
European Research Council
BlockchainGov Public Workshop

September 10th, 2022
CERSA - 10 rue Thénard - Paris, France

Virtual participation via [Zoom](#)

WORKSHOP AGENDA

09:00 - 09:30	Welcome
Session 1: THEORY	
09:30 - 11:00	<ul style="list-style-type: none">● The case of Tornado Cashb. <p>Discussion topics</p> <ul style="list-style-type: none">● Tornado Cash: legitimate uses vs illegitimate uses● Role of sanctions, and impact of imposing sanctions over smart contracts rather than a legal entity● What alternative routes to protect against the dangers without precluding the benefits of the technology? <p>Readings:</p> <ul style="list-style-type: none">● What is a sanctionable entity?● Lessons from the crypto wars of the 90's● Going-dark debate: states reaction to cryptography● (optional): The "Alegality" of blockchain technology● (optional): US Treasury official press release <p>Outcome:</p> <p>Blog post presenting our take on privacy regulation in blockchain with regard to Tornado Cash: privacy vs terrorism?</p>

11:00 - 12:30	<h2>The Ethereum Merge</h2> <ul style="list-style-type: none"> • Governance <i>of</i> Ethereum: who decided to merge? • Governance <i>by</i> Ethereum: implications on the network <p>Readings:</p> <ul style="list-style-type: none"> • <i>Understanding hard forks in Open Source Communities</i> <ul style="list-style-type: none"> - Berg & Berg (2020) Exit, Voice and Forking • <i>How was the merge decided?</i> <ul style="list-style-type: none"> - Vitalik's reflections on the Roads not taken (2022) - The "Merge" (https://ethereum.org/) <p>Optional readings:</p> <ul style="list-style-type: none"> - A thread by Vitalik on research development - Fellowship of the Ethereum Magicians - The Hitchhiker's Guide to Ethereum - The State of the Merge: An Update on Ethereum's Merge to Proof of Stake in 2022
LUNCH BREAK	
Session 2: GOVERNANCE	
14:00 - 16:00	<h2>Blockchain and Legitimacy</h2> <p>Presentation of the BlockchainGov Legitimacy Report</p> <p>General discussion and feedback</p> <p>Collective brainstorming on Section IV: <i>Best-practices and guidelines</i></p>
BREAK	
Session 3: LEGAL MODELLING	
16:30 - 18:00	<h2>DAOs and Legal Institutions</h2> <p>Investigation on how blockchain-based systems are adopting institutional solutions and legal tools to better interact with the non-blockchain world:</p> <ul style="list-style-type: none"> • dOrg • Opolis • WorkDAO • LaborDAO

Session 4: COLLABORATIONS

18:00 - 19:00

Upcoming collaborations

- **Metagov:** GovBase, DAO Research Hub
- **RadicalXChange:** Historical cases of social verification?
- **Invited Scholars:** Ellie Rennie, Jason Potts, Eric Alston
- others?

End of Meeting

20:30 DINNER at Le Chaméléon Restaurant - 70, rue rené Boulanger 75010 Paris

Confirmed Participants:

PARIS	ZOOM
<ul style="list-style-type: none"> • Primavera De Filippi • Morshed Mannan • Tara Merk • Jamilya Kamilova • Sofia Cossar • Marco Crepaldi • Louise Frion • Xavier Lavayssière • Florian Glatz • Balazs Bodo • Vincent Danos • Yann (only morning) • Bea Botero (afternoon only) 	<ul style="list-style-type: none"> • Abeer Sharma • Vashti Marajah • Simon Pek • Nicholas Saul (afternoon only) • Vili Lehdonvirta

The case of Tornado Cash

(1) adding the smart contract addresses to the OFAC sanction list

Tornado Cash entity != Tornado Cash application

You cannot delist an application that cannot change its behaviour

Who's the operator?

- blockchain network for the smart contract
- front-end maintainer
- developer of the code

Limited liability of service providers (can they be held liable if we don't find the others?)

(2) arrest of Alexey Pertsev from the netherlands

(a) was he arrested because he was a developer of Tornado Cash

(b) or because he was facilitating the activities [what was he doing exactly?]

- facilitating "money laundering" (because they developed TC ?)
- suspected to be involved in Russian espionage

How does the chain of liability work in the virtual space? 1st, 2nd, 3rd, etc.

"closest available person" ⇒ any potential intermediary has some liability exposure

⇒ Going Dark debate

Different between copyright regime (private enforcement); legal conflict between private parties and terrorist activities (public enforcement, mighty hand of the government)

Gov has to tolerate PirateBay, but OFAC doesn't have to tolerate anything

FinCEN criteria to held someone responsible for facilitating money laundering:

- if you create it, you facilitate money laundering? that's not good enough of a reason

Must think of the legitimacy of the legal use of Tornado Cash: is there enough good reasons ?

Gov can shift responsibility to the intermediary to take-down content in case of e.g. child pornography

cf. Blender entity is "able" to do certain things; but in the case of TC, because there is no entity in charge, even if there was take-down notices, they wouldn't have the power to do this unilaterally.

Is the law fair?

Chain of liability: if smart contract is not developed by a certain entity (in a centralised way), and if the developer was just creating a general purpose technology.

How do you enforce the rule of take-down notice, and to whom?

- Can you ask that developers implement a 'backdoor' (à la Clipper)
- Can you ask the network to stop the network and reverse the transactions? (à la DAO-hack)
 - e.g. hold validators jointly-labile for not abiding by a request not to validate tx's

cf. previous war on cryptography: adding a back-door for governments or others to revert transaction

cf. previous SilkRoad case: US gov asking dev to implement the tainted transactions; but they did not implement it because they proved that they did not have the ability to enforce others from using it.

Problem of the slippery slope: eventually the legit ppl will be using software that is legally compliant, but without privacy, the 'criminals' will use the one with financial privacy (but it is not legally compliant) → the nice people are the one suffering the most from the draconian regulations

Mixing services imply an ethical dilemma, because of the network effect, by using the service you are contributing to increasing the 'anonymity' of the mixed funds, hence you are helping terrorists by using the system, even if you do so legitimately.

Public services are used by criminals, so the public authority is introducing constraints or limitations - e.g. remove the 500 euros, CCTV cameras in the street

who do I trust with the process of implementing these constraints? do I trust the U.S. government?

(right to privacy > right to secrecy, because it includes autonomy too)

Trust vs Confidence ⇒ Governability vs Reliability

Ticket for Tornado Cash to prove that your funds come from a legit source – you lose your financial privacy but at least you can retrieve your funds.

Sanctions and property (of foreign entities): the smart contract is not a property, and even if it were, it would be no one's property (according to Coincenter's article)

Legal reforms are trying to claim that this is some form of property?

Can you use a smart contract for terrorist purposes to claim for it to become a sanctioned entity?

Deodand: holding objects liable of committing a crime, until the medieval time. the idea of US holding smart contracts liable and sanctionning them, is a follow-on on this ancient tradition.

ZORA ZINE article: Primavera, Sofia, Morshed, Jamilya

Academic article: Primavera, Xavier, who else ?

The Ethereum Merge

How are things decided? Ethereum Merge was proposed many years ago, what is the process that came into the decision? The role of Ethereum foundation supporting specific types of research instead of others.

Very early on, when the network launched, there was a time-bomb (difficulty bomb) that forced at least some decisions, so as to come back to the topic for revising the protocol on an on-going basis.

Vitalik presented the proof of stake since the beginning - proof of work was done by default, but they were thinking about the switch to proof of stake since the early days.

Why the Merge?

- environmental issues
- money concentration

Problem with the fact that those who owns the most ETH will be the ones benefiting the most

ETH is today reasonably distributed, but this move may actually lead to further concentration of ETH

Miners will move to other PoW chains

Fork will be maintained for a while to allow miners to acquire 'exit liquidity'

Block production process is changing; the new trend is that block producers make more money with MEV - you don't want to prevent MEV, you want consensus for validators to split the MEV

Cross-chain MEV: since i'm a validator, I will most likely be a multi-chain validator

Mining PoW requires economies of scales, thus it is not necessarily CENTRALISED, you can have non-professional validation services.

It becomes easier to be a validator, hence less concentration for validators, but still require knowledge and skills - especially for MEV. do we really go into the democratization of block production?

Mining is a thing that capital holders can do (asics or tokens).

If i buy all my crypto on coinbase, I delegate to the validators that they are running, they have better understanding to engage in MEV.

Custodial exchanges become the new 'mining pools'

Most market have a tendency to concentrate. PoS cannot be solved at the protocol level; need other means, e.g. legal means? (competition law, Massa legal licence).

DAOs and Legal Institutions

Project in Mexico (w/ Simona Ramos) : [PescaData](#) - for reporting to the government about catch. 1000 members, NGO exploring the use of blockchain technology for their own purposes; e.g. for data sovereignty. Simona went to Mexico spending time with fishing cooperatives, to see the implication of these applications on interpersonal trust, and trust in the technology. Question whether introducing this digital tool has benefited the agency of these communities? What factors matter for the tech to be adopted or not? NGOs goal is to spin out the application out of the NGO to create a fishing cooperative in Mexico. Strong sustainability component. Questions formulated to the members of the different stakeholders, observations from the field by Simona. Debrief of project + Follow up with more interviews with the 3 stakeholder groups. Potentially write a paper on Trust & Technology in the Global South. ⇒ Pillar 2/3 looking at collective action organisations; tie with Louise's PhD project; also connects with earlier work we've done with trust and confidence: i.e. how trust is perceived by specific communities, and how they have confidence with the technology we have. Next steps?

DAOs providing work services: e.g. Opolis, WorkDAO, dOrg, LaborDAO

LaborDAO: founded by an expert of union organisations

- Web3 labor: research to come up w/ recommendations for DAOs to compensate their workers
- Legal labor:
 - fundraiser for labor-organisers, to develop tools to assist these labor efforts
 - strike-fund for Amazon employees to get funding when they choose to strike

BreadChain: meta-project meant as a place for left-wing projects to come into existence; help with development of projects and smart contracts; governance system with proposals for choosing projects that are solidarity-based rather than profit-oriented.

Very little has been written about DAO workers; how to help them understand them as a class, recognize their rights; and explore whether there is reform needed.

Because the legal system cannot coerce DAOs into doing anything, inviting DAOs to be compliant in order to benefit from something

DAOs providing benefits, and therefore creating pressure for the legacy system to also start providing similar levels of benefits.

Is it possible to unionize beyond nation-states ?

Self-exploitation: you can work yourself to death if you think it's good; but countries limit the number of hours you can work. Usually for employment relationship. Default for independent contractors.

Web3 union, where everyone working for a DAO have collective decision-making about how they should be treated; how many hours they should work. make up a federation of similarly-minded projects that govern cooperatively.

Different from gig-economy like Uber, where you claim to be a contractor but you're actually an employee.

Next steps: interview workDAO, Opolis, etc. + people working for these DAOs.

COLLABORATIONS

RadicalXchange:

- Historical cases of social verification; e.g. wrt community recovery

Florian:

- Social spaces for collaboration built on strong identity model

Metagov:

- GovBase; DAO Research Hub; DAO research initiative.

Bodo:

- data science methods to identify legal anomalies in decentralized networks
- scraping NFTs and identify fraudulent metadata; new licensing frameworks
- artificial inflation of prices
- interdisciplinary project on Trust : working with Daft uni blockchain lab and Erasmus university of Amsterdam; post-doc to understand how trust gets into techno-social systems? Trusted flaggers (content-moderation systems of platforms) for propaganda; problem with oracles in decentralized networks. Compare different approaches in terms of reliability.

Josh:

- LaborDAO;

Xavier:

- Tornado Cash; angle with AML [academic paper on Tornado Cash]
- propose new architecture for identification and KYC

Bea:

- Towards the new rule of law (weekly) at Sciences-Po
- Plug ourselves into this on a monthly-basis
- Conference with Sciences-Po