Beyond 1 $APE = 1 Vote : The future of DAO governance

[future = mid to long term]

Note : This was meant to go live around 2 weeks back but was postponed cause of a myriad of reasons, with that said now its finally out

A great Philosopher once said "Don't destroy what you don't understand" which at a first look doesn't seem to make sense but then it started to grow on me.

I'll give you an example, You come across a fence in the middle of nowhere and it's being a nuisance, what'd you do ? Do you (a) Destroy it or (b) Be inconvenienced and change your path

"If you don't see the use of it, I won't let you clear it away. Go away and think. Then when you come back and tell me that you do see the use of it, I may allow you to destroy it." This teaches us to first try and understand why the previous system was set up the way it was and without that prior knowledge, you cannot act to the best of your abilities and are much more likely to commit some blunders.

He further stated "Tradition is the solution to problems which we forgot we had". just something to ask yourself

This is known as Chesterton's fence and is the principle that Reforms should not be made until the reasoning behind the existing state of affairs is understood

. As some prominent voices inc@0xSword has pointed out that no changes should be made to the core workings hastily. Some have even proposed a supposed halt to any changes to the core mechanics for a specific period.

Then there comes the old reformer vs traditionalist debate.

I consider myself as a reformer but with that said, There's nothing more dangerous than reform just for the sake of it.

Any robust voting mechanism would need strong anti sybil measures in place. And not just that, a lot of supporting mechanisms are needed to uphold the integrity of the system. (Checks and Balances peeps)

Context : Here

The way I think of it, nothing is ever truly sybil resistant, It just gets financially, technologically or chronologically infeasible to do so. As the Incentive to rig the governance process of a Treasury with a billion $ treasury is so severe that it cannot be overlooked.

"Show me the Incentive and i'll show you the outcome" → This quote by charlie munger perfectly encapsulates how Incentives are a powerful tool which help in shaping Human behaviour.

If the incentive for rigging something so fundamental is still there, then you best believe that's what's gonna happen. That's just Game theory playing out in real time.

Now it's very Important for me to make my position clear on this

Q1) Am I favouring a secure implementation of Quadratic Voting mechanism with the purpose for this post to sway popular sentiment ?

No

Q2) Am I trying to shill another mechanism, let's say Conviction based voting ?

No

Q3 ) Am I exploring alternative governance structures so that we can analyse a particular mechanism thoroughly as a collective in the meantime ? Just get the ball rolling on the discussion side of things.

Yes, That's what exactly I'm trying to do.

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## These are the major problems which some popular mechanisms face :

I'll add to this with time

- One person, One vote → Proof of Humanity How !?

How can we , in a trustless system say with 100% certainty … without intrusive measures like KYC or sam altman's Iris scanning zK proofs ?

It has strong connotations wrt Sybil . That attack vector is wide open.

With the rise of Generative AI, esp (GPT 4) our perception of reality, what's true and what isn't will start to change radically and there'll come a time where genuine human interaction and AI generated content (more like hallucinations ad it has a tendency to just make stuff up) would be pretty much indistinguishable from one another. Worst part ? It's not even that far away.

And dw, Sam is providing solutions to the problems he helped create. Introducing Worldcoin. where you only have to scan your iris to help prove your humanity. (Yikes !!)

- One $APE = 1 Vote → Obsolete (Maybe ?)

Negligible representation for smaller holders, Voting power disproportionately concentrated within a few entities. Now that's not a bad thing, but it demoralises the small to medium holding contributors which make up the majority of the contributors (n) on a particular platform.

Well to be fair, this system has some merit to it cause it brought us up to this point so we can have those conversations.

Buying influence in this system is pretty straightforward and each additional (or consecutive) vote costs the exact same as the one before. Although this system isn't vulnerable to sybil type attacks as in Quadratic Voting.

Pros and Cons people, pros and cons.

No. of Votes

APE Holding

1

1 $APE

500

500 $APE

1,000

1,000 $APE

5,000

5,000 $APE

10,000

10,000 $APE

- Conviction based governance → Requires locking in of stake for scaling voting power up

TLDR : Your voting power scales dynamically according to the lock in period (in weeks)

However, If someone wants to use the traditional system, it'll still be in place but without any of the vote scaling benefits.

Dynamic scaling of voting power helps incentivise a more long(er) term approach.

Voters would generally want to maximise their voting power while trying to minimise the lockup period, then there'll come a time where this reaches equilibrium (Nash equilibria). That's what Game theory dictates.

- Meritocratic or Merit Based systems → Seems interesting, relatively uncharted territory

TLDR : Citizens give up their influence on particular issues to gain influence on others based on their knowledge and prior experience.

Seems Interesting really, needs further studying.

- Quadratic Voting → Sybil attacks, Collusion

No. of Votes

Cost

| | |
|---|---|
| 1 | $ 1 |
| 5 | $ 25 |
| 10 | $ 100 |
| 50 | $ 2,500 |
| 100 | $ 10,000 |
| 500 | $ 250,000 |
| 1000 | $ 1,000,000 |

The biggest issue with QV is with Proof Of Individuality.

How do you determine the humanity of a certain Individual , without directly going against the values which we stand for ? That's a question which I've tried to address with → zKYC

If not, then how can you manage the sybil attack vector ?

| No. of Voters | Votes (v) per Individual | Associated Cost | Total Votes |
|---|---|---|---|
| 1 | 100 | $ 10,000 | 100 |
| 2 | 50 | $ 5,000 | 100 |
| 5 | 20 | $ 2,000 | 100 |
| 10 | 10 | $ 1,000 | 100 |

20

5

$ 500

100

50

2

$ 400

100

100

1

$ 100

100

So now the cost of every consecutive vote doesn't scale to the factor of (v) → v^2 $ and instead is divvied up among legit voters and / or aliases of existing one. I've put in aliases to emphasise the Sybil attack vector

The Fundamental flaw in the Implementation of a Secure (but public) implementation of QV as a robust governance system is that it's very susceptible to Sybil type attacks.

For a vote ranging from 1 → n, the cost of every vote scales from 1 → (n) ²

So, it can be determined that the vote scales much more effectively for those with smaller holding. If the amount is small enough, it achieves near parity.

Now's where the sybil attack vector comes into play, a single account with 100 … and that's exactly why we'd need strong measures to take

Now the Incentive here is to spoof this system by introducing an overwhelming no of seemingly real

aliases to try to game the system with the ultimate aim of undermining the authority of a reputable system by maliciously gaining a significant influence over the executive (either a separate body which oversees governance ot the process itself)

TLDR : QV requires quadratic pricing of votes per individual, two colluding individuals can buy v votes for a lower price than one individual alone and that effect scales up massively as we've seen before

The process to do such a thing might look complex at first look, but this effort in the face of such a big incentive is negligible.

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I've seen the debate come up for looking into alternate forms and I'm glad I'm not alone in this

The old Reformer v/s Traditionalist debate is going strong over here as election season nears, things are starting to heat up in this regard.

And at the end of the day, we're still subservient to the will of the DAO and the will of the DAO is paramount. Just some food for thought till the next post

PS : Added the section for Collusion between parties with an aligned incentive here →Quadratic Voting Threat Assessment