

11 **GOVERNMENT AS A PLATFORM? PUBLIC VIRTUAL
STRUCTURES FOR SERVICE DELIVERY AND
PARTICIPATION AS ELEMENTS OF A RENEWED
PUBLIC ADMINISTRATION**

Ayad Al-Ani

ABSTRACT

Information produced by citizens could be the essence of a public administration that seeks to reinvigorate its capabilities lost during the neo-liberal period. In the current model, the citizen expects services in return for taxes paid. When the services do not meet expectations, the 'participation' is often limited to a protest/voice or exit. In the now-emerging new view of government, administration in its various forms reaches into the virtual space, capturing the motivation and talents of citizens, which have been so far neglected by the private and public sectors, forming a 'cognitive surplus'. This surplus of ideas and talents is now integrated into the processes of policy formulation and service delivery using modern social media tools and virtual platforms. This co-option – which in the digital world is often achieved with negligible transaction and marginal costs – can be used to solve collective problems at the community, state, national and international levels: The ability to tap the cognitive surplus becomes part of a country's political and economic competitive advantage and shows a way out of the dilemma of 'post-democracy', which describes the dependency of politics on the private sector. As the desire (or rather need) for utilising the cognitive surplus continues, we can expect the administration system to evolve into a kind of partner state that supports activities of its citizens by providing data, applications and interaction spaces as they compete and collaborate with the traditional economic and administrative sector by using various forms of the self-governing and self-organising peer-to-peer (P2P) approach that has been successfully implemented in the open software community. Therefore, services must not ultimately be delivered by state organisations, but rather platforms must be provided to allow for the self-organised interaction of citizens to solve their pressing issues. In times of financial hardship, these models seem to make even more sense.

11.1 INTRODUCTION

The argument developed here is that new forms of collaborations between citizen producers could be useful or even at times better in delivering public services and also possibly cover needs not addressed today. The beleaguered and strained state could use these new forces and must open and remodel its institutions and policies to direct, encourage and stimulate the cognitive surplus to fulfil this role. This cooperation and co-option of the cognitive surplus will, however, adversely affect its potential political participatory capabilities, but P2P collaborations could add cohesion to the society, through shared experiences and collective practices on the community level.

11.2 FORCES OF DISRUPTIVE INNOVATIONS

The transformations that are occurring in our societies have their root in the globalisation and technisation/digitisation of the economy (Fuhr, 2005). These changes lead to a different understanding of the roles of the state, the citizens, and the fabric and cohesion of society.

11.2.1 *The Limited State*

The efficient and effective organisation of public administration is restricted for two main reasons: the structural limitations of the classical hierarchical Max Weber model aggravated by neo-liberal conceptions of the role of the state and the financial meltdown that occurred in 2008/2009.

Hierarchies do not seem to cope with the expectations of a complex world. Breaking down information and work into smaller bits and bytes leads to institutional performance that is lacking in its ability to act efficiently, responsively, flexibly and innovatively. Trying to put the small work packages together again, designing and governing complex programs through a command hierarchy is almost impossible in a complex environment.¹ Even worse, hierarchies do not make good use of the capabilities of their workforce, let alone the talents and motivations of their customers/citizens. Hierarchies have a tendency to select and use only certain aspects of the talents and motivations of individuals and

¹ For an early but still impressive critique, see Marglin (1974). On the 'limits' of organisation despite his positive views on hierarchy ('nature loves hierarchy'), see Arrow (1974).

neglect the rest.² With an awareness of these limitations, or specifically, of the often poor performance of government agencies, the neo-liberal model has argued for cutting back the role of the state and allowing market mechanics to take its place. However, market processes cannot fully substitute public action and public goods. Thus, over the last 20 years, the role of the state has been increasingly diminished, through the systematic cutting back of its capabilities for development and service delivery, leading observers to describe the current situation of government as being 'post-democratic'. This phenomenon describes a weak government that cannot act on behalf of the citizens but is left to the mercy of market forces, which exert influence and co-opt state activities to serve their interests (Crouch, 2004). The increasingly weakened capabilities of the state reveal themselves even in developed nations, as western governments suddenly appear incapable of effectively implementing complex programs (i.e. 'Obamacare', 'Energy Transition' in Germany). The final blow for the state in the Western Hemisphere came with the financial crisis, which required the state to save the market, through the public takeover of market debts, restricting its future capabilities even further.³

11.2.2 Peer-to-Peer Collaboration as a New Force of Production

Given that the talents and motivations of individuals (employees and citizens) have often been excluded by hierarchies, individuals can now use social media to do more for themselves, by themselves or with others (Benkler, 2006: 8). Using digital devices, the individual can act as a free producer, as a peer, to produce, enrich and redistribute information, thus creating a new social (and political) relationship coined 'peer-to-peer' production. This P2P process of collaboration uses existing technologies and assets (smartphones, computers, technical infrastructure, cars, rooms, etc.) and available time at negligible marginal costs to engage in production processes, creating 'non-exclusive' goods, *commons*, that are available to anybody for free.⁴ A new scheme of production is

2 For this problematic selective inclusion process, which rejects 'unwanted aspects' of the personality but always gets too little of the wanted traits (commitment, quality, etc.), cf. Neuberger (2000: 500).

3 For a summary of this discussion, cf. Al-Ani (2013).

4 Nobel laureate Elinor Ostrom (1990) reintroduced the commons into the economic sphere. Writing before the Internet era, she came short of describing that the commons in the information technology era are something rather different than the commons used to govern natural resources as described in her groundbreaking work. These new information commons are not affected by the "tragedy of the commons" (Hardin 1968), for instance. The value of the information commons created through P2P processes is not diminished by use, but on the contrary enhanced by it: it is governed "(...) by a Comedy of the Commons, or using a similar metaphor, producing a Cornucopia of the Commons. This is so because of the network effect, which makes resources more valuable the more they are used" (Bauwens, 2005). With the advancement of technology, Ostrom later noticed this as well: "(...) open access to information is a horse of a much

emerging, one that cannot be explained by the current logic of microeconomics and macroeconomics, as non-profit motivations and inclusive property rights are used. In addition, current systems of resource allocation are obsolete in this sphere. In a hierarchy, our superiors decide; in the market, prices decide; in a democracy, 'we' decide. However, "(...) where resources are abundant, as they are with immaterial knowledge, code, and design, which can be copied and shared at a marginal cost, they are truly unnecessary" (Bauwens, 2012). Clearly, these P2P relationships have a different collaboration and governance logic. Individuals select, by themselves, work packages they are truly interested in and work when and as much as they like/can. Of course, this is not a nonhierarchical world, but in contrast to traditional organisations, its hierarchies are fluid and tend to be used to ensure participation (rather than exclusion). Furthermore, with individuals governing themselves, less management overhead is necessary. In "the old model for coordinating group action requires convincing people who care a little to care more" (Shirky, 2008: 181). In the P2P model, the experiences of open software organisations have been very instructive: The mechanisms of self-selection and self-governance avoid this problem in the sense that the work effort is an individual choice and the great number of participants balances the various levels of input, "(...) so that people who cared a little could participate a little, while being effective in aggregate" (ibid). There are many impressive examples of P2P production besides the well-known success stories (Linux, Mozilla and Wikipedia), and this mechanism has now entered into the public sphere, creating public goods.⁵ Even more fascinating is that the state, along with private companies, is now scrambling to use these P2P processes: co-opting processes and peers in a myriad of shapes and variations.⁶ In their former role, citizens only had the possibilities of revolting (voice), leaving (exit) or – as public goods are often delivered

different color than open access to land or water (...). With distributed knowledge and information the resource is usually nonrivalous" (Hess/Ostrom, 2011: 13).

- 5 Bollier (2004) notices, "Librarians, who are trying to protect free access and circulation of knowledge. Scientists, who are trying to preserve their foundational traditions of openness, collaboration and free inquiry. Creative artists in music, film and other fields who realize that culturally compelling creativity depends upon their ability to use prior works and collaborate with others. Media reformers, who are trying to reclaim the public airwaves for public benefit, whether through open spectrum commons or auctions. Indigenous peoples, who are trying to retain some measure of cultural sovereignty by preventing Big Pharma and other commercial predators from appropriating their traditional knowledge and art. Online user communities, who wish to protect their ability to communicate among themselves without the impediments of market transactions".
- 6 For this co-option movement and resulting hybrids often labelled Netarchies, see Al-Ani (2013: 223) and Bauwens (2012). In Germany, almost 19 % of all companies cooperate with the 'crowd' in one way or another, integrating peers into the value creation process of the firm (Al-Ani et al., 2014). From a total population perspective, 55 % of all males and 44 % of females are involved in political or economic participatory activities ranging from petitions, political networks, to product development and configuration (Send/Schildhauer, 2014).

by a monopoly – accepting the unsatisfying level of services. Now, a new strategy is available: “To resist is to create!” (Holloway, 2005: 25) or in other words, to utilise available P2P production processes, talents and resources of peers to create or enrich public services – a new way to produce is emerging. “By this I mean: a new way to produce anything and everything, whether it is software, food, or cities. What once required rigid organisations and a society defined by the mentality of hierarchies, we are discovering now (and in many cases re-discovering) how to do through free association of peers” (Bauwens, 2012).

11.2.3. *The Peer and the Multitude*

The vacuum of the retarding state is now filled to some extent by P2P collaborations and processes. The attractive innovative power and problem-solving and product-enrichment capabilities of P2P are the target of a co-option strategy by private and public organisations. This rise of the importance of the individual and corresponding new collaboration schemes also reflects a deeper transformation of the societal constitution. Conventional thinking of a societal fabric consisting of classes, ethnical groups, is being challenged by a more individualistic perception of the ‘multitude’. “The multitude is composed of innumerable internal differences that can never be reduced to a unity or a single identity-different cultures, races, ethnicities, genders, and sexual orientations; different forms of labor; different ways of living; different views of the world; and different desires. The multitude is a multiplicity of all these singular differences” (Hardt/Negri: XIV). Unanswered for some time was the question of how this multitude of individuals unites and cooperates. With the understanding of P2P, the picture becomes clearer: The individual can now use P2P to unite for a specific purpose, making use of the ‘general intellect’ (Virno, 2008) or the cognitive surplus (Shirky 2010). The multitude is a multitude of thinkers and producers that can use new relationships and technologies to collaborate. This collaboration, however, is by no means comparable to former loyalties defined by ethnic or ideological adherence. It is transient, rather tied to a specific topic and timeline associated with the topic. Thus, examples of citizens’ use of platforms that address certain public issues in Germany show that these technologies allow for a selective and time-specific inclusion of citizens (Der Standard, 2012: 9). Once the specific task of the platform/collaboration is fulfilled, members exit to seek new tasks.⁷

7 “(...) individuals can do more in loose affiliation with others, rather than requiring stable, long-term relations (...)” (Benkler, 2006: 9). For the specific characteristics of political collaboration platforms (large, small, long-lived and short-lived), cf. Anheier/Nassauer (2012: 17).

11.3 THE NEW ROLE OF CITIZENS

Social-media-enabled collaboration and available skills give citizens the option of participating in the production process of government tasks. The citizens in their role as free producers begin to be more interwoven into the process of service delivery. The community evolves into a community of contributors that create commons of knowledge, software or design. Public policies can be influenced – at least to some extent – by citizens. Although this process of adding a discussion level to state services seems to have its limitations, on a local level, at least, the impact is more obvious.

11.3.1 *Citizens as Producers of Public Services*

With the increased usage of social media tools, citizens who formerly could not cooperate with one another suddenly have the chance to reach out to likeminded peers in order to do more for themselves and for others. Perhaps for the first time in human history, collaboration becomes ‘deinstitutionalised’: Permission from institutions is no longer necessary to seek and establish working relationships with other citizens. The individual turns into a producer and into a networked ‘DIY citizen’: “DIY means taking matters into your own hands, not leaving it for others to do it for you” (Ratto/Boler, 2014: 2). Enabled by technology, this concept seems to take up pace. Gilding (2011:251), who evaluated social services performed by peers, came to the conclusion: “What these examples show is that people have stopped talking and started acting”. This is due to the fact that the production model of P2P is clearly geared to directly tapping into the intrinsic motivation and talents of the citizens, in other words the cognitive surplus, in a very efficient way. Moreover, ubiquitous collaboration technology seems to compensate for a missing infrastructure in developing countries and might trigger a development process unseen.⁸ Of course, the integration of peers into the process of delivering public services can have many shades and variations. An emerging pattern, however, seems to be that in return for market or product information provided, citizens contribute information to the service provider, who uses this to further enrich its services and learning content. A very impressive example is the use of open agriculture solutions in Africa. Here (mainly private or NGO), producers of agricultural services provide information and learning content to the citizens/customers, who in turn send feedback, adding further value to the services (see Table 1). Furthermore, using the virtual platform, peers interact not only with the provider but also with other peers. A typical mixture of peer-to-peer and

⁸ Smartphone coverage in Southern Africa is almost higher than in parts of Europe, and these devices are used as computational tools (Fox, 2011).

Table 11.1 Agricultural Applications/Platforms in Africa.

Source: IT News Africa (2013)

Rural eMarket

Developed for rural Africa, Rural eMarket is a simple yet powerful solution to communicate market information, using smartphones, tablets or computers. The use of appropriate ICT solutions can improve transparency and access to market information and transform the livelihoods of rural populations.

Esoko

Esoko is Africa's most popular magic platform for tracking and sharing market intelligence. It links farmers to markets with automatic market prices and offers from buyers, disseminates personalised extension messages based on crop and location and manages extension officers and lead farmers with SMS messaging.

FarmerConnect

The FarmerConnect Platform is a cloud-based and mobile-enabled platform that delivers personalised agricultural extension services and text/audio information intelligence in local languages to smallholders and farmers who otherwise do not have access to or cannot comprehend information from traditional sources. Such services help them stay connected with the information and aiding agencies on a daily basis, increase their yields/incomes, and reduce hunger, poverty and malnutrition. FarmerConnect, in a nutshell, hosts a one-stop market place for agricultural communities, including service seekers (Farmers), service enablers (Government, NGO and Private agencies) and service providers (Agronomists, Markets Trackers, Weather Stations etc.).

M-Shamba

M-shamba is an interactive platform that provides information to farmers through the use of a mobile phone. M-shamba utilises the various features of a mobile phone, including cross-platform applications accessible in both smartphones and low-end phones, and SMS to provide information on production, harvesting, marketing, credit, weather and climate. It provides customised information to farmers based on their location and crop/animal preference. Farmers can also share information on various topics with each other. M-shamba is currently being used by 4000 rice farmers in Kenya to help them adopt new technologies in rice farming.

Mobile Agribiz

Mobile Agribiz (mogribu.com) is a Web and SMS mobile application that helps farmers decide when and how to plant crops, select the best crops for a given location using climate and weather data and connect to the available market. It helps connect farmers to buyers and helps them to source important, relevant information (e.g. how to plant crops, how to use fertilisers) and necessary data aggregates (e.g. weather, crop pricing) from various sources. Farmers can easily connect with customers by sending an SMS with their phone number, information on goods, prices and quantities for sale. This information is plotted into a map on servers, enabling customers to see farmers' information, the goods they are selling and their quantities and location and make a connection.

AgroSim

AgroSim is a valuable tool for decision-making in agricultural projects. It works primarily on data collected online and provides a virtual representation of the different stages of crop growth and development as would be the case in reality. It is an event simulator able to anticipate the quality and quantity of the productivity of a desired crop by taking into account data related to seed, soil, hydraulic climate, geography, macroeconomy and the demographic of the targeted area.

amAgriculture

Developed by Access.mobile, amAgriculture is an analytical tool that helps agribusinesses understand underlying business trends, manage transactions, cut costs, increase revenues and mitigate risk. Core product features include agricultural input data collection and management, agricultural output data collection and management and transactional data tracking from agent transactions with farmers in cooperatives/networks.

Farming Instructor

Farming Instructor is a mobile app that provides online and offline agricultural information (text, speeches and animations) to farmers and their communities. The application is created specifically to inspire youth and all other groups in the society to have the passion to engage in agriculture as a means to self-employment. With this app, the user or farmer can source all the necessary information related to agriculture, as well as share and comment on other farming tips and advice.

company-customer relationships emerges. Other examples, such as the Ushahidi platform, resemble more a classical P2P relationship: an open source platform provided for free, as a commons, which allows peers to collaborate to collect and analyse information about security issues (Anheier/Korreck, 2013: 106). We can also observe that some public institutions begin the use of platforms to collect voluntary peer resources and to direct them to areas that have limited access to metropolitan services.⁹

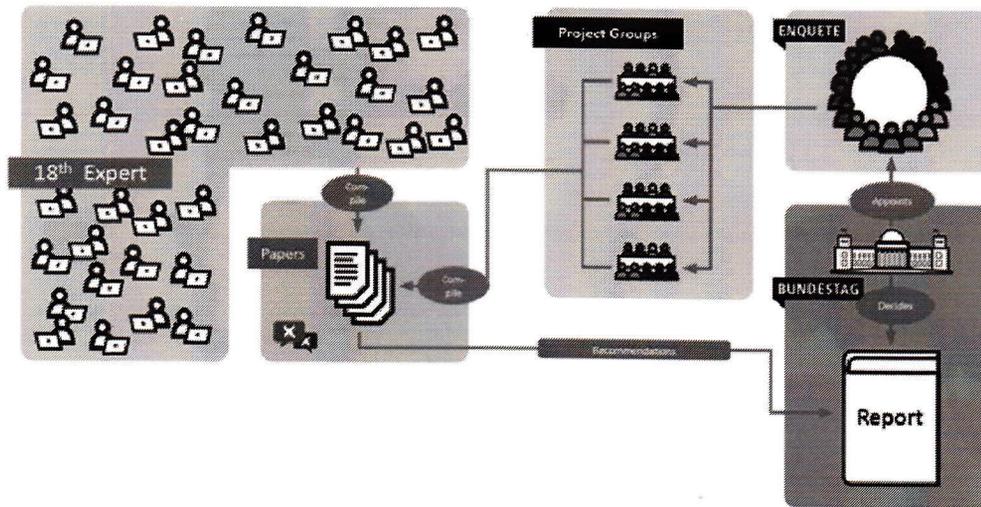
11.3.2. *Peers and Policy Formulation*

The most obvious impact of social media is its capacity to mobilise voices cheaply and quickly. This has been demonstrated by the use of social media for the purposes of political mobilisation and even political resistance (Shirkey, 2011). With the use of smartphones and the like, virtually everybody can become a sender of information and has a propensity to influence opinion in one way or another. In Europe, the development of a new constitution in Iceland, which used the participation of the crowd, and in Germany, the opening of some law-making processes to interested contributors, demonstrates limited but successful experiments.¹⁰ These examples show how the traditional system of government has introduced parts of the P2P logic to increase its capacity to find

⁹ See the example of Chicago and its online platform www.ChicagoShovels.org, that directs voluntary services to elderly and disabled residents living in areas the municipal services do not reach easily after snowfalls (Mickoleit, 2014: 45).

¹⁰ For a summary of German open-policy formulation experienced mainly at the communal level, see, for instance, the platform provided by the Bertelsman Foundation (<http://www.beteiligungskompass.org/>). For the general slow adaptation of digital strategies by OECD governments using social media mainly as tools for communication, see Mickoleit (2014).

Figure 11.1 The Crowd Acting as a Virtual 18th Member of a Law-Making Special Committee of the German Parliament (Bundestag). Source: Fischalek (2012).



solutions to issues and, ultimately, also enhance the legitimacy of these solutions via crowd participation. The German example demonstrates how the original system of law making has been amended by introducing a further – virtual – member of the law-making body, serving as an interface to the crowd (see Figure 1).¹¹

The early hopes, however, that some kind of liquid democracy or electronic democracy would emerge and pave the way for a *deliberative democracy* (Habermas, 1998), or at least for a discussion layer guiding and reflecting capitalist mechanisms (Brown, 2010), have not yet materialised. There may be several reasons for this:

- The deliberative process is seen by many as not being effective enough to influence politics. The arena of deliberation, or the ‘political periphery’ as described by Habermas, is too far away from the real decision-making at the ‘political centre’: “Deliberative democracy relegates the role of citizens to discussions only indirectly related to decision making and action. The reality of deliberation is that it is toothless” (Noveck, 2009: 37). In practice, as it often seems to turn out, civic talk is largely disconnected from power. “It does not take account of the fact that in a web 2.0 world ordinary people can collaborate with one another to do extraordinary things” (ibid).

11 For the example of Iceland’s new constitutions and its final failure, see The Guardian (2013) and Schwarz (2013). For the use of social media in US election campaigns, see Shirfy (2004).

- Not only is the political influence of deliberation limited, it is often clear what needs to be done. Thus, action to change things is more pressing than discourse, as recent interviews from Occupy movement members revealed: “One interviewee states that it is almost too trivial to formulate global problems Occupy is concerned with, because they [are] the same topics [that have been] moving people [for] decades: environmental destruction, war, lacking possibilities of democratic participation, an unjust world order, putting profits before people, a disrespect of human rights, drastic cuts in education and social services, to name the most prominent ones. There is no need to come up with specific topics, since there are enough pressing issues as it is” (Anheier/Nassauer, 2012: 26).
- Peer-to-peer collaboration in itself is not democratic, but rather *meritocratic*: The status of its participants is tied to their output performance only. The outputs need not be produced in a democratic, organised manner, but rather by the right producers, as the Peer-to-Patent project revealed. Here, peers acting as experts were asked to evaluate patents. As it turned out, not masses of peers and talents were needed for that evaluation, but rather point skills: “The excitement of modern collaborative environments (call it Web 2.0 or what you will) lies in the hope of bringing the masses on board to create something collectively. Hundreds of thousands, it is thought, can be not only consumers but producers. But more often than you’d think, what you need is not hundreds of thousands, but just five or ten people who know best” (Oram, 2007).
- There are few examples of the rule of the many. Even in democratic systems, we are more accustomed to the rule of delegates. Thus, the involvement of the multitude the Athenian way has few examples and seems difficult to achieve. Our political culture is ill equipped to deal with a broad understanding of citizen participation. Rather, “(...) the devaluation of citizenship is an integral component of a ‘successful’ modern democracy; not a failure to be corrected by technical means” (Varoufakis, 2014). Effectively, “(...) e’democrats will be facing the task not simply of involving more people in deliberations regarding policy making but, more ambitiously, of deploying new technology as a part of a broader political intervention whose purpose is to re-invent the political sphere” (ibid).
- We do not seem to have tools yet that allow for the deliberation of complex issues. Rather, we seem to use liquid democracy tools to ask ready-formulated questions, which are not stimulating enough. Furthermore, traditional political institutions are lacking the experience to generate attention and resonance for political topics.¹²

¹² See the examples of Swiss political parties and their restricted use of Web tools to connect with the crowd in Kruse (2010).

In summary, the effects and impact of P2P on political participation seem rather modest or mixed at this stage. This is most obvious at the level of nation state institutions (Mickoleit, 2014). Here, the necessity for individuals and P2P to collaborate with existing political institutions (parliaments, parties) in order to obtain political legitimisation clearly sets limits to the potential of enhanced participation. The complexity of aggregating social preferences and the consequent separation of decision-making and deliberation – connecting citizens mainly to the latter – are obvious restrictions.¹³ But if we shift our view from nation states to cities, things suddenly become possible that seemed impossible (P2P Foundation, 2014). Unlike nation states which are often engaged in competitive zero-sum games, the prevailing relationships in cities are based on communication, trade, transportation and culture. Cities are inherently pragmatic rather than ideological. Thus, the institutional frame of cities seems more suited for P2P, as Benjamin Barber argues: “They collect garbage and collect art rather than collecting votes or collecting allies. They put up buildings and run buses rather than putting up flags and running political parties. They secure the flow of water rather than the flow of arms. They foster education and culture in place of national defense and patriotism. They promote collaboration, not exceptionalism” (ibid). It can then be argued that collaboration by peers to produce public products and services even if mainly focused on the city or community level is by itself fostering new social and ultimately political relationships, giving a more specific meaning to the phrase “to resist is to create”.¹⁴ This does not exclude the possibility for enhanced political participation in the traditional system. It rather sets a trajectory for a transitional process that could start with increased self-organisation of peers to deliver public goods and services, leading to more participatory and inclusive political

13 For the ‘impossibility’ of aggregating social orders and its grave consequences for democracy, see Arrow (2012:59): “(...) the only methods for passing from individual tastes to social preferences which will be satisfactory and which will be defined for a wide range of sets of individual orderings are either imposed or dictatorial”. The consequences were clear limitations of political participation: “Voting, from this point of view, is not a device whereby each individual expresses his personal interests, but rather where each individual gives his opinion of the general will” (ibid:85).

14 In this context, P2P is a more collective strategy than individual market action, and its underlying values and practices are a political statement in itself: “Peer to peer has indeed to be seen as an object oriented sociality, where person-fragments cooperate around the creation of common value. What connects individuals who participate in open and shared knowledge, software or design projects is the ability to connect their own ends, with some transcendental collective goal (building a universal operating system, constructing a universal free encyclopedia, constructing an open source car, etc.). In peer projects, individuals aggregate a particular passionate pursuit into a collective project. This is important, because whereas in individualist market visions the invisible hand indirectly creates public benefit (at least in theory and ideology), in peer to peer the intentionality of the collective project is integrated in the effort itself. Contributors to Wikipedia or Linux do not see the end result as an indirect result of individual transactions, but as the result of a particular social design which harmonizes individual effort and the collective goal, with the integration of both seen as non-contradictory. This gives peer to peer relationality a strong collective aspect, which was absent in the previous individualist epoch” (Bauwens, 2010).

institutions later on, once these collaborations consolidate and claim their share of political power.¹⁵

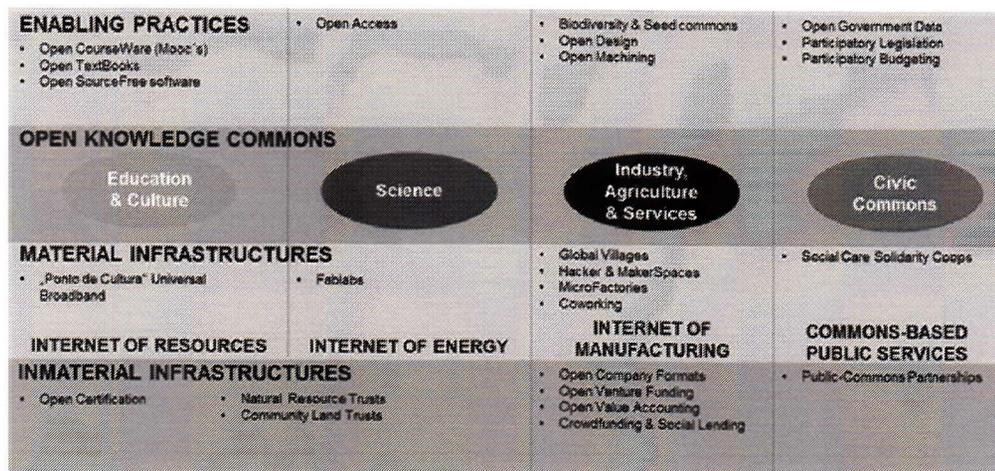
11.3.4 *The Emerging Partner State*

The aforementioned examples of collaboration may now lead to a new role of the state: a state that rather enables and empowers the social creation of value by its citizens. It protects the infrastructure of P2P cooperation and the creation of commons: The state evolves into a manager of a 'marketplace', stimulating, enabling and organising the assets of the country – the abilities and motivations of its citizens – in an efficient manner. The state will use modern devices and digital platforms to do this. By providing the prerequisites of peer production, the strategy of the state changes: Instead of providing the services all by itself, a strategy that encourages and enables peer production becomes relevant. "Can we imagine a new compact between government and the public, in which government puts in place mechanisms for services that are delivered not by government, but by private citizens? In other words, can government become a platform?" (O'Reilly, 2009:65). We can already observe that some states and nations are embarking on, or rather trying out, this kind of role. An interesting project to be cited in this context is the FLOK project of Ecuador, which aims at elaborating ways towards an 'open economy' (see Figure 2). Clearly, in order to stimulate peer production, a set of enabling practices are needed.

The peer is a typical knowledge worker. This implies that access to learning content is crucial to peer productivity, allowing the knowledge worker to retrieve learning contents for free, on demand, preparing him/her for the next task. The impact of digitalisation on education is already impressive and will have a massive impact on society and the economy. Suddenly, the *Edupunk* way of learning becomes attractive and possible: *a*

15 This consolidation process may have already commenced according to some observers: "Look closely and you will see a messy, uncoordinated, bottom-up movement struggling to assert itself. Just below the radar of mainstream media, a teeming constellation of constituencies — internet users, environmentalists, librarians, academics, media reformers, software programmers — is beginning to talk about the commons. This gathering movement is at once an activist phenomenon, a proto-political philosophy and a cultural outlook. It sees the commons as a means to create wealth while honoring social equity and ethical values, an achievement that continues to elude the neoliberal mainstream. (...) At the moment, the wildly disparate threads of this movement have not been woven together. That, in part, will be a primary mission of OntheCommons.org — to give these many voices a forum; to showcase noteworthy fronts of activism and analysis; to puzzle through problems; and to bring together a new community united by some core values, a new story, and exciting new initiatives" (Bollier, 2004). Of course, traditional political parties could also serve as possible 'poles' for consolidating these new forces (Friedrichsen, 2015:21). For the upcoming conflict between these new horizontal powers and the traditional power elite, see Wallerstein (2013).

Figure 11.2 Open Knowledge Society Project of Ecuador. Source: FLOK Society (Free/Libre Open Knowledge Society) (<http://flocksociety.org/>).



strategy of individuals who can have access to online education free of charge in order to create meaningful products in the net.¹⁶ This strategy is already available to anybody who has access to the Web and understands the language of the content.¹⁷ Already, major universities – sometimes behaving as commoners – are spreading their content via digital outlets all over the world, as, for example, the edx.-platform of Harvard and MIT (edx.org). On a smaller scale, the above examples of agricultural solutions have demonstrated that peers can also learn from other peers (lateral learning) and will in turn produce learning content while acting as peers.¹⁸ The role of the state should here embark on a non-elitist learning strategy and open up learning content for anybody for free.¹⁹

¹⁶ The term was coined by Jim Groom in a blog in 2008, cf. Al-Ani (2014: 12).

¹⁷ Even language problems are not the ultimate restriction, as the experiments of Mitra et al. (2005) with slum children in India have clearly demonstrated. The concept also showed that digital learning needs to be complemented with some sort of moral support and coaching (which can be delivered by P2P online as well, as the example of British ‘grannies’ supporting Indian students online showed: <http://grannycloud.wordpress.com/>).

¹⁸ The important effects of lateral learning are described by Rifkin (2011: 244-8).

¹⁹ For the ‘Edupunk Guide to Education’, a manual supported by the Bill Gates foundation, see Kamenetz (2010) and (2011). For new strategies of universities: Al-Ani (2014). For sub-Saharan Africa, see the results of the Tessa program of the Open University, which aimed at giving teachers access to teaching content using smartphones (<http://www.open.ac.uk/about/open-educational-resources/oer-projects/tessa>).

Peers not only need personal skills. In order to produce or enrich products, access to designs – often protected by copyrights – is necessary.²⁰ Clearly, copyrights are the most visible battleground between the traditional economy and the P2P sphere.²¹ Here, the state should propose the use of peer property rights that ensure that peer products remain free and accessible. In addition, the means for reproducing infrastructure (tools, hardware and software) must be given.²² Here, for instance, relatively inexpensive 3D printers provided by the public will be helpful in reproducing parts of complex scientific tools (Open Source Lab): “Working replicas of expensive scientific equipment could be made for a fraction of conventional costs using cheap 3D printers, possibly saving developing world labs thousands of pounds each time” (The Guardian, 2014). Peers already provide design plans for almost any agricultural tools (Open Ecology) to be reproduced using simple and available tools.²³ Eventually, the state could provide libraries for all kinds of relevant products to be downloaded by peers: “This regime of open, shareable knowledge would move away from the idea of privatized knowledge accessible only to those with the money to pay for copyrighted and patented knowledge. The system could be adapted for education, science, medical research and civic life, among other areas” (Bollier, 2014). Of course, the data produced by the state must be opened up as well and be accessible to anybody, thereby increasing the availability of relevant data for market transactions, product design and delivery.

All these prerequisites and contents will be delivered through physical infrastructure (IT, telecommunication), which needs to be open and accessible to the public at minimum possible cost. Also, the state could support and provide virtual platforms that people use to collaborate, as, for instance, demonstrated by the ‘meetup’ platforms that enable citizens to communicate about relevant events and also to collaborate to solve issues of mutual interest.²⁴

20 See here, for example, the successful fight of Brazil and civil society organisations for AIDS drug patents. The Brazilian Administration used P2P mechanisms to mobilise civil support for the cause (Fischer-Lescano/Teubner, 2004:1027f.).

21 See here the work of Lessig (2004).

22 See here the example of reproducing hardware using the Raspberry Pi hardware assembling kit (<http://www.raspberrypi.org/>).

23 Open Source Ecology provides “Open Source Blueprints for Civilization. Build Yourself. We’re developing open source industrial machines that can be made for a fraction of commercial costs, and sharing our designs online for free. The goal of Open Source Ecology is to create an open source economy – an efficient economy which increases innovation by open collaboration” (<http://opensourceecology.org/>).

24 “Meetup is a platform for people to do whatever they want with. A lot of them are using it for citizen engagement: cleaning up parks, beaches, and roads; identifying and fixing local problems” (O’Reilly 2009: 65). In addition, a number of policies will frame the effective and efficient use of these platforms: “(1.) Issue your own open government directive. (2.). (...) create a simple, reliable and publicly accessible infrastructure that ‘exposes’ the underlying data” *from your city, county, state, or agency. Before you can create a site like*

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Finally, it must be clear that the peer also needs some kind of social and financial support. The peer production of common value requires civic wealth and strong civic institutions, something that is often overlooked. The partner state that is complementary to P2P production is not a minimal or retarding state concept. On the contrary, it is based on the best of the welfare state, i.e. solidarity mechanisms, education and open access to almost everything (Bauwens 2012). Thus, if P2P is to be used as a producer of public services, a kind of transfer mechanisms or basic income programmes (like the Brazilian Bolsa Familia program) must be in place to enable this production.

11.5 CONCLUSION

As states struggle to finance/deliver meaningful services to their citizens, providing platforms and stimulating self-organisation of citizens as producers seem a prudent strategy. This cooperation strategy is by no means an easy process, as both entities (P2P and hierarchy) use very different governance mechanisms (i.e. self-governance vs. top-down orders). Furthermore, the danger for P2P is that it could be sooner or later disintegrated or strangled by traditional market and hierarchy mechanisms.²⁵ On the other hand, traditional hierarchies will also seek to incorporate P2P structures and mechanisms in order to capture the benefits of the cognitive surplus and will thus also transform themselves step by step into hybrids making better use of decentralised and self-governing work collaborations while retaining central hierarchical functions. P2P could, in addition, benefit from this collaboration as the often self-centred motivations of

Data.gov, you must first adopt a data-driven, service-oriented architecture for all your applications (...). (3.) "Build your own websites and applications using the same open systems for accessing the underlying data as they make available to the public at large (4.) Share those open APIs with the public, using Data.gov for federal APIs and creating state and local equivalents. For example, cities such as San Francisco (DataSF.org) and Washington, D.C. (Data.DC.gov and Apps.DC.gov) include not only data catalogs but also repositories of apps that use that data, created by both city developers and the private sector. (5.) Share your work with other cities, counties, states, or agencies. This might mean providing your work as open source software, working with other governmental bodies to standardize web services for common functions, building a common cloud computing platform, or simply sharing best practices. (...). (6.) Don't reinvent the wheel: support existing open standards and use open source software whenever possible. (...) Figure out who has problems similar to yours, and see if they've done some work that you can build on. (7.) Create a list of software applications that can be reused by your government employees without procurement. (8.) Create an 'app store' that features applications created by the private sector as well as those created by your own government unit (see Apps.DC.gov). (9.) Create permissive social media guidelines that allow government employees to engage the public without having to get pre-approval from superiors. (10.) Sponsor meetups, code camps, and other activity sessions to actually put citizens to work on civic issues" (O'Reilly, 2010).

25 A process that is already observable with large corporations co-opting political NGOs (Dauvergne/Lebaron, 2014).

peers are now being coupled with needs of communities. This enhanced customer orientation of P2P will further add to its relevance and political legitimisation.

It will, therefore, make much sense for public institutions to reform their institutions and tools to establish this opening towards P2P networks and to direct and enable them to work on relevant issues of the society. Acting as a platform, public entities could seek cooperation with P2P and encourage further self-organisation of citizens. Open government data, open education and the usage of Open Source systems with standardised interfaces towards the public are policies that are already taking shape and would in totality generate this platform function.

We can at this stage only speculate about the political effects of these new social collaboration schemes that will be interwoven into the public services delivery. As these collaborations reflect new egalitarian, collective and self-governing relationships, it is not altogether absurd to assume that these relationships will alter the political fabric and institutions, even if they initially focus on service delivery at the community level. For the state, two possible scenarios arise: The state could begin to support this transformation process and seek a corporation with P2P making use of these networks by directing and encouraging them to solve relevant tasks. Or else, if the state will not move, it will be moved by myriads of P2P collaborations who will not wait any longer for a cooperation and take the matter into their own hands.²⁶ “Where governments fail to or are slow to use those platforms to improve and deliver public services, people and organisations step in and pressure for change. The impacts of ‘bottom-up’ processes tend to increase where social media are combined with online petitions, mobile applications, open (government) data analytics, crowd-funding initiatives, and collective ‘offline’ actions such as protests” (Mickoleit, 2014:3). These collaborations could then unite and form political positions leading to larger structures competing with the traditional settings.

26 This situation has already been depicted by commentators observing the (possible) reaction of younger people to the ongoing crisis in the West “The hope is that these young people will eventually leave the house when the economy perks up, and doubtless many will. Others, however, will choose to root themselves in their neighborhoods and use social media to create relationships that sustain them as they craft alternatives to the rat race. Somewhere in the suburbs there is an unemployed 23-year-old who is plotting a cultural insurrection, one that will resonate with existing demographic, cultural and economic trends so powerfully that it will knock American society off its axis”(Salam, 2010).

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