🌐 P2P / Blockchain / Web3

The Good Parts & Real Use Cases

No speculation • Just what works

⚠️

Why Web2 is broken

🔄

The alternatives

✅

Real use cases today

Web1 (1990s)

- **Read-only** static pages

Web2 (2000s - now)

- **Interactive** platforms
- User-generated content

Data == Money

- Free software → Low barrier to adoption
- Companies sell **your data** to advertisers and investors
- **Example:** Target predicted a teen's pregnancy before her father knew

The Problems

- **Hyper-centralization** — few control everything
- **Attention economy** — apps steal your time
- **Algorithms** — optimize for engagement, not value

Real Consequences

- 🗳️ **Cambridge Analytica** — election manipulation
- 🇲🇲 **Myanmar** — Facebook accused of enabling genocide
- 🔓 **Data breaches** — billions of records leaked

Centralized

One actor controls all

P2P

Nodes share directly

Blockchain

Shared ledger, no owner

🤝 It's about **who you trust**

🔐 Permissioned

- Controlled access
- Known participants
- **Example:** Private company blockchain

🌍 Permissionless

- Anyone can join
- No gatekeepers
- **Example:** Bitcoin, TOR

🛡️ FOSS Alternatives

- Free & Open Source Software
- Auditable code
- **Self-host** or use ethical providers

⛓️ Blockchain (when appropriate)

- Public, verifiable data
- Resilience & reproducibility
- ⚠️ Not for confidential data

💡 **Examples:** Matrix, ActivityPub, IPFS, Ethereum

Nextcloud

Self-hosted cloud

Proton

Encrypted email & VPN

Signal

Encrypted messaging

💵 Stablecoins

Venezuela, Zimbabwe — alternative to broken currencies

🕵️ Whistleblowers

Tor Network — anonymous, P2P communication

📚 IPFS Wikipedia

Censorship-resistant Wikipedia in restricted countries

💸 Remittances

Lightning Network — cheaper cross-border transfers vs Western Union

🪪 **Zero-Knowledge Proofs:** Prove your age without showing your ID

7 days → 2.2s

Walmart supply chain tracing

1.4 billion

Unbanked adults worldwide

99.95%

Ethereum energy reduction (PoS)

The Failures

- **FTX, Luna/Terra** — centralized entities pretending to be decentralized
- **NFT bubble** — speculation ≠ technology value
- **Rug pulls** — permissionless can be exploited

The Lesson

Decentralization theater vs **actual decentralization**

Always ask: *Who really controls this?*

⚠️ Critique	✅ Counter-argument
🔥 Energy consumption	Proof of Stake uses **99.9% less** energy
🦹 Used for crime	Blockchain is **traceable**; cash preferred by criminals
🎲 Too complex	UX improving; like early internet
📈 Just speculation	Real production systems exist (Walmart, Signal, etc.)

📱 **Try FOSS alternatives**

🏠 **Learn to self-host**

🧠 **Understand before investing**

🛠️ **Build on open protocols**

🔍 **Always ask:** Who controls my data?

⚠️ The Problem

- Web2 exploits your data
- Hyper-centralization is dangerous
- Attention economy harms society

✅ The Solution

- FOSS alternatives exist
- P2P & blockchain for resilience
- **You choose who to trust**

🚀 We're still in the early days of Web3

The infrastructure is being built right now

Let's discuss!

Statistics

- **Walmart supply chain:** Blockchain in the food supply chain - What does the future look like? (2021)
- **1.4B unbanked:** World Bank Global Findex Database (2021)
- **Ethereum energy:** Ethereum Foundation - The Merge (2022)
- **Cambridge Analytica:** The Guardian investigations (2018)

Further Reading

- Ethereum.org use cases
- IBM Blockchain case studies
- "Mastering Bitcoin" - Andreas Antonopoulos
- Chainalysis Crypto Crime Reports
- World Economic Forum - Blockchain reports