

# **Passionate Production and the Happiness Surplus**

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## ***Introduction***

### **Distributed networks**

In this essay, we will claim that contemporary society is evolving towards a dominance of distributed networks, with peer to peer based social relations, and that this will affect spiritual expression in fundamental ways.

To organize our thoughts, we will use a triarchical division of organizational forms, and a quaternary structure of human relations.

Human organizational formats can be laid out as network structures, outlining the relationships between the members of a community. A common network format is the hierarchical one, where relations and actions are initiated from the center. It is graphically represented by a star form, but also often represented as a pyramidal structure. A second very common network format is the decentralized network, where agents actions and relations are constrained by prior hubs. In decentralized networks power has devolved to different groups or entities, which have to find a balance together, and agents generally belong to the different decentralized groups, which represent their interests in some way. Finally, we have distributed networks, which are graphically represented by the same hub and spoke graphic, but contain a crucial differentiating characteristic. In distributed networks, though there are indeed hubs, i.e. nodes with a higher density of connections, these hubs remain voluntary. Think of the difference between taking a plane that is going to go to the destination via a hub airport, and you have no choice but stay in the place, whose flight path has been decided by someone else, and the much greater freedom that you have in a car, where you can still pass through that big city hub if you want, and many people do, but you can also go around it, the choice is yours.

Our first contention is that distributed networks are becoming a dominant format of human technological and organizational frameworks. Think about the internet and the web as point to point or end to end networks. Think about the emerging micro media practices such as wiki's and blogging, which allow many human agents to express

themselves by bypassing former decentralized mass media. Think of the team-based organized project groups increasingly being used in the worksphere. In a distributed network, the peers are free to connect and to act, and the organizational characteristics are emerging from the choices of the individuals.

The second framework we are using is the quaternary relational typology proposed by the anthropologist Alan Page Fiske, who describes this extensively in his landmark treatise, the *Structures of Social Life*.

According to Fiske, there are four main ways that humans can relate to each other, and this typology is valid across different cultures and epochs, as an underlying grammar. Cultures and civilizations will choose different combinations, but one format may be dominant.

Equality matching is the logic of the gift economy, which was the dominant format of the tribal era. According to this logic, the one that gives obtains prestige, and the one that receives feels an obligation to return the favour, in one way or another, so that the equality of the relationship could be maintained. Tribal cultures have elaborate ritualized and festive mechanisms, organized around the notion of reciprocity and symmetry, to allow this process to happen.

The second relational logic is Authority Ranking, and corresponds to the just as important human need to compare. This ranking may be the result of birth, of force or coercion, of nomination by a prior hierarchy, of credentials, even of merit. Authority Ranking is the main logic of the imperial and tributary hierarchies (such as the feudal system) which dominated human society before the advent of capitalism and parliamentary democracy. The strong protects and provides for the safety of the weak, who then pay a tribute in exchange. These societies were moved by the concept of a life debt, from the human to the divine order sustaining it, and from the mass of the living to the representatives of that divine order, who required tribute in order to extinguish that debt. The organizing principle is one of centrality (represented by kingship) and redistribution of the resources by a hierarchy.

The third format is Market Pricing, based on the neutral exchange of comparable values. This is the logic of the capitalist market system, and the impersonal relations on which its economic system is based.

Finally, there is the logic of Communal Shareholding, which is based on generalized or non-reciprocal exchange. In this form of human relations, members collectively and voluntarily contribute to a common resource, in exchange for the free usage of that resource. Examples are the medieval agricultural commons, the mutualities of the labour movement, and the theoretical notion of communism used by Marx (but of course not the hierarchical Authority Ranking practice of regimes abusively using this nomenclature). There is of course a relationship between the organizational triarchy and the quaternary relational grammar. The tribal era was based on small kinship based distributed networks, which had little relationship to each other; the imperial and feudal regimes use the

hierarchical formats, and capitalist societies used mostly decentralized political structures (the balance of power of democratic governance) and competition between firms. In contrast, the current social structures are increasingly moving towards manifold affinity based distributed networks, interconnected on a global scale.

## **P2P as a mode of production, governance, and property**

In the current historical configuration, our technological infrastructures are often taken the form of a distributed network, such as the point to point internet, or the generalized self-publishing features of the web which allow any internet user to produce and diffuse different type of content. Humanity has therefore a technology which has the fundamental effect of allowing the global coordination of small teams, which can now work on global projects based on affinity. Well-known expressions of this is the production of the alternative computer operating system Linux, and the universal Wikipedia encyclopedia. But the over a billion already connected people are literally engaged in tens of thousands of such collective projects, which are producing all kinds of social value. The alterglobalization movement is one expression of a movement born out of such networks, which can globally organize and mobilize without access to the decentralized mass media, using a wide variety of micro media resources.

In the business environment, we see the increasing importance of diffuse social innovation (innovation as an emerging byproduct of networked communities, rather than internally funded entrepreneurial R & D), and we see the emergence of asymmetric competition between for-benefit institutions based on communities of peer producers), which are successfully competing with traditional for profit companies. In addition, for profit companies are now themselves adapting and therefore using practices pioneered by such communities. This is not the right context to explain in detail such trends, so interested readers are referred to the Wiki Encyclopedia at P2PFoundation.Net . We are witnessing a similar process as when imperial slaveholders were freeing their slaves into serfs, or smart feudal lords where sponsoring merchants and entrepreneurs.

The peer to peer relational dynamic in distributed networks is creating three altogether new social processes, which respectively represent a third mode of production, governance, and property.

Peer production refers to the ability to produce in common (or to share individual creative expression), as communities of peer producers. Bear in mind that pricing, hierarchy and democracy are different means to allocate scarce resources and that since peer production operates in the immaterial sphere of content creation, characterized by marginal costs of reproduction, it needs neither pricing, nor hierarchy to allocate such resources. It is therefore a mode of production that is neither driven by the state planning (the now mostly defunct 'socialist' systems), nor by corporate hierarchies driven by profit. It can therefore properly be called a third mode of production.

Peer governance refers the techniques used to resolve conflicts and manage such projects, which are characterized by the absence of a prior hierarchy, as well as the absence of representational negotiations between different stakeholder groups. Since peer producers operate in small groups, but can globally scale and coordinate, they can mostly use direct decision-making by participants themselves. Since it is neither a classic hierarchy nor a representational process of negotiation between decentralized groups, it can also be properly called a third mode of governance.

Peer property consists of the legal and institutional formats that peer projects will use to socially reproduce themselves, and to defend against private (or public) appropriation. It uses collective choice systems (rankings, ratings, algorithms, etc..) that aim to prevent the crystallization of a ‘collective individual’ which would rise out of the community and dominate it. It uses two main types of common property against private appropriation. The sharing licenses such as the Creative Commons allow sovereign individuals to determine the degree of sharing of their creative material, while the commons licenses, such as the General Public License, carry the obligation of putting every change back in the common pool.

The circulation of the common is the process whereby ‘open and free’ raw material is used as input, for a participatory process of production and governance, which results in commons-oriented output, which in turn becomes open and free material for a next round. We see therefore the emergence of three powerful social movements, representing the interests of the emerging peer producers, and arising in practically all social domains. These new movements are organized around the promotion and demand of these three principles: 1) the open and free movements (Free Software Movement, Open Yoga, Open Reiki); 2) participatory movements (spiritually oriented peer circles), and 3) Commons oriented movements.

Peer to peer dynamics are not limited to the production of economic value, but can be used in every domain of human life, including the common production of spiritual knowledge.

Before we explain the latter, we need to review the general characteristics of the new mode, which overturns almost every premise of our industrial civilization. We will then be able to apply them to the pursuit of spiritual experience or knowledge, and see how it affects the organization of this pursuit.

Figure – P2P as a third modality

<b>Centralized</b>	<b>Decentralized</b>	<b>Distributed</b>
Hierarchy	Heterarchy	Autonomy

<b>Economics</b>	Centralized Planning	Market	Peer Production
<b>Politics</b>	Absolute monarchy	Separation of powers	Peer Governance
<b>Property</b>	Collective State	Private Exclusionary	Common Inclusionary

Figure – Evolution of hierarchy in the context of peer governance

	<b>Degrees of Moral Insight</b>	<b>Relationship between hierarchy, cooperation, autonomy</b>
<b>Premodern</b>	<b>no rights of political participation</b>	<b>Hierarchy defines, controls and constrains co-operation and autonomy</b>
<b>Early Modern</b>	<b>political participation through representation</b>	<b>Hierarchy empowers a measure of co-operation and autonomy in the political sphere only</b>
<b>Late Modern</b>	<b>political representation with varying degrees of wider participation</b>	<b>Hierarchy empowers a measure of co-operation and autonomy in the political sphere and in varying degrees in other spheres</b>
<b>P2P Era</b>	<b>equipotential rights of participation of everyone in every field</b>	<b>The sole role of hierarchy is in its spontaneous emergence in the initiation and continuous flowering of autonomy-in-co-operation in all spheres of human endeavor</b>

Source: John Heron

## **Characteristics of Peer Production in Social and Economic Life**

If one examines more in detail how peer production projects operate, one can see many reversals from not only the traditional mode of operating either a corporate or public institution, but also from NGO's emanating from civil society.

At the root of the different functioning of peer projects is the concept of equipotentiality, which was already defined by Jorge Ferrer. It means that human beings are not ranked according to one criteria, or as a totality, but that they are considered to consist of a multitude of skills and capabilities, none of which in itself being better than another. In the context of a peer project, potential participants are considered a too complex mix of skills and experiences to predict a priori who can perform a certain task. The solution is to slice up any project in the greatest possible array of modules, which can be carried out

separately, but nevertheless coordinated as one project. Participants can then self-select their tasks, without any a priori control of their credentials (this is called anti-credentialism), giving rise to this mode of distributed production which differs from the traditional division of labour. But given that there is no more a priori selection mechanism, how then to ensure the quality of the work, and carry out a selection for performance? The answer is to couple distributed control to this distributed production. This concept can be called communal validation, and differs from the still credentialist peer review process in scientific publishing for example. In addition, peer projects are characterized by holoptism, this is the total transparency of the project, and stands in contrast with the panoptism of hierarchical projects, i.e. the availability of information only to those deemed to have a need to know, and with only the top of the hierarchy having a full view of the project. In contrast, peers have access both vertically (the aims, the vision) and horizontally (who does and did what), from their particular angle. Every change in code in Linux, or every change of word in the Wikipedia, is available for review, and linked to the recognized author. This is a stunning number of reversals with the traditional way of performing tasks and organizing work, yet the system turns out to be more productive in terms of performance, more participative in governance, and more distributive in terms of property, than its rivals.

So there we have it: equipotentiality, anti-credentialism, self-selection, communal validation, and holoptism, as some of the key characteristics of the peer to peer mode of producing the common.

Unlike the industrial mode of production, which basically applies feudal-hierarchical modes to organization, and is mostly fit for producing economic value; and unlike the democratic mode of governance, which only applies to the political realm, we have here a mode of production and governance which can be applied to every human domain, and this is a radical advance in terms of participation. It is now possible to have self-governed communities, not just in economic and political projects, but also for example in the construction of collective spiritual knowledge.

## ***P2P and human evolution***

### **The evolution of cooperation: from neutrality to synergetics**

In this section, we want to look at the basic characteristics of the evolution of the mode of production<sup>i</sup>, and in particular, how this different forms tackle cooperation. It is perhaps useful to distinguish the general concept of coordination, which does not involve people cooperating together, but people working individually in a chain, being coordination through hierarchy or technology. With cooperation we mean: working together and the following is an attempted history of the modalities of such 'working together'.

The primary economy is based on reciprocity, which derives from common ancestry or lineage. It is based on families, clans, tribes and exchange mostly operates through gifts

which create further obligation. The division of labor is minimal and most often related to gender and age. The key question is 'to belong or not to belong'. Social groups are based and bounded by real or symbolic lineage. Wants are defined by the community. Leadership is in the hands of the lineage leadership.

The secondary economy arises together with power monopolies which engender coercion as a means to force cooperation. We enter the domain of class societies, and production is organized by the elite in power, which holds together through the symbolic power which transforms power into allegiance. Respect for power, in the form of tribute, taxes, etc.. is normative. Distribution depends on your place in this chain of symbolic power. Wants are defined by the symbolic power with symbolic markers monopolized. The key question is: 'to deserve power or to deserve subjection'. Social groups are bound by allegiance to power. Leadership is political and religious. Relationships, i.e. allegiance, is highly personal.

The tertiary economy arises with the entrepreneur and capitalism. It is based on 'equivalent', i.e. 'fair' exchange, which is normative. Power arises from relative productivity, relative monopoly over a needed good, and from the wage relationship which creates dependence. Social groups are loose, and wants are determined by advertising and mimetic desire. Cooperation is no longer correlated to belonging. Relationships are impersonal.

The quaternary economy, based on peer to peer processes, is based on 'ideological leaders' which can frame common goals and common belonging and is based on membership and contribution. Contributing to the best of one's ability to common goals is normative and the key question becomes: to follow an existing group or to create one's own, i.e. to convince or be convinced. Contributions to many groups can overlap. Power is dependent on the power to convince.

How do these different formats tackle cooperation?

The earliest economic systems were based on the principle of reciprocity, which was normative, but within the limits of kin groups such as the family, the clan or the tribe. The so-called gift economy, operated in a context of abundance (this counter-intuitive analysis is well explained by anthropologists such as Marshall Sahlins (Sahlins, 1972), who showed that tribal peoples only needed to work a few hours per day for their physical survival needs), created a circle of obligations. Cooperation was therefore not free, but an obligation associated to belonging. Moreover, the cooperation engendered by reciprocity was balanced by a competition for prestige, that took the form of giving, and very often, of the destruction of goods in gift-giving festivals. It seems therefore correct to say that the surplus was not re-invested, did not create permanent classes, and was not geared on enhancing productivity.

After the breakdown of the tribal gift economies, we can see that premodern imperial and feudal forms of human cooperation were based on the use of force (the transition from

egalitarian Neolithic villages to class-based Sumerian cities such as Akkad took place in the 4<sup>th</sup> millennium B.C.).

Using Edward Haskell's<sup>ii</sup> triune categorization of human cooperation (adversarial, neutral, synergetic, Haskell, 1972): It was a win-lose game, which inevitably led to the monopolization of power (either in land and military forces in precapitalist formations, or in the commercial sphere, as in capitalism). Tribute was exacted from losers in a battle (or freely offered by the weak seeking protection), labor and produce from slaves and serfs. In forced, adversarial cooperation, in this win-lose game, cooperative surplus is less than optimal, it is in fact negative:  $1 + 1$  is less than two. Productivity and motivation are relatively low. Nevertheless, the ability to commandeer and organize vast resources, and a further division of labor, increased the productivity of such societies, as compared with the tribal economies, and they could sustain a class society with a vast army of warriors and spiritual leaders. But the competitive game was not geared on increasing the productivity of existing resources, but on the control of a bigger scope of resources, i.e. land and people, through military conquest.

In capitalist society, neutral cooperation is introduced. In theory, free workers exchange their labor for a fair salary and producers and consumers exchange products for a 'fair' amount of money. In neutral cooperation, the result of the cooperation is average. Participants give just their money's worth. Neither participant in a neutral exchange gets better,  $1 + 1 = 2$ . We can interpret this negatively or positively. Negatively, capitalist theory is rarely matched in practice, where fair exchange is always predicated on monopolization and power relationships, not in the form of direct coercion (except in the phase of 'primitive accumulation' of capital, in the 16<sup>th</sup> and 17<sup>th</sup> century, where coerced power was still very prevalent). The situation is therefore much darker, more adversarial and less neutral, than the theory would suggest. Nevertheless, compared to the earlier feudal models, marked by constant warfare, the monopoly of violence exercised by the capitalist state model, limits internal armed conflicts, and adversarial relationships are relegated to the sphere of commerce, or 'externalized'.

The system has proven very productive, and coupled with the distributive nature of the welfare state which was imposed on it, has dramatically expanded living standards in certain areas of the world. Seen in the most positive light, a positive feedback loop may be created in which both partners feel they are winning, thus it can sometimes be seen as a win-win model. But what it cannot do, due to its inherent competitive nature, is transform itself into a win-win-win model (or in the formulation of Timothy Wilken of [synearth.net](http://synearth.net), a win-win-win-win model, with the biosphere as fourth partner). A capitalist relationship cannot freely care for the wider environment, only forced to care. (This is the rationale for regulation, as self-regulation generally proves even more unsatisfactory in terms of the general interest of the wider public and the survival of the biosphere)

Here peer to peer can be again defined as a clear evolutionary breakthrough. It is based on free cooperation. Parties to the process all get better from it: In Wilken's formulation:  $1 + 1$  gives a lot more than 2. By definition, peer to peer processes are mobilized for common projects that are of greater use value to the wider community (since monetized

exchange value falls away). True and authentic P2P therefore logically transforms into a win-win-win model, whereby not only the parties gain, but the wider community and social field as well. It is, in Edward Haskell's definition, a true synergetic cooperation. It is very important to see the 'energetic' effects of these different forms of cooperation, as I indicated above: 1) forced cooperation yields very low quality contributions; 2) the neutral cooperation format of the marketplace generates average quality contributions; 3) but freely given synergistic cooperation generates passion. Participants are automatically drawn to what they do best, at the moments at which they are most passionate and energetic about it. This is one of the fundamental reasons of the superior quality which is eventually, over time, created through open source projects.

Arthur Coulter, author of a book on synergetics (Coulter, 1976), adds a further twist explaining the superiority of P2P. He adds to the objective definition of Haskell, the subjective definition of 'rapport' based on the attitudes of the participants. Rapport is the state of a persons who are in full agreement, and is determined by synergy (S), empathy (E), and communication (C). Synergy refers to interactions that promote the goals and efforts of the participants; empathy to the mutual understanding of the goals; and communication to the effective interchange of the data. His "Principle of Equivalence" states that the flow of  $S + E + C$  are optimal when they have equivalent status to each other. If we distinguish Acting Superior, Acting Inferior on one axis and Acting Supportively and Acting with Hostility on another axis, then the optimal flow arises when one treats the other as 'somewhat superior' and with 'some support'. Thus an egalitarian-supportive attitude is congenial to the success of P2P.

Our supporting graph also mentions the importance of the motivational aspect. We can indeed distinguish between three kinds of motivation. The first one, typical for tributary modes of production, is 'external negative', or in other words: fear. Non-compliance results in violence. Slaves or serfs, living themselves on a subsistence economy, have no self-interest in higher production, and are compelled to give away their production in toto (for slaves), or partially (as serfs). There is little 'internal' motivation for work outside the presence of supervision. In capitalism, extrinsic positive motivation is used, or in other words, self-interest, if not greed. This increases personal productivity, because every effort is in theory compensated, but at the same time, it discourages extra productivity, since efforts without equivalent, create a win-lose game for those giving without receiving anything in return. Capitalist firms will not innovate for innovations sake, but only when driven by the competition, and will try to limit features of products to create artificial scarcities (i.e. planned obsolescence), or captive audiences. Innovation levels can and are generally high, because of the competitive element, but still sub-optimal. Finally, the best case scenario is intrinsic positive motivation, that which comes from within, and which can only be expressed in passionate production, which is really a synonym for peer production. Here, cooperators for the the intrinsic value of what they are producing. Innovation is continuous. Hence, asymmetric competition is emerging between for-profit firms working with conditional innovation, and new breeds of for-benefit institutions working within a paradigm of unlimited innovation.

Above we have focused on the means of cooperation, but another important aspect is the 'scope' of cooperation, or the amount or 'volume' of what can be shared, in both relative and absolute terms.

This is how Kim Veltman, a Dutch academic, echoed by evolutionary psychologist John Steward<sup>iii</sup> puts it:

*“Major advances in civilization typically entail a change in medium, which increases greatly the scope of what can be shared. Havelock noted that the shift from oral to written culture entailed a dramatic increase in the amount of knowledge shared and led to a re-organization of knowledge. McLuhan and Giesecke explored what happened when Gutenberg introduced print culture in Europe. The development of printing went hand in hand with the rise of early modern science. In the sixteenth century, the rise of vernacular printing helped spread new knowledge. From the mid-seventeenth century onwards this again increased as learned correspondence became the basis for a new category of learned journals (Journal des savants, Journal of the Royal Society, Göttinger Gelehrten Anzeiger etc.), whence expressions such as the "world of letters. The advent of Internet marks a radical increase in this trend towards sharing.”<sup>iv</sup>*

In a similar vein, a French philosopher, Jean-Louis Sagot-Duvaurox (Sagot-Duvaurox, 1995), who wrote the book, “Pour la Gratuite”, stresses that many spheres of life are not dominated by state or capital, that these are all based on free and equal exchange, and that the extension of these spheres is synonymous with civilization-building<sup>v</sup>. The very fact that the cooperation takes place in the sphere of free and non-monetary exchange of the Information Commons, is a sign of civilisational advance. By contrast, the 'monetarisation of everything' (commodification) that is a hallmark of cognitive capitalism, is a sign of de-civilization .

Recent developments concerning the participatory culture on the internet have stimulated the discipline of cooperation studies<sup>vi</sup>, which study how to promote human cooperation. For example, they are trying to determine the maximum number to obtain efficient non-hierarchically cooperating groups, beyond which centralization and hierarchy sets in.

## Figure – The Evolution of Cooperation

	<b>Cooperation &amp; Motivation Formats</b>	<b>Game Typology</b>	<b>Quality of Cooperation</b>
<i>Pre-modern (feudal, imperial)</i>	<b>Adversarial</b>	<b>Zero Sum: Win-Lose</b> <b><u>“Power Game”</u></b>	<b>Low,</b> <b>1+1&lt;2</b>
<i>Modern (market, industrial)</i>	<b>Extrinsic negative Neutral</b>	<b>Zero Sum: Win-win: Draw</b> <b><u>“Money Game”</u></b>	<b>Average,</b> <b>1+1=2</b>
<i>P2P era</i>	<b>Extrinsic positive Synergistic</b>	<b>The 4 wins</b> <b><u>“Wisdom Game”</u></b>	<b>High,</b> <b>1+1&gt;2</b>
	<b>Intrinsic positive</b>		

## **The evolution of Collective Intelligence**

Related to the above evolution of cooperation is the concept of collective intelligence, which concerns any knowledge of the collective, which goes beyond or transcends the knowledge of its parts<sup>vii</sup>. Collective Intelligence is the process whereby groups take charge of their challenges and future evolution, by using the resources of all its members in such a way that a new level emerges which has added qualities.

Jean-Francois Noubel in an online book-in-progress at <http://www.thetransitioner.org/ic> outlines three stages, arguing that we are in a transition to a fourth. The following is a synthesis of his work.

The first stage is the 'original collective intelligence', which can only exist in small groups, and historically has been typified by the human organization in the tribal era. Seven characteristics define this stage:

- 1) an emerging whole that goes beyond its parts
- 2) the existence of a 'holoptic' space, which allows the participants to access both horizontal knowledge, of what others are doing, and access to vertical knowledge,

- i.e. about the emerging totality; to have collective intelligence, all participants must have this access, from their particular angle
- 3) a social contract with explicit and implicit social rules about the forms of exchange, common purpose, etc..
  - 4) a polymorph architecture which allows for ever-changing configurations
  - 5) a shared 'linked object', which needs to be clear. This can be an object of attraction (the ball in sports), of repulsion (a common enemy), of a created object (future goal, artistic expression).
  - 6) the existence of a learning organization, where both individuals and the collective can learn from the experience of the parts
  - 7) a gift economy, in the sense that there is dynamic of giving in exchange for participating in the benefits of the commons

This original stage had two limits: the number of participants, and, the need for spatial proximity.

The second stage is the stage of pyramidal intelligence. As soon as a certain level of complexity is reached, it will transcend the limits in numbers as well as the spatial limits. Cooperation takes on hierarchical formats, with the following characteristics:

- 1) division of labor, in which the constituent parts become interchangeable; based on specialized access to information and panoptism, i.e. only a few have centralized access to the totality
- 2) authority organizes a asymmetrical information transfer, based on command and control
- 3) regulated access to scarce resources, usually through a monetary system
- 4) the existence of norms and standards, often privatized, that allow knowledge to be objectified

Pyramidal intelligence exists to obtain 'economies of scale' through repetitive processes that can add value to an undifferentiated mass of raw material. To see what kind of intelligence predominates in an organization, adds Noubel, look at how it produces. If it produces mass products, then, despite eventual token usage of peer to peer processes, it will essentially be based an hierarchy-based pyramidal intelligence.

The third form of collective intelligence is swarming. It exists where 'simple individuals' cooperate in a global project without holoptism, i.e. collective intelligence emerges from their simple interactions. The individual agents are not aware of the whole. This is the mode of organization of social insects, and of market-based societies. The problem is that in the insect world, individuals are expendable for the good of the system, while this is unacceptable in the human world because it negates the full richness of persons. This means that the contemporary enthusiasm for swarm intelligence has to be looked at with caution. It is not a peer to peer process, because its lacks the quality of holoptism, the ability of any part to know the whole. Instead, swarming is characterized by 'stigmergy', i.e. 'environmental mechanisms used to coordinate activities of independent actors'<sup>viii</sup>.

Thus, a fourth level of collective intelligence is emerging, which Noubel calls 'global collective intelligence'. Compared to original CI it has the following added characteristics:

- a 'sufficient' money as opposed to a scarce money<sup>ix</sup> (see The Transitioner.org/ic site for more details)
- open standards that maximize interoperability
- an information system to regulate symbolic exchange
- a permanent connection with cyberspace
- personal development to acquire the capabilities for such cooperation

In this new global collective intelligence, the original limits in numbers and spatial proximity are transcended by creating linkages through cyberspace. In this context, we can see why technological developments are an integral part of this evolution, as it enables this form of networking. What cyberspace does it to create the possibility of groups cooperating despite physical distance, and to coordinate these groups in a network<sup>x</sup>. An important aspect of the new cyberspace-enabled collective intelligence will be the increasingly symbiotic relationship between the countless human minds (one billion at present) and the huge networked intelligent machine we are creating<sup>xi</sup>. This noospheric networked intelligence is not an alien construction imposed on us, but something we are collectively creating through our sharing and participation.

Figure – Pyramidal vs. Collective Intelligence

	<b>Pyramidal Intelligence</b>	<b>Collective Intelligence</b>
Type of Collective	Enterprise, institution	Cyber-collective
Informational architecture	Panoptism	Holoptism
Dynamic	Top – down planning	Bottom-up 'emergence'
Power type & distribution	Centralized authority	Distributed 'leadership'
Mode of regulation	Static (printed rules)	Dynamic (*Galloway: 'Protocol')
Economic dynamic	Scarcity	Abundance
Transactional tool	Scarce Money	Sufficient Money
Capital	Material goods & knowledge	Persons

Jean-Francois Noubel in an online book-in-progress at <http://www.thetransitioner.org/ic>,  
email: [jf@thetransitioner.org](mailto:jf@thetransitioner.org)

## ***P2P and human happiness***

### **Overcoming barriers**

The above overview should convince readers that humanity has just invented a new set of rules that allows humanity to overcome the current predicament of an unsustainable society. One that is characterized by an inversion of common sense rules:

- 1) we organize material production through an economic system based on infinite growth, i.e. a false conception of pseudo-abundance. Infinite growth is simply impossible in a finite natural environment;
- 2) we create artificial scarcities in the immaterial sphere, where reproduction costs are marginal, creating a system that is biased against free human cooperation, i.e. based on a false system of pseudo-scarcity

The solution for a sustainable society is clear. We need to revert the basic rules towards a recognition of both natural limits in material production, i.e. recognizing true scarcity, and promote social innovation by stimulating open flows of social innovation.

What does this mean for existing institutional players, both the for-profit companies and the public institutions?

Indeed, we can conclude from the above, that next to our market economy, a new economy is arising which no longer exclusively is geared towards monetization. As the threshold of cooperation in globally coordinated networks of individuals and small groups goes lower and lower, the direct social production of all kinds of use value is enabled. Either through the sharing economy taking place over the (proprietary) Web 2.0 platforms, through the commons-oriented production of communities such as Linux and Wikipedia (usually surrounded by an ecology of for-profit enterprises), or through the crowdsourcing based participation of users within the value chains of brands and corporations. Essentially, peer producers are NOT primarily motivated by monetary returns, but by the social values of learning, recognition, exchange, gifting, etc ... Moreover, peer production generally, as it generally operates within the context of the immaterial economy, where information reproduction costs are marginal, it operates in a context of abundance. Abundance of brains, of creativity, of computer time etc... Markets and hierarchies (and even democracy) being means to manage scarce resources, they are less and less operable in peer production, which is based on 1) voluntary participation, not wage labour; 2) free collaboration, not hierarchical command; 3) direct use value put in a 'commons'.

At present, a relative minor part of this massive value creation is being transformed into monetizable exchange value, which is not only a problem for for-profit entities, but for peer producers themselves. Proprietary web platform owners can make money selling the attention of the communities to advertisers. Commons-oriented companies (say IBM with Linux), create scarcities around the commons. And crowdsourcers lower their cost of production while increasing the pool for their own innovation processes. But one can immediately see that the ratio from value creation (social, use value) to monetizable value capture is smallish, if not decreasing.

Referring to the earlier concept on asymmetric competition, this presents a difficulty for companies. They have to adopt open/free, participatory, and commons oriented strategies to compete, BUT at the same time, without any 'closed', 'scarce' aspects, there can be no value capture!

Innovation is becoming social, i.e. becoming an emerging property of the entire social field of networks, rather than an internal characteristic of for-profit institutions. The solely entrepreneurial vision of innovation is therefore superseded. Edge competencies replace core competencies as key competitive quality.

Society and the market players are increasingly benefiting from the positive externalities of social cooperation, but we lack an efficient return mechanism.

Peer production projects might be collectively sustainable (as long as they can replace individuals who leave with at least as many entrants), but the individuals involved in passionate and creative production still need to sustain themselves.

Hence a crisis of precarity, of which creative professionals are not just the victim, but it is also often times a matter of choice, with paid employment becoming a means for the more meaningful passionate value creation. But what is fun at 25 becomes problematic when one wants to sustain families.

What can be done?

For-profit entities can start supporting, either the commons or communities from which they are benefiting, or social innovation more generally, since it is the pool from which value is created. Companies need to more actively support social innovation.

Public authorities can also evolve towards a Partner State model, whereby they can enable and empower direct social production and social innovation. The evolving Transitional Labour Market policies which are evolving in Europe to take into account the mobility of contemporary workers, need to be enriched with an understanding that the periods of non-work, are potentially such as creative, necessary, and socially useful than the episodes of paid employment. Ultimately, we need forms of income, which are divorced from the need for production for the market.

The peer producers themselves can also directly organize their interface with the market, and they can do this by following principles of equity and transparency, which are directly in tune with the underlying values of peer production. Of this, the OS Alliance in Austria is a pioneering model.

## **Conclusion**

We have seen how peer production as a mode of production, and the peer to peer dynamic as a mode of being, surpasses the other modes in economic productivity, political participation, and distributive potential. Subjectively, it means more happiness as it allows intrinsic positive motivation to bloom. Intersubjectively, it represents more relational wealth, through its higher modes of synergistic cooperation and collective intelligence. First, we have to learn to recognize and accept that peer production is indeed emerging as a new logic for our economy and civilization; and second, if we indeed accept the argument that it is a 'better' mode, then we have to find out, how we can extend and protect it. What is at stake is nothing less than human happiness.

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i

Our evolutionary scheme here is inspired by Wim Nusselder, see <http://www.antenna.nl/wim.nusselder/schrijfsels/economics.htm>

ii

- Resources on Edward Haskell:

Haskell's ideas are very well summarized by Timothy Wilken, see especially chapter five, in <http://www.synearth.net/UCS2-Science-Order.pdf> ; <http://www.synearth.net/Order/UCS2-Science-Order.html>

The full text of the book of Haskell's book Full Circle, can be read at [http://www.kheper.net/topics/Unified\\_Science/index.html](http://www.kheper.net/topics/Unified_Science/index.html) ; other relevant texts are:

The evolution of humanity, at <http://www.synearth.net/Haskell/FC/FCCh4.htm>

The basics explained, at <http://futurepositive.synearth.net/2002/07/02>

iii

- The evolution of cooperation:

“Evolution's Arrow also argues that evolution itself has evolved. Evolution has progressively improved the ability of evolutionary mechanisms to discover the best adaptations. And it has discovered new and better mechanisms. The book looks at the evolution of pre-genetic, genetic, cultural, and supra-individual evolutionary mechanisms. And it shows that the genetic mechanism is not entirely blind and random. Evolution's Arrow goes on to use an understanding of the direction of evolution and of the mechanisms that drive it to identify the next great steps in the evolution of life on earth - the steps that humanity must take if we are to continue to be successful in evolutionary terms. It shows how we must change our societies to increase their scale and evolvability, and how we must change ourselves psychologically to become self-evolving organisms - organisms that are able to adapt in whatever ways are necessary for future evolutionary success, unfettered by their biological or social past. Two critical steps will be the emergence of a highly evolvable, unified and cooperative planetary organisation that is able to adapt as a coherent whole, and the emergence of evolutionary warriors - individuals who are conscious of the direction of evolution, and who use their evolutionary consciousness to promote and enhance the evolutionary success of humanity.”

([http://pespmc1.vub.ac.be/Papers/Review\\_Complexity.pdf](http://pespmc1.vub.ac.be/Papers/Review_Complexity.pdf))

iv

See <http://erste.oekonux-konferenz.de/dokumentation/texte/veltman.html>

v

- Free sharing as an aspect of civilisation-building: see at <http://www.peripheries.net/g-sagot1.htm>

vi

- Cooperation Studies and Cooperative Intelligence

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Cooperation studies are well monitored by Howard Rheingold and a whole team of collaborators at the Smartmobs.com weblog.

Here's a summary of cooperation theories maintained by Paul Pivcevic of the <http://www.cooperativeintelligence.org/> website.

vii

- Definitions: Collective intelligence, co-intelligence

"**Tom Atlee** is founder of The Co-Intelligence Institute coined the term co-intelligence, which he usually defines as meaning what intelligence looks like when we take seriously the wholeness, co-creativity and interconnectedness of life. Collective intelligence is only one manifestation of co-intelligence. Others include multi-modal intelligence, collaborative intelligence, wisdom, resonant intelligence and universal intelligence." See <http://www.co-intelligence.org>

viii

- Stigmergy defined

"**Stigmergy** is a term used in biology (from the work of french biologist Pierre-Paul Grasse) to describe environmental mechanisms for coordinating the work of independent actors (for example, ants use pheromones to create trails and people use weblog links to establish information paths, for others to follow). The term is derived from the greek words *stigma* ("sign") and *ergon* ("to act"). Stigmergy can be used as a mechanism to understand underlying patterns in swarming activity."  
(Global Guerilla weblog)

ix

- Towards 'sufficient' and 'repersonalised' money systems, quote by Keith Hart

Clearly, a radical monetary reform is going to be at the heart of the problematic for creating a P2P-based society. Instead of the present situation where only 10% of the financial supply reaches those who need it, with the larger parts of the world excluded from its circuits, we need a monetary format that empowers bottom-up development. Today, we have the paradoxical situation of a financial system which is overabundant for those who don't need it, and scarce in those parts of the world really needing it. Reading **Money in an Unequal World**. New York and London: Texere, 2001 by Keith Hart is a good place to start explorations in monetary reform.

"Money is the problem, but it is also the solution. We have to find ways of organising markets as equal exchange and that means detaching the forms of money from the capitalist institutions which currently define them. I believe that, instead of taking money to be something scarce beyond our control, we could begin to make it ourselves as a means of accounting for those exchanges whose outcomes we wish to calculate. Money would then become multiple sources of personal credit, building on the technology which has already given us plastic cards. The key to repersonalisation of the economy is cheap information. Money was previously impersonal because objects exchanged at distance needed to be detached from the parties involved. Now growing amounts of information can be attached to transactions involving people anywhere in the world. This provides the opportunity for us to make circuits of exchange employing money forms which reflect our individuality, so that money may be more meaningful to each of us as a means of participating in the multiple associations we choose to enter. All of this stands in stark contrast to state-made money in the 20<sup>th</sup> century, where citizens belonged to one national economy whose currency was monopolised by a political class claiming the authority of representation to manage its volume, price and allocation."

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(<http://www.thememorybank.co.uk/> )

- The Open Money project

“Open money is a means of exchange freely available to all. Any community, any association - indeed, any body - can have their own money. Open money is synonymous with LETS - an invitation to come inside and play, as in open door and open house; collaboration as in open hand and open for all; attitude as in open mind. The purpose of the open money project is to bring together and organize the people and resources necessary for the development and propagation of open money everywhere. The open money project is a work in progress - a continuation of almost 20 years of [LETSystem](#) development all over the world, two [community way](#) projects in Canada using smart cards, the Japan open money project, and, most recently, a community currencies server program, [cybercredits](#). The intent is to develop an open money kernel - a core set of text files, administration tools and software systems that are sufficiently coherent and clear that further elaboration of the set derives from the core concepts themselves, rather than from the particular agendas of the originating writers and contributors. The open money kernel is to have a life of its own. ’

(<http://www.openmoney.org/>)

- Some other complementary currency initiatives

LIBRA project (Milan, Italy), <http://www.aequilibra.it/>; Banca Etica (Padova, Italy), <http://www.bancaetica.com/>; Chiemgauer (Bavaria, Germany), <http://www.chiemgauer.info/> ; WIR Bank (Switzerland), <http://www.wir.ch/>

- Learning about monetary reform:

Dr. Margrit Kennedy at <http://www.margritkennedy.de/> . one of the leading figures in this field as she published "Interest and Inflation-free Money"(the whole text is available in English at: <http://userpage.fu-berlin.de/~roehrigw/kennedy/english/>)

A page devoted to ‘alternative economy’ topics, also listing the alternative currencies in Japan, at <http://www3.plala.or.jp/mig/econ-uk.html>, and on Argentina’s RGT, the world’s biggest non-money barter network

x

A listing of technologically-supported collaborative methodologies can be found at <http://www.thataway.org/resources/practice/hightech/intro.html>

xi

The human-machine global network symbiosis is researched by this project on Symbiotic Intelligence, at <http://ishi.lanl.gov/symintel.html>