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Par Cum *Pari*: Notes on the Horizontality of Peer-to-Peer Relationships in the Context of the Verticality of a Hierarchy of Values

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Definition and Description of the Peer-to-Peer Social Dynamic

We define peer-to-peer as the relational dynamic in distributed networks. Distributed networks are networks where individuals do not need permission to undertake actions and engage in relationships, because they are in control of their own productive resources, and therefore can undertake the production of common value through the self-aggregation of resources.

In our contemporary context, this means access to our own creative capacities, computing power and access to the communication networks, so that production of common 'immaterial' value can occur.

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As distributed networks, mostly in hybrid formats but nevertheless allowing for an unprecedented level of self-aggregation, are becoming the mainstay of our technical and social organization, our societal organization is in for an unprecedented overhaul. It is important to note that this model is now moving to more deeply influence all forms of material production as well, through the development of much cheaper distributed and networked machines that are connected to open design communities. Makerspaces and fablabs are prototyping these new industrial forms. Early production networks based on shared designs, such as Arduino or Atelier Paysan, have formed, and a vision of cosmo-local production, where 'everything that is light is global, and everything that is heavy is local' has been formulated elsewhere by this and other authors.

Some important characteristics are the following:

> As long as the self-aggregation occurs on the level of immaterial resources (i.e. resources that are copy-able and capable of being distributed on a massive scale at marginal cost), the creation of social value can occur outside the institutional field of both corporations and the state, even if for scaling purposes, the resources controlled by the two latter fields may be necessary for further transformations to occur.

Amongst the more important new social dynamics associated with these developments are:

– Peer production, as the generalized ability to create social value through self-aggregation
– Peer governance, as the generalized ability to manage this self-aggregation outside of market pricing, hierarchical mobilization of resources, or democratic negotiation (all three needed as potential mechanisms allocating scarce resources, but not in a sphere of self-aggregating abundant resources)
– Peer property, as the ability to protect the common value creation from private appropriation. This takes the form of new non-exclusionary, shared property formats, such as the Creative Commons and General Public License, which differ both from public/state/collective and from private exclusionary property.

Peer production has created an emerging model of production which has created three interdependent dynamics. This 'commons-centric economy' consists of:

1. productive communities engaged in the self-managed production of common artefacts;
2. aided by for-benefit institutions who manage the infrastructure of cooperation without a for-profit motivation; and
3. surrounded by an ecology of businesses creating 'scarce' and marketable added value around that commons.

A key question here is whether the relation between the commons and the market forms is 'extractive', that is, are the entrepreneurial entities unduly capturing the value of this human cooperation without an adequate return; or 'generative', that is, are these entities creating just and ecologically sustainable livelihoods. A recent report by the P2P Foundation, "Value in the Commons Economy" (2017), outlines some of the techniques used by 'value sovereign' productive communities, to avoid such types of capture. Value sovereignty refers to the capacity of these communities to independently evaluate and reward all contributions, independently of the market value assigned to it.

The Ethical Evaluation of P2P Dynamics: P2P is a Social Process Based on Equipotentiality

What are the ethical and inter-subjective implications of this emergence?

In this section, we would like to attempt an explanation on why peer production is such a strong candidate for a new social model.

What transpires from Pierre Levy's examination of both social control and power over nature is the increasing ability to start from the building blocks of matter, life and mind themselves. The broad movement is from a limited ability to influence nature and sociality as it is given 'externally', in a very broad 'holistic' way (premodernity), to the ability to influence

collective 'molar' building blocks of such systems, that is, a mass or group orientation (modernity), and finally to the level of individuality (postmodernity).

This is true for the mastery of organic life processes through knowledge of genetics dealing directly at the DNA level, for the control of inorganic matter through material sciences involving an ability to work at the molecular and atomic level with nanotechnology and for the intellect and cultural/social sphere, which is moving from institutional/organizational intervention to the self-organized peer-to-peer level. A negative example is the level of deep behavioural and neural control now exercised by platforms like Facebook, which can intervene in our choices at this micro-level. Cambridge Analytica, a consulting company that was instrumental in the Brexit and Trump Insurgency wins, is an example of political capture. But again, the same techniques can be used for emancipatory purposes and human autonomy, depending on context and so forth.

In a positive and emancipatory context, the evolution of peer-to-peer dynamics can be seen to be in line with a broad evolution towards direct intervention through self-organized systems. Practices at this level of complexity, which tend to be more efficient and productive than previous models, create more surplus value and innovation in the societies practising them. The surplus of peer production tends to occur at this stage at the level of immaterial, cultural, intellectual, relational and spiritual wealth, in a way that can complement but also replace current logics of material accumulation.

It is here that I would like to introduce equipotentiality as the metaphysical basis of peer-to-peer relationships (i.e. the underlying view of the place of the human in the universe), as it is even more fine-grained than the individuality and individualism that was developed through modernity.

We could say that just as modernity developed all the implications of individuality, peer-to-peer processes develop all the implications and potentialities of relationality. Indeed, equipotentiality means the capacity of social systems to directly access the various skills of individuals, which can be aggregated selectively by the individuals themselves. Through equipotentiality, individuals allocate partial skills and effort to common

value creation, finding identity and recognition through their engagement in such common projects. It's an object-oriented sociality, organized around transcendent objects and goals, that structure the peer-to-peer social system and the individuals within it.

This means that everyone can potentially cooperate in a project, that no authority can prejudge the ability to cooperate, but that the quality of cooperation is then judged by the community of peers, that is, through communal validation. In other words, distributed production is matched with distributed control mechanisms, through collective choice systems that avoid the emergence of 'representative' collective individuals, which would crystallize to take control of the social process. In equipotential projects, participants self-select themselves to the module to which they feel able to contribute.

In his landmark book on *The Wealth of Networks*, Yochai Benkler (2006) explains how open source communities coordinate themselves. Leadbeater (2007) paraphrases his argument:

> Open source communities resolve the difficulties of assessing creativity and quality by decentralising decision making down to individuals and small groups. They decide what to work on, depending on what needs to be done and what their skills are. There is little sense in working on a project that is already well staffed and where your contribution will add very little. It is very difficult to pull the wool over the eyes of your peers: they will soon spot if the contributions that you make do not really come up to scratch. That allows people to work on just their bit of the puzzle. Good central design rules allow the whole thing to add together. Work in open source communities gets done when creative people self-distribute themselves to different tasks, they submit their work to open peer review to maintain quality and the product has a modular design so that individual contributions can be clicked together easily. (Chap. 8, part 3)

Equipotentiality is an important concept in this context, and is a new view of humanity as a complementary contributor in the co-construction of common projects.

The ethical implications of equipotentiality are well drawn out by Jorge N. Ferrer, Ramon V. Albareda and Marina T. Romero (2011):

An integrative and embodied spirituality would effectively undermine the current model of human relations based on comparison, which easily leads to competition, rivalry, envy, jealousy, conflict, and hatred. When individuals develop in harmony with their most genuine vital potentials, human relationships characterized by mutual exchange and enrichment would naturally emerge because people would not need to project their own needs and lacks onto others. More specifically, the turning off of the comparing mind would dismantle the prevalent hierarchical mode of social interaction—paradoxically so extended in spiritual circles—in which people automatically look upon others as being either superior or inferior, as a whole or in some privileged respect. This model—which ultimately leads to inauthentic and unfulfilling relationships, not to mention hubris and spiritual narcissism—would naturally pave the way for an I-Thou mode of encounter in which people would experience others as equals in the sense of their being both superior and inferior to themselves in varying skills and areas of endeavor (intellectually, emotionally, artistically, mechanically, interpersonally, and so forth), but with none of those skills being absolutely higher or better than others. It is important to experience human equality from this perspective to avoid trivializing our encounter with others as being merely equal. It also would bring a renewed sense of significance and excitement to our interactions because we would be genuinely open to the fact that not only can everybody learn something important from us, but we can learn from them as well. In sum, an integral development of the person would lead to a 'horizontalization of love'. We would see others not as rivals or competitors but as unique embodiments of the Mystery, in both its immanent and transcendent dimension, who could offer us something that no one else could offer and to whom we could give something that no one else could give. (p. 5)

An additional insight comes from John Heron ([2006](#)) who writes about the co-evolution of hierarchy and participation:

There seem to be at least four degrees of cultural development, rooted in degrees of moral insight:

1. autocratic cultures which define rights in a limited and oppressive way and where there are no rights of political participation;

2. narrow democratic cultures which practice political participation through representation, but have no or very limited participation of people in decision-making in all other realms, such as research, religion, education, industry etc.;
3. wider democratic cultures which practice both political participation and varying degree of wider kinds of participation;
4. commons p2p cultures in a libertarian and abundance-oriented global network with equipotential rights of participation of everyone in every field of human endeavor.

Heron adds that

These four degrees could be stated in terms of the relations between hierarchy, cooperation and autonomy.

1. Hierarchy defines, controls and constrains co-operation and autonomy;
2. Hierarchy empowers a measure of co-operation and autonomy in the political sphere only;
3. Hierarchy empowers a measure of co-operation and autonomy in the political sphere and in varying degrees in other spheres;
4. 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.

The crucial insight is this: until the advent of peer production, individual autonomy in cooperation was limited to small groups, which were unable to scale because the transactional cost of organizing commonality required hierarchical structures. However, peer production is the ability to globally coordinate a multitude of cooperating individuals and small groups, and in such a way that small group dynamics, that is, peer governance as the ability to manage such common projects, remain at the core of the process of value creation, and no longer at the periphery. There may be new forms of hierarchy (of merit, engagement and entanglement within the networks), but they cannot be equated with command and control mechanisms. This means that productive processes can now be autonomous and cooperative, which is a potentially important social

advance. Until today, democracy and participation were limited to choosing representatives in the political field, while production itself remained a hierarchical and non-participatory process.

We should further note that peer production is not limited to the business or economic field, but can be applied to every form of value creation. Autonomy-in-cooperation becomes scalable throughout the social field.

There is, of course, much to say about peer governance itself, where power becomes interdependent, since it is based on voluntary contributions and not on wage-dependency, and such power can only be consensual. However, power can and does hide in the invisible architectures of the design of such social systems, requiring a literacy of cooperation from the cooperating communities, who need to become adept at value-sensitive design, so that diversity and autonomy are stimulated.

As John Heron (2006) says in concluding his examination, "the sole role of hierarchy is in the spontaneous emergence in the initiation and continuous flowering of autonomy-in-cooperation, in all spheres of human endeavour".

Passionate Production as a Superior Modality of Value Creation

In this section, we offer a series of arguments of why peer production is potentially a more efficient form of value creation.

Let's start with motivation. Precapitalist models of the division of labour, such as slavery and feudalism, were based on coercive cooperation, whereby the real producers of wealth had to respectively give away the totality (slaves) or a part (serfs) of their production. While the motivation of serfs would be obviously superior to that of slaves, neither group would be motivated to produce beyond subsistence without coercive pressure, and while slavery-based societies are said to be characterized for their lack of technical innovation regarding human work, medieval feudal societies fare better, but are still characterized by very slow productivity growth compared to capitalism, with the majority of the population not moving substantially beyond subsistence levels. Both systems are of course determined by 'extrinsic negative' motivation, that is, ultimately fear, possibly the lowest possible form of human motivation in terms of efficiency.

One could argue that the great social advance of the capitalist mode is to change the extrinsic negative motivation into a positive one, that is, mutual self-interest. Ideally, all parties exchange equivalent value with each other. The result has been an unprecedented rise in productivity and efficiency, but with a high social and natural cost. Indeed, while coercive modes can be characterized (in game theory format) as win–lose dynamics, capitalism's win–win is still very limited (and, of course, in reality, that ideal is rarely attained): parties in a market exchange cannot and do not take into account any externalities, whether it be social or natural.

This is why a for-profit enterprise can only innovative relatively, that is, strive for relative quality, while a for-benefit community cum institution can and does strive for absolute quality. What is remarkable for example is to note the absence of any 'planned obsolescence'-based design in open design projects.

Peer production is therefore characterized by the filtering out of both negative and positive extrinsic motivation, leaving only intrinsic positive motivation as the sole motivator. In other words, this system of voluntary contributions thrives on human passion and the search for creative expression, social recognition and the need for meaning in the process of common value creation.

Peer production is therefore highly efficient, based on a quest for absolute quality, and wherever this mode becomes economically feasible because of the drop-in coordination and transaction costs, it will generally tend to drown out competing modes.

However, in the transition period where peer production is in a seed form, it will give rise to many different hybrid formats, involving cooperation with both state and private forms of production and governance.

The Non-Reciprocal Logic of Peer Production

Historically, we have seen a succession of a tribal economy, primarily based on symmetrical reciprocal gift-giving, tributary economies based on a-symmetrical hierarchical allocation of goods according to social rank, and finally the dominance of market pricing mechanisms according to a logic of equivalent exchange.

What kind of social logic is behind peer-to-peer? As we will see, it is definitely not a gift econonomy based on direct reciprocity!

We are using the definitions of anthropologist Alan Page Fiske (1993), who uses a fourfold typology of possible inter-subjective relationships based on his research in his book, *The Structures of Social Life*, which he says are a valid 'relational grammar', for all cultures and temporalities.

According to Fiske (n.d.), this would give the following:

Dominant in the tribal gift economy:

In Equality Matching (EM) relationships, people keep track of the balance or difference among participants and know what would be required to restore balance. Common manifestations are turn-taking, one-person one-vote elections, equal share distributions.

Dominant in the tributary economies:

In Authority Ranking (AR), people have asymmetric positions in a linear hierarchy in which subordinates defer, respect and (perhaps) obey, while superiors take precedence and take pastoral responsibility for subordinates. Examples are military hierarchies (AR in decisions, control and many other matters), ancestor worship (AR in offerings of filial piety and expectations of protection and enforcement of norms), monotheistic religious moralities (AR for the definition of right and wrong by commandments or will of God).

Dominant in capitalist economies:

Market Pricing relationships are oriented to socially meaningful ratios or rates such as prices, wages, interest, rents, tithes or cost–benefit analyses. Money need not be the medium, and Market Pricing relation-ships need not be selfish, competitive, maximizing or materialistic—any of the four models may exhibit any of these features. Market Pricing relationships are not necessarily individualistic.

However, it is clear that the peer-to peer-dynamic is not covered by any of the first three definitions. As a reminder, peer-to-peer is based on voluntary contributions on the input side, but not to another individual, but rather to the whole collective project, and by universal availability on the output side. One can take without giving, and one can give without

receiving anything back, though one has access, as have the non-givers, to the totality of the commons that has been created through this self-aggregation of effort.

Clearly, we are talking here about non-reciprocal, 'generalized' exchange, which do not fit the previous models. We therefore turn to Fiske's fourth model, which does give a correct definition of the inter-subjective logic of peer-to-peer.

He calls it 'Communal Sharing', and it is dominant in the emerging peer-to-peer modes:

> Communal Sharing (CS) is a relationship in which people treat some dyad or group as equivalent and undifferentiated with respect to the social domain in question. Examples are people using a commons (CS with respect to utilization of the particular resource), people intensely in love (CS with respect to their social selves), people who 'ask not for whom the bell tolls, for it tolls for thee' (CS with respect to shared suffering and common well-being), or people who kill any member of an enemy group indiscriminately in retaliation for an attack (CS with respect to collective responsibility).

We would therefore like to present an alternative account of social evolution, formulated by the Dutch author Wim Nusselder (2003), which beautifully summarizes the point we are trying to make:

> 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 and so forth 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, that is, allegiance, is highly personal.

The tertiary economy arises with the entrepreneur and capitalism. It is based on 'equivalent', that is, 'fair' exchange, which is normative. Power arises from relative productivity, relative monopoly over a needed good and 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, that is, to convince or be convinced. Contributions to many groups can overlap. Power is dependent on the power to convince.

From all of these that have been mentioned, we are tempted to formulate a temporary conclusion: that peer production based on the inter-subjective logic of 'communal shareholding', that is, characterized by non-reciprocal generalized exchange between the individual and the collective, now a seed form present in a transitional economic regime, may well be the emerging logic of social and economic organization of a new political economy and civilization yet to arise.

What we arrived at as a preliminary conclusion is that peer-to-peer modes are highly efficient, and are based on advanced modes of motivation and cooperation, and on an ethic of non-reciprocal giving and sharing.

Peer-to-Peer in the Light of the Social Doctrine of the Catholic Church

An interesting point of comparison is to compare our findings regarding peer production, with the social doctrine of the Catholic Church, as it similarly puts civil society at the centre and sees the state and market forms as servants of civil society.

Let us briefly review the four pillars of the social doctrine, and make a preliminary examination of how the emergence of peer-to-peer modes may affect it. The four pillars are the recognition of personhood, the centrality of the common good as ideal standard for human behaviour, subsidiarity, as the necessity to exercise power at the lowest most appropriate level, and solidarity, stressing the interdependency of human action.

- Regarding personhood, there is no doubt that peer-to-peer modes respect personhood, and represent a 'relational augmentation' of individuality. Equipotentiality as the ethical and metaphysical principle underlying peer-to-peer does not endanger any concept of personhood. We would argue that it represents a deepening of personhood and the possibilities of self-realization and autonomy-in-cooperation.
- Regarding the common good, the peer production of common value is more respectful of the common good than market relations, which are genetically unable to take into account the necessary social externalities. Constitutively, peer-to-peer includes the convergence of individual and collective interest, so that individual effort strengthens the commons, which is universally available to all who need it. Some would suggest that forms of giving and sharing that do not require reciprocity would be ethically inferior to reciprocal giving, but I would suggest that the kind of giving and receiving that occurs in peer-to-peer is related to the common and represents an extension of the circle of care. But rather than rely on altruism, it relies on designing social systems so that individual and collective interests are aligned. Peer-to-peer dynamics do create strong personalized relationships amongst the core producers, but also allow for impersonal collaboration, while crucially enabling cooperation amongst strangers.
- Peer-to-peer modes strengthen subsidiarity, in the sense that civil society organizations, in the new more 'informal' form that it takes in the P2P context, increase their ability to create common value and decrease the necessity for both the market and the state to intervene. Both market and state remain complementary, and can play a substantial role in enabling and empowering the direct production of social value, through open business models that include benefit-sharing practices, and partner state policies which strengthen the infrastructure of social

cooperation. However, we would argue that peer production truly 'realizes' subsidiarity, as it enables all types of value creation which were hitherto monopolized by private entities and subject to commodification and market relations.

• The challenge of peer-to-peer lies in the fourth pillar of the social doctrine: solidarity. It's an issue which peer production cannot solve on its own.

Peer-to-peer modes, because they rely on voluntary contributions, are sustainable collectively, but not on the individual level. Projects can sustain themselves if they maintain the level of volunteering, but no individual can permanently maintain him or herself outside of the monetary system. P2P projects are essentially 'agnostic' as to the individual situation of the volunteers, as they rely on the surplus and abundance that they are able to mobilize through self-aggregation. It has no answer to the individual who cannot mobilize such resources (though it does create vast wealth in a commons mode, which is universally available), and it has no mechanisms to monetarily sustain the volunteers, beyond the creation of satellite economies around the commons.

This poses not just a problem for the individual, but for society, as it creates a 'crisis of value' for present market society. Indeed, as increasing numbers of individuals choose passionate production and the infrastructure for peer production continues to improve, the ability to directly create use value increases exponentially, but the ability of the market to monetize such social utility only rises linearly, creating a huge gap between the desire and potential for peer production, and the ability of individuals to sustain such choices. This is, in our opinion, one of the constitutive causes of precarity and precariousness amongst the new generations.

Society therefore needs a new mechanism of solidarity, but which cannot be a monetization based on profit-sharing, as this would simply 'crowd out' the willingness for non-reciprocal contributions. The solution then would seem to be very similar to the one familiar to the Catholic Church in the Middle Ages, when nearly one-quarter of the male population was supported in their spiritual production, through gifts to the Church. In contemporary terms, this could mean an unconditional form of support in the form of a basic income.

Such a basic income should not be seen as welfare, but as recognition by society and the market that social innovation has become the primary vehicle for value creation, and it would, in a transitory period, allow citizens to move more easily in and out of the market sphere, and manage their careers over the longer term, so that periods of peer production could be more easily inserted. Europe is already moving in that direction, through transitional labour market policies being developed in various countries, but it is still based on the premise that transitional periods are less productive than formal labour, while the new emerging realities point to the opposite, namely, that value creation is highest through peer production, and not in the market sphere, which is becoming increasingly derivate *vis-à-vis* social innovation in the P2P sphere.

Before such basic income becomes a reality, open business models based on benefit sharing and partner state policies should be supported.

In the longer term, we have to ask the question about moving from a political economy where peer-to-peer is a subset of market relations in a context of infinite-growth capitalism, to a political economy where the market for scarce goods is a subset of a peer to peer economy and a civilization centred around the notions of the commons and direct value creation through civil society.

If infinite growth is indeed a logical and physical impossibility in the context of finite natural resources; and when the artificial scarcities currently impeding social cooperation and innovation will be increasingly seen as counterproductive, then such a shift might be seen as a conditional inevitability.

If we find a solution for the solidarity issue, and the right interface and combination between non-reciprocal peer production in the immaterial field and cost-recovery mechanisms for the production of scarce rival goods, then the resulting society would be seen to be a more adequate expression of the value system expressed by the social doctrine.[1]

Notes

1. Nota Bene: For extensive documentation on the emergence of peer to peer formats throughout the social field, see https://wiki.p2pfoundation.net

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