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Fluid p2p normative system and governance

under development... feel free to contribute.

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Goals

The aim of this document is to describe a *fluid* p2p normative system. This builds on [peer governance](#) but adds fluidity to the process, i.e. makes the normative system open, stigmergic, dynamic, emergent.

Can we apply it to all levels of the [fractal OVN](#)?

Fluid p2p governance is essentially [peer governance](#) with no universal / fixed code (a body of universal rules / laws like the Ten Commandments) and no centralized decision-making process (like an assembly or a parliamentary session), i.e. affiliates / agents of the network don't need to draft a charter (or a set of rules) and go through a group decision making process (voting, consensus, or other) to enact it. Moreover, *Fluid p2p governance* has no centralized enforcement and punishing mechanism (like the police and the justice system) when rules are transgressed. Instead, costs for transgressing the rules and benefits for following them are adjusted, communicated and enacted in real time, in context, based on the input of affiliates / agents. This reduces the barrier to formalization of a network and makes the network highly adaptable.

- The system relies on a dynamic registry of *deontic statements*¹
- Any active affiliate / agent can propose new deontic statements in the registry, anytime. There is no need to delete statements that are already there, although a “cleaning” function may be desired in some context. (open)
- Any active affiliate / agent can weigh these *deontic statements* and revise the distribution of weights anytime. (dynamic). In some contexts some “dumpening” mechanisms may be required to reduce fluctuations.

1. A *deontic statement* is a claim that describes what is obligatory, forbidden, or permitted, rather than what simply is the case. In philosophy of logic and ethics, such statements express norms or duties using concepts like obligation, permission, and prohibition (for example: “You may leave early,” “You must not steal”). In linguistics, these are often analyzed under “deontic modality,” which covers expressions of how the world ought to be according to laws, rules, or other norms.

This registry of deontic statements can be applied directly to resources (to govern access), or to a network or to parts of it, the registry can be associated with a portable agent profile (in the case of decentralized / p2p infrastructures) and dynamically aggregated in context.

Fluid p2p governance can be applied to free agent actions (ex. how you show up and interact in a collaborative environment), as well as to automated systems where actions are programmatically enforced (ex. governing access to resources based on reputation scores, credentials, etc.).

In the case of free agent action, the compiled result constitutes an *explicit* normative system which essentially communicates to all active affiliates what behavior is more or less acceptable

by all the other affiliates, and gives an idea about the probability to be rewarded or sanctioned by other affiliates, as individuals, which can aggregate into large scale effects (ex. being essentially isolated within the network). The rewards and the costs come from individual active affiliates / agents, through the [Reputation system](#) or through direct actions (which are also in turn regulated by the same emergent normative system). Therefore there is no equivalent of police and of a justice system, there are no centralized mechanisms to enforce and administer justice.

In the case of automated systems, actions are regulated by rules which are derived from the system and programmatically enforced, as in validation of requirements for the action to be allowed. See [governance as operator architecture](#).

See also the [video presentation of this idea](#), or [here](#).

Other links

[OVN Governance on OVN wiki](#)

[Sensorica Governance folder](#)

[Sensorica Governance page](#)

[Peer Governance](#)

[Optin Governance](#)

Background

Idea introduced by Tibi in April 2014.

Idea considered for implementation for [Nondominium](#) (built on REA + Valueflows + Holochain is a distributed multi-agent system for uncapturable resource flows).

Please help us develop this concept. If you do so, add your name as an author and maintain this section.

Description of *fluid* p2p governance

At every level of organization of the OVN (seen as a [fractal structure](#)) we have [norms](#) and rules that structure different kinds of processes.

If we model the OVN as a [living system](#), as advocated by Tibi, these processes can be mapped onto the system's architecture. [Yasir](#) has developed an [alternative view of the OVN model](#), which takes a business/economical approach and defines these processes in a different way. Others might propose something else in the future.

The *fluid* qualification of this system of governance refers to the fact that

- Deontic statements are continuously and openly proposed by affiliates, and
- Affiliates continuously and publicly adjust their level of adherence to them

Thus, norms become explicit in this system, they become rules, directly related to actions, in context. Some of these rules can be programmatically enforced or they can become embedded into the digital and physical infrastructure.

Ex. of programmatically enforced: smart contracts or action validation rules

Ex of embedded rules: do not access red tapes in a physical space or a UI feature that only allows norms-compatible actions.

This system can be easily implemented by publishing a list of deontic statements.

This registry can be created for a specific resource, a process or for a network. In this case, access to propose a deontic statement is governed by a [benefit redistribution algorithm](#). Deontic statements can be remixed.

Anytime there is a change in the registry / list, affiliates are called to reevaluate or reassess their adherence to every deontic statement (notification system).

One possibility is to limit the number of deontic statements an affiliate can adhere to, to diminish the effort that affiliates deploy to weigh them all. For example, if the total number of deontic statements one can adhere to is X, every affiliate is asked to provide a list of X among all the proposed deontic statements, in order of importance.

Another possibility is to ask affiliates to rate deontic statements from 0 to 10.

Adherence to a deontic statement can be public / transparent, i.e. all affiliates have access to the identity of those who have adhered to a given deontic statement, or not. Empirical data is needed to assess the pros and cons of each possibility.

Affiliates can revise their position any time.

All data is compiled and made public.

The list of deontic statements can be dynamically aggregated in context from individual lists, and be part of a portable agent profile (see agent profile development @ OuiShare Fest 2014).

This p2p normative system gains its stability statistically, when enough affiliates participate in it.

The major difference between this governance system and traditional ones is that in the case of a ***fluid p2p normative system norms are understood as information about what type of behavior network affiliates will tolerate, more or less***. Norms are not seen as universal laws, i.e. are not seen as hard barriers raised in front of individuals by a governance body (government) and administered by centralized punishment mechanisms (judicial system and police). Within the *Fluid p2p normative system* framework deontic statements are seen as prone

to be transgressed, which is a more realistic view. The system provides information about the possible rewards or costs for actions that respect or go against deontic statements. These rewards or costs come from every other individual, especially from those who have expressed a high sensitivity to the deontic statement in cause. Some deontic statements present less rewards or costs, in which case the system is more neutral or permissive.

Network affiliates naturally transgress deontic statements from time to time, which adds more flexibility to the system. Transgressing deontic statement is the mechanism of adaptation, which makes OVN's adaptable, a critical requirement to embrace complexity.

Any affiliate can publish an act of transgression of a deontic statement about any other affiliate. A public debate can follow and all the parties can argue to establish the facts. The costs or punishing action doesn't come from a centralized body that "administers justice", but rather from every other affiliate who is aware of the situation. Although a more drastic punishment mechanism can go through the [Reputation system](#) which might be directly connected to the [contribution accounting system](#) and directly affect the ability to extract tangible benefits from the network.

This *normative system* can be merged with the *values system* (as in moral/ethical values) into one. A statement of values, or the [ethos](#) of an organization can also take the form of a list that is rated by the community. This norms registry communicates norms which define positively rewarded behavior by the network affiliates. This list is a positive one, which can be complemented by a negative list sending information about behavior that will incur costs within the community.

Unexpected consequences of behavior are also possible, depending on every individual affiliate.

Advantages

Fluid p2p governance lowers the barrier to formalization, because it makes formalization a continuous, emergent process. Moreover, this new form of governance is more inclusive, because new affiliates can directly propose new deontic statements. The network becomes highly adaptable by allowing transgression of norms and rules, which are not seen as rigid, centralized and definitive.

Disadvantages

It might be volatile for communities with low membership numbers, but in these cases informal governance plays a more important stabilizing role.

The following potential disadvantages are not arguments for rigid bureaucratic governance, but for careful discussion of rule changes:

- Changes in rules can have unforeseen side effects. (Rules program behavior; changes can create bugs.)
- Inclusion of one organization inside another (as in networks of networks, or projects within projects, etc.) can create incompatible rules, either upon inclusion, or later when one or another layer of the onion changes their rules.
- Rule changes can be symptoms of power struggles. (This is not a disadvantage of fluid organizations per se, but of organizational politics, an ever-present fact of life. But it is not clear how different degrees of fluidity, or constraints on fluidity, will play into them.)

About governance in general

Please help complete this section

See [Wikipedia definition of Governance](#). The starting point is mainly driven by this Wikipedia article.

Governance refers to all processes of *governing*, whether **undertaken by** a government, market or network, whether **over** a family, tribe, formal or informal organization or territory and whether **through** laws, norms, power or language.

It relates to processes and decisions that seek to define actions, grant power and verify performance.

In general terms, governance occurs in three broad ways:

1. Through **networks** involving [public-private partnerships](#) (PPP) or with the collaboration of community organisations;
2. Through the use of **market mechanisms** whereby market principles of [competition](#) serve to allocate resources while operating under government regulation;
3. Through **top-down methods** that primarily involve governments and the state [bureaucracy](#).

"governance" is the concrete **activity that reproduces a formal or informal organization**. If the organization is a **formal one**, governance is primarily about what the relevant "*governing body*" does. If the organization is an **informal one**, such as a market, governance is primarily about the *rules and norms* that guide the relevant activity. Whether the organization is a geo-political entity (nation-state), a corporate entity (business entity), a socio-political entity (chiefdom, tribe, family, etc.), or an informal one, its governance is the way the rules and actions are produced, sustained, and regulated.

There are

- those who participate in governance (undertaken by)
 - using means (through)
- those who are subjects to governance (over)

Some definitions

norms(-social): [[see Wikipedia def](#)] a group-held belief about how members should behave in a given context. Sociologists describe norms as informal understandings that govern society's behaviors, while psychologists have adopted a more general definition, recognizing smaller group units, like a team or an office, may also endorse norms separate or in addition to cultural or societal expectations. The psychological definition emphasizes social norms' behavioral

component, stating norms have two dimensions: how much behavior is exhibited and how much the group approves of that behavior. Norms running counter to the behaviors of the overarching society or culture may be transmitted and maintained within small subgroups of society. Social norms have a way of maintaining order and organizing groups. See also [related to philosophy](#).

Trends

Please help complete this section

Michel Bauwens adheres to [Connective Hypothesis](#), i.e. *The key organizing pattern of our global culture is shifting from a top-down hierarchical pyramid to a distributed, self-organizing network* ([open reference](#)).

Theoretical approaches

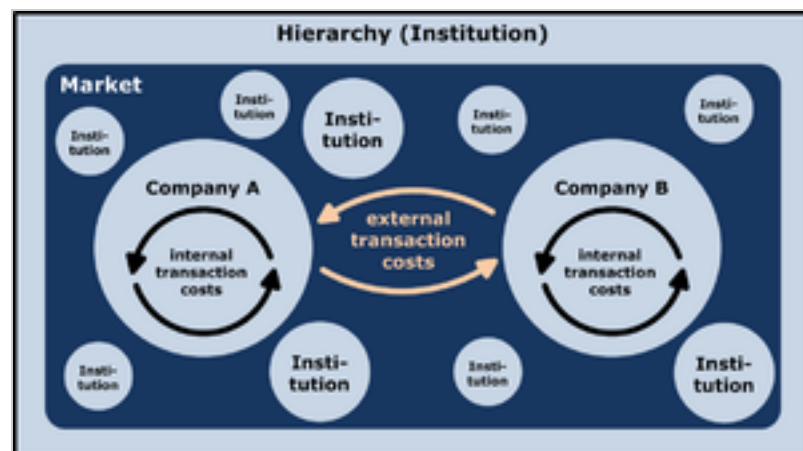
Transaction costs theoretical framework

Please help complete this section

The main concept is that the role of governance is to reduce transaction costs. These transactions can be economic or others.

See [Wikipedia page](#)

In [economics](#) and related disciplines, a **transaction cost** is a [cost](#) incurred in making an economic exchange (restated: the cost of participating in a market). According to Williamson, the determinants of transaction costs are frequency, [specificity](#), uncertainty, limited rationality, and opportunistic behavior.



The pool shows institutions and market as a possible form of organization to coordinate economic transactions. **When the external transaction costs are higher than the**

internal transaction costs, the company will grow. If the internal transaction costs are higher than the external transaction costs the company will be downsized by outsourcing, for example.

Add other theoretical approaches

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Peer Governance

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See [article on p2p Foundation](#), the following is a remix from there.

If *peer-to-peer* is the relational dynamic at play in distributed networks, and *peer production* the process whereby common use value is produced, then **peer governance refers to the way peer production is managed**.

[Vasilis Kostakis]...a new mode of governance and bottom-up mode of participative decision-making (...) a way that peer production, the process in which common value is produced, is managed. Peer governance's main characteristics are the

- **Equipotentiality**, i.e. in a peer project all the participants have an equal ability to contribute — no authority can pre-judge the ability to cooperate, although not all the participants have the same skills and abilities. Equipotential participants self-select to the section to which they want to contribute
- **Heterarchy** - projects do not operate in strict hierarchies of command and control, but rather in heterarchies (...) allows for the existence of multiple teams of participants working simultaneously in a variety of possibly opposing directions. As a form of community, heterarchies are not simply adhocracies, but ad hoc meritocracies which, however, are at risk of transforming themselves into more inflexible hierarchies;
- **Holoptism** - transparency - i.e. the ability for any part to know the whole, to have horizontal knowledge of what is going on, but also the vertical knowledge concerning the aims of the project . Unlike panoptism (i.e., the way knowledge is distributed in hierarchical projects where only the top of the pyramid has a full view)

The collaboration among members of a project is geographically dispersed, asynchronous and organized in networks. Moreover, the project is transparent and the dialogues among

the participants are recorded, and the information of the project is subjected to open review. There is a mechanism for institutional history, as well as the setting of a compelling foundational artifact around which the production and the participation will be organized is crucial. So, all these give rise to the formation of a community where the sense of project ownership is wide and decisions are taken by a hybrid political system, premised on meritocracy.

Three levels of governance

Project-level

- The right to fork
- The right to improve
- The right to combine (remix)
- The right to make something compatible with something else

Consequences: The product with the support of the *open source* community can enjoy assured relevance rather than planned obsolescence. Decayed products can be revived and updated. As long as there is sufficient community interest in a project, forking can allow for constant improvement in software functionality.

Community level

No one person or group has a “magical hold” over a project - fundamental and unconditional right to fork. Forking comes with costs, because it involves a split of the community and can hurt overall productivity. Resources are not split if the fork stays within the same network.

Hijacking occurs when a commercial vendor attempts to privatize a project’s source code/design. While *open source* companies can be bought, *open source* communities cannot. Forking provides the community that supports an *open source* project with a way to spin off their own version of the project in case of such an acquisition.

Given that forking ensures that any project can continue as long as there is sufficient community interest, forking has been described as the “invisible hand of sustainability” in *open source* software.

Commonly, forking occurs due to a community’s desire to create different functionality or focus the project in a new direction. Such forks are based on a difference in requirements or focus, rather than a distrust of the project leaders. When they address disparate community needs, different versions can prosper.

Forking cannot be prevented by business models or governance systems. The key lies in appropriate resource allocation and careful community management. Managers must strike a delicate balance between providing a driving force while appeasing and unifying the community.

Business-ecosystem level

Open source is a darwinian environment - only the fittest designs survive.

The right to fork means that competitors can copy each other; thus, competitive advantage cannot depend on the quality of the code alone. Not to forget issues regarding trademarks, brand value and recognition, as well as the existing developer and user base of the original product.

While the right to fork may seem to make for a harsh business environment, *open source* companies can and do thrive. Forking lays the building blocks for innovators to introduce new functionalities into the market, and the plethora of online forges have hundreds of thousands of programs/products available for forking and reuse in any new, creative way the user can imagine, allowing for the rapid adaptation to the needs of end users. Hence, the practice of forking allows for the development of a robust, responsive economic ecosystem that is able to meet an abundance of demands.

See also about [the problem of proliferation of open source designs](#).

To allow virtual communities to work properly, three important governance problems have to be dealt with:

- **Attention governance:** we must attract a considerable number of users, reduce the risk of premature convergence and enable sufficient exploration of the search space by countervailing the influences of informational pressure, social pressure and common knowledge;
- **Participation governance:** we must retain a critical mass of motivated diverse users, and provide them with support and incentives for evidence-based reasoning as well as the sharing of unique personal knowledge;
- **Community governance:** we must identify the rules and the organizational structures of the community in terms of the process and roles that enable attention governance and effective participation.

Some *open source* projects use benevolent dictatorships or different forms of dynamic hierarchies. See more on [p2pFoundation/Peer Governance](#).

Mapping *peer governance* onto Sensorica and the OVN model

Sensorica and the OVN structure are fully compatible with [peer governance](#), as presented on p2pFoudation, as shown below. *Fluid p2p governance* builds on top of (is an extension of) [peer governance](#).

Sensorica is an [OVN \(open value network\)](#), an instantiation of the [commons-based peer production](#) model. It is an informal organization with different kinds of legal structures (Custodian, [Exchange firm](#), etc.) set up at the periphery of the network.

Equipotentiality applies to Sensorica as **projects are open** (apart from a recent [April 2014], experimental initiative introduced by Ivan, which is essentially closed - new participants are invited), meaning that anyone can contribute in projects without permissions. If participation requires the use of material assets that are sensitive to manipulation or dangerous, access to these resources requires **credentials** provided by the community (see [Physical resource governance](#)). **Holoptism** applies to Sensorica as **products and processes are transparent**.

Meritocracy is embodied by the [Reputation system](#) and the [Role system](#).

At the beginning of 2014 Sensoricans were conscious about 3 structural levels:

- **technical (or project) level**, where activities are organized around research and development.
- **open enterprise level**, where activities are organized around distribution/commercialization of *open source* products
- **network level**, where activities are organized around sustainability of the entire economic ecosystem

A fourth level, [network of networks](#) has been proposed early (as soon as 2011), but it only started to materialize in early 2014. Theoretical development has been done under the [Open Alliance](#) banner, and later under the [NOICE](#) banner.

What is the play between *networks*, *market mechanisms* and *top-down methods* in OVNs?
Is this play level-dependent?