

## Approaching Infinity:

Governance, and the case for experimentation

By Brett Sun



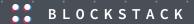
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A SIGNATURE FUND EVENT

### **Approaching Infinity:**

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Or perhaps better put,

# Let's throw things on the wall... and see what sticks

(And why we want that)





#### So what am I going to talk about?

"Micro" (intra-network) governance, e.g.

#### Communities

#### **NOT** blockchains





# The most successful projects will be communities, not startups





Individual representation (decentralization)

Global scale (interdependence)





Hunter-gatherers

Individual representation (decentralization)

Global scale (interdependence)



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Hunter-gatherers

Individual representation (decentralization)

Agricultural tribes

Global scale (interdependence)





Hunter-gatherers

Individual representation (decentralization)

Agricultural tribes

Global scale (interdependence)

Nobility & Monarchies



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Hunter-gatherers

Individual representation (decentralization)

Agricultural tribes

Global scale (interdependence)

.

Nobility & Monarchies

Mercantile Empires





**Hunter-gatherers** 

Individual representation (decentralization)

Agricultural tribes

Global scale (interdependence)

**Liberal Democracies** 

Nobility & Monarchies

Mercantile Empires



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## Well, what's the point?





"Centralized system[s] will necessarily need people who are not directly exposed to the cost of errors"

Nassim Taleb, Skin in the Game





"Computers and networks are cheap... computer science secures money [and scales society] far better than accountants, police, [politicians,] and lawyers"

Nick Szabo, Money, blockchains, and social scalability





Do you really want to trust those without skin in the game to maximize your community's ability to socially scale?





Individual representation (decentralization)

Global scale (interdependence)





Individual representation (decentralization)

Global scale (interdependence)

Valley of coordination



Individual representation (decentralization)

Global scale (interdependence)





Individual representation (decentralization)

Global scale (interdependence)





Individual representation (decentralization)

???

Peak of self-representation

Global scale (interdependence)





# Governance can be experimented with at the speed of software

(let's throw things on the wall and see what sticks)







 $\Lambda R \Lambda G O N$ 



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aragonOSE> launch\_3.0

#### A framework for programming governance

github.com/aragon/aragonOS





#### Core design tenets

- 1. Primitives-focused
- 2. Default to opt-in
- 3. Interchangeable, malleable components





Logical decentralization

Trusted

Trust minimized

Logical centralization



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### Let's make some governance happen!





#### **Access Control List (ACL)**

```
1 interface IACL {
        function initialize(address permissionsCreator) external;
        function hasPermission(
            address who,
            address where,
            bytes32 what
        ) external view returns (bool);
       /* Non-interface suggestions for implementations:
10
        function createPermission(address who, address where, bytes32 what) external;
11
        function grantPermission(address who, address where, bytes32 what) external;
12
13
        function revokePermission(address who, address where, bytes32 what) external;
14
15 }
```

Interface: https://github.com/aragon/aragonOS/blob/dev/contracts/acl/IACL.sol Implementation: https://github.com/aragon/aragonOS/blob/dev/contracts/acl/ACL.sol





#### Make me a DAO

```
1 contract DAOFactory {
2 function newDAO(address root) public returns (Kernel) {
3     Kernel dao = new Kernel();
4     dao.initialize(root); // Assume this also creates an ACL for the DAO
5     return dao;
6     }
7 }
```

Factory: https://github.com/aragon/aragonOS/blob/dev/contracts/factory/DAOFactory.sol





## And sprinkle on some (light) governance...





```
1 contract DAOFactory {
       function newDAO(address root) public returns (Kernel) {
            Kernel dao = new Kernel();
            dao.initialize(root); // Assume this also creates an ACL for the DAO
           ACL \ acl = ACL(dao.acl());
           Vault vault = Vault(dao.newAppInstance("vault"));
            Voting voting = Voting(dao.newAppInstance("voting"));
10
            Finance finance = Finance(dao.newAppInstance("finance"));
11
            TokenManager tokenManager = TokenManager(dao.newAppInstance("token-manager"));
12
13
           acl.createPermission(finance, vault, vault.TRANSFER_ROLE());
14
           acl.createPermission(voting, finance, finance.CREATE_PAYMENTS_ROLE());
15
           acl.createPermission(voting, finance, finance.EXECUTE_PAYMENTS_ROLE());
16
           acl.createPermission(voting, tokenManager, tokenManager.MINT_ROLE());
17
           acl.createPermission(voting, tokenManager, tokenManager.ASSIGN_ROLE());
18
19
            return dao;
20
21
```

#### Goodies

- Program upgradability
- Package management

(which are inherently software governance questions)







#### Join us

#### Aragon Labs, Aragon Nest

Token Curated Registries, Liquid Voting

(We're hiring)





#### Come find us



Brett @sohkai





#### Come find us

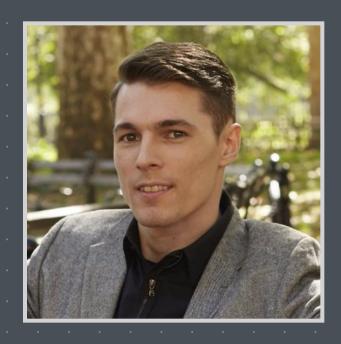


Tatu @smokyish



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#### Come find us



John @lightcoin



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## Thank you

(and let's go experiment!)



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