ETH **is permissionless money**

alt. The ticker is ETH

mike neuder

ethereum foundation research

ETH **is *permissionless* .**

"What our generation has forgotten is that the system of private property is the most important guarantee of freedom."
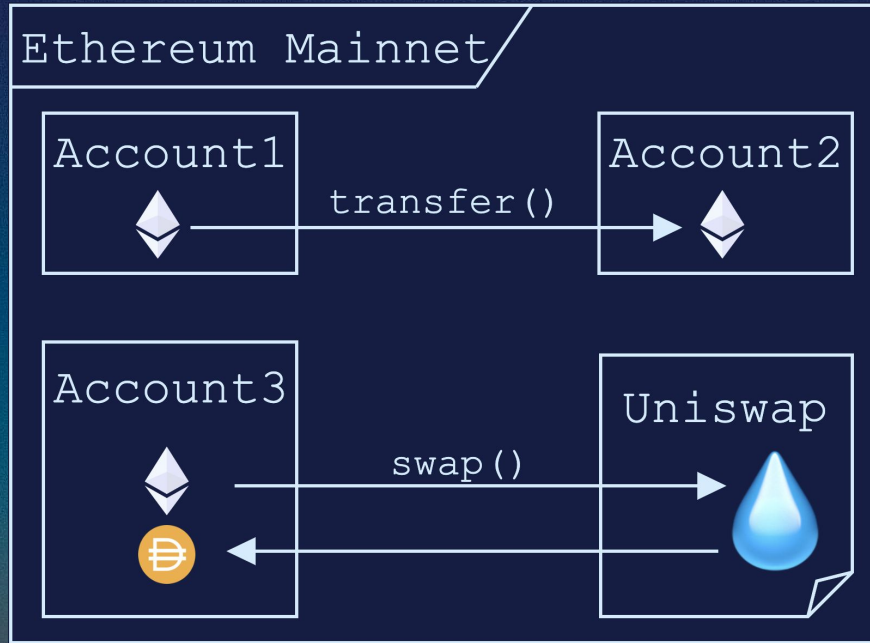~Friedrich Hayek, *The Road to Serfdom*

"I think that nothing is so important for freedom as recognizing in the law each individual's natural right to property."
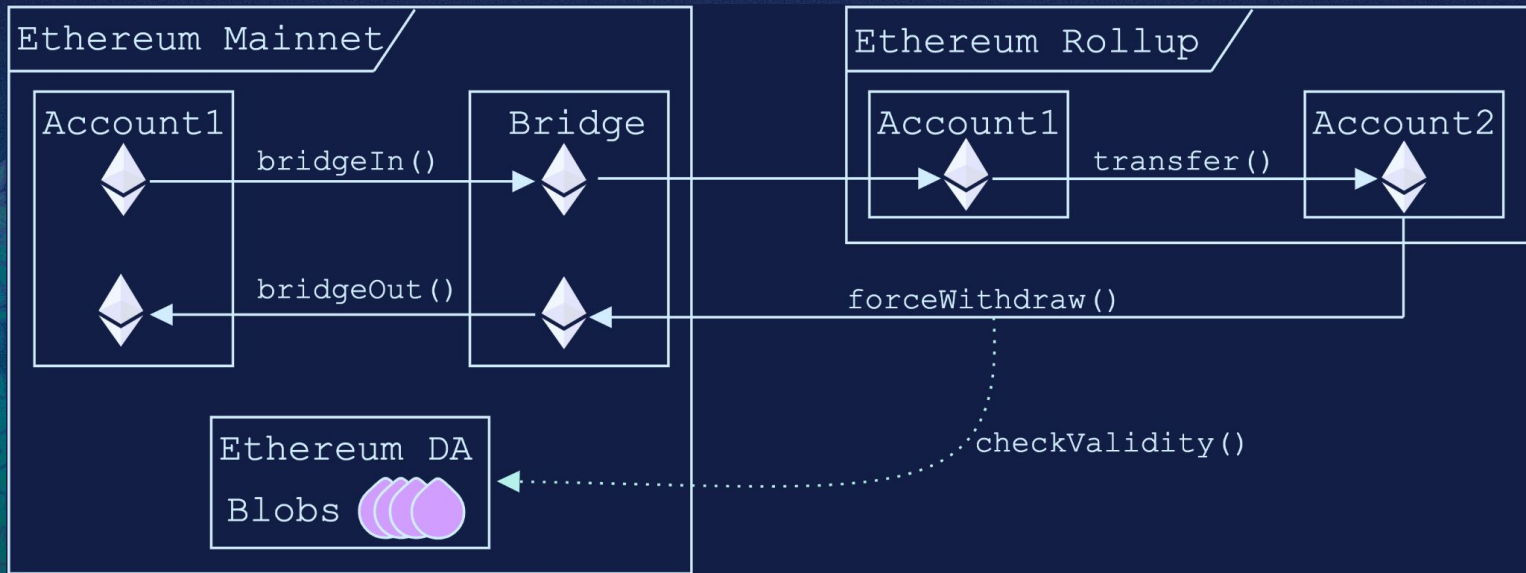~Milton Friedman, *Capitalism and Freedom*

Property rights of ETH on the L1.

Anyone can permissionlessly store, send, and program ETH, the native asset.
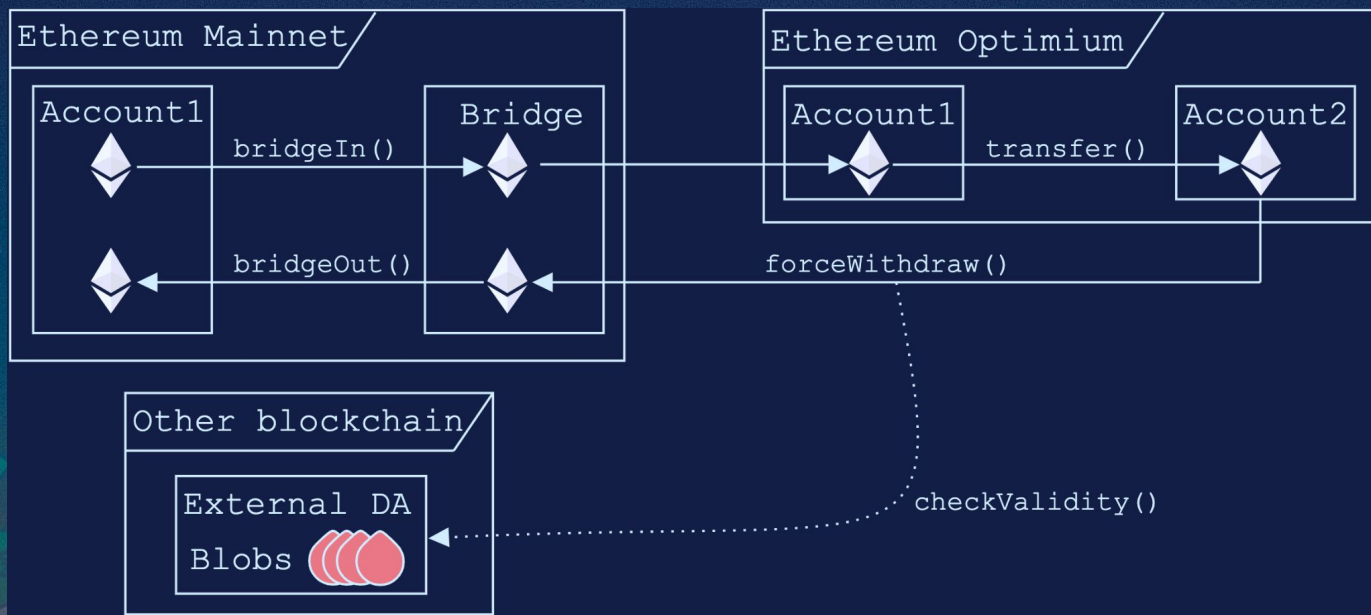
Property rights of ETH on rollups.

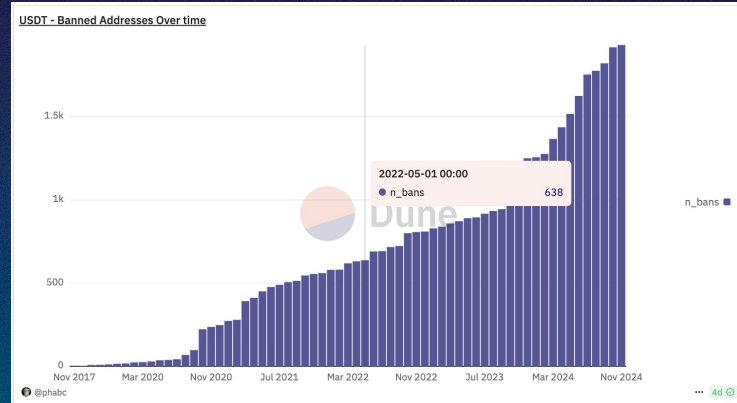Anyone can permissionlessly bridge ETH in and out of rollups.

Property rights of ETH on non-Ethereum DA L2s.

If the external DA layer is live, anyone can permissionlessly bridge ETH in and out.

Aside: USD(C/T) have no property rights.

USDC - Banned Addresses Over time

2022-09-01 00:00
n_bans   87

@phabc

USDT - Banned Addresses Over time

2022-05-01 00:00
n_bans   638

@phabc
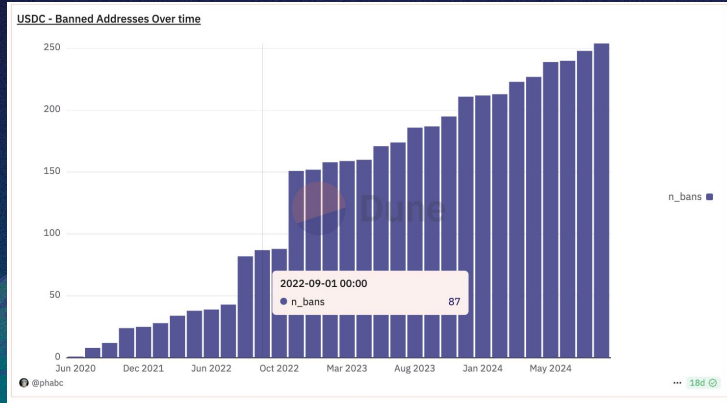
Canadian authorities freeze financial assets for those involved in ongoing protests in Ottawa

By Aya Elamroussi, Holly Yan and Amir Vera, CNN

5 minute read · Updated 8:48 PM EST, Sun February 20, 2022

ETH **is _permissionless_** .

1. ETH is permissionless and programmable on the L1.
2. Rollups scale the property rights of ETH.
3. Property rights on non-Ethereum DA L2s depend on another chain.
4. USD(C/T) have no property rights.

ETH **is *money* .**

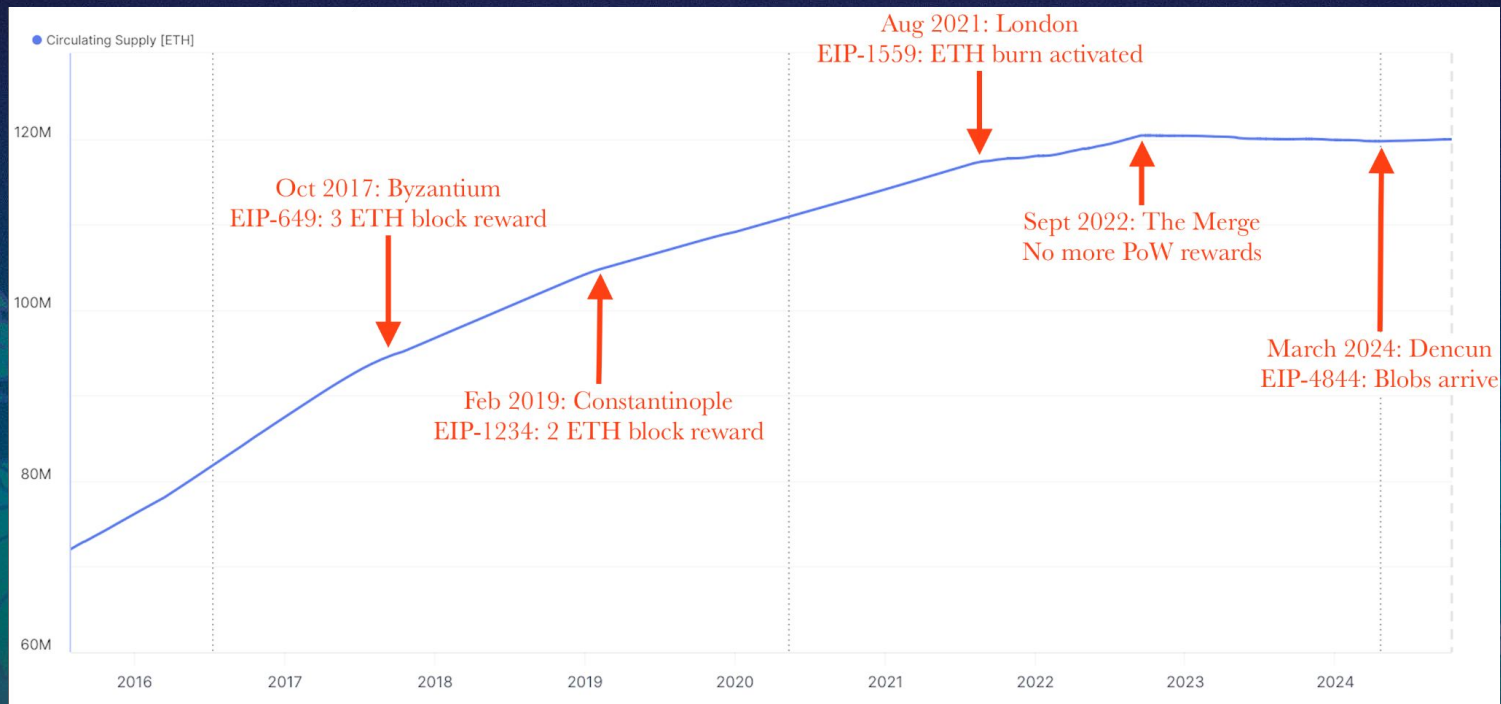"By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens."
~John Maynard Keynes, *The Economic Consequences of Peace*

"Money has no essence. It's not 'really' anything; therefore, its nature has always been and presumably always will be a matter of political contention."
~David Graeber, *Debt: The first 5,000 years*

A brief history of the ETH supply.

Circulating Supply [ETH]

Aug 2021: London
EIP-1559: ETH burn activated

Oct 2017: Byzantium
EIP-649: 3 ETH block reward

Sept 2022: The Merge
No more PoW rewards

Feb 2019: Constantinople
EIP-1234: 2 ETH block reward

March 2024: Dencun
EIP-4844: Blobs arrive

120M

100M

80M

60M

2016   2017   2018   2019   2020   2021   2022   2023   2024

glassnode.com

Current ETH inflation.

- ➤ 120mm ETH Supply
- ➤ 34mm ETH Staked (≈28%)
- ➤ 3.25% Yield

- ➜ 34*0.0325 = 1.10mm ETH per-year
- ➜ 1.1/120 ≈ 0.9% annual inflation

Current SOL inflation.

- ➤ 588mm SOL Supply
- ➤ 400mm SOL Staked (≈68%)
- ➤ 7% Yield

- ➜ 400*0.07 = 28 mm SOL per year
- ➜ 28/588 ≈ 4.7% annual inflation
- ➜ 5x higher than ETH inflation

Current BTC inflation.

- ➤ 19.78mm BTC Supply
- ➤ 3.125 BTC per-block
- ➤ 52560 blocks per year

- ➜ 164250/19.78mm ≈ 0.8% annual inflation
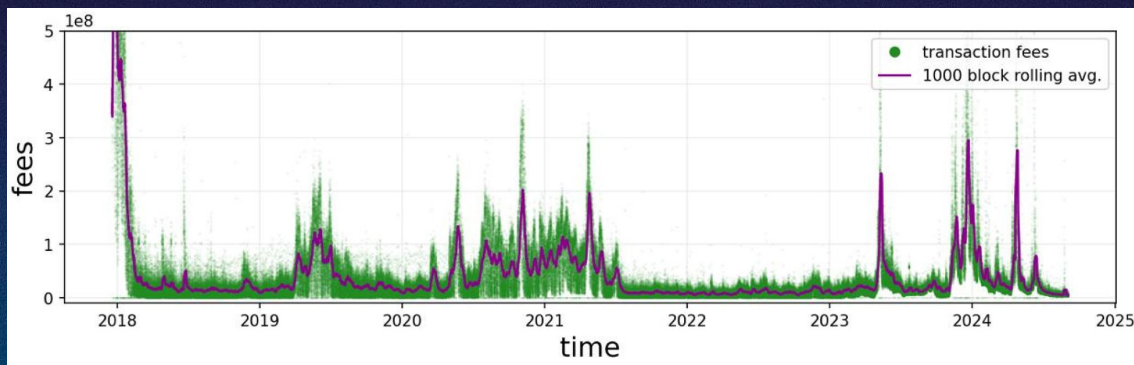- ➜ About the same as ETH inflation

21 million: the core promise & the fatal flaw.

6.   Incentive

By convention, the first transaction in a block is a special transaction that starts a new coin owned by the creator of the block. This adds an incentive for nodes to support the network, and provides a way to initially distribute coins into circulation, since there is no central authority to issue them. The steady addition of a constant of amount of new coins is analogous to gold miners expending resources to add gold to circulation. In our case, it is CPU time and electricity that is expended.

The incentive can also be funded with transaction fees. If the output value of a transaction is less than its input value, the difference is a transaction fee that is added to the incentive value of the block containing the transaction. Once a predetermined number of coins have entered circulation, the incentive can transition entirely to transaction fees and be completely inflation free.

Instability of PoW with only transaction fees.

857911	857910	857909	857908
~1,557 sat/vB	~718 sat/vB	~8 sat/vB	~3 sat/vB
1,025 - 2,116 sat/vB	513 - 4,463 sat/vB	6 - 5,937 sat/vB	3 - 330 sat/vB
15.551 BTC	9.515 BTC	0.138 BTC	**0.031 BTC**
4,736 transactions	4,404 transactions	2,755 transactions	7,399 transactions
12 weeks ago	12 weeks ago	12 weeks ago	12 weeks ago
▲ AntPool	▲ AntPool	🦎 SpiderPool	▲ AntPool

500x

ETH has low & sustainable inflation.

What about the burn?

Burn from L1 transaction fees.

➤ Currently at 476k ETH per-year.

➤ Depends highly on market conditions.

➤ Absorbs large amounts of inflation (reminder: inflation is about 1mm ETH).

ultrasound.money

BURN

476K
ETH/year
🔥

TIME FRAME   5m   1h   1d   7d   30d

Burn from blob fees (L2 usage).

➢ "DA layer with128 blobs/slot could support around 2 Ggas/s."

➢ ~95k transfers per-second

➢ ~6k swaps per-second

To fully offset the issuance:

➜ 95k transfers per-second spend 0.001 dollars per-txn.

➜ 6k swaps per-second spend about 0.015 dollars per-txn.

➜ 336,384,000 blobs per year

➜ $10 blobs

TL;DR. L2 transaction fees can stay   low and burn a lot of ETH.

ETH **is _money_** .

1. ETH supply is stable.
2. ETH inflation is low _and_ sustainable.
3. ETH burn from L1 activity offsets half of the inflation.
4. L2 activity burns blob fees; can burn a lot of ETH while preserving sub-cent txns.

The full picture
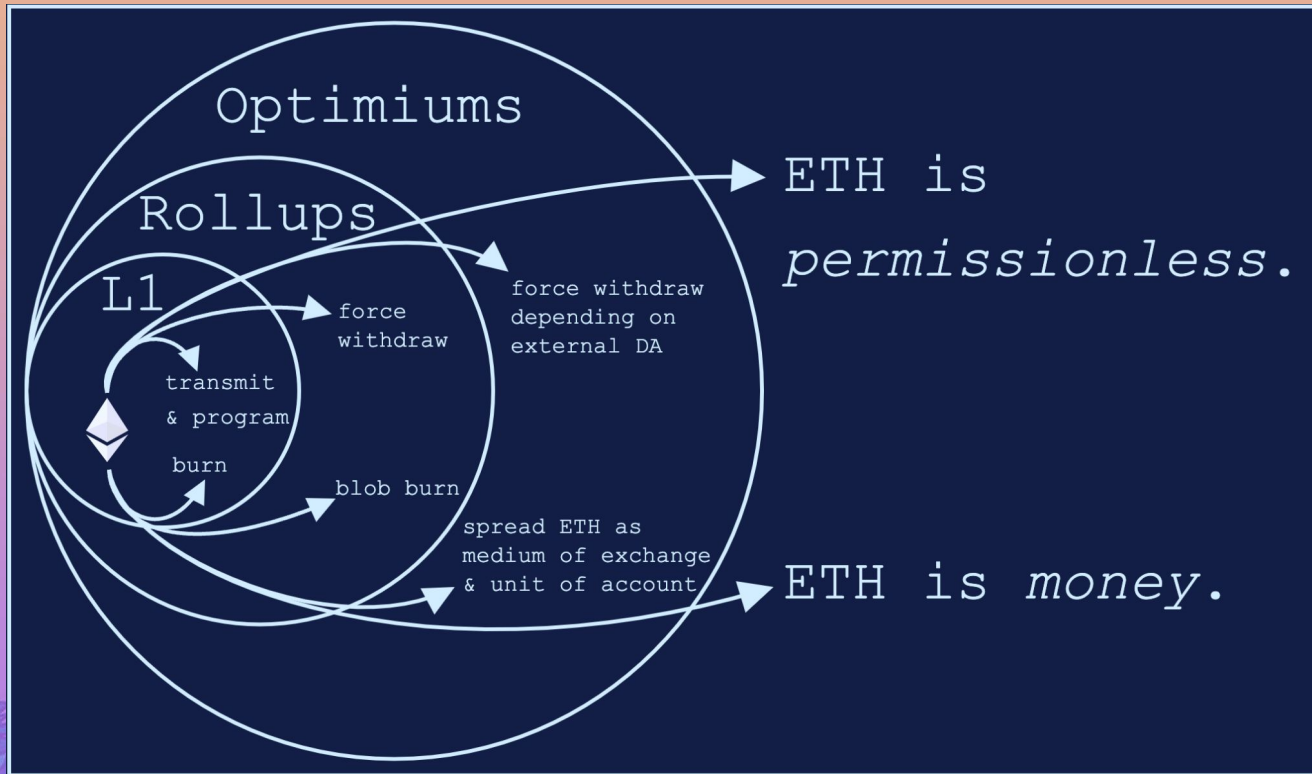
Thank you!

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