GOVERNANCE BY APPARENT CONSENSUS
(DRAFT A.)

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ABSTRACT. This article describes a new form of soft governance for decentralised autonomous organisations, called 'apparent consensus'. It is simple, can be implemented on- or off-chain, and uses direct token-weighted voting, but is not plutocratic. It does not require voters to pay attention to every issue, only the ones they care about. It has no quorums, and tolerates low turnout without losing legitimacy. It defaults to a state of expert delegation, without requiring any special technology. It respects minority rights, and allows dishonest actors to be routed around. There is no mechanical decision rule. When consensus is high, decisions are rapid. When it is low, they take more time.

1. INTRODUCTION

This article [1] describes a new form of soft governance for decentralised autonomous organisations, called "apparent consensus". The procedure is implemented in three stages.

Crowd consensus: A member of the general public makes a proposal and posts it on a public forum. It is debated in public and can be modified and revised to adapt to public feedback.

Sophon consensus: Expert members of the DAO, called "Sophons" [2] who have been designated as reviewers, analyze the proposal and publish a recommendation on whether to adopt, decline, or defer.

Tokenholder consensus: Following Sophon consensus, Tokenholders are offered the chance to object to the recommendation using a token-weighted vote that only counts "no"s, signaling the magnitude of their intent to exit, should the recommendation be upheld.

1.1. Outcomes.
The Sophon recommendation and the Tokenholder objection vote interact to determine the result.

Sophons	Tokenholders	Result
adopt	*reject*	**reconciliation**
adopt	*approve*	**adopt**
decline	*reject*	**reconciliation**
decline	*approve*	**decline**
defer	*reject*	**reconciliation**
defer	*approve*	**defer**

1.1.1. *Reconciliation.*
If the Sophon consensus and the Tokenholder consensus do not agree, the matter enters reconciliation, a process by which objectors explain their objections and negotiate revisions.

1.1.2. *What is sufficient objection?*
There is no hard-and-fast rule for what constitutes sufficient objection. Formally, sufficient objection is objection that would reduce the competitiveness of the DAO.

1.1.3. *Why is it called apparent?*
The word "apparent" comes from the fact that each stage, not all individuals who *could* be involved in a decision, *will* be involved. The most obvious example is in tokenholder consensus, which uses a rule of non-opposition similar to "silence is consent". This can be seen as a form of optimistic consensus, in which we search for evidence of non-consensus, and if we find none, assume consensus holds. In this case, absence of proof is not proof of absence, and so this is only "apparent" consensus.

1.2. Sophon selection.
Sophons are elected and can be removed by proposal and the same consensus procedure used for all other proposals. Becoming a Sophon is a large responsibility and signals that you have the time, attention, and technical understanding to respond to proposals. Because of this, the process of becoming a Sophon should be long and selective. The candidate should be able to speak for the protocol autonomously, demonstrate high understanding and the ability to organize, and remain engaged and responsive.

1.3. Proposals.
Proposals are documents which describe a policy, action, request, or idea that the author(s) want the DAO to think about. They can be authored by anybody, and follow a standard format to make them easy to read and write.

2. DERIVATION

Rather than argue point-by-point for the merit of this approach, we take a deductive approach and derive this form of governance from a reasonably general definition of DAO and the requirements we place on it in a competitive environment.

2.1. Consensus Democracy.
Define a DAO as a group whose membership is determined by ownership of the DAO's governance token on a permissionless blockchain. This means that every member of the DAO has at least one right: the right to transfer their governance tokens [30].

This right gives members the power to grant membership (by transferring their tokens to a non-member), and to

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[2] Gr. sophón, from sophós, "wise one, sage". Also the name of an autonomous information-gathering supercomputer in the Cixin Liu novels *The Three-Body Problem*, *The Dark Forest*, and *Death's End*.

revoke their own membership (by transferring all of their tokens to someone else). Revoking your own membership, i.e. leaving the group, is an important concept called exit [10, 14, 19, 27].

DAOs are bound together by the power of exit, because for DAOs, exit has consequences. Their open source software, transparent processes, and permissionless nature means that they live under the constant "shadow of the fork": if enough members exit, they could fork the software and replicate the DAO with their own ideas, instead of the ones they left behind [5, 1, 2, 3].

This splitting of the pie is usually in nobody's interest, so when there is a significant threat to exit, "remainers" will act to prevent the exit from happening. But what can they do? Voting won't work. The exiteer is autonomous; they will simply leave if they don't like the outcome of the vote. In the words of John Locke, the remainers are "bereft of compulsive power", and can only convince the exiteer to remain using "exhortations, admonitions, and advices" [12].

This kind of governance, using "words, not votes," characterizes what is called consensus democracy, a decision-making structure which involves and takes into account as broad a range of opinions as possible, as opposed to systems where minority opinions can potentially be ignored by vote-winning majorities.

2.2. **Rule of Non-Opposition.** Barbara Yngvesson [29] spent a year observing consensus democracy in a community of fishermen on a small island off the west coast of Sweden. She found that when making an important decision during an expedition, such as changing the fishing location, the process was three-fold:

(1) One of the fisherman suggests moving to another location.
(2) During the following half-hour or so, the others may express reactions to this proposal.
(3) In the case of no counter-proposal, the first speaker reiterates his proposal and the boat heads for the designated fishing area.

Philippe Urfalino calls this the "Rule of Non-Opposition", and contrasts it with voting as a method of consensus decision-making [22, 23, 25, 24]. It is also sometimes called a "silence procedure", or described with the Latin phrase *qui tacet consentire videtur* "who is silent is seen to agree".

The rule of non-opposition appears everywhere in deliberative situations across the globe, from Sudanese tribal councils to Swiss cantons to the World Trade Organisation [21, 20, 8]. One especially relevant practitioner is the Internet Engineering Task Force (IETF), which for decades has successfully used the method of "rough consensus" for group decisionmaking [16, 6].

> Our credo is that we don't let a single individual dictate decisions (a king or president), nor should decisions be made by a vote, nor do we want decisions to be made in a vacuum without practical experience. Instead, we strive to make our decisions by the consent of all participants, though allowing for some dissent (rough consensus), and to have the actual products of engineering (running code) trump theoretical designs. (IETF RFC7282)

Rough consensus, along with the "Request for Comment" (RFC) proposal format, are IETF innovations and the ancestor of much of the protocol governance practiced today. The widely-imitated Ethereum Improvement Proposal (EIP), for instance, was based on the Bitcoin Improvement Proposal (BIP), which in turn was based on the Python Enhancement Proposal (PEP), which takes significant inspiration from the IETF RFC. And similar ideas of "rough consensus" are a major part of what powers the soft governance philosophy of Ethereum [28].

2.3. **Rethinking the Token-Weighted Vote.** So then, when and why did voting get involved in DAO governance? It was likely borrowed in by "seductive analogy" with corporate shareholder voting [17]. In corporate governance, though, the outcome of a shareholder vote is enforceable by federal laws guaranteeing the rights of corporate shareholders. No such laws, and hence no such rights, exist for members of a DAO. Ostrom has shown that such "anchoring" to state law is neither necessary nor always desirable, a view in keeping with the philosophy of decentralisation.

If the outcome is not enforceable, does it make sense to consider a tokenholder vote as having "passed" or "failed"? Probably not. And at a deeper level, doesn't the right of exit mean that a vote has no way to prevent the negative externalities of the DAO losing consensus? The corporate entities most similar to a DAO in this regard are mutual funds and SPACs, and in these entities voting has become vestigial or even been eliminated [18, 19, 17, 27], a fact mirrored in the MolochDAO design [7]. We do not even need to dip into questioning oligarchic or plutocratic forms, or the governance attacks they engender, to see that most tokenholder voting is not analagous to shareholder voting at all.

Instead, we suggest that tokenholder voting, or more precisely token-weighted voting, measures the scale of a threat to exit. When considering a proposal, those who would exit if the proposal were to pass, may signal that fact using a token-weighted vote that only counts "no"s. The result is the number of tokens that would exit, allowing the group to measure the degree of consensus. In other words, we propose that the natural use for a token-weighted vote is to answer the question, "are there any objections?".

2.4. **Coordinators, Experts, and Meritocracy.** Even with an egalitarian form of consensus governance, KeeperDAO is embedded in, and interacting with, a highly competitive market environment. It is a "production community," where members collaborate in the creation or maintenance of collective goods, and "own" the output of their labor [26].

Scholarship on open source production communities suggests that governance must be meritocratic in order to attract high quality contributions from voluntary members [15, 9, 4, 11]. But in meritocratic institutions, power can be earned through reputation or contribution, which can lead to the establishment of distinguished individuals. Does the presence of such "distinguished individuals" harm the legitimacy of decentralised governance? The evidence suggests the answer is no, as long as their authority is properly limited, and that in fact they can play a vital role.

Production communities need a way to manage their interdependence in order to direct individual efforts toward a common goal [15, 13]. This need leads to the emergence of limited positional authority for some individuals, allowing them to facilitate coordination and decisions, aid in conflict resolution, and represent the project to outside parties. While most authority remains laterally distributed, truly "flat" structures are very rare.

This limited positional authority is part of what Buterin calls the "coordination institution" [4], and it appears also in fisheries, where Gutiérrez, Hilborn and Defeo found that legitimate community leaders, when guided by collective interests and not self benefits, give resilience to changes in governance, and enhance conflict resolutions, concluding that the presence of community leadership was critical for successful co-management [20].

2.5. **Summary.**
- The properties of the blockchain, the effects of tokenized stake, and the threat of fork, render the effects of voting meaningless and instead support consensus democracy as the the natural mode of governance.
- The most widely-practiced form of consensus governance, from Swedish fishing boats to the IETF, is what Urfalino calls the "rule of non-opposition". This rule creates an "apparent consensus".
- A token-weighted vote is a compatible way to signal a lack of consensus.
- On a meritocratic basis, limited positional authority for coordination makes production communities more competitive.

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