

Blockchain Voting Systems

Lesson 9 Summary

Prof. Joerg Osterrieder

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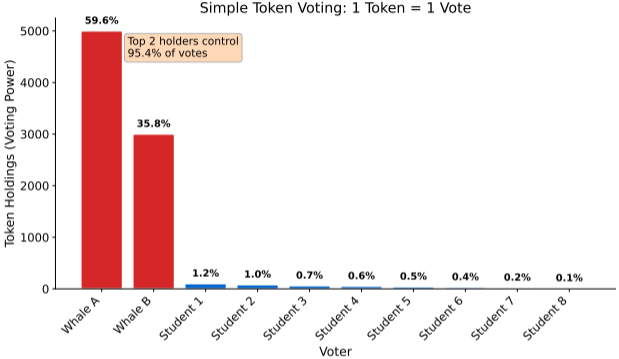
Five Voting Systems at a Glance

System	Formula	Strength	Weakness
Token	$VP = \textit{tokens}$	Simple	Plutocratic
Quadratic	$Cost = n^2$	Fair	Needs identity
veToken	$VP = \textit{tokens} \times t/T$	Long-term	Illiquid
Reputation	$VP = \sqrt{REP}$	Sybil-resistant	Oracle needed
Conviction	$C(t) = 0.9C(t-1) + 0.1t$	Resistant	Slow

Key insight: No system is universally best—trade-offs exist

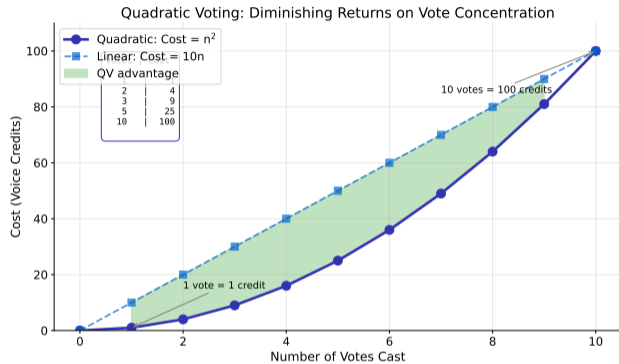
Choose based on: Sybil resistance, fairness, simplicity needs

Simple Token Voting



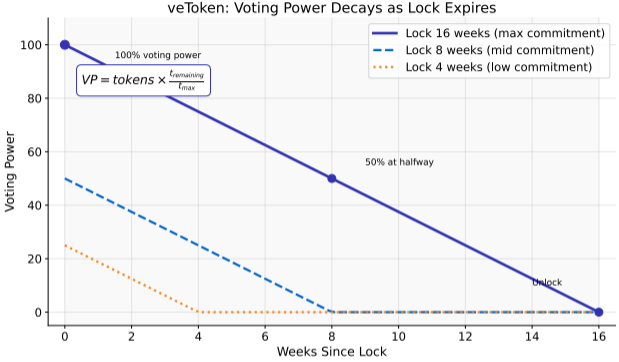
1 token = 1 vote. Simple but enables whale dominance

Quadratic Voting



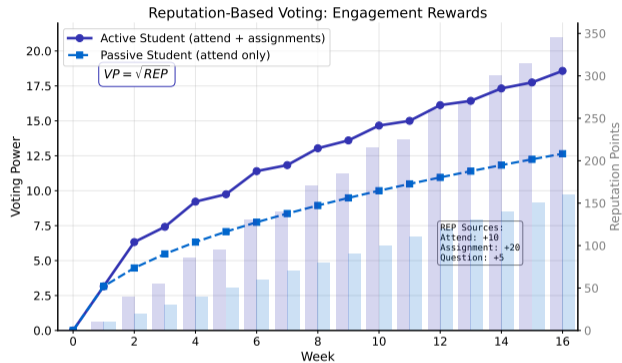
Cost = n^2 prevents vote concentration. Used by Bitcoin Grants

veToken Locking



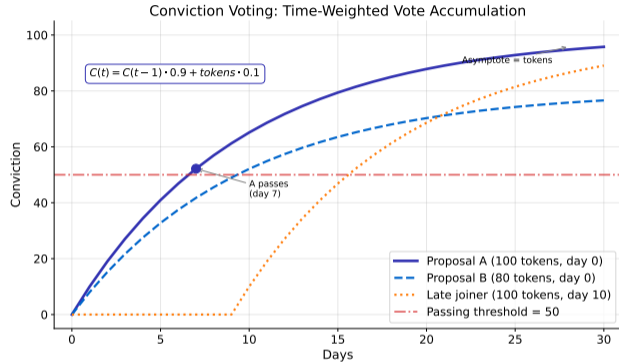
Lock longer = more power. Pioneered by Curve Finance (platform TVL exceeds \$2B)

Reputation-Based Voting



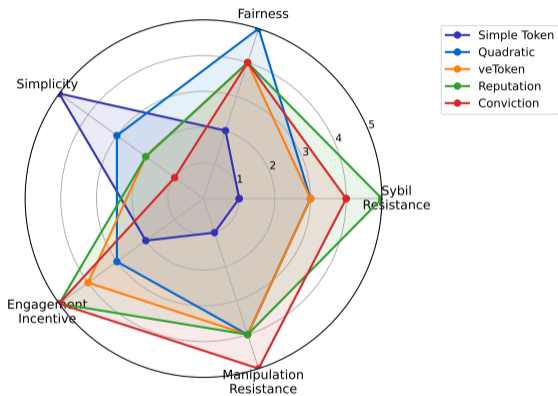
Earn voting power through participation. Sybil-resistant by design

Conviction Voting



Votes accumulate over time. Prevents last-minute manipulation

Voting System Comparison



Match system to governance needs—hybrid approaches often work best

Why Snapshot?

- Free (no gas costs)
- Supports all voting strategies
- Used by 1000+ DAOs

Setup steps:

- 1 Deploy ERC-20 token (Polygon: \$1)
- 2 Create Snapshot space
- 3 Configure strategy (token/quadratic)
- 4 Create proposal and vote

Total cost: **\$6** for complete governance setup

1. **Voting trilemma:** Sybil resistance vs fairness vs simplicity
2. **Five systems:**
 - Token: simple, plutocratic
 - Quadratic: fair, needs identity
 - veToken: long-term focus, illiquid
 - Reputation: earned power, oracle risk
 - Conviction: time-weighted, slow
3. **Implementation:** Start with Snapshot, iterate
4. **Design principle:** Match system to governance need

Good governance evolves—start simple, improve based on feedback