotic Futures, Transmediale, Berlin (2 Feb - 5 Mar 2017);  
Dark Habits Dark Ecology, SPEKTRUM, Berlin (8-11 Jun 2017);  
New World Order, Furtherfield Gallery (20 May - 25 Jun 2017), Aksioma, Ljubljana (11 Jan - 9 Feb 2018), Gallery Filodrammatica, Drugo Mesto, Rijeka (15 Feb - 9 Mar 2018);  
Befriending Hyperobjects, Navel LA, Los Angeles (3-25 Feb 2019);  
Digital Dilemma - The Architecture of Trust, Bureau Europa, Maastricht, Netherlands (12 Apr - 16 June 2019); Blocumenta, Artspace Sydney (Jun 2019);  
MAK Vienna, Vienna Biennale For Change 2019 (29 May - Oct 6 2019);  
GOODBYE CRUEL WORLD, IT'S OVER, WELTKUNSTZIMMER, Dusseldorf (28 Nov 2019 - 2 Feb 2020);  
Survival of the Fittest, Kunstpalais, Erlangen, Germany (29 Feb - 24 May 2020); crypto\_manifold,  
Chronus Art Center (CAC), Shanghai (27 Jun - 25 Oct 2020)

**Connections/Influences:**

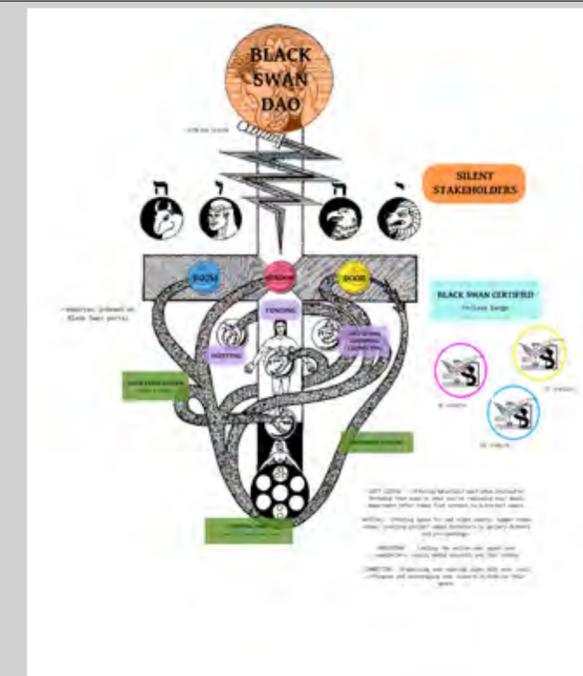
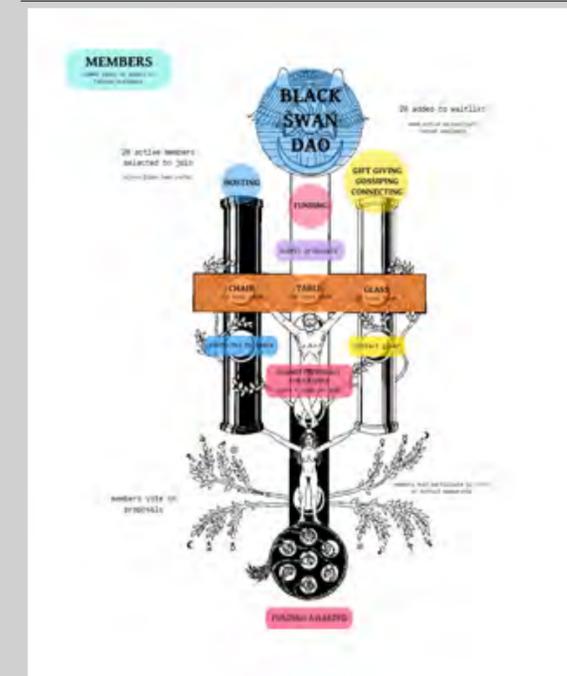
!Mediengruppe Bitnik, CHEN Baoyang, Simon Denny, Grayson Earle, Sarah Friend, Marija Bozinovska Jones, Matthias Tarasiwicz, Lina Theodorou & Rob Myers, Theun Karelse, Valentina Karga, Eline Benjaminsen, Paolo Cirio, Simon Denny, Dries Depoorter, Lucas Dubois, Jonas Ermland, César Escudero Andaluz and Martin Nadal, Adam Harvey and Anastasia Kubrak, Joey Holder, Studio Cyanne van den Houten, Land+Civilization Compositions (Merve Bedir and Jason Hilgefort), Samuel Leder and Ramon Weber, Sunjoo Lee, Jen Lowe, Isabel Mager, Christopher Meerdo, Joana Moll, OMA, Clara Ormières, Arthur Röing Baer, Asya Sukhorukova, Studio Richard Vijgen, Waag Society, David Zielnicki, Sonja Gerdes, Elisa Balmaceda, David Sampethai, Familia Villaroel, Tomoko Sauvage, Acqua Vrzal, Sylbee Kim, Susanne Probst, Cojimo Ancerias, Hayden Dunham

**Selected Articles:**

[John Doran, 'Three Songs No Flash: The Possibility Of A Forest: Unsound 2017', The Quietus, 30 Oct 2017;](#)  
[Artur Kiulian, 'Decentralized Artificial Intelligence Is Coming: Here's What You Need To Know', Forbes, 11 Jan 2018;](#)  
[Leonardo Dellanoce, 'Terraforming via the digital twin of everything', Comrade Animal, 6 Oct 2018](#)

<b>Celestial Cyber Dimension, with a CryptoKitty 2017-present</b>	<b>Guilherme Twardowski</b>
Reaching \$140,000 at auction in 2018, Celestial Cyber Dimension is one example of the CryptoKitty phenomenon in which players acquire and trade virtual cats. The smart contract uses a genetic algorithm to determine details of the cat's characteristics (called 'cattributes') including background, patterns, fur stripes, spots, colour and facial expressions. The output is a non-fungible token that is associated with a genetically unique cat. (based on source)	
<a href="http://cryptokitties.co">cryptokitties.co</a>	collectibles; markets; games; platform;
<b>CryptoPunks 2017-present</b>	
10,000 unique collectable characters 24x24 pixel art images, generated algorithmically with proof of ownership stored on the Ethereum blockchain. (source)	
<a href="http://larvalabs.com/cryptopunks">larvalabs.com/cryptopunks</a>	collectibles; markets; platform
<b>ClickMine 2017-present</b>	<b>Sarah Friend</b>
ClickMine is a blockchain based clicker game using mining as a destructive trope. (artist's website)	
<a href="http://clickmine.click/">clickmine.click/</a>	game art; mining; environmental critique
<b>Blocumenta 2017-present</b>	<b>Baden Pailthorpe &amp; Denise Thwaites</b>
Blocumenta is an experimental annual event dedicated to prototyping decentralised cultural systems in the Asia-Pacific Region. (Blocumenta website)	
<a href="http://blocumenta.org/">blocumenta.org/</a>	new artworlds; decentralisation; diwo

<b>Black Swan DAO 2018-present</b>	<b>Penny Rafferty, Calum Bowden, Paul Seidler, Max Hampshire &amp; Catrin Mayer</b>
Black Swan is a decentralised critical autonomous organisation. Its users are in charge of their assets and resources which they acquire from silent stakeholders. These stakeholders offer resources to the decentralised autonomous organisation (DAO) in order for them to be disseminated to the group. The group of users are Berlin cultural workers who have radical practices and often marginalised voices. (Rafferty, 2019)	
	artworld DAO; solidarity



Black Swan Genesis Sketch-up based on Gnostic System - Penny Rafferty and Calum Bowden (2019)

**Connections/Influences:**

Omsk Social Club, Calum Bowden, Paul Seidler, Max Hampshire, Jonas Schonenberg, Kei Kreutler, Cathrin Mayer, Maurin Dietrich, Jan Malte Kunkle, Chloe Stead, Kate Brown, Alicia Reuter

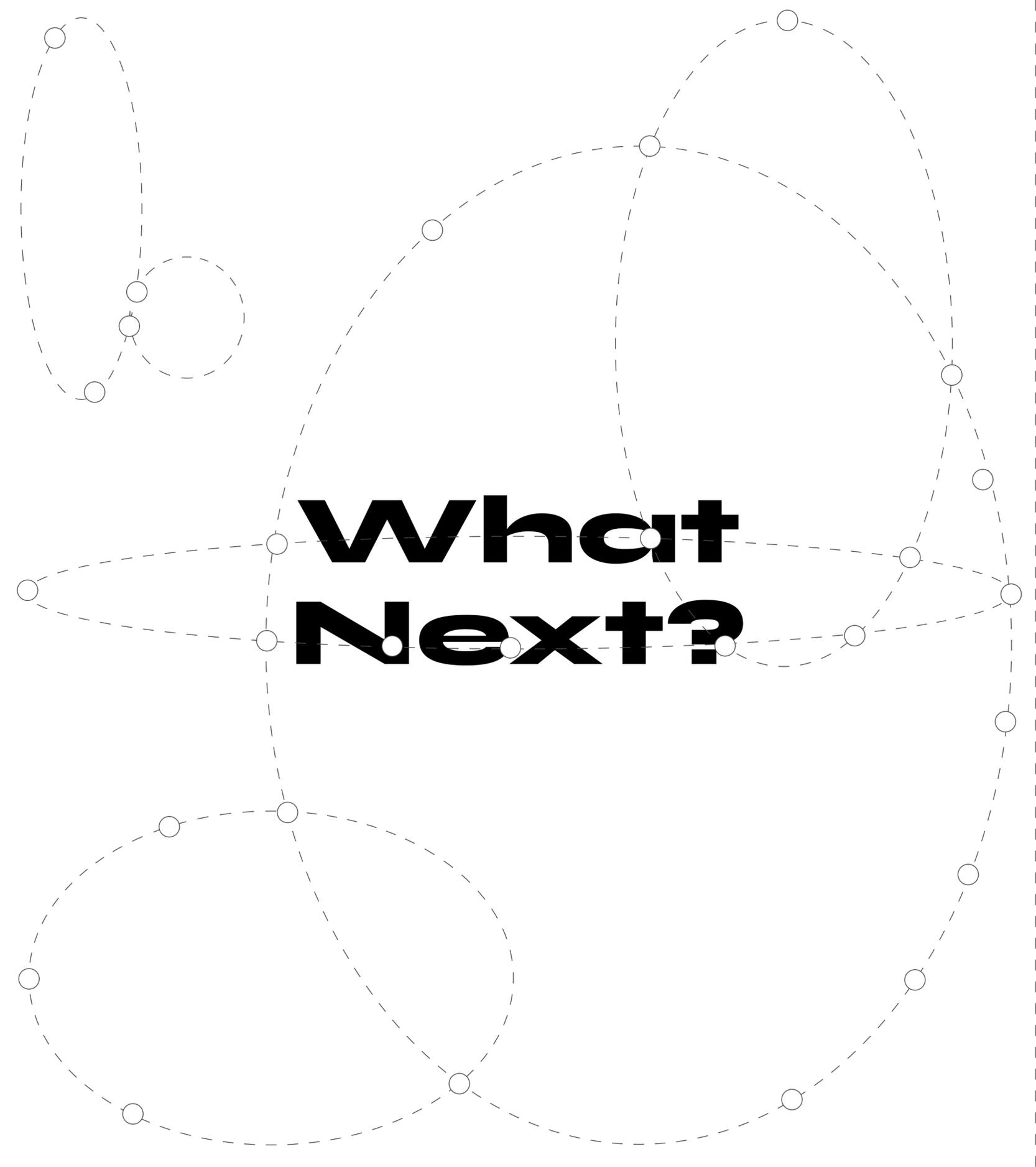
**Selected Articles:**

[Penny Rafferty, 'A Speculative White Paper on the Aesthetics of a Black Swan World', KW Berlin, 2018;](#)  
[Lucy Rose Sollitt, 'The Future of the Art Market', Creative United, 12 Nov 2019;](#)

<b>Jonas Lund Token</b> 2018-present	<b>Jonas Lund</b>
Jonas Lund Token (JLT) is a cryptocurrency by Jonas Lund, in which the artist has created 100,000 shares in his artistic practice.	
<a href="http://jlt.ltd/about/">jlt.ltd/about/</a>	tokenization; distributed autonomy; governance
<b>A Vertical Sovereignty</b> 2018-present	<b>Helen Knowles</b>
A tokenised four-screen video installation that features (and pays) participants of different auction communities, and that incorporates a machine that vends access.	
<a href="http://arebyte.com/trickle-down-a-new-vertical-sovereignty">arebyte.com/trickle-down-a-new-vertical-sovereignty</a>	tokenization; markets; auctions; diwo
<b>CryptoRave</b> 2018-present	<b>Mediengruppe Bitnik! &amp; Omsk Social Club</b>
Rave-Enabler a software underpins an event form that is LARP, installation and edition release integrated into the structure of the Club and Gallery. (source)	
<a href="http://panke.gallery/event/cryptorave/">panke.gallery/event/cryptorave/</a>	crypto; transparency; solidarity; rave
<b>Five million Incidents</b> 2019	<b>Sultana Zana</b>
In the Incident Network observation is an asset in an open source peer-to-peer blockchain based system of cryptocurrency called CoIncident	
<a href="http://sultanazana.github.io/5millionnet.github.io/">sultanazana.github.io/5millionnet.github.io/</a>	attention economy; cryptocurrency; altcoin
<b>The Trojan DAO</b> 2019-present	<b>The Trojan DAO</b>
The Trojan DAO is a Decentralised Autonomous Organization that began operating in Athens, Greece in 2019.	
<a href="http://trojanfoundation.com/about">trojanfoundation.com/about</a>	artworld DAO; decentralised; transparency; ethereum; diwo
<b>The Haket</b> 2019-present	<b>Telekommunisten</b>
An artistic, functional cryptocurrency based on the Marxist theory of money with a stable value indexed to a consistent work/coin ratio. (Aude Launay)	
<a href="http://telekommunisten.net/">telekommunisten.net/</a>	Marxist cryptocurrency

<b>This Artwork Is Always On Sale</b> 2019-present	<b>Simon de la Rouviere</b>
A digital artwork incorporating novel economic property rights. A modified Harberger Tax (COST) is administered using the Ethereum blockchain and the artist receives the tax on the property as patronage.	
<a href="http://thisartworkisalwaysonsale.com/">thisartworkisalwaysonsale.com/</a>	Radical Markets; property; ethereum
<b>The Sphere</b> 2019-present	<b>Saloranta &amp; de Vylder</b>
A community platform digital ecosystem for self-organization in the performing arts and shaping new organizational, aesthetic and economic forms.	
<a href="http://salorantadevylder.com/projects/the-sphere/">salorantadevylder.com/projects/the-sphere/</a>	new artworlds; self-organisation; community; platform





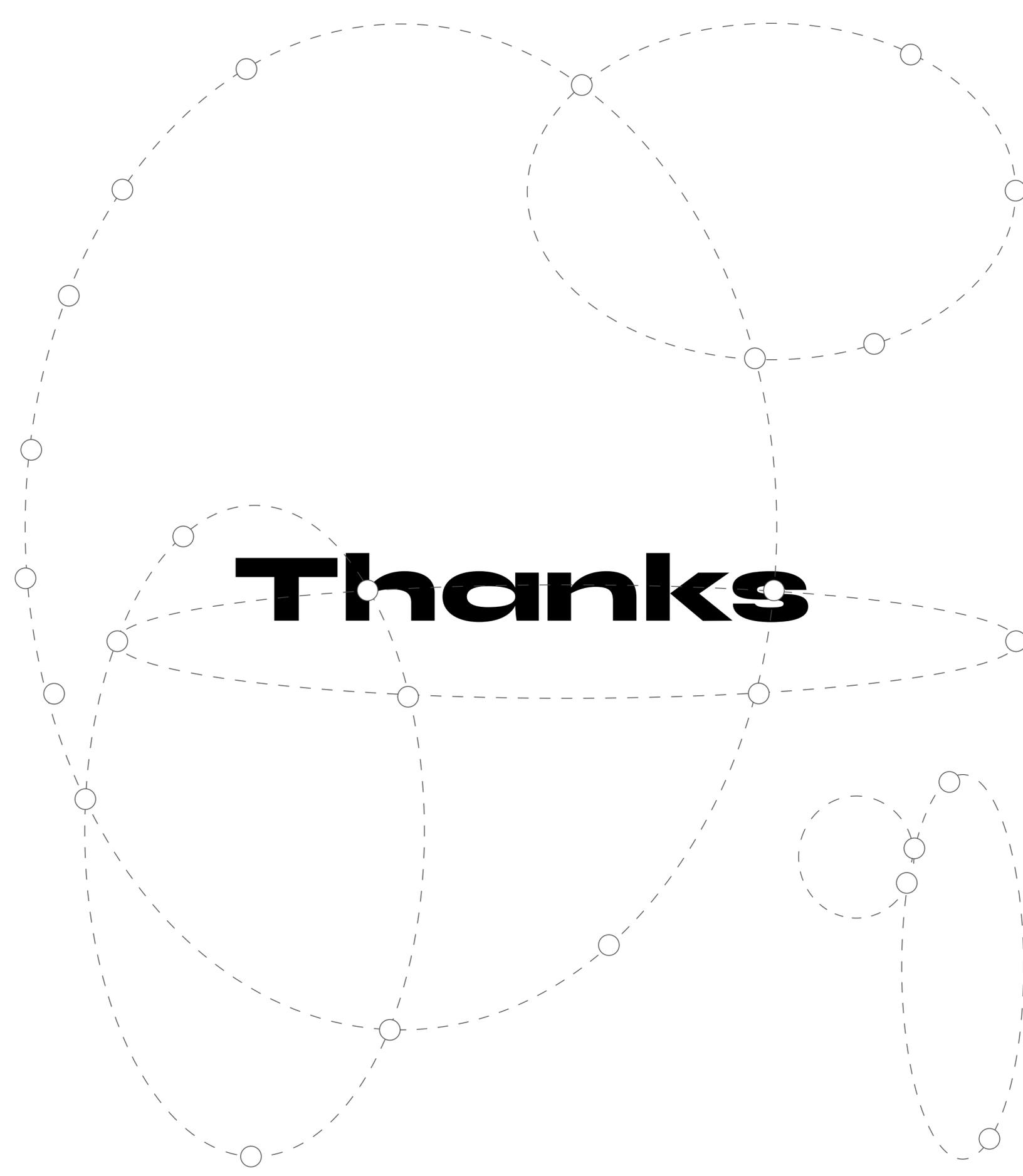
# What Next?

This study is the result of collaboration with leading practitioners and academics who are specialists working across the fields of art and technology. They have helped to develop the conceptual frameworks for discussing and analysing blockchain technologies and to make a preliminary collation of indicative works for a timeline of blockchain and crypto artworks.

The ongoing success of this project will therefore depend on continued engagement from cross-sectoral stakeholders. Through the publication of this report, we aim to share our results with the communities that inspired it and to further solidify existing and future partners necessary to the realisation of the project. We also hope that through its widespread dissemination we can widen the discussion to include an international audience of artists, curators, art historians, critics, technologists, hackers and activists.

The authors are now securing technical, academic, and artworld partners for the next phase of this project. This will be to run a live curation of the timeline and to host an exhibition of Blockchain Art based on the research findings from this feasibility study. For this stage of the project, we will be working in close collaboration with commercial and cultural partners and will secure funds from the UKRI.

This work is inspired by the visionary, exploratory work of researchers, practitioners and entrepreneurs across art and blockchain sectors. This study is offered as a roadmap and invitation to those communities to collaborate in the creation of tools for cultivating and coordinating collective imagination at the time when it is most needed.



# Thanks

## Research Assistant

Gabriella Beckhurst, Doctoral Research Candidate, UCL

## Participants in the feasibility study workshops, and contributors to the timeline of indicative artworks

Aude Launay, writer, curator and researcher

Boris Jardine, researcher, History and Philosophy of Science, University of Cambridge and the Whipple Museum of the History of Science, Cambridge

Burak Arıkan, artist

Helen Kaplinsky, curator and writer

John Hill, artist, organiser and educator

Laura Lotti, researcher

Marc Garrett, artist, curator, researcher

Matthias Tarasiewicz, researcher and artist

Richard Taws, Reader, History of Art, University College London

Rob Myers, writer and artist

## Advisors

Ben Vickers (Serpentine Galleries)

Daniel Kronovet (Colony)

Georg Bak (4Art Technologies)

Jo Townsend

Kei Kreutler

Keld Van Schreven

Lukas Hess (Dezentrum)

Marianne Magnin (Arteia)

Nave Rachman (DAOStack)

Nick Koppenhagen (DAK)

Ozan Polat (Dezentrum)

Peter Holsgrove (Zein)

Primavera de Filippi (COALA)

Sam Hart

Sam Skinner

Simon Denny



# About The Team

## **Cadence Kinsey**

Cadence Kinsey is Lecturer in Contemporary Art in the Department of Art History at University College London. Her research centres on the histories of art and technology, as well as live art and performance from the 1960s to today. She is interested in the relationships between the body and technology, and her work is informed by feminist science & technology studies. Cadence has published research on (and with) emerging artists in relation to the Internet and digital technology in both academic and non-academic contexts and her first book, *Walled Gardens: Autonomy and Automation in Art After the Internet*, is forthcoming from Oxford University Press.

## **Rob Myers**

Rob Myers is an artist, writer and hacker from the UK now based in Vancouver, BC. An early creative and critical adopter of blockchain, his work centers on the intersection of changing technological, aesthetic and social form. Rob's blockchain art projects include "Facecoin" (2014), "Blockchain Aesthetics" (2015) and "Artworld Ethereum" (2014 - ongoing). His writing on the subject includes "(Conceptual) Art, Cryptocurrency and Beyond" (2014), "Blockchain Geometries" (2018) and the story "Bad Shibe" (2017).

## **Ruth Catlow**

Ruth is an artist, curator and researcher of emancipatory network cultures, practices and poetics. She is artistic director of Furtherfield, London's longest running decentre for arts and technology, founded with Marc Garrett in 1996.

Ruth co-edited the book "Artists Re:Thinking the Blockchain" (2017), curated the European touring exhibition *New World Order* (2017-18), and runs the award winning "DAOWO" arts and blockchain lab series with Ben Vickers in collaboration with Goethe Institute. In 2019 Ruth started Furtherfield's DECAL DeCentralised Arts Lab, which exists to mobilise research and development by leading artists, using blockchain and web 3.0 technologies for fairer, more dynamic and connected cultural ecologies and economies. She is the lead for Blockchain Art at the Serpentine R&D Platform.

## Studio Hyte

Studio Hyte is a London based design studio working between graphic design, interaction and emergent forms of visual communication. We aim to create meaningful and thought provoking work, placing research and concept above medium.

Formed of a small group of individual practitioners, Studio Hyte is the middle ground where all of our interests and practices meet. As such our collective practice and research covers a broad spectrum of topics including; language, inclusion & accessibility, egalitarian politics & alternative protest and technology & the human. With an emphasis on process, we often create critical narratives through our work in order to conceptualise through making. Collectively, our visual practice is a means through which we can plot out a conceptual landscape in order to understand and explore real world scenarios.

Studio Hyte works on self-directed research projects, commissions and client-led briefs for a small pool of like minded organisations and individuals.





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Images on the front and back cover as well as pages 16, 53 & 61 were created by Studio HYTE, incorporating images of timeline artworks as well as reference images which have been manipulated through content-aware tools.

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