Week 5: Why Blockchains?

Paolo Soleri's 1969 "hyperstructure"

OBG Onboarding Fall 22

Homework!

- Browser wallet, uniswap?
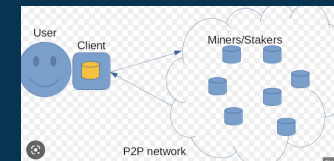
- How did Dhru do?
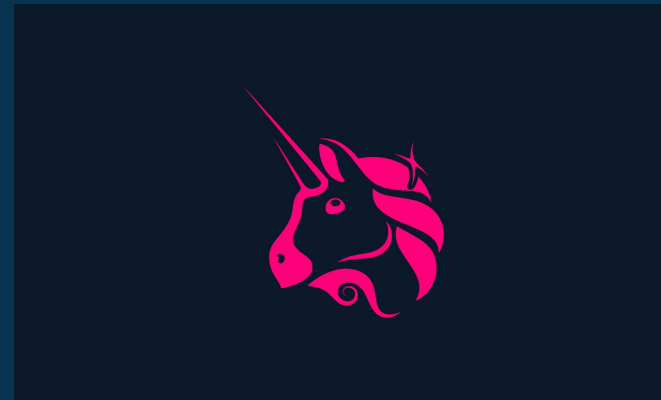
Revisiting Weeks 1-3

1. Introductions

2. Problems early cryptographers faced, why they needed censorship resistance

3. How blockchains achieve censorship resistance

today: Why blockchains!

Why Censorship Resistance

What most people think

- useful for nefarious purposes
- regulatory arbitrage

What actually matters

- is the foundation for enforceable guarantees!
- Immutable, perpetual

Banger Tweet

Blockchain guarantees

1. Will last forever (no maintenance, censorship resistant)
2. Permissionless

Some catches to this...

Hyperstructures

-   Idea borrowed from Paolo Soleri
-   Architect trying to build hyper efficient cities
-   Never worked because incentives not aligned

-   Blockchains give important guarantees
-   Encourage and incentivize cooperation!

Blockchain Thesis

1. Blockchains have enforceable guarantees other institutions don't/can't have
2. This lets us coordinate further out in the future than current software platforms
3. Composability lets us build hyperstructures!

Thesis today!

DeFi hyperstructures - Curve ecosystem

layer 5: ????
layer 4: votium - Vote delegator
layer 3: [redacted] - Bribing platform
layer2: convex - Governance Aggregator
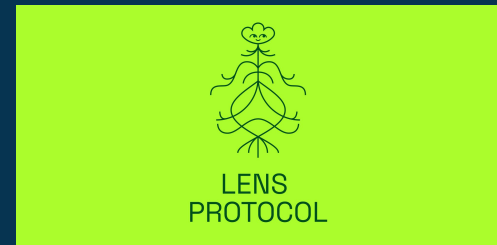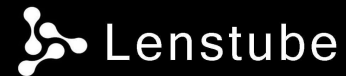layer 1: curve - DEX

Thesis today!

Social hyperstructures - Lens protocol

layer 4: ????
layer 3: super app
layer 2: Apps (youtube, instagram, etc)
layer 1: Social graph

Thesis today!

Gaming hyperstructures - Autonomous worlds (video games anyone can contribute to)

layer 4: ????

layer 3: clans/Daos

layer 2: subgames

layer 1: digital physics

Hyperstructures

Asynchronous composability

- more common (for now)
- latency doesn't matter

Synchronous composability

- only poss. on blockchain
- latency matters
- interactions happen in a single block!
  - flash loans
  - some DeFi verticals

Obstacles

- Requires developers
- Needs to be fully on-chain
- On-chain stuff is expensive rn (think back to instagram ex. from last week)

Changing gears -> governance/forks

- Blockchain why: platform for hyperstructures
- But what if we want to change the platform itself?

Some Terminology: what is a Fork?

Softfork vs Hardfork

Softfork

- change to protocol that is backwards compatible

Hardfork

- change to protocol that is not backwards compatible

Users vote for fork by accepting/rejecting client update

Types of forks

Contentious fork

- No consensus
- Blockchain splits into two communities

Non-contentious fork

- Consensus
- No split

Reasons for forks

- Something disastrous
  - ethereum vs. ethereum classic (DAO incident, 5% of all eth)
  - Bitcoin (value overflow incident)

- Want to upgrade protocol
  - ethereum PoW vs. ethereum PoS
  - Bitcoin vs. Bitcoin cash vs. Bitcoin Satoshi's Vision

Governance/fork process: Ethereum

1. Based on BIPs, based on PEPs (~ 2000)
2. Feedback on Ethereum Magicians
3. Submit an EIP (outlined in EIP-1)
4. Ethereum cat herders/EIP editors
5. Discussed during all-core devs meeting (scheduling happens on github and Eth r&d discord)
6. Spec is upgraded, client teams implement it
7. EF + client teams will announce the upgrade

Onboarding Checklist

✅ Week1: Introductions

✅ Week2: What blockchains solve

✅ Week3: How a blockchain works

✅ Week4: How to use a blockchain

✅ Week5: Social layer (why blockchains!)

Read: Atoms, Institutions, Blockchains

Extra: hyperstructures

HW is a little more philosophical, talks about blockchain guarantees more

-   congrats on graduating OBG onboarding!

-   Reach out to me if you want to help next term!

Next Steps

- Join committees!
    - Fund (Ronan Broadhead)
    - Dapp (Dhru Patel)
    - Ops (Chris Garcia)
    - Finance (Jordan Combs)
    - Education (Me!)

- Some resources/project ideas in Github repo
- Get involved & start working on something!