

The Sharing Turn: Why we are generally nice and have a good chance to cooperate our way out of the mess we have gotten ourselves into

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Abstract

After a period of neoliberal blind faith in the power of economic self-interest and of austerity to tackle its catastrophic effects, we are re-discovering our more pleasant sides. There is currently a surge of interest in sharing – in research in various developmental sciences, in popular debate and most of all in practice. This paper proposes that our society is undergoing a Sharing Turn that has its roots in human nature and in cultural history, is media-technologically enabled by networked computers and is fueled by the rising anger over societal systems that fail to serve the public interest. It attempts to set out some of the roots, diverse manifestations and dynamics of this paradigmatic shift, and it expresses hope that the ‘trending’ values of sharing and cooperating will change the world for the better.

Dear reader, I would like to share some thoughts with you. That sounds easy enough. I have some thoughts on sharing, derived from practice, observation and literature. I have written them down. If you read them here, we may share some of these thoughts in common, and each of us can draw our own conclusions from them.

It sounds simple, yet, it is counter-intuitive. It runs counter to an intuition informed by the idea of the *Homo economicus*, the self-interested rational economic actor, who does not share but keeps things to himself, who does not cooperate but competes with others. Based on this image of human I should make the most of my assets by e.g. selling them exclusively for a hefty consulting fee. A landmark in the formation of that intuition was Garrett Hardin's essay on the “Tragedy of the Commons” (1968) telling us that sharing things in common does not work, because “freedom in a commons brings ruin to all”.

This intuition is losing ground. Today, it is just as plausible, certainly among people like you, dear reader, who are interested in the phenomenon of sharing, to expect Open Access to a paper which is situated in a science commons, standing on the shoulders of generations of researchers and enabled by public funding.

‘Sharing’ is indeed a booming, or in contemporary parlance, a ‘trending’ issue. Contemporary commentary and marketing likes to make it seem like something entirely unprecedented emerged from the digital revolution, from Web 2.0, from social networks, from the generation of ‘digital natives’. At the same time sharing appears as an eternal trait of mankind, that which distinguishes our species from our closest evolutionary relatives. News abound on new research in evolutionary biology and anthropology disproving the view of

humans as competitive, aggressive and brutish and showing that we are ‘naturally nice’ (e.g. Al Jazeera, 2012). Jeremy Rifkin, in his *Empathic Civilization* (2009) attempts nothing less than “an entirely new interpretation of the history of civilization” by focussing on the evolution of human empathy.

Yochai Benkler in his latest book (2011), pits the Leviathan of the state against the Invisible Hand of the market and both against the sharing Penguin of free software and free culture. Benkler recounts how the prevalence of these models shifted throughout history from feudalism through the industrial revolution and the Cold War, culminating in the neoliberal phase from the 1980s onwards which led to the dismantling of market regulations and welfare state and to the financial crisis of 2008. “Predictably, today we find ourselves facing a new crisis, our economic systems toppled by our blind faith in the power of self-interest and in our ability to harness it effectively through incentives and payoffs” (p. 7). The current wave of (interest in) sharing then appears as a reaction to the excesses of unregulated *Homo economicus*. Just like on the cover of the German Edition of the report on the *Limits to Privatization* to the Club of Rome (von Weizsäcker, 2005) the pendulum swings back from private to public. Solidarity, cooperation, generosity, hospitality, in short: sharing is re-emerging. Values, universal values even, are the primary concern in the new working programme of the Club of Rome (n.d.).

This paper proposes that our society is undergoing a Sharing Turn. It attempts to set out some of the roots, diverse manifestations and dynamics of this paradigmatic shift, and it expresses hope that the ‘trending’ values of sharing and cooperating will change the world for the better. How universal they actually are, warrants further research into the cultural and normative dimensions of sharing.

The animal that can say ‘we’

Sharing thoughts is what makes us human. We make tools and signs. Signs enable us to share our thoughts and feelings with each other. Music, language, images, writing, moving images – in short: media – links us together. It lets us communicate in real time, and with storage media-like images and writing: also across time, even thousands of years, which allows us to undergo a cumulative cultural evolution. We became the media-making animal for a purpose. We make them in order to compensate our individual shortcomings – to cooperate, to coordinate our actions, to preserve and pass on experiences and innovations and establish groups beyond the biological family: communities, societies.

But hold on, you will say, animals form flocks, swarms, prides. From ants and bees to lions, wolves and monkeys hunting together, they are able to coordinate their actions. Aren't they cooperating?

No, says Michael Tomasello, co-director of the Max-Planck-Institute for evolutionary anthropology in Leipzig, in his book *Why We Cooperate* (2009). Hunting is certainly a com-

plex group activity where one animal has to observe the spatial positions of the others. But, most researchers agree, there is no prior joint plan or division of roles among animals. Each participant strives to maximize his own chances for prey. "The group activities of apes", writes Tomasello, "takes place in 'I' mode, not in 'We' mode" (p. 57).

Tomasello and his colleagues conduct experiments with chimpanzees and Bonobos, our closest relatives among the primates, and with young children. His hypothesis: The forms of cooperation visible in children today reflect the earliest forms of cooperation in human history. They have the same basic structure as joint hunting of big game and gathering of berries (pp. 65, 75). Ontogeny recapitulates phylogeny – in our biological as well as in our cultural development.

Animals including all other primates are egoists, rational maximizers of their personal benefits. Where there is sharing and caring behaviour is among family members. Among non-related individuals and often even among mother and child there is constant competition for food.

As for us humans, one of the great debates in history concerns the question whether we are born cooperative and are corrupted by society later on (e.g. Jean-Jacques Rousseau) or whether we start out egoistic and are then educated by society (e.g. Thomas Hobbes). Tomasello's empirical findings: From about their first birthday when children begin to walk and speak and turn into truly cultural beings, they are spontaneously helpful and cooperative in many situations.

At the age of nine months, children start playing with adults, simple games with balls and toy blocks. And they start to develop a "shared attention". They watch the adult and her attention, and the adult watches the child's attention in an endless interplay of mutual observations. This 'recursive mind-reading' is the basis for the formation of a common conceptual background, of shared intentionality, of intersubjectivity (p. 62f.). Even before they can speak, kids inform others by pointing to things, things they understand to be relevant for others. Freely sharing information seems to be something that naturally occurs even with very small children (p. 31). Chimpanzees do not use pointing gestures among themselves (p. 26). Tomasello explains that in their world nobody altruistically directs others to food. They compete for it (p. 28f.). When a group of them hunted together they would fight over the prey. Children in research situations have been shown to be much more generous. Not that they always divided the goodies fairly, but when one child took more than its share and the other one complained, the first one would nearly always give in (p. 31ff.). So it seems that a sense of distributive fairness emerges early on and that we are naturally inclined to negotiate our way out of conflicts.

Apes do not pursue activities with a common goal. In the experiments they never tried to communicate the formation of a common goal or a shared attention, while kids do this in various forms all the time (p. 62f.). Setting common goals is crucial for cooperation. In another set of experiments, Tomasello's group gave kids and young human-raised chimps

four cooperation tasks, two instrumental ones and two games, to be fulfilled together with a grown-up human. For problem solving, the chimps did quite well in coordinating their actions with the human, but were not interested at all in the games. The kids cooperated in both cases, often turning the instrumental tasks into a game, putting the reward they had received back in order to start over again. “The collective activity in itself was more worthwhile to them than the instrumental goal.” When the grown-up stopped, they actively encouraged them to continue. ‘We have agreed on doing this together; we are not done yet; please come back.’ The chimps did not. They had not formed a common goal. (p. 57f.)

Trust and tolerance arose from the common goal of food acquisition. Here individuals who were less competition-oriented and more tolerant had an adaptation advantage. In hunter-gatherer communities aggressive, quarrelsome and greedy individuals were often expelled or even killed. In this way, humans underwent a cultural selection, a process of self-taming of our competitive drives (p. 71).

At the age of about three years, social norms start to take effect. Then children are more willing to share if the recipient previously had been nice to them: a sense of reciprocity, empathy and mutual respect emerges. They now become concerned about their reputation and status in the eyes of others. They want to be accepted by the others, part of the ‘we’ feeling of the group – a group that competes with other groups (p. 36f.). This dynamic creates a social group selection that probably cannot be found in any other species, says Tomasello, leading to homogeneity within the group and large differences in language, clothing, and customs between groups. Competition is banned from in-group relations and reserved for interaction with other groups.

To sum up: *Homo sapiens* started with collective actions for which the other primates are neither emotionally nor cognitively equipped. (p. 80f.) There seem to be no indications that altruistically helping, informing and sharing in young children are the result of a cultural imprint. We are naturally receptive for the intentional state of the other, can form common goals and coordinate our actions by dividing tasks into complementary roles. (p. 55ff.) Key to understanding this behaviour, according to Tomasello, is shared intentionality from which arises a “we” identity. What defines us humans is that we are the animal that can say ‘we’. We start out with a disposition to act in those ways. Later on we become aware of the impressions we make on others and are drawn into the social norms that characterize our cultural environment. Thus it seems that both Rousseau and Hobbes were partly right. (p. 46)

Sex, drugs and rock 'n' roll (Göbekli Tepe)

Let us assume that our deficiencies did not allow us to become egoists or ‘lone wolfs’, that we depend on each other for our survival and that therefore evolution favoured the traits in phylogenesis that led to a ‘we’ identity. We still need an explanation of how this strange

but nice species took over the planet. Tomasello reminds us that if you measure the evolutionary success by the size of a population, then the rise of *Homo sapiens* only started about 10,000 years ago. Anatomically modern humans originated in Africa about 200,000 years ago. For most of our existence we have been nomads. It was not until the Neolithic Revolution when our ancestors settled down, developed agriculture and cities, that they grew in numbers.

Why they settled down and why they did so only in one specific place, the Fertile Crescent at the boundary of Africa and Asia, is still a mystery. The conventional hypothesis goes like this: At the end of the last ice-age, the melting water made the sea-level rise by more than 100 m, recorded as the Deluge in many myths. The numbers of big game in Eurasia declined and the remaining populations were over-hunted by humans whose diet consisted mostly of meat and whose efficiency had been increased by spears and arrows. The ensuing famines created pressure to domesticate suitable animals like goat and sheep, and to shift to other forms of nutrition. Humans had eaten the grains of wild grasses before. Because of food scarcity they now cultivated them to increase their nutritious yield. You cannot simply sow in spring, then go hunting and gathering and come back in autumn to harvest. The crop needs continuous care. Therefore the farmers needed to settle down, while the herder nomads kept moving around with their animals. In short: People had to innovate and settle down because they were starving.

Not plausible, says evolutionary biologist Josef Reichholf from the Technical University Munich. In his book *Why humans settled down. The greatest enigma of our history* (2009) he lists countless arguments why this theory is not convincing, of which here only two: Most striking is the energy balance for grain that Reichholf calculates. With the amount of calories a person needs, a family of ten would have needed 30 kg of wild grain per day and 10 tons per year. These would have had to be collected one spike of grain at a time. Different from berries and fruits which can be eaten right away, next the nutritious seed has to be strenuously one by one broken out of its hard shell. Since it ripens only once per year, it would then have to be stored and protected against mould and mice. All this makes it entirely unlikely that wild grain was a significant part of the diet even where it naturally occurred in abundance. Cultivating it requires cross-breeding over hundreds or thousands of generations until it becomes worth the effort. Again it is entirely unlikely that a nomad people who are starving would make the investment for a far-away future in order to do so (p. 184ff).

Reichholf also raises a principal argument: Scarcity does not lead to innovation but to a stabilization and an increased differentiation in smaller ecological niches. Natural selection in the sense of Darwin works that way. What is born out of necessity rarely persists when times get better. In contrast, abundance, i.e. unused opportunity brings forth new practices. This is what happened when our ancestors left the forest and walked out onto the savanna in East-Africa where huge herds of huntable animals roamed. The closer you look at each aspect of the conventional hypothesis, the less convincing it is. Thus, argues

Reichholf, we have to look for another explanation, one that lies not in nature, but in culture, and one that starts not from scarcity but from abundance (p. 167).

About 40,000 years ago humans started to create magnificent paintings – in southern Africa and in caves of what today is France and Spain (p. 150f.). Recent linguistic research dates the origin of language at roughly the same time (p. 154ff.). This marks the transition from biological evolution to culture. *Homo sapiens* become the sign- and media-making animal.

Like Tomasello, Reichholf emphasizes that language re-enforces the ‘we’ and it separates ‘us’ from those who speak a different language. Children easily learn their ‘mother tongue’. Those who acquire it later in life will easily be identified as outsiders. Children tend to devise secret languages that only they can understand, another indication that the function of difference must have been at least as important as that of unity. It does not only allow to coordinate collective actions but also to hide one's intentions and to pass on knowledge selectively.

This is where drugs come in. In search for food, humans tried all sorts of plants and discovered that some – e.g. fly agaric or belladonna – are poisonous, but at a lower dosage cause hallucinations or cure illnesses. The specialist in these societies who accumulated this dangerous knowledge were the shamans, who served as healers and as guides to other dimensions. Hop and cannabis are known to have been used early on. Berries and fruits spontaneously start to ferment, turning the sugar into alcohol. The same happens when grass seeds begin to sprout, turning starch into sugar, which yeast then transforms into beer.

Reichholf's hypothesis: While language was not essential for coordinating hunting and gathering, which the young ones could learn by imitation, the shaman could not have accumulated and conveyed his complex and secret knowledge to an apprentice without language (p. 238). In Africa and Australia, there was no significant use of drugs, and agriculture and livestock breeding did not develop. Where it did, drugs were part of the culture: e.g. peyote in Central America where corn was first cultivated, coca in South America where the potato took roots and khat in Asia which led to rice cultivation.

Wild berries were an important part of the diet of the people in the forest and swamp lands in northern Eurasia and were also appreciated in the form of wine. They did not exist in the semi-arid regions of the Fertile Crescent. What did occur there naturally are wild grasses with comparably large seeds, barley and the wild forms of what became wheat. As we have seen, the energy balance of gathering wild grain in order to make bread is prohibitive. However, this is not the case for beer-making. The necessary amounts can be collected in a few hours or days. For this purpose also it is not necessary to peel the seeds out of the hard husks. The spikes can be used as they are. And there is a simple means of speeding up the transformation of starch into sugar: saliva. We still see this today in the Amazon and in the Andes where Indios produce the ‘spit-beer’ Chicha (p. 259ff.).

Many ancient documents refer to beer-making. There is repeated mention in the Gilgamesh-Epos from Mesopotamia which is the heartland of the Fertile Crescent. A later image from Egypt shows people preparing what seems like flat breads while in fact they are making dough for beer. At this point the process has become very similar: One could bake the flat cake into bread or add more water so that it ferments into beer. Reichholf is convinced: beer preceded bread. Barley is the oldest proven cultivated grain plant, starting 12,500 years ago. Bread only appeared 6,000 years later (p. 268).

What then happened in the Fertile Crescent? In 1963 a megalithic structure was discovered in the Anatolian village of Göbekli Tepe, and excavation began only 15 years ago. It lies at the northern edge of the Fertile Crescent on a mountain range and dates back at least 12,000 years, making it 6,000 years older than Stonehenge. It consists of similar stone circles of T-shaped pillars up to five meters high, but unlike Stonehenge, these are richly ornamented with reliefs of animals and plants. They show no indication of domestic animals or cultivated plants. Nor are there signs that these structures were used for habitation. Thus Göbekli Tepe belongs to the grand final phase of a hunter-gatherer culture.

This monumental landmark can be seen from afar. One can easily imagine, says Reichholf, that roaming groups of hunters were attracted to it at certain times of the year. They came together to celebrate large cultic feasts. These involved food, alcohol and other drugs, and, as we may assume from the memories recorded in the Bacchanalia, singing and dancing and other carnal pleasures as well. The purpose was to celebrate community and connectedness among people from different families and tribes. Just as in the case of children turning tasks into games, community was seen as an end in itself. Did they undertake the monumental effort to build this site in order to worship their gods? Reichholf says, it is not necessary to assume a mythical dimension. Most people today don't need it to come together and celebrate. Reinforcing community is a strong purpose in itself. When drugs and music are used, trance, transcendence, the mythical emerges all by itself. It might not have been the cause of celebrating together but its consequence.

All the elements come together. Barley was cultivated in the low-lands below Göbekli Tepe so that enough beer for large numbers of people could be brewed. Settlement is a requirement for the whole seasonal cycle from sowing to harvest and for storing the grain in buildings. Livestock breeding started for the same reason. Geological and archeological findings show that huge herds of antelopes, gazelles and other animals migrated across the region at that time. Meat was there in abundance in the Fertile Crescent. So why did our ancestors start to domesticate sheep and goats? Reichholf's hypothesis: One cannot supply fresh meat to a large number of people on a specific date if one depends on a successful hunt, the outcome of which is always somewhat unpredictable. Therefore, people started to keep the young ones of animals they had hunted. The herds served as live meat-stock for the feasts. Again, this could not have happened in a situation of scarcity and famine when these animals, which also needed to be fed, would have been eaten to survive the day.

Thus gatherers became beer-brewing farmers. Hunters became herders. When these feasts became common practice, this set in motion a dynamic that necessitated settlement, and 10,000 years ago, the first city Jericho emerged. And with it came an explosion of proto-scientific knowledge of biology, genetics, pharmacology, astronomy and calendar-making, religion, and music – particularly important as non-verbal communication after the Babylonian confusion of languages – and, very likely during these large get-togethers also conflicts were settled (sic!), agreements and contracts concluded, also diplomacy, politics, business and law.

Reichholf thus tells the old story of the changes from cultus to agriculture to culture with a new twist. Competition was not the driving force that made us human, as the ideology of the *Homo economicus* made us believe, but cooperation and mutualism by which we all profit from our joint actions. And it seems, each of us repeats these pre-historic experiences in early childhood. Göbekli Tepe then, is an early monument of what we can achieve when we work together. What drove our ancestors was not necessity, not scarcity, but the desire to celebrate community, to share each other in sex, drugs and rock 'n' roll.

From gods to ethics

A line runs from the hypothesised feasts in Göbekli Tepe through the documented ones by the North-West American tribes (Marcel Mauss' (1990/1923) seminal study on gift giving in tribal cultures, particularly on potlatch), the Greek Dionysia and the Roman Bacchanalia all the way to contemporary carnival. These were ruled over by the gods, like Aphrodite, Eros and Dionysos, to name but those that media theoretician Friedrich Kittler (2009), who recently passed away, was especially fond of. They are about a communion in which people share each other in the full sensorial range of women/men, beer/wine and song, or in contemporary terms: sex, drugs, and rock 'n' roll.

Mauss points to an important next step in the evolution of sharing: With monotheism the character of the gift changes. Where before the gods demanded generosity “because otherwise Nemesis will take vengeance upon the excessive wealth and happiness of the rich”, this old gift morality is raised to a principle of worldly justice. Rather than uselessly destroying goods in sacrifice they now should go to the poor and the children. The gifts turn into alms. The new doctrine of charity then went round the world with Christianity and Islam (p. 47).

At the same time, secularization of the imperative of sharing starts. The oldest and most universal maxim of an ethic of reciprocity is the Golden Rule: One should treat others as one would like others to treat oneself. Thus the basis for sharing shifts from an external to an internal and social authority. Socrates and Aristotle made the self the basis of ethics, the key to which is self-knowledge. A self-aware person will act completely within his capabilities. Such a person will naturally know what is right, do what is good and therefore be happy.

Immanuel Kant's (2004) Categorical Imperative then universalizes the Golden Rule and brings in the Other and humanity as a whole: "Therefore, every rational being must so act as if he were through his maxims always a legislating member in the universal kingdom of ends." By making us parliamentarians of the world government of ethics, Kant thus builds a bridge from interactions among peers to those in society.

The Knowledge Commons

The quintessential ethics of sharing is the ethics of the commons. The 'commons' historically refers to a natural productive resource like a meadow or a fishing ground that a group of commoners owns and utilizes together, setting rules for themselves and excluding outsiders to ensure sustainability. In Roman law it was called *res universitatis* and included lands and other income-producing resources jointly owned by a community and public facilities like theatres and race-courses maintained by a town for its citizens.

In the European Middle Ages the first knowledge of commons emerged from this collective institution: the *universitas magistrorum et scholarium*, the community of teachers and learners, i.e. our university. It retains the privileges of self-governance, the freedom of teaching and research and the right to grant academic degrees, and it constitutes the first form of a knowledge commons.

In 1942, the sociologist of science Robert Merton summarized the essential elements of academic self-regulation that had emerged over the centuries by basing the ethos of science on the four pillars of CUDOS (Communism, Universalism, Disinterestedness and Organized Scepticism). One can imagine the provocation of even mentioning 'communism' in Second World War USA. This is what Merton wrote: "'Communism,' in the nontechnical and extended sense of common ownership of goods, is a second integral element of the scientific ethos. The substantive findings of science are a product of social collaboration and are assigned to the community." (p. 273).

The scientific community inscribes the name of the discoverer into its knowledge asset, e.g. by calling it 'Boyle's law', but does not grant an exclusive property right to it. Nobody referring to the inversely proportional relationship between the pressure and volume of a gas had to ask Robert Boyle for permission or has to pay him royalties. "The communal character of science is further reflected in the recognition by scientists of their dependence upon a cultural heritage to which they lay no differential claims. Newton's remark – 'If I have seen farther it is by standing on the shoulders of giants' – expresses at once a sense of indebtedness to the common heritage and a recognition of the essentially cooperative and selectively cumulative quality of scientific achievement" (p. 274).

The Internet which is the basis for the current wave of sharing was originally developed by and for scientists as a commons. The same is true, if for different reasons, for the operating system of the Internet. Unix was developed as an in-house tool at AT&T from 1969 by

Ken Thompson and Dennis Ritchie who also passed away recently. Before divestiture of the telecommunications monopoly, Unix was shared freely with academia, and many researchers contributed to it. Afterwards AT&T's software lab was able to commercialize Unix. All mainframe makers licensed and extended it, in no time leading to dozens of mutually incompatible Unices.

We would still be in this balkanized world today, had it not been for one hacker who at the MIT had experienced what the sharing spirit among a community of peers can achieve and stubbornly refused to let this go to the ruins of business plans and non-disclosure contracts. Richard Stallman in 1983 single-handedly undertook to reverse-engineer Unix in what he called the GNU project. In addition, he hacked the copyright system to ensure that his Unix would remain free forever, free to share and build on. His GNU General Public Licence (GPL) enshrines all of Merton's freedoms and stipulates the requirement to share derivative works back into the software commons. Strangely enough, it does not require attribution, but that is anyway common practice in free software projects. The GPL looks like a copyright licence, and technically it is, but its meaning is a social contract that creates a commons.

The Sharing Turn

What is the range of practices and movements in which the paradigmatic shift manifests itself? Tomasello's simple classification of objects of sharing may serve us to group them: information, services and resources.

Information sharing is the purpose of information and communication technology. Even in the pre-Internet age, time-sharing operating systems introduced in the 1960s enabled people connected to the same mainframe computer to share anything from academic papers to recipes and science-fiction commentary. Still before the Internet proper, with the store-and-forward Usenet, these exchanges became global and their diversity exploded. The Internet then enabled the Open Access (OA) academic publishing movement as a response to the journal crisis (s. Guéron, 2001), with the high energy physics pre-print repository arXiv.org launched in 1991 as an early watershed.

Since the Internet allows not only broadcasting of information as is, but two-way and group communications it encourages cooperations in which participants share their expertise, knowledge and skills in jointly creating new informational goods. Free Software, as mentioned, was the first practice that brought this trend to the public's attention. Benkler (2002) conceptualized it as part of a much broader social-economic phenomenon: The emergence of a new, third mode of production in the digitally networked environment that he termed "commons-based peer-production", to distinguish it from the property- and contract-based models of firms and markets. Participants work together as equals (which does not preclude a meritocratic social differentiation), and they ensure the sustenance of their cooperation by releasing their common work under a free licence. Wikipedia is an-

other prime example of this mode of production. In the wake of OA followed the Open Educational Resources (OER) movement that cooperatively creates educational modules, text books all the way to free institutions of higher learning like the Capetown-based P2P University. CC Mixer, launched shortly after the release of the first Creative Commons licenses, may serve as an example of a music remixing community. While the Internet does not permit transmission of material goods, it does enable projects for free hardware design of anything from computer chips via musical instruments to cars.

Sharing of material and financial resources seems to be an effect induced secondarily by information sharing. When creative works are shared freely how can creators pay their rent? Kelsey/Schneier (1998) started from the observation that published works in principle cannot be controlled and therefore charged for. Thus they conclude, they have to be paid for in full before their initial publication. The Street Performer Protocol is their proposal for a system in which creators can solicit voluntary payments for a work which, once the desired total amount has been pledged, is released into the public domain. After a ten-year period of experimentation we now have a range of platforms like Kickstarter and Inkubato that enable the peer funding of music albums, movies, games and any other kind of creative work. Another approach is taken by platforms that allow giving rewards to works that already have been freely published, like Flattr and Patronism. At first, observers assumed that only small amounts will end up in the virtual tip jar. Now we see that the amounts are getting larger and the time to collect them is getting shorter. In a recent example, the production company of a popular German telenovela proposed to turn it into a movie. It took them only one week to collect the required one million Euro (Anon., 2011). Peer funding also works without specialized intermediaries. Belsky et al. (2010) studied three music sites that expressly permit their users to share through Creative Commons licences and ask them to pay what they like. Thus people can legally get the same music without paying for it. And yet they do. And in the end, artists earn significantly more on these platforms than with mandatory fixed-price models like on iTunes. Aside from money, computing and communications resources were shared early on, whether it is CPU cycles like in the distributed search for extraterrestrial intelligence (SETI@home), wireless routers and Internet connections shared to build free wireless networks or running a TOR node to provide anonymous communications for all. More recently we see that online sharing inspires offline sharing as well, in forms like couch surfing or car sharing.

If the current surge of sharing – in research, popular debate and most of all in practice – is actually significant enough to justify calling it a Sharing Turn – what then were its immediate causes? I want to highlight two elements that contribute to it. First, the media-technological conditions for the possibility of sharing have become readily available. Reichhold's rule holds in the digital age: scarcity – here: of the means of production and distribution of creative goods – breeds attempts at stabilization and control, not innovation. That comes from abundance. The PC brings an abundance of cheap computing power. The Internet that now extends to mobile devices brings cheap, abundant, global distribution for

any kind of social network. And these, in turn, bring back the culture of cooperation and sharing that comes natural to us, now, compared to our Stone Age ancestors, on a new media-technological and global level.

The second element is the growing discontent over the neoliberal state of affairs that lets capitalism run its course without checks and balances. Under neoliberalism, private enterprise and competition took priority. The welfare state was dismantled. Much of the public infrastructure (telecommunications, electricity and water utilities etc.) was privatized, leading to a further enclosure of public domain goods such as the electromagnetic spectrum or most strikingly, rain water (In Bolivia the private water monopoly successfully lobbied for outlawing the collection of rain water. Similar laws have been introduced in several states of the USA (Adams, 2010)). In other areas, like education and public broadcasting in Europe, private sector competition was admitted. Markets were deregulated. Where crises made the need for regulation obvious, particularly in the financial industry, it was successfully warded off. Neoliberalism thus led to an erosion of solidarity, on the individual, the collective as well as the normative level (Stalder, 2011).

Also in copyright, more of what was still public domain was enclosed during the 20th century, e.g. by a continuous extension of the term of protection and of the range of uses covered by it. Industry was particularly keen to bring the new opportunities for sharing that had manifested themselves in the digital revolution under its control. Under the neoliberal paradigm even the social contract of copyright law was subject to privatization. Most striking is the special protection against the circumvention of Digital Rights Management (DRM) system introduced in the WIPO Internet Treaties of 1996: Where before exceptions and limitations were a matter of public law, now companies are able to set their own policies implemented in and enforced by DRM technology. A regular cease-and-desist industry has emerged, with technical service providers monitoring peer-to-peer networks and specialized law firms sending out chargeable cease-and-desist orders, in Germany on the scale of 3.6 million per year (ECO 2011). As with DRM, a public legal procedure to counter copyright infringement with its provision of due process has been nearly entirely privatized. Industry's most recent strategy in its escalating war on sharing is aimed at making Internet access and hosting providers proactively police their networks against infringements. Again the US is leading these initiatives, domestically with the Stop Online Piracy Act (SOPA) and internationally with the Anti-Counterfeiting Trade Agreement (ACTA) and the Trans-Pacific Partnership (TPP). The European Union is planning similar steps in its upcoming amendments of the Intellectual Property Rights Enforcement Directive (IPRED). At the same time, copyright is not serving its *raison d'être*: to protect the economic interests of authors (Kretschmer/Hardwick 2007).

Discontent had grown since the 1980s and culminated first when the Dot Com bubble burst in 2000, followed by the global financial crisis of 2008 that was triggered by the bursting of the pyramid scheme of the US housing bubble. About the latter, the Levin-Coburn Report (2011, p. 1) to the US Senate found "that the crisis was not a natural dis-

aster, but the result of high risk, complex financial products; undisclosed conflicts of interest; and the failure of regulators, the credit rating agencies, and the market itself to rein in the excesses of Wall Street.”

The unregulated excessive greed of the financial industry in turn resulted in broad global protests: the Occupy movement that was initiated by the Canadian activist group *Ad-busters*, initially directed at Wall Street and inspired by the Arab Revolution. Mohammed Bamyeh (2011), professor of Sociology at Pittsburg University, observed the events on Cairo's Tahrir Square that came to a happy climax in February 2011. The old regime had collapsed, nearly all police stations had been burned to the ground. “During the following one and a half weeks, millions of people were in the streets all over Egypt and one could nearly physically sense how a high ethos – public spirit, solidarity, solicitousness, respect for the dignity of all, a sense of personal responsibility for all – emerged from the disappearance of the state.” Everyone took to the streets, all age-groups, all classes of society, men, women, Muslims, Christians, people from the cities and from the countryside. An enormous mass that acted with unprecedented determination. People shared food and drink. They volunteered to regulate traffic and prevent looting of museums. People's committees took over security services in the neighbourhoods. Harassments of women stopped. Lost or stolen things were returned. And all this happened spontaneously, without leaders. The old regime asked for leaders, anyone to negotiate with, writes Bamyeh, but there were none. The Arab Revolution – at least at this historic point in time – and, following its example, the Occupy movement are true peer-to-peer movements.

The crisis of the political order leaves a vacuum that turns into an abundance of opportunities. Given the opportunity, people share. The crisis of the recorded music industry and the structural failure of the copyright system make more and more artists like Love (2000) break away:

“Record companies stand between artists and their fans. We signed terrible deals with them because they controlled our access to the public. But in a world of total connectivity, record companies lose that control. ... It really is going to be a global village where a billion people have access to one artist and a billion people can leave a tip if they want to. It's a radical democratization.”

The Sharing Turn in this light has its roots in human nature, has been media-technologically enabled by networked computers and was fuelled by the rising anger over societal systems that fail to serve the public interest. This failure makes people take things into their own hands, join hands and share information, services and resources with each other. Where a corrupt state had claimed it was needed to keep the order, people self-organise. Where culture industry had claimed that free access to creative works and a fair payment of authors and artists are mutually exclusive, again people self-organise a technology-based social contract that enables both. And when the same industry tries to push for

strengthened anti-sharing measures like SOPA and ACTA, the force of the resistance self-organised by the global networked citizens who do not want to let the potential of the Sharing Turn be crushed is astounding.

Conclusions

This paper does not pretend to present a systematic mapping of the socio-cultural practices emerging in the Sharing Turn nor a comprehensive analysis of its dynamics. I hope, though, I have managed to share with you some of what I see as important elements for such a theory and will close with posing questions for further research.

There seems to be something in the biological make-up and in the cultural history of mankind that makes us naturally inclined to share. Environmental conditions may be more or less favourable to this inclination being actualized. An abundance of opportunity to network and interact with others as presented by the digital revolution is clearly an enabling factor in the current Sharing Turn. The more the technology and the capacity and ability to utilize it are spreading, the more sharing practices become normalized. The break-down of a prevalent anti-sharing power structure, whether a dictatorial regime or a culture industry, also provides ample opportunity and motivation for commonality, sharing and cooperation to re-emerge. As we have seen in the example of Cairo's Tahrir Square, as immensely useful as digital technology is, it is by no means a necessary pre-condition. Also when ideologies of greed are discrediting themselves by showing their catastrophic effects, their mental hold over people breaks and makes them reconsider their ideas on competition vs. co-operation.

If on- or offline public or commons spaces where communities of sharing can gather are a pre-condition then these must not be taken for granted. Zuccotti Park in New York, where Occupy Wall Street had set up camp, was cleared by police after two months. The Internet is subject to censorship, bans on access to it for alleged copyright infringers, threats to network neutrality and other of its fundamental principles. It is a matter of public policy to consider the effects of measures taken in these spaces on the Sharing Turn.

The design of these spaces and the tools that communities develop for their interactions also warrant further attention. Belsky et al. (2010) have taken first steps in identifying features that are conducive to sharing in the exchanges between musicians and their audiences. These may be summarised as implementing and expressing trust and authenticity, transparency, empathy and solidarity, reputation-building, generosity and fairness.

These values themselves need to be looked at more closely. E.g. altruism is often mentioned as a driving force of sharing. Like sharing and cooperating, altruism has become a popular research object in evolutionary genetics and neuroscience. But looking at one of the most comprehensive empirical studies of the motivations in the free software community (Ghosh et al., 2002, Figure 35 in Part IV: Survey of Developers) do we really find a

selfless concern for the welfare of others at work? The most important reason given in the survey for joining and staying in the free software community is to learn and develop new skills. Like 'to improve my job opportunities' this is a rather self-interested motive. Another group of reasons is pragmatic ('solve a problem that could not be solved by proprietary software'). Also important are what one might call political convictions ('think that software should not be a proprietary good', 'limit the power of large software companies'). That leaves us with reasons referring to the community itself ('participate in a new form of cooperation', 'get a reputation'). Only 'to share knowledge and skills' – after 'learning' the second-most frequently given reason for joining and becoming more important over time – looks altruistic at first glance. But even here the gains (improving ones own knowledge through teaching, reputation) might outweigh the sacrifices.

The value of fairness is relevant in many areas of socio-economic practices. E.g., we are seeing a growing awareness of the ethical implications of consumption for human rights and the environment, aided by such devices as Fair Trade marks. Given the empirical evidence about authors' and artists' earnings, for a society that calls culture and creativity its most important asset, these are just as unworthy as is child labour producing our cotton and coffee. Following the Fair Trade model, the Music Information Centre Austria (MICA, n.d.) is creating a framework called Fair Music. The goal here is to develop criteria for what constitutes fairness in music production and then certify compliant companies, allowing audiences to make conscientious decisions.

The debate on identifying and signalling criteria of fairness is certainly crucial for nurturing the third, sharing mode of production, not only in the North-Western world but on a truly global level. In this global debate we will find that cultural differences make North-Western values less universal than we tend to think. E.g. Michel Bauwens who runs the P2P Foundation and lives in Thailand remarked that despite a great tradition of hospitality in Asia couch surfing does not resonate with Thais.

Autonomy seems like one of the core values: Different from potlatch, sharing in our time is voluntary. But a free licence that mandates that I 'share-alike' a modified work is certainly a binding obligation. Where can such conditions be conducive to sharing, how can they be justified? When the idea of peer-funding arose it was conditioned on the collectively funded work being in the public domain or under a CC licence. Not so with the current generation of peer-funding platforms. Would the willingness to contribute increase if the commons were put back into peer-funding? When a hardware corporation pays its employees to contribute to free software projects, are these then sharing or does the lack of autonomy make their contribution into something else? Can a society voluntarily decide on mandatory forms of solidarity, like health care and public broadcasting? Would a Sharing Licence that proposes to legalise private, non-commercial file-sharing in exchange for a copyright levy on broadband Internet access run counter to the spirit of the Sharing Turn because it is not voluntary, or would it strengthen it by putting a end to the war on sharing while living up to the values of fairness and solidarity?

The enquiry has only just begun. Who shares? Why do some share more than others? What is being shared? With whom? For what reasons? Various disciplines have started to produce indications but much remains unclear. The Club of Rome, in updating its 1972 report on the Limits to Growth thirty years later, found that in many areas we have over-shot our limits, moving deeper into unsustainable territory. Global warming, the mounting population, food, energy and water crises and the growing wealth disparities are leading us toward global environmental and economic collapse (Meadows, Randers & Meadows, 2004). We can only address these challenges and soften their impact if we work together and share the responsibility for sustaining the basis of our existence. The Sharing Turn might be a turn for the better. If we re-invent our heritage of sharing and cooperating we have a chance of turning the mess around that we have gotten ourselves into.

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