Online creation communities for the building of digital commons:

Participation as an eco-system?

Contribution to the panel on "Organizational principles and political implications" of the First

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Abstract: Online creation communities (OCCs) constitute forms of collective action based on virtual environments that result in the provision of a public good. In this paper I analysed the organizational logic of the participation in OCCs. The analysis is developed over the case studies of a platform provided by the European Social Forum and Wikipedia. Particicipation in OCCs seems to loose the dichotomist character. Instead, a conception of participation as an eco-system is characteristic of participation in OCCs. In synthesis, participation is understood as an eco-system in six senses. 1) What is important is that the system is open to participation, but it is not expected that everybody participate and contribute equally; 2) Participation has multiple forms and degrees which are integrated. A critical mass of active developers is essential to initiate the project and maintain the content; weak cooperation enriches the system and facilitates reaching larger fields of information resources; and lurker or non-participants provide value as audience or though unintended participation that improve the system; 3) Participation is decentralised and asynchronous; 4) Participation is in public; 5) Participation is autonomous in the sense that each person decides which level of commitment they want to adopt and on what aspects they want to contribute. 6) Participation is volunteering. Participation is not only deliberation but implementation. To conclude I reflect on the political questions and implications that OCCs pose and what do they tell us in term of defining radical or direct conceptions of democracy..

I. Introduction: Online creation communities phenomenon

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[1] This paper presents preliminary results of my doctoral research on the governance of online creation communities which I conducted at the Social and Political Science Department of the European University Institute supervised by Prof. Donatella della Porta. In the analysis of the governance of online creation communities, I pay particular attention to the role of the providers of the platform of participation that hosts the interaction and the organizational and democratic logic and distribution of functions between the providers of the platform of participation and the community of participants in *co-governing* the space. The empirical analysis of this doctoral research is based on a statistical web analysis of a sample of 50 experiences and a comparison of three case studies: i) Wikipedia, ii) Flickr, and iii) the Social Forums Memory Project. This paper also contain reflections which arise from my personal involvement in designing online infrastructure to support direct democracy processes.

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One of the pioneer pieces of research-employing the term "virtual community" can be found in a book with the same title written by Howard Rheingold published in 1993. Rheingold used the term 'online community' to connote the intense feelings of camaraderie, empathy and support that he observed among people in the online spaces. Nowadays, *Virtual or online community* is used broadly for a variety of social groups interacting mainly via the Internet. Several types of online communities could be distinguished.[2] I will dedicate the paper to analyse a specific type of online community, the *online creation communities*. Online creation communities are characterised by having as a common goal the building of integrated and systematized information archives that remain accessible as a public good.

In sum, *Online Creation Communities (OCC) are defined as a collective action performed by individuals that cooperate, communicate and interact, mainly via a platform of participation in the Internet, with the goal of knowledge-making and whose resulting "outcome" remains freely accessible as a public good and collectively owned.*

Knowledge-making in the frame of this research is defined as the process of creation and systematization of socially dispersed information and knowledge resources and cognitive capabilities resulting in evolving bodies of shared knowledge.

OCCs can have very diverse type of goals (i.e.: Memory and documentation of social processes; developing software programs; encyclopaedias; dictionaries; and audio-visual archives; among others).

Online creation communities are an interesting collective action form in rethiking democracy from several points of view. OCC are interesting from the point of view of constituting spaces for civic engagement in the dissemination of alternative information and participation in the public space which could contribute to enriching public discussion and policy-making in a representative or participative democracy perspective. And, OCCs are also interesting from the point of view of direct or radical democracy, in the sense of citizen engagement in the provision of public goods and services based on a *commons* approach, that is provision of public goods not necessarilly linked to the state or other conventional political institutions .

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[2] Other type of online communities are mutual support communities, social networking sites, intra-organization communities of professionals (known as communities of practices), or community networks (physical communities that are supported by an online network) (Preece, 2000).

Furthermore, regarding the internal democracy form of the OCC, OCC constitute "laboratories" to experiment and check the possibilities for more direct conceptions of democracy. In this regard, historically, the local and small communities are presented as having better conditions for democratic organization. Local and small communities could more easily develop control over decision-making processes; the information could more easily reach all members or participants and increase participation. However, online creation communities are participative processes which are able, in some occasions, to engage very large communities. In some occasions OCCs constitute large performances and produce elaborate outcomes, in this regard, a number of questions emerge: How is the participation organized that lead them to grow?; How can complex knowledge-making and sharing take place in such an extremely decentralized form of organization in which apparently formal governance structures are weak or invisible, and in which permanent membership in the classical sense does not exist? How can dispersed activities nevertheless lead to the creation of a complex product such as software code or an encyclopaedia online?

Content of the paper and empirical base

In order to approach the above questions, in this paper I will approach the organization and democratic logic of OCC. First, I will look to data on participation and distribution of the participation in OCCs; to then, analyse the conception of participation in OCC though the Wikipedia and Openesf.net cases.[3]

Openesf.net is a platform provided by the European Social Forum (ESF). The European Social Forum is the main gathering of social movements in Europe. It is the European part of the World Social Forum, which started in 2001 as a meeting of alternatives and as a critic of the neoliberal approach of the World Economic Forum of Davos. Around the Forums meet feminist movements, trade unions, environmental movements, Not Governmental Organizations for solidarity with the south, among others. The Openesf in itself is a collaborative platform. Registration of accounts is not moderated and participants can create "project" or spaces to work collaboratively with each other around common goals. Each project is provided with e-lists, wikis, its own domain and other features. Openesf is used to support the networking of groups around Europe, collaboratively define the program of the next ESF and collectively build the memory of

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[3] I will also make reference to results of a large-N analysis I conducted. For more details see Fuster Morell, M. 2009.

previous ESF.

The other case study is Wikipedia. Starting in 2001, Wikipedia is one of the great successes of collective action on the Web. It is an online encyclopaedia built by the collaboration of volunteers on the web. It contains millions of articles and ranks among the top ten most visited sites. It is based on wiki technology, every one of its articles can be edited by anyone – there is no credential checking. Changes are visible to everyone immediately, without any review cycle. The platform that host Wikipedia is provided by the Wikimedia Foundation.[4]

II. Distribution of participation in content generation in online communities

Around online media (i.e. Wikis, blogs, internet forums) are emerging highly cooperative communities, which rely on visitors to contribute content and each with its own unique culture. Several motivations lead people to contribute to virtual communities (Weber 2004; Benkler 2006). But the question is: how is the participation organized in such forms of collective action?

The research on the distribution of participation in online communities suggests some common features (Hill, Hollan, Wroblewski, and McCandless 1992; Whittaker, Terveen, Hill and Cherny 1998; Nielsen 1997). A very low percentage of committed participants who usually account for a disproportionately large amount of the content; a low percentage of participants that make very small or indirect contributions; and, finally, a largest presence of individuals that aparently do not participate. This distribution of participation is known as 90/9/1 law (Nielsen 1997). It refers that 90% of visitors are lurkers who never contribute (i.e.: only read or observe), however, many feel that they are part of the community (Nonnecke and Preece, 2003); 9% contribute a little or only time to time; and 1% of participants account for almost all the content and system activity.

The tendency to a strong inequality seems to be characteristic of most online communities However, actual percentage per each profile (active participants/contributors/lukers) might not follow exactly the 90/9/1 law. Percentage per each profile might depend upon what the content is and the protocols of participation of each community. Furthermore, due to the variety of online

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[4] The Openesf.net case study is supported by online ethnography and participative observation at meetings (2007 - 2008); 25 interviews; my personal involvement; documentation review and importantly statistical analysis of participation data (digital threads) available at the site. The Wikipedia case study is supported by online ethnography and participative observation at meetings (July 2008 – December 2009); 35 interviews; e-list analysis and documentation review. For the Wikipedia case I did not analysis data on participation, but adopted the available data from previous research.

communities is difficult to establish valid indicators of participation for precise case comparison.

It might be worth clarifying that the 90/9/1 low applies to single sites or communities. The law do not necessarily apply to participation acress all sites. Furthermore, the total participation of each person in online communities could be distributed acress communities. In this regard, a person can be a lucker in one community and an active participant in an other.

III. Organization and conception of the participation in OCCs: Participation as an eco-system?

In the previous section, I have introduced the distribution of content generation among the participants, which resulted in a strong inequality in terms of participation in content generation. In this section, instead, I will analyse the conception of participation in OCC. I will develop the analysis though the Wikipedia and Openesf.net cases.

My analysis starts from the assumption that collective action following a representational ethos and collective action following a participative ethos have their own distinctive logics and dynamics. The meaning and function of participation in a representative organizing form could be different from participation in an open-to-participative organizing form. Furthermore, online environments have some constraints that could affect the way participation takes place in them.

It seems participation in an open-to-participative logic and online environment tends to loose its dichotomist character. Recent uses of technology of information and communication for collective action challenge the notion that there is a binary choice to participation or not (Bimber, Flanagin and Stohl 2005). The egalitarian aspect of participation is reshaped, in the sense that, there is no requirement that everybody contributes and contributes equally. And, importantly, the several instances of participation in the 90/9/1 patterns (committed participation, weak contribution and lurkers or audience) seem to be integrated, each playing a role in the system. This leads me to suggest that a conception of participation as an eco-system is characteristic of participation in OCCs.

Participation as an eco-system refers to five features:

1) Openness to participation

What appears to be relevant is that the system is "open to participation", but it is not

expected that everybody participates and contributes equally. The base of legitimacy is not equality in the actual participation and contribution, but equality in the openness to participation (ones in the site).

The openness to participation dimension is related to the provision of multi-interactivity application that allows participation in the content hosted at the site and the protocols that guided those applications favour equal access to participation (I.e.: Low requirement of credentials to participate; all pages are readable; registration system allow automatic registratin without requering any filter to become part of the platform, among others) (Fuster Morell 2008b).

Highlighting the openness to participation approach in the OCCs I am not implying that OCCS are equally accessible. For example, most OCCs are "blocked" (not accessible) for people with physical disabilities (Fuster Morell 2008b) and digital divide in the access to the NTI also restrict the possibility to arrive to participate in the OCC.

In the case of Wikipedia, the importance of openness is manifested by the emphasis that the community gave by adopting an easy-to-use technology (a wiki) and the lack of requirements of credentials or other requirements to edit it.

Following the Wikipedia case, empirical research showed that there is a strong inequality in the participation at Wikipedia. Around 10% of the participants generate 90% of the contents (Ortega and Gonzalez-Barahona 2009). 10% of the very active participants in Wikipedia are more than 300.000 participants.[5] More than 300.000 participants is a much more open to participation form than if we compare traditional organizing such as the Britannica Encyclopaedia (Emigh and Herring 2005). Furthermore, there does not seem to be a problem of lack of participation in Wikipedia. On the contrary, on some occasions a problem of too much participation occurs. Problems of too much participation happen when the levels of participation are so high that the system is not able to sustain technically and collapses. This occurred for example after the 11 of September attack or the Obama elections in which many people wanted to keep Wikipedia updated.

Interestingly the inequality in the contribution does not seem to be interpreted as a problem among the Wikipedians[6]. GerardM spoke out in an e-list against the idea of regular equal contributor and instead for valuing all community forms: "*When you divide people up in groups, when you single out the ones "most valuable" (because they contribute more), you in effect divide the community. (...). When you label groups of people, you divide them and it is exactly the egalitarian aspect (independently of their contribution) that makes the community thrive*" (GerardM

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[5] Source Wikimedia Foundation. Data available at:: http://en.wikipedia.org/wiki/Wikipedia:Wikipedians.
[6]   Wikipedian is a term that refers to people part of the Wikipedia community.

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e-mail to the e-list Wiki-research-l 21 October 2008).

2) Participation has multiple forms and degrees which are integrated.

The participation is organized in a way that accommodates the different types and degrees of availabilities in terms of resources and interest in contributing of the people.

Very active and committed participants are present. It is particularly necessary the formation of a "critical mass" of active participants for starting an online community. In Howard Rheingold terms: "*An online community either gets started or it doesn't. The first important stage is growth, at the very beginning. If you do not have a critical mass of participation – that could be ten people! If each of those ten people has something to say every day. It could be a thousand people (but without them the online community doesn't get started). But then you're going to have to scale that so that it's not overwhelming for people.*" (Howard Rheingold Interview – December 2009). The very active participants do not necessarily remain composed of the same people over time.[7]

Sporadic or low contributors are also present. The system is organised in a way that it is easy to do small or weak contributions. Modular organization of the information makes it easy to locate information without knowing what occurs in the overall site. Search engines and meta-data systems allow users to profit from dispersed and distributed information. Post information is accepted even if it does not pass a sophisticated qualification process. Tasks in the process of content elaboration are highly divided. In this regard, a person could contribute with non-edited information while another participant takes care of editing it and increasing its quality.

Weak ties are useful for this type of collective action becouse favour reaching vast and diverse fields of information resources (Granovetter 2005). Furthermore, online cooperation around a common goal generally creates weak links (but a large network) in comparison with offline collective action (Cardon and Aguiton 2007).

The weak participation not only refers to the work on contents, but also other types of activities such as contributing by donating money. For example "mini fund-raising" is the main source to sustain 6 million dollars annual budget of the Wikimedia Foundation. Most donation are

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[7] See Ortega and Gonzalez-Barahona 2009 for Wikipedia case.

lower than 30 dollars and 1 dollar donations are also received.[8]

As explained previously weak in terms of *low-resources* contribution are welcome. Furthermore, weak in terms of weak interest and identification with the project is also accommodated. Contributors do not need to identify with the project as a whole in order to participate. In this regard, at Free and Open Source Projects, the low level of active commitment required among participants is seen as an advantage (Freeman and Rogers 2002). Stalder argues that the majority of the participants have an individualistic approach to the platform and very few participants have a holistic interest in caring about the holistic dynamic of the whole platform (Transcripts discussion on web communities, Networked Politics Seminar, 2007). In this line, Stalder develops the idea that online communities are based on a change in the identity building of the individual. From an identity building based on the relationship with big projects, such as political parties or churches, there is a move to the development of a *networked individual identity*, "where individual self-identity – both in terms of the image one has of oneself and the image others have of one - can no longer be separated from one's position within a relational network" (Stalder 2007).

Furthermore, the multi-belonging to several groups could explain the weak contribution. A person belonging to several groups could distribute his or her contribution alone the groups she or he belong. For example, amogn Wikipedians is common that a person has a "home project" where they concentrate their efforts and then also in some occasions weakly contribute to other secondary projects. Empirical research on the Global Justice Movement also highlight the multi-belonging or distribution of activist participation across groups (della Porta 2004).

As previosly presented strong and weak participation are present and accomodate by the system. Weak and strong participation constitute important contributions to the community. Furthermore, no-participation or unintended participation is also present and has a role.

Participation can be indirect participation or a side effect, that is, the system is organised in a way that some participants contribute with zero effort and without intending to do it. In online environments most of the actions are translated into digital information, known as *digital threads*, the elaboration of the visitors digital threads are a source of very valuable information to improve the contents and system functioning. It could provide relational and attention data. For example, if a

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8   Source Wikimedia Foundation.

Wikipedia visitor reads a Network entrance and then goes to the Manuel Castells entrance, the system will understand there is a connexion between them and next time will put them together when presenting search results. Reading provide attention data. For example the system could use the number of times an article was visited or download as an indicator of quality.

The non-active participants also has a role as *audience. Audience* increases the relevance and value of the site content and attrack willing to participation in that site.

In sum, the different levels of participation (strong participation, weak and non-participation) play a role and are integrated and complement each other. Active and committed participants are important to start the online community and assure most of the contents; weak participation favours reaching vast and diverse fields of information resources; and, unentended participation improves the system and as audience increases the value and relevance of the content and the value of participation in the site.

3) Participation is decentralised and synchronous

As the OCCs grow there is a recurrent tendency for them to fragment into projects.

Empirical research has been developed in the relationship between centralization and project size. Research on Open and Free Software projects case suggest that as the project is bigger, the score of centralization get lower . "In a large project, it is simply not possible for a single individual to be involved in fixing every bug. As projects grow, they have to become more modular, with different people responsible for different modules. In other words, a large project might be an aggregate of smaller projects, resulting in what might be described as a 'shallot-shaped' structure, with layers around multiple centres" (Crowston and Howison 2004).

Concerning the Wikipedia case, most of the activities at Wikimedia projects are based on the interaction of small groups. Even there is a profile of participants "that just write articles in his corner". There are very rare occasions which co-involve the entire Wikipedia community, such as the elections and the fundraiser. Furthermore, there is no requirement that participants congregate at the same time.

Concerning Openesf.net case, any participant is part of all the projects. In fact, around 40% of the projects are composed by one only member, the rest 60% are composed from 2 to 27 members. The projects with 3 members are the more frequent (20%) (Fuster Morell 2008b).

4) Participation is in public

Most online communities are public. In two senses, firstly they provide a public good or service, anyone can use their resulting "outcome". Secondly, the projects are developed in public, and actually it would be more accurate to say online communities *live in public*. That is, it is possible to read the content of the communication among the participants without requiring any registration. In the Wikipedia case the whole of the process is visible to anyone, not only the resulting contents. The channels that host the interaction (the Wikis, e-lists, IRC, meet – up, etc) are public.

The public character has to do with external and internal requirements. External refers to a communicative issue, the goal to spread the contents to the external world. The internal is an organizational issue. The public character of the organizational process favours the coordination and the distribution of decentralized participation. Furthermore, the public character of the organizational process facilitates the openness to participation, the learning to participate and autonomy in participation. The public organizational process reduces the need to predefine a plan to distribute participation and a gatekeeper who distributes the participation.

5) Participation is autonomous

Participation is autonomous in the sense that each person decides what level of commitment they want to adopt and in what aspects they want to contribute on the basis of their own interests, motivations, resources and abilities.

6) In part participation is implementation

Participants are volunteers in the sense that they DO things. The participation is in part based on implementing things. In Wikipedia, volunteers deliberate among themselves before the edit the articles (Viegas, Wattenberg, Kriss and van Ham, 2007). The deliberation among volunteers is not to provide an opinion in a consultation exercise as part of a delegation, but for implementing changes in the platform themselves. Furthermore, in the case of Wikipedia form of "doagracy" is present in two senses. On the one hand, who takes care of a particular part of the project decides about it including defining the policies that will govern that project. On the other hand, the control

of the system is over the ability to bring together forces which will act, more than in-favour opinions.

IV. Conclusions

Online creation communities constitute forms of collective action based on virtual environments that result in the provision of a public good.

From a qualitative analysis of the organizational logic and conception at online communities it emerged that participation in online communities loses the dichotomize character and seems to follow an "eco-system" functioning.

In synthesis, participation is understood as an eco-system in six senses. 1) What is important is that the system is open to participation, but it is not expected that everybody participate and contribute equally; 2) Participation has multiple forms and degrees which are integrated. A critical mass of active developers is essential to initiate the project and maintain the content; weak cooperation enriches the system and facilitates reaching larger fields of information resources; and lurker or non-participants provide value as audience or though unintended participation that improve the system; 3) Participation is decentralised and asynchronous; 4) Participation is in public; 5) Participation is autonomous in the sense that each person decides which level of commitment they want to adopt and on what aspects they want to contribute. 6) Participation is not only deliberation but in part participation is implementation.

Political implications of online creation communities: A*dvantages, risks and pre-conditions for a pro-democratic use of the new technologies*

OCCs have a common pattern regarding the distribution of content contribution. Quantitative analysis of participation in online communities shows that strong inequalities in the contribution among the participants seems to be characteristic of these type of collective action. It could be discussed if in other type of open participation (physical) meeting, such as assemblies, also tend to create core-groups and have unequal participation.

For the OCC, there are several mecanishms which explain the uniqual distribution of the content generation and why some people in the online community do not participate. From my

analysis emerged that, in part, the uniqual contribution could be associated to the *flexible* approach to participation in accomodating several degress of availabilities to contribute and, in part, uniqueal contribution could be associated to the multi-belonging. The distribution of the participation resources of each individual alone the several OCCs he or she belong could result in weak participation. Further research is requered in order to fully verify these hypothesis.

Other concrete reasons suggested why people do not participate in online communities are: thinking that they were being helpful by not posting; wanting to learn more about the community before diving in; not being able to use the software because of poor usability; not liking the dynamics that they observed within the group; or feeling representad on what was said by other participants (Preece and Nonnecke 2003).

An other important reason to explain the distribution of participation in online communities and why people do not participate is lack of resources to participate. Resources are a key factor in understanding why some people participate whereas other people do not (Verba, Schlozman and Brady 1995). The autonomous character of participation in online communities suggests that participants are able to contribute according to their own resources of time, skills or money. Resource-rich participants with free-time, educational and technical skills and money could contribute more easily than those without free-time and money, and so the resource-rich tend to be disproportionately represented among participants. In this regard, participation in online communities could reproduce social and economical inequalities present in society. For example, looking at gender distribution of participation at the Openesf.net showed that only 36 % of active participants are women and 10% for the Wikipedia case (Glott, Schmidt and Ghosh 2009).

In *sum*, open system based on autonomous participation depend on (equal or unequal) distribution of resources already present at society. In this regard, the assuring of the citizens resources required to access and use the NTIs constituted also a key pre-condition for the pro democratic use of the NTI.

Online creation communities could be seen as a sign of reinforcement of the role of civil society and make the space of the public debate more participative**.** In this regard, the Internet has been seen as a medium capable of fostering new public spheres since it disseminates alternative information and creates alternative (semi)public spaces for discussion. The other face of it is the risks. NTI's allow exhaustive control of data and sophisticated political marketing, and offer great possibilities for the manipulation of information, with little margin for generating change (Calenda

and Lyon 2007). Rather than strengthening the presence and participation of the citizens in collective affairs, the use of NTIs could end up by reinforcing the control and authority of institutional elites (Subirats 2002). Finally, the lack of online infrastructure provided by public institutions to support online interactions and instead the building of online infrastructure, including key pieces for the Internet functioning (such as search - engines) by private multinational companies could end up with an increase of the privatization of the public sphere.

Related to the above and other reasons, the control of the participants over the data generated in their interaction though online creation communities and, more in general, the control and possibility to civil society to provide the infrastructure which support collective forms and communication online emerge as central for a pro-democratic conditions in the use of new technologies of information.

Additionally, online creation communities could also be seen as citizens directly engaged in providing public goods without the direct involvement of the state or conventional political institutions. In this regard, this research is framed by the notion of transition in which distinct organsational and democratic logics are emerging at a time when the institutional principles of both the nation state and the private market are in a state of profound crisis (in the case of the nation state) and undergoing dramatic change (in the case of the private market). In this regard, in my view, online creation communities could provide insight for the building of institutions in a network – oriented society to be on a base territory that is different to those of the nation-state, built in the joint space of the political and the social, and giving an idea of participation, belonging and citizenship of a different type. However, their democratic effect depend on the conditions under which are used.

Dimensions of democratic quality of OCC

Finally, it is required a double exercise of, on the one hand, evaluating the democratic pros, contras and ambiguities of the emerging institutional and organizational forms, such as the OCCs, and, on the other hand, adapt the dimensions of democratic quality to the organizational logic of these emerging forms of collective action. The meaning and function of participation in a representative organizing form could be different from participation in an open-to-participative organizing form. Furthermore, online environments have some constraints that could affect the way

participation takes place in them. In this regard, it emerges as important to further research and define dimensions of democratic quality in OCCs for the building of digital commons. In order to proceed, it might be necessary to question the tendency present in political science and political sociology to use analytical categories and dimensions of democratic quality of a representational form to evaluate the democratic quality of the OCCs and instead move towards defining dimensions of democratic quality linked to the organizational logic of the OCCs.

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