

Vertical crowdsourcing: The discourses of activity and the governance of crowds in emergency situations.¹

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The paper examines the role of crowdsourcing within the power relations between traditional emergency response institutions and volunteers, relying on the notion of governmentality (Foucault). Relying on the analysis of a Russian portal, Dobrovoletz.rf, the paper introduces a notion of “vertical crowdsourcing” as a strategy that seeks to use crowdsourcing platforms for the governance of crowds in general and for the governance of volunteers in particular. The paper adopts the analytical apparatus of cultural historical activity theory (Vygotsky, Leontiev, Engeström) in order to describe vertical crowdsourcing as a particular type of activity system (Engeström) mediated through crowdsourcing platforms. The history of Dobrovoletz.rf illustrates the struggle over the boundaries of an activity system mediated through a crowdsourcing application. The paper identifies the association between the discourse of the digital platforms (mediation of object-oriented activity through material tools) and the discourse of the language used (psychological tool) around the nature of the subjects as resources within a particular activity system. The analysis identifies two alternative discourses of activity that constitute the role of the crowd’s members as a subject of activity. The first discourse constitutes the subject of crowdsourcing as an independent actor that contributes to the optimization of resource allocation. The second discourse constitutes the crowd as a threat that needs to be controlled.

1. Background: The emergence of crowdsourcing in Russia

“Crowdsourcing should become the norm in all layers [of government]” – these are the words of a president of Russia, Vladimir Putin. The quote is taken from an article on “Democracy and the Quality of the State” published by Mr. Putin in the newspaper *Kommersant* as part of his presidential campaign in February 2012 (Putin, 2012). The story of crowdsourcing in Russia, however, started far from the cabinets of officials in the Kremlin.

The first major crowdsourcing platforms, created by independent groups of citizens in order to address social challenges, appeared in 2010. In August 2010 a project called the Help Map for Victims of Russian Wildfires was developed by a group of volunteers, relying on the Ushahidi online platform (Sidorenko, 2010). Another project, Rosyama, was introduced in the same year by a leading Russian blogger and political activist, Alexey Navalny, in order to map potholes on Russian roads and force local authorities to fix the problem.

Later, Navalny introduced a number of additional crowdsourcing platforms, including Rospil (monitoring corruption) and RoskZhKH (monitoring local infrastructure). Another project, Liza Alert, used an online platform to mobilize Internet users for the search and rescue of missing people (Asmolov, 2011b).

A crowdsourced map of illegal casinos, Gdecasino.ru, introduced the first case where the government actively responded to a citizen crowdsourcing initiative. Dmitry Medvedev, who was at that time in presidential office, called the chief prosecutor and demanded the closure of all the illegal venues shown on the map, while criticizing the law enforcement service for lack of action in response to data coming from citizens (Litvinovich, 2011).

The concept of crowdsourcing gained popularity in the Kremlin in 2011 during the presidential term of Dmitry Medvedev. The Russian president was associated with the development of the first state-affiliated crowdsourcing project, GdeDuraki.rf (Where are fools?), which was supposed to collect reports from Russian citizens about the misbehaviour of bureaucrats and local officials. At the same time it became evident that the tendency of the Russian government was not to respond to problems raised by citizen-based, bottom-up crowdsourcing projects, but to develop their own platforms. When I asked Mr Medvedev why the government tended to ignore citizen initiatives and miss opportunities for collaboration, while developing its own platforms, he argued that this was a problem of political culture:

The only thing I can promise is that I will continue to provide a personal example. But eventually it is a question of how the ministers and heads of department feel. If they don't want to become the dumping ground [to be fired], they should react in this regard. (Asmolov, 2011a)

The polarization between citizen projects and state-affiliated platforms increased in 2011 and 2012, around the time of the parliamentary and presidential elections, when the crowdsourcing platform Karta Narusheniy [Map of Violations] was used for the monitoring of election violations and the crowdsourcing platform Belyi Krug [White Circle], was used for the coordination of protests in Moscow (Asmolov, 2013).

While political activists tried to use crowdsourcing applications to map falsifications and challenge the authorities, crowdsourcing was introduced as part of a new political program for the reform of Russian governance (Naumov,

& Shwartz, 2012). The Russian state-owned bank Sberbank played a leading role in the promotion of crowdsourcing in Russia (Vezhin, 2011). Russian consulting firms started to develop crowdsourcing methodologies and applications. Moreover, the Russian presidential administration opened a new branch responsible for Internet policy, and in particular for crowdsourcing.

On the one hand, the authorities tried to restrict independent crowdsourcing projects. For instance, the NGO Golos, which launched the Map of Violations, was prosecuted, the project's media partners were forced to cancel the partnership and the platform itself was blocked by Distributed Denial of System [DDoS] attacks on the day of the elections (Meier, 2011). The Rosyama project continued to send complaints about the condition of the roads to the authorities and, while the complaints were officially welcomed, according to the founder of Rosyama, a number of measures were taken to block information from Rosyama, including the restructuring of the official platforms that were supposed to collect complaints from citizens and the use of a key-word filter to block complaints that came from Rosyama (Ezeev, 2014). On the other hand, Russian official institutions introduced new crowdsourcing initiatives and new platforms at the municipal, regional and state levels.

The development of crowdsourcing in Russia can be described as a dynamic of innovation, where digital innovation by citizens and NGOs have challenged the power of traditional institutions, and the latter have tried to restore the power balance through restricting citizen innovation, changing the legal environment in order to increase the degree of regulation and developing their own innovative tools, as well as through new practices and new institutional structures (Asmollov, 2013).

There is, however, beyond the dynamics of innovation as a process of changes in power relationships, also another dimension to the development of information technologies. The purpose of this paper is to offer an overview of the nature of the innovations introduced by traditional political institutions in response to challenges introduced by horizontal, bottom-up actors.

The paper suggests a conceptual framework for analyzing the development of crowdsourcing projects as part of the power relationship between grassroots formations and traditional institutions, and applies this

framework to a case study from the field of digital platform-mediated engagement of volunteers in response to emergency situations in Russia.

2. Theoretical framework: Crowdsourcing as the governance of crowds.

Since David Howe introduced the concept of crowdsourcing in 2006, it has become a topic for academic debate. One of the key issues addressed by scholars is the definition of crowdsourcing, including who are the actors that participate in crowdsourcing, what is the nature of the relationship of these actors, and what crowdsourcing can be used for. The literature has introduced a variety of case studies of crowdsourcing projects, from commercial, political and social fields, including profit and not-for-profit applications, as well as a variety of resources that can be mobilized from the crowd. Special attention has been dedicated to instrumental questions of how to make crowdsourcing more effective, sustainable and credible. In light of the ongoing discussion, Estellés-Arolas and González Ladrón-de-Guevara (2012) have aggregated 40 definitions of crowdsourcing and suggested their own.

Following the logic of social capital, Prpić and Shukla (2012) suggest conceptualizing the resources that can be mobilized by relying on the mediation of digital platforms as crowd capital. For the purpose of this research I approach crowdsourcing as the “digital platform-mediated mobilization of resources of networked individuals² (crowd) in order to achieve a particular goal.” (Asmolov, 2014c) However, further analysis of crowdsourcing requires a more detailed understanding of the nature of crowd resources.

The resources that can be mobilized through crowdsourcing include sensory resources (e.g. for the purpose of monitoring and data collection), analytical resources (e.g. data mining), professional resources (relying on the specific expertise of an individual), physical resources (relying on the physical power of the individual), material resources (e.g. specific things/goods) and financial resources (e.g. the case of crowdfunding) (Asmolov, 2014c). The scope of this research is also limited to the mobilization of volunteer resources, with no financial reward, meaning that crowdsourcing is approached as the digital platform-mediated mobilization of volunteers.

² A notion introduced by William Dutton (2009) as a part of the Fifth Estate concept.

Approaching crowdsourcing as a concept that deals with the mobilization of resources suggests an additional layer of analysis - the structure of power relationships around crowdsourcing applications. Accordingly, the questions asked are: who can benefit from crowdsourcing, whose interest it serves and threatens, as well as whether the emergence of crowdsourcing applications changes the balance of power relationships in specific fields.

While the initial definition by Howe describes firms as the major actor, using crowdsourcing in order to maximize profit and achieve their goals through relying on the mobilization of crowd resources while decreasing their costs, in recent years we have witnessed how the number of fields for crowdsourcing applications and the actors who apply crowdsourcing is constantly expanding. Applying the notion of connective action (Bennett, & Segerberg, 2012) allows us to emphasize the way that crowdsourcing applications enable self-organization beyond the institutional framework of a traditional organization.

The optimistic view suggests that crowdsourcing empowers grassroots actors and horizontal projects, while allowing the mobilization of the “cognitive surplus” for good (Shirky, 2010). It situates crowdsourcing within a normative dimension, as a mechanism of mutual aid (Benkler, 2011) and global goodwill (Meier, 2013). Following the analytical concept of mass self-communication (Castells, 2007), one can argue that crowdsourcing suggests a mechanism for mass self-mobilization. On the other hand, post-Marxist scholars emphasize the role of crowdsourcing as a new form of exploitation of digital labor that serves the commercial interests of major commercial actors (Fuchs, & Seignani, 2013).

While there is, thus, a polarization of views on the role of crowdsourcing in power relationships, approaching crowdsourcing as a digital-platform-mediated mobilization of the resources of the crowd allows us to place crowdsourcing in a more general context, beyond the discussion of the role of information technologies, and to add historical perspective. Efforts to mobilize the crowd are not a new thing. The state, as well as other actors, has always been interested in harnessing the power of volunteers or/and in forcing people to “volunteer.”

For instance, the idea of “Subbotniki” – Saturdays where all citizens had to volunteer and participate in cleaning - was introduced after the Bolsheviks came

to power in Russia and linked to a famous image of Vladimir Lenin carrying a baulk on his shoulder. There is no fundamental difference between these efforts and the contemporary crowdsourcing platforms that call for volunteers to participate in mapping waste and its collection.



A soldier of the Red Army points his finger toward the spectator on the famous poster captioned “Have you registered as a volunteer?” (1921). In 2010 the same image was adopted in order to call volunteers to participate in response to wildfires. The figure of a male soldier was this time replaced by a woman without uniform, with the same message and a link to a crowdsourcing platform that facilitated citizen-based emergency response. In other words, the institutional mobilizer was replaced by an independent citizen engaged in bottom-up mobilization.

Approaching crowdsourcing as a form of empowerment or a form of exploitation will provide only a limited understanding of this phenomenon. Information technologies, and in particular crowdsourcing, have enabled new forms of harnessing the power of the crowd. However, at the same time they offer hegemonic actors new opportunities to challenge this power through mechanisms of mass self-mobilization. In other words crowdsourcing as a methodology for the mobilization of the crowd forms a new field of struggle between horizontal and vertical structures, institutional and informal forces acting on the resources of the crowd.

Accordingly, this research suggests adopting the Foucauldian approach to power as not a stable form of domination, but a permanent contest. According to

Foucault, power is “a productive network which runs through the whole social body” (Foucault, 1980, p. 119) and has a decentralized nature. It is reproduced and challenged through every action including discursive practices that rely on language. In “The History of Sexuality” (1978, pp. 92-93) Foucault says that “power is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategic situation in a particular society.”

Foucault argues that the main subject of a power relationship is the possibilities of action by other people: “To govern, in this sense, is to structure the possible field of action of others.” (Foucault, 1982) In his lecture entitled *On Governmentality*, Foucault explored the notion of governance, which does not necessarily mean a form of coercion or domination:

Governing people, in the broad meaning of the word, governing people is not a way to force people to do what the governor wants; it is always a versatile equilibrium with complementarity and conflicts between techniques which assure coercion and processes through which the self is constructed or modified by himself. (Foucault 1993, pp. 203-204)

Foucault requires differentiating between power and domination:

We must distinguish the relationship of power as strategic games between liberties – strategic games that result in the fact that some people try to determine the conduct of others – and the states of domination, which are what we ordinarily call power. And, between the two, between the games of power and the states of domination, you have governmental technologies. (Foucault 1988, p. 19)

According to Lemke (2002) power as a strategic game “signifies structuring the possible field of action of others,” while it does not mean exercising power against their interests or threatening their liberty. On the contrary, Lemke emphasizes that it can lead to “empowerment” and “responsibilisation” of individual actors. Equally, however, Lemke explains that “government” refers to more or less systematized, regulated and reflected modes of power (a “technology”). The third type of power, “domination,” deals with asymmetrical power relationships and the limitation of a person’s liberty. According to Lemke (2002), the systematization of power relationships as a part of the technologies of governance “may lead to a state of domination.”

This paper suggests an analysis of crowdsourcing relying on a notion of governance as a disciplinary mode of power (Foucault, 1982) that seek to govern a crowd and take crowdsourcing from a state of strategic games toward a state of governance, and possibly a state of domination. While discussing the governance of the self, the governance of family, the governance of souls and lives, the governance of children, and other aspect of governmentality, Foucault links state governance with the emergence of the notion of population and accordingly with the governance of populations:

Governmental state, essentially defined no longer in terms of its territoriality, of its surface area, but in terms of the mass of its population with its volume and density, and indeed also with the territory over which it is distributed, although this figures here only as one among its component elements. (Foucault,1991)

The development of information technologies contributed to the transformation of populations into networked crowds that are not bounded by geographical location. This introduced new challenges for the governance of populations, due to the increased distance between populations and territories. New digital technologies make the traditional techniques of governance less efficient and are a challenge to the governmentality of populations. The emergence of a networked crowd as a resource, and accordingly as a subject for regulation suggest a necessity for the “governance of crowds”. In this light, the research discusses if crowdsourcing can be conceptualized as a governmental technology and a “technique of power” (Foucault, 1975).

To conclude, relying on Foucault’s notion of power and governance, I would suggest approaching crowdsourcing as a technique of power that structures the possible field of action of others. The structuring, however, can take place in different contexts of power relationships, either as a part of a strategic game around the mobilization of crowd resources or as a part of the governance of crowds and in particular the governance of networked volunteers, which can also potentially lead to a state of domination.

This paper suggests that analysis of various crowdsourcing platforms can identify what role is played by these platforms as a part of power relationships, and distinguish between platforms that represent substantially differing techniques of power, as well as following the genealogy of crowdsourcing platforms as a transition is experienced from one mode of power to another

within a process of development and as an outcome of power struggles. In addition, while exploring how crowdsourcing platforms constitute the subject of crowdsourcing (the networked individual whose resources can be mobilized), one may distinguish between crowdsourcing as a technology of self-governance and crowdsourcing as a technology for the governance of others.

3. Methodological framework: Mapping the discourse of activity

In light of the argument that crowdsourcing is a technique of power that can be applied in order to govern crowds, the purpose of this analysis is to identify when crowdsourcing platforms are used as a part of a strategic game between liberties, a mode of governance or a form of domination. Accordingly, the empirical question is how crowdsourcing platforms structure the possible field of action of others. Responding to this question requires suggesting a more specific notion of what the “action” is and of the role of digital platforms in mediating the action.

In order to analyze how crowdsourcing platforms structure the field of action for others, this analysis adopts the conceptual apparatus of cultural-historical activity theory (CHAT) and suggests focusing on activity as the major level of analysis (Leontiev, 1978). Accordingly, the methodological framework for the investigation of crowdsourcing platforms suggests conceptualizing crowdsourcing platforms as artifacts that mediate activity and give rise to activity systems

The notion of activity systems and mediating artifacts relies on cultural-historical activity theory (Engeström, 1987). The basic assumption of CHAT is that the relationship of individuals with their surrounding environment is always mediated through artifacts. According to Nardi, “all human experience is shaped by the tools and sign systems we use.” (Nardi, 1996) This notion was introduced by Lev Vygotsky (1978) through his depiction of a triangle in which the actions of a subject are always directed to a particular object while being mediated through an artifact. According to Kaptelinin and Nardi (2006, p. 56), “the structure of a tool itself, as well as learning how to use a tool, changes the structure of human interaction with the world.”

Accordingly, the role of digital platforms in structuring the action of volunteers can be approached as the mediation of an object-oriented activity that relies on a digital artifact. According to Vygotsky, activity is the artifact-mediated relationship between the subject (the individual) and the object (the purpose of the activity). In the case of crowdsourcing platforms for emergency response, the subject is the volunteer and the object is the response to a disaster.

Alexey Leontiev (1978) extended the notion of mediated activity from the internal process of the individual's development to the external process of interaction between the individual and his surrounding environment. Kaptelinin (2014) summarizes the core argument of Leontiev's notion of mediation:

For Leontiev, mediation is primarily understood as tool mediation, which transforms human interaction with the objective world as a whole. The transformation makes it possible for a person to appropriate socially developed forms of acting in the world. Tool mediation shapes the entire structure of meaningful, purposeful activities.

The role of the artifacts can be associated with the development of different types of activity system (Engeström, 1987). Engeström has suggested a graphical model of collective activity that relies on extending the Vygotsky's triangle. This model identifies a number of new components, including rules, community and division of labor.

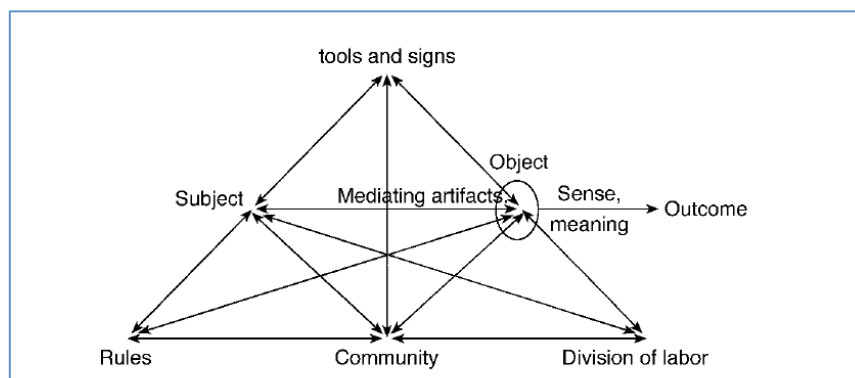


Fig. 1. The structure of a human activity system (Source: Engeström, 1987, p. 78)

The notion of community allows the argument that a division of labor takes place in a particular community around a particular object. At the same time, an activity system is based on a set of rules and norms shared by its members.

Engeström (1999) notes the proximity of the Foucauldian approach to language as a form of discourse and the way activity theory conceptualizes mediation. While Foucault emphasizes the role of language in the constitution of social reality through discourses, activity theory suggests that mediation takes

place not only through language and symbols (conceptualized as psychological tools), but also through physical objects conceptualized as material tools. Psychological tools and material tools have equal status as artifacts that mediate the relationship between the subject and the environment. Both type of tools are internalized in an individual's mind, while "externally mediated functions become internally mediated." (Kaptelinin, & Nardi, 2006, p. 43)

In light of the discussion above, one can argue that discourse can be found not only in language, but also in tools. Applying CHAT as a methodological framework for the analysis of power relationships, relying on the Foucauldian notion of power, suggests that crowdsourcing platforms can be approached as a "discourse of activity." In order to understand the role of crowdsourcing platforms in power relationships, we need to identify the discourse of activity embedded in a platform. The analysis of discourse relies on the triangle of activity system

Accordingly, applying CHAT allows arguing that the activity of crowds is governed through mediation by digital platforms. Crowdsourcing platforms structure activity in a particular way and give a rise to a specific type of activity system. Applying the notion of an activity system to the analysis of crowdsourcing platforms as mediating artifacts allows us to identify the "discourse of activity" mediated through the platform, and accordingly to respond to the question of how a crowdsourcing platform structures the field of action of others, as well as how it constitutes the subject of crowdsourcing within a power relationship (whether this is a strategic game, a mode of governance or a form of domination).

Framing the discussion about crowdsourcing as a technique of power that regulates the activity of the crowds allows crowdsourcing platforms to be approached as a field of struggle where we may expect that institutional actors will use this as a new technique of power and as a disciplinary framework for activity, while the horizontal or bottom-up actors will try to use this opportunity to develop independent activity systems.

Activity as a level of analysis allows the conceptualization of the nature of this struggle, which takes place within activity systems as well as around the construction and introduction of new activity systems through new forms of

activity mediation, and the definition of the boundaries of activity systems. In order to respond to and analyze the power relationships around crowdsourcing platforms, the methodological framework suggests exploring what type of activity system for citizens' action is mediated through a particular platform, including:

- What is the object of this system?
- What is the division of labor?
- What is the community?
- What are the rules associated with this platform?

Accordingly, it suggests asking who defines the purpose of the activity and the terms of participation in the activity system.

The analysis suggests a few additional properties of activity systems, including the transparency of an activity system mediated through a particular platform and the degree of activity as reflected through the object. The question of transparency addresses the extent to which the members of an activity system are aware of and have access to its structure of activity. The meaningfulness of activity suggests approaching the object of activity as a range from the mediation of passivity, where the activity system does not mediate any activity, to various forms of activity that require relatively significant resources from the subject. The scale of activity also includes the mediation of objects that suggest minimal forms of activity, which can be conceptualized as "thin participation" following the argument by Zuckerman (Erhardt, 2013)

The framework of the activity system is applied to the analysis of specific online platforms in order to identify the type of activity system mediated through a particular platform. Interviewing developers and managers of the platform allows us to follow the development of the system, and the genealogy of activity in a case of a specific platform, with a focus on internal conflicts and contradictions as a part of the development of the system. In addition, the structure of discourses around the target crowd, the potential community that the platform seeks to activate, allows us to understand the relationship between the developers of the platform and the crowd, and how the crowd is constituted through the platform.

4. Case study

a. General overview

The field of crowdsourcing projects for emergency response has a dual nature. On the one hand, an emergency is not a political conflict between the ruling forces and the opposition, but a state of conflict between people and nature. Accordingly, one may expect less motivation for regulating the crowd in the case of an emergency as compared with a political conflict, where crowdsourcing platforms may cause a political threat. On the other hand, Mark Pelling and Kathleen Dill (2006) suggest that disasters create a stress test for political systems, and in some cases an emergency situation caused by nature can challenge the existing authorities and lead to political change. Pelling and Dill (2010) argue that state actors may approach spontaneous citizen-based self-organization as a threat and respond to it with repression.

In the case of Russia, emergency response was one of the first fields for the emergence of crowdsourcing projects. In the case of the wildfires in 2010, as well as those of a number of subsequent disasters, the so-called “non-system” spontaneous volunteers organized by relying on crowdsourcing platforms and social networks played a significant role in a struggle against the powers of nature (Asmolov, 2014a).

The central case of this paper is the *Dobrovoletz.rf*³⁴ platform, which was launched by a state-affiliated emergency response organization in order to engage volunteers in emergency response. The portal was created by RosSoyuzSpas (<http://www.ruor.org>), an organization of retired emergency response professionals affiliated with the Russian Ministry of Emergency Situations (MCHS). This platform was the first major state-affiliated effort to create an online platform that would allow volunteers to be engaged in emergency response.

This analysis relies on interviews conducted in 2013 in Russia with co-founders and developers of the platform, as well as on an investigation of the structure of the website as a mediating artifact that constituted a particular type

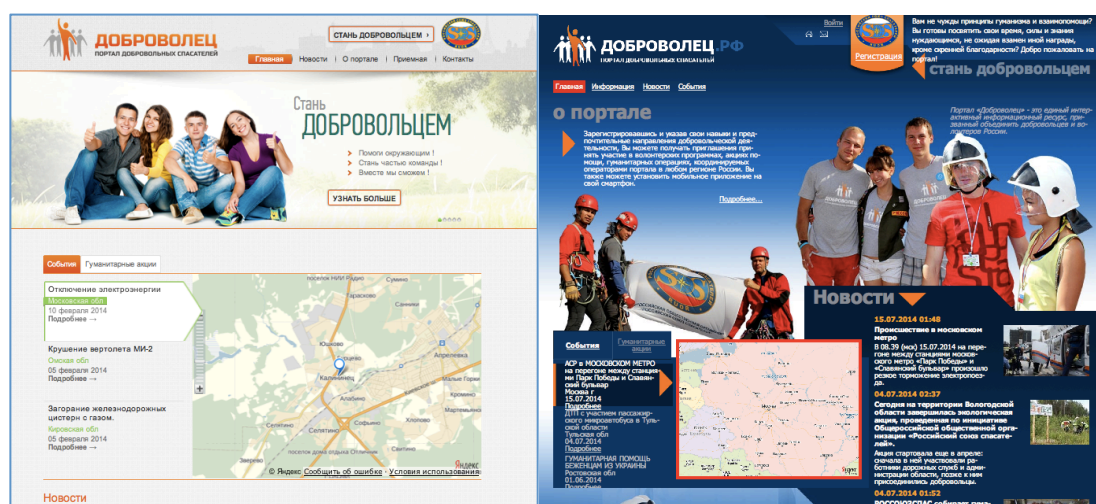
³ “Dobrovoletz” means volunteer in Russian, the literal translation being “a person with a free will” (freewillier). A synonym of “dobrovoletz” in Russian that is also commonly used is “volontyor”.

⁴ The platform is located in the Cyrillic domain. The actual URL of the platform is доброволец.рф

of activity system with the purpose of engaging people in response to an emergency. The analysis of the interviews and of the structure of the platform is based on a thematic analysis, while the coding framework was informed by activity theory.

In order to strengthen its conclusion, the paper suggests a brief comparative analysis of Dobrovoletz.rf with the citizen-based emergency response crowdsourcing platform Virtual Rynda: The Atlas of Maps (Rynda.org) – a volunteering portal developed by an independent group of activists with the support of I-Teco, the same IT-group that developed Dobrovoletz.rf.

b. The structure of the platform



The initial design of the first page of the portal suggests an appeal: “Become a volunteer,” with a link for registering as a member of the volunteer community, as well as two categories of news, “Events” and “Humanitarian Actions.” In August 2014, Dobrovoletz introduced a new design that also suggested general news, as well as a number of appeals and the purpose of the platform: “The Dobrovoletz portal is a joint interactive information resource that seeks to unite all “doborovltzy” and volunteers in Russia.”

The page explains that once a user registers and identifies his or her skills, as well as preferences for volunteering, he/she will be able to get invitations to participate in volunteering programs, humanitarian operations and aid efforts coordinated in any region in Russia. The portal also provides a definition of the volunteer as one “who spends the time that is free of work or studies in order to carry out activities with a social utility that contribute to

society, doing this without violating the laws of the Russian Federation, and without any financial or material profit.”

The external page of the website does not provide any information about specific activities of the members of the community of volunteers. The news is of a general nature, with a list of recent emergency events, a general description of what happened and the location of the event on the map. The only way to get more information is to join the community through filling out the form, which requires the provision of detailed information about skills, certification, physical condition and the availability of the volunteer. If the potential volunteer has official certification, he/she receives the status of professional rescuer following a process of verification. In other cases, the volunteer receives the status of general volunteer.

Once the volunteer is approved, he/she gets access to the internal part of the website, depending on his/her authorization. The internal classification includes type of participant (professional rescuers and volunteers) and list of events, as well as humanitarian actions. The following is an example of a “Humanitarian Action” page, while the left-hand column introduces the general structure of the website (2013):

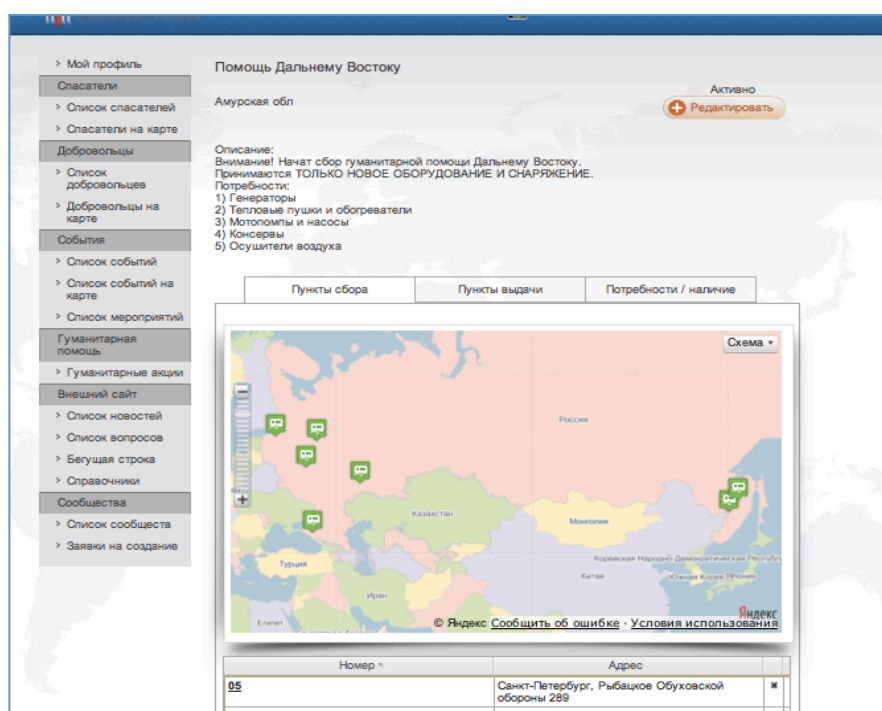
The screenshot shows a web interface for 'Гуманитарные акции' (Humanitarian Actions). On the left is a sidebar with a tree view of site navigation. The main area has a search filter with three dropdown menus: 'Регион' (Region) set to 'Все' (All), 'Событие' (Event) set to 'Все' (All), and 'Статус' (Status) set to 'Активно' (Active). Below the filters are buttons for 'Обросить фильтр' (Clear filter) and 'Поиск' (Search). A table displays one action entry.

Номер	Наименование	Событие	Регион	Статус
021082013	Помощь Дальнему Востоку		Амурская обл	Активно

At the bottom of the table, there is pagination information: 'Стр. 1 из 1' and 'Просмотр 1 - 1 из 1'.

My profile	Rescuers	Volunteers	Events	Humanitarian assistance	External website	Communities
	List of rescuers	List of volunteers	List of events	Humanitarian actions	List of news	List of communities
	Map of rescuers	Map of volunteers	Map of events		List of questions	Requests for creation
			List of activities		Running line	
					Information books	

The “events” and “humanitarian actions” categories suggest a blank page that can be used for general information, including requests. The page shown below was created for emergency response to the Amur floods (2013). It also includes a map with three categories at the top: “Collection Points,” “Distribution Points,” and “Requests/availability.”



All these categories are used to inform, but there are no categories for becoming involved. The humanitarian actions are addressed in general terms. To conclude, while the external section of the website has no categories, the internal side, which is available only to registered users suggests a structure of classification, but these categories do not mediate activity, and are used mostly for providing information.

The structure of the website suggests that only the bounded community of members has access to information, and that only moderators/admins can contribute data, share requests or activate members around a particular event. An ordinary member can contribute information about himself/ herself, follow some news and activities, but his/her capacity to engage is dependent on the moderators of the website, who make decisions about whom, where and for what purpose to activate.

c. Actual usage

Interviewee D, a Director of RosSoyuzSpas, which manages the Dobrovoletz website, argues that the system allows them to reach out to all the users who register, relying on SMS, e-mail or Skype, with any type of information. The system divides volunteers into three groups: members of RosSoyuzSpas, professional rescuers/certified volunteers (about 17,000 in Russia according to Interviewee D) and general volunteers with no specific certification and no skills. The initial plan was to create a platform only for the members of the organization, but according to Interviewee D this was then expanded to include anyone interested in volunteering.

The three groups suggest a community mediated through the platform. Further investigation allows us to identify an association between the structure of the community and the division of labor. The access to information depends on which group the user belongs to and in which region. The task a person can be allocated also depends on his/her skills and which group s/he belongs to. According to a senior developer who participated in the development of Dobrovoletz.rf (Interviewee B), the platform is closed and is primarily used for the coordination of work by members of RosSoyuzSpas.

The mobilization of volunteers through the platform takes place by decision of the executive committee of RosSoyuzSpas and the heads of its branches. Interviewee D suggested that the role of the platform is defined according to Russian law (Law No. 151 concerning the status of the rescuer and Decree No. 794 concerning the united system of response to emergency situations in the Russian Federation): "The law says who and when should respond and the platform is embedded as a citizen rescue formation. Everything

that we do is according to the law.”

The platform was used in a response to floods in the Amur area in the Russian Far East in 2013 (the interview was conducted two weeks after the beginning of this rescue operation). Interviewee D said that the platform was used for coordination between three or four locations of the rescue operation. It was used as an internal system for the exchange of messages and the sharing of photos, summary reports (including needs and actions that had taken place) and general information, for example people’s contact details. That said, most coordination was carried out through radio-based communication. Interviewee D emphasized that all the people involved were professional rescuers:

We have about 45 people who are working there today and more than 100 people who are ready to go there. But these are not just volunteers, these are our people, who are prepared, trained, certified and have all the right equipment. These are not just people who say “I want to work...” and then they go. No.

The website’s section on “Humanitarian Aid,” which was supposed to map needs for humanitarian aid and coordinate its provision, was not working due to limited human resources and problematic connectivity. Interviewee D suggested that in the future the number of computers taken to the location of an operation would be increased in order to optimize work with the platform in real time.

According to interviewee A, a professional firefighter and emergency activist who initially developed the concept of Dobrovoletz.rf, during the floods in the Amur area, the website was used solely by RosSoyuzSpas volunteers as an internal platform, although the initial idea was that the platform would be used by all volunteers in Russia.

The platform is actively used, in particular, by the youth wing of RosSoyuzSpas. It is also the youth wing that presents the platform at events and exhibitions, although interviewee A suggested that this leads to the platform being used as a “fetish”, not as a real response tool.

d. Genealogy of activity

The interviews allow us to follow the development of the platform and to map the major contradictions in the evolution of the project. According to a leading developer of Dobrovoletz (Interviewee C) the initial concept was introduced by a professional firefighter and emergency activist (Interviewee A).

He suggested creating a volunteer portal that would allow a community to be created not only for professionals but also for a more general group of volunteers, and suggesting new opportunities for training and engagement. The platform was supposed to be focused on the facilitation of a transparent process around specific needs, while a number of needs around a specific emergency would create a module of humanitarian aid.

According to Interviewee A, the initial concept was that people who registered with the platform would be able to create their own groups according to their volunteering interests. The platform was supposed to provide an infrastructure for horizontal connections and to allow users to create their own initiatives, as well as activating members within its own projects:

“The idea was that people would be able to create groups according to their volunteer interests while being able to define their personal skills and competencies for themselves. Accordingly people could collaborate horizontally and independently in the groups that they would create relying on the platform, but they also could ask for help from other groups.” (Interviewee A, 2013)

The structure of horizontal collaboration suggested that all the activities should be organized around an “object” and around the “form of help.” The object was the entity that required some form of care (e.g. a monument that needed to be repaired). The “form of help” was the resources needed to achieve the goal. The purpose of Dobrovoletz was to enable a full picture of the human resources available for a response, and to manage those resources by relying on information about people’s skills, experience, reputation, location and availability. The platform was supposed to provide an environment for horizontal connections to identify objects and organize the mobilization of resources. Once a person received a request to activate, he/she could respond as to whether or not he/she was interested.

Following the development of the idea, the developers from the I-Teco group met the leadership of RosSoyuzSpas, which is considered a major emergency response NGO with links to the Ministry of Emergency Situations. RosSoyuzSpas expressed an interest in the idea and decided to develop the platform as a social non-profit project.

Interviewee C argued that he had opposed the idea that the platform should be associated with a specific organization, while the initial plan had been

to develop an environment where any group would be able to create its own community and would have the power to manage itself. At the same time, the development of this environment was supposed to be supported by RosSoyuzSpas, which could collaborate with these groups if needed.

Interviewee C described the proposed mode of relationship between the independent groups and RosSoyuzSpas as a pyramid. The base of the pyramid relied on independent horizontal connections. The vertical dimension of the pyramid, with a developer of the platform at the top, meant not a hierarchical relationship but a “fuzzy connection” that would allow RosSoyuzSpas to engage and coordinate communities in times of emergency (Interviewee C).

However, the developers and the author of the idea argued that RosSoyuzSpas had a very different concept in mind. From the point of view of RosSoyuzSpas, the major purpose of Dobrovoletz was to create a command and control system for a distributed network of certified volunteers. According to the author of the concept (Interviewee A), the involvement of RosSoyuzSpas led to the “detachment of horizontal connections between the groups.” Following this decision, Interviewee A left the project and ended his collaboration.

According to Interviewee A, the decision to remove the horizontal connections was “pure politics”. He explained that “RosSoyuzSpas wanted to have total control over the process and prevent the collaboration of non-system volunteers among themselves.” Interviewee A argued that the reasons for the shift around the purpose of the platform was a fear of non-system volunteers as an entity that could not be controlled, as well as concerns that non-system volunteers might be more efficient than traditional organizations.

According to Interviewee C, the shift toward a vertical hierarchical structure led to major challenges for the development of the platform:

“RosSoyuzSpas decided that if they can harness everything, they won’t give it to anyone else. But why then is the platform needed at all... If RosSoyuzSpas is afraid for their reputation, they will increase their reputation if they create a platform that organizes volunteers and give it to the people. However, what they created is not volunteering, but their own small military.”

One of the points of debate around the structure of the platform was also the degree of transparency around the information on Dobrovoletz.rf. According to one of the developers (Interviewee C), he had demanded transparency around

all activity facilitated through the platform, including information about who had asked for help, what help was required, who had offered their help, and what had happened to the help that was provided:

Almost all volunteers say that they are ready to help, but they want to be it transparent. They don't want to be just people that get tasks and do the work that other people get paid for, but they want the Dobrovoletz portal to be precise, clear and transparent in order to understand the tasks on our agenda, our contribution, and why it's needed. But that element is missing." (Interviewee C)

According to Interviewee D, the Director of RosSoyuzSpas, they had considered making the platform more transparent, but then decided to cease these efforts because if the platform provided information from the area of an emergency, this could immediately be used by the mass media. As a result, it was decided that the only visible element of the activities of the platform would be news: "We put news that shows the work, but no more" (Interviewee D). The rest has remained concealed. Interviewee D says:

If there are volunteers there, they will see the specific section on volunteering according to their authorization and right of access. We did this on purpose in order to avoid chaos.

One of the developers of the platform (Interviewee B) suggested that, while the declared purpose of the platform was the integration of professional and spontaneous volunteering resources around an emergency situation, its real purpose was to create a system for controlling volunteers who had no affiliation with government. He argued that the system had been created as a technological component of a new legal framework that sought to regulate volunteering in Russia.

According to the Director of RosSoyuzSpas, the system had been created in order to allow the monitoring of an individual volunteer's activity, including a personal card for a volunteer that would monitor how much time he/she had volunteered, in what type of activities he/she had taken part and how his/her work had been evaluated:

Sooner or later the "Law of Volunteering" will be approved, and then we will have to register all volunteering activities. Accordingly we thought, how should we do this? This personal card [for volunteers] is going to rely on some type of memory card and will use card readers, or we can do it on paper as a resume, or make a passport for volunteering, and eventually we decided to go with the idea of the platform. (Interviewee D, 2013)

One of the developers (Interviewee C) concluded: "Our initial idea was to make

this platform as a tool for the integration of volunteer resources, but you see, it didn't work. There is zero integration." He argued that the strategic mistake of RosSoyuzSpas was to use the platform as a part of the struggle for the resources of volunteers.

e. A clash of discourses and regimes of control

A former developer of Dobrovoletz, as well as the author of the platform's concept, describe the dynamics around the development of the platform as a shift from the development of an open horizontal tool that was supposed to support collaboration between various independent volunteering groups to a tool of control led by a vision of non-system volunteers as a threat and a source of potential harm during emergency response. The interview with government officials and representatives of traditional emergency response organizations allowed us to identify a number of discourses around the role of independent volunteers, who can be considered as a subject of the activity system mediated through the platform.

Interviewee A differentiated between the two main types of volunteer in Russia – system volunteers, who are affiliated with traditional emergency response institutes, and non-system volunteers – various groups of citizens who self-organize in order to respond to emergencies. One of the stories most often told around the participation of non-system volunteers in emergency response is that of the wildfires in western Russia in 2010.

Some of the representatives of official emergency services argue that the difference can be expressed through language, pointing out the difference between two synonyms: "dobrovoletz" (a word with Russian origins) and "volontyor" (a Russian word with Latin origins):

"Dobrovoletz" is a person who is taken into account. He is registered according to the law.

"Volontyor" – it's like I will go and be a volunteer. The person can be whoever he is – a doctor, a policeman. But "dobrovoletz" is not like that – he will do it only following orders.

(Interviewee F)

One of the major discourses to be found in the way that system-volunteers talk about non-system activists concerns the degree of professionalism and the extent of the training and skills required in order to participate in emergency response. A Director of RosSoyuzSpas said:

I don't want to offend these people and hurt their feeling but a yard-keeper cannot work in an operating room and carry out surgery even if he wants to. The members of our organization are all a current or formers workers of the Ministry of Emergency Response, who have affiliation with this institute. They know what to do and how to do it.

(Interviewee D)

In response to a question about the Russian online volunteer search and rescue initiative Liza Alert, Interviewee D argued that it lacked professionalism and resources:

So ten to 15 volunteers will arrive. They will go to the forest, right? And then the professional rescuers who know how to manage a search in a systematic way will come and ask: "Guys, why are you doing this? What for?"

Interviewee D did not say that there was no place for the involvement of non-system volunteers, but argued that their work should be limited to specific tasks that do not require training and skills: "They can manage information support well, giving out leaflets, talking to people."

Another argument (Interviewee A) suggested that the involvement of non-system volunteers may lead to a wrong allocation of resources as part of emergency response:

They take selfies and shout about how everything around them is bad and they need help without understanding the general picture. That might lead to resources being sent to their area, while this help is more needed in another place with no volunteers and no information online about the scale of the emergency.

According to Interviewee A, non-system volunteers often tended to ignore common rules of behavior in disaster zones (as seen, for example, in the direct distribution of humanitarian aid to the population without coordination in the case of the Amur floods).

Another type of discourse suggests that outside interests drive non-system volunteers and that their motivation is primarily not related to an actual desire to help. Interviewee D suggested the term "PR-volunteer" to describe people who are willing to use emergency situations to promote themselves and improve their own image:

People love to be involved in an emergency situation. They don't understand the law. They just see something and say, "Let's do something. I created a group and have many users and did that and that... Oh, you are a great guy. You should continue and we will help you."

(Interviewee D)

One specific case of this type of motivation is using emergency response for

political ends:

Once something happens some kinds of civic activists come to the area, start posting photos on Facebook: “we are in the ruins, we are with an old lady, we are there.” We have seen many examples in the Krymsk floods of how this works. And they collect political points from this. They get more followers and use the emergency to expand their audience, and then these followers get everything from them. (Interviewee D)

Accordingly, Interviewee D argued that what makes the difference between professionally responsive and non-system volunteers is the distance from politics:

We don’t have any interest in politics. Those people who are involved in politics can do whatever they want, and do their political stuff while collecting points among the ruins, but that is not our story. We act according to the law and that is how our system is structured. All the other rubbish and waste is peeled away. (Interviewee D, 2013)

Some of the representatives of the official emergency service (Interviewee F) even argued that some of volunteers set fires in order to claim that the emergency services were not doing enough, to blame the authorities and attract media attention. Interviewee D suggested that non-system volunteers were also not open to collaboration with official responders: “It is their life position – to deny everyone and everything. According to their view, any state system, any official institution are bad by definition.”

To conclude, Interviewee D constructed an opposition between non-system volunteers who lack professionalism and are guided by political and PR motivations, and professional rescuers who respond according to the law and with no political background.

On the other hand, the volunteers expressed their lack of trust and lack of desire to collaborate with platforms like Dobrovoletz.rf that are affiliated with official emergency response institutions and represent the idea of an emergency response that must rely on the “rule of law”. Interviewee E, one of the coordinators of an online community of volunteer firefighters, explained why her fellow volunteers hesitated to engage with state-affiliated initiatives:

Once you are on the register, you have been counted, you feel committed. But those volunteers that I have been in touch with give a very high value to their feeling of freedom: I want – I go, I want – I won’t go.

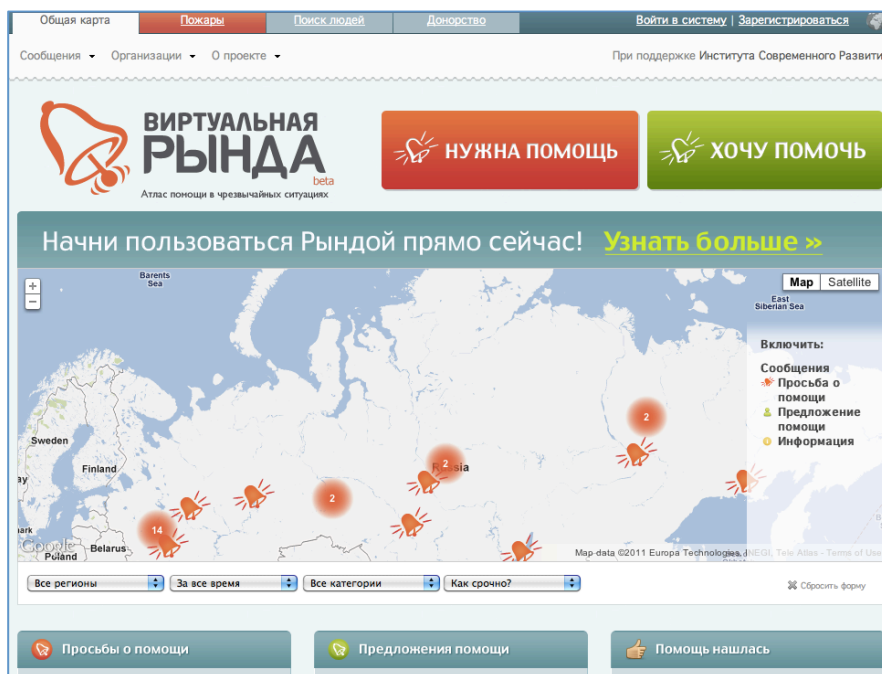
Interviewee E explained that volunteers will not collaborate with state-affiliated platforms, since these initiatives do not allow them to participate in firefighting,

while they are interested in taking an active role in response to an emergency. However, they have these opportunities when they collaborate with an NGO like Greenpeace that also leaves volunteers freedom of choice with regard to forms and times of engagement.

One of the developers (Interviewee C) argued that RosSoyuzSpas had a very bad relationship with independent groups of volunteers, and that this should be seen as a context of the shift in the development of the Dobrovoletz platform. Another developer (Interviewee B) summarized how the relationship between the official system and non-system volunteers affected the development of the project:

As I understand it, there is a negative attitude toward volunteers in the Russian Ministry of Emergencies. During all emergencies, some major efforts were dedicated to sending a message to volunteers that they only made problems and should leave. At the same time, online you could witness an opposite situation when there were a lot of needs, and only volunteers were able to respond, to bring goods and to help. And this system was a way not only of stabilizing this situation, but also of placing volunteers under control.

f. Virtual Rynda: An Atlas of Help.



I-Teco, the same IT-company that developed Dobrovoletz.rf, also supported the development of another platform aimed at facilitating the engagement of volunteers. The platform Virtual Rynda: An Atlas of Help (Rynda.org) was

developed as a second stage of the Help Map for Victims of Russian Fires (Russian-fires.ru) project (2010), which relied on the Ushahidi platform.⁵

The Help Map for Victims of Wildfires was launched by a group of Russian-speaking volunteers at the end of July 2010 in response to wildfires in western Russia that took the lives of more than 60 people. The purpose of the project was to create effective bridges between people in need and volunteers around emergency response to disaster. It connected those who needed help with those who could offer help. In other words, the platform was seeking to support the efficient allocation of resources through providing an infrastructure for direct horizontal communication between people in need and those who are willing to help them (Machleder & Asmolov, 2011).

The idea of the Atlas of Help was to expand the facilitation of resources between those in need and those interested in helping beyond the situations of natural disasters. Anyone could post a request for help or an offer to share a particular resource. The service helped to create a match between the request and the most relevant available resources (Asmolov, 2014d).

Unlike in the case of Dobrovoletz.rf, the facilitation of help took place in an open transparent mode, where information was available to anyone without any request for prior registration. Whether or not to take a part in responding to a particular request was a decision for users, and not for an administrator at the top of the hierarchy. The role of moderators was not the top-down activation of users, but to support the efficiency of horizontal communication. The platform also had a social networking component for volunteers, where anyone could register a personal profile with information about his/her personal background, location and availability. That said, access to this information did not require registration.

According to one of the developers from I-Teco (Interviewee B), the two platforms had substantial differences in their mode of engagement of volunteers. Dobrovoletz was focused on the creation of groups of rescuers around specific events and adding volunteers to these groups in case required:

⁵ The author of this paper took part in the development of the Virtual Rynda platform.

The purpose of Rynda was substantially different. It was a provision of targeted direct help. I visit the website and say: "I have a problem of clothing, I don't have enough clothes for my children". Anyone who has clothes can see this and help me." (Interviewee B)

Both Dobrovoletz.rf and Rynda.org were developed in order to engage volunteers in response to emergency situations, as well as to situations that required aid from volunteers in everyday life (in the case of Rynda). Both platforms proposed a social network of volunteers. However, the way, the two platforms achieved this goal differed substantially.

In the case of Dobrovoletz, information was restricted, access to information was associated with the type of membership within the community and the decision to engage volunteers was of a top-down nature and was made by the leaders of RosSoyuzSpas. In the case of Rynda, the structure of categories within the platform and of information about needs was transparent, access did not require any membership and users decided for themselves if they were interested in responding to any specific request. In addition, in the case of Dobrovoletz needs were also defined solely by the moderator, while in the case of Rynda the notification of needs came from the users of the platform and the role of moderators was to verify information and assist in facilitating horizontal matchmaking between needs and resources.

In other words, while Dobrovoletz suggests a top-down, hierarchical system of engagement in emergency response with strict requirements concerning what is needed in order to become a member of the community, Rynda offered an open system of engagement that relied on the facilitation of horizontal, peer-to-peer connections around the provision of help, participation did not require membership, any specific skill set or verification, and the terms of participation were defined by the users.

5. Analysis

The data demonstrates the shift in the purpose and structure of Dobrovoletz.rf as a project created in order to engage volunteers in emergency response. The initial purpose of Dobrovoletz.rf was to provide a framework for the horizontal connection and self-organization of independent groups interested in volunteering, around emergency situations in particular, and everyday problems in general. In addition, this model suggested enabling the

integration of professional and non-professional resources around an emergency. This type of horizontal model recalls the principle of a sharing economy, while relying on the mediation of a peer-to-peer allocation of resources.

Applying an activity framework allows us to conceptualize the transformation of the initial idea of the project as the transformation of an activity system relying on the properties of the CHAT model:

- **Subject-Object relationship:** In the case of Dobrovoletz.rf, the subjects are the volunteers (the users of the platform) while the object is the response to disaster or any type of purpose that requires volunteering (if the platform is used beyond emergency situations). The relationship between subject and object can be described in terms of the capacity of the subject to define the object of his/her activity or at least to choose the object within a particular activity system (in this case an activity system created in order to respond to disaster). The initial idea suggested that the object would be defined by relying on the interests of independent groups that used the platform, and that this could be launched as a grassroots initiative. Eventually, in the case of Dobrovoletz, the objects came to be defined in a top-down manner by the administrators of the platform, while the subject had no freedom to select a specific object from the range of objects within the activity system or to have any impact on the definition of the object.
- **Community:** The initial idea suggested that the platform would provide a framework for an unbounded open community with many independent volunteering groups, where the activists would launch the groups. In this case, there would be no hierarchy between the groups. The capacity to open a new group was not restricted. The platform was supposed to be used by professional responders to engage with a wide community of independent groups in order to integrate system and non-system resources as part of emergency response. Eventually, however, the platform suggested a different model for the “community”. The community came to rely on three groups arranged in hierarchical order: members of RosSoyuzSpas, certified rescuers-volunteers, and general

volunteers. Joining the community was controlled and made possible only after approval by the administrator of the platform. There was no option to open any additional groups, and the community could now be described as a bounded group of approved users managed in a top-down manner by the administrators.

- **Division of labor:** The initial idea of the project suggested that any group could define its own set of objects according to its own interests. Accordingly, the division of labor around these objects would take place within these independent groups among their own members and could be described as relatively flexible and bottom-up (relying on the interests of the subjects in participating in a particular task, and not just on assigning the task). That said, the major contribution of the platform was supposed to be the provision of a framework that would allow the integration of the skilled and unskilled resources of system and non-system volunteers into one activity system in response to emergency, and define a division of labor between various groups around the same object (a response to a specific disaster). Eventually, the platform suggested a model where the administrator would define the division of labor in a top-down manner, while the tasks of uncertified volunteers became very limited and, using Ethan Zuckerman's term, "thin".
- **Rules:** One aspect of the rules governing crowdsourcing platforms concerns the question of who is allowed to engage and when, or, to use activity theory terminology, the activating of volunteers. In the case of the initial Dobrovoletz.rf project, we could see a high degree of flexibility around the terms of activation, where any group could use the platform in order to engage their members independently, without any request to and/or authorization from the administrators of the platform. The Dobrovoletz.rf project in its current form suggests a platform that allows the activation of members only by decision of the administrator (which, according to Interviewee D's argument, is based on the logic of emergency-related laws).

What is also evident from the data is the substantial difference in the degree of transparency around objects, rules, information about members of community and division of labor in the two versions of project. The initial project suggested a high degree of transparency, while the current project has restricted access to most information and makes public only general news and the membership application form.

The two versions of Dobrovoletz.rf suggest two substantially different activity systems, while having the same subject (volunteers) and the same object (emergency response and humanitarian aid). To some extent, the structure of the activity system of the first version of Dobrovoletz.rf recalls the structure of activity of the Virtual Rynda, which offered full transparency around the structure of the activity system, and allowed the subject to define/choose objects of activity, as well as suggesting a flexible division of labor, an unbounded community around the platform and rules allowing the self-activation of the subject in response to a specific task (object).

That said, the initial versions of Dobrovoletz.rf and Rynda.org also differed substantially. The core idea of Dobrovoletz was the development of a community that could later be activated, but the difference lay in whether these were to be independent communities or communities bounded and defined by the administrator. Unlike Dobrovoletz, Virtual Rynda suggested a direct mediation of activity through the publication of a request for help that could be chosen and addressed by individual users.

Both projects under investigation, Dobrovoletz.rf and Rynda.org, are approached here as artifacts that mediate the activity of volunteers around emergency response and give rise to a particular type of activity system around a natural disaster (or/and other crisis situations). The analysis demonstrates how the structure of the activity system mediated through the online platform regulates the activity of the subject, who in this case is the volunteer.

The paper demonstrates how the system initially proposed as a mechanism for the mobilization of resources through the facilitation of horizontal connections was transformed into a system mediating the top-down, vertical mobilization of resources by a specific actor who controls the system. Applying the activity system framework allows us to follow the nature of the

shift from the initial Dobrovoletz.rf project to the system later developed, with a bounded community, top-down definition of the object, strict rules for the activation of volunteers and a division of labor defined in a way that either restricts the capacity of volunteers to participate or offers thin forms of participation.

The investigation demonstrates the tension between crowdsourcing applications as platforms that mediate the mobilization, efficient allocation and integration of resources, and platforms that mediate control over resources and eventually suggest a form of Command and Control system (C2) over a specific resource (in this case the volunteers interested in participation in emergency response).

Taking into account the notion of activity theory that both language and tools mediate our relationship with the environment, I would argue that crowdsourcing platforms mediate different **discourses of activity** around the volunteer as a subject and the crowd as a community of subjects within a specific activity system.

The first discourse can be conceptualized as a discourse of “**optimization of resource mobilization,**” relying on the crowd. It constitutes a crowd as a resource that can support the achievement of a particular object by relying on the usage of a digital platform. The second discourse is one that situates the role of the platform as a tool for “**control of the crowd**”. In this case, the subject and the crowd constitute a threat and have to be controlled. In other words, any crowdsourcing platform is not only a tool for the mobilization of resources, but also an artifact suggesting a particular discourse around the crowd that potentially can be mobilized/activated through this artifact.

Relying on the Foucauldian notion of governmentality, approaching crowdsourcing platforms as a form of discourse suggests that platforms around the same issues can make differing contributions to the power relationship around the mobilization of volunteers in particular, and the mobilization of the crowd in general. While the crowd is a resource subject to constant ongoing power struggles, some crowdsourcing platforms can be approached as part of the power game between liberties around what is the most efficient form of resources mobilization, while other crowdsourcing platforms present actual

command and control systems created in order to govern the resource of the crowd (and volunteers).

The case studies presented above illustrate how crowdsourcing platforms mediate in different ways the “possibilities of action by other people” and “direct the conduct of individuals” (as it conceptualized by Foucault). Accordingly, crowdsourcing applications present a technique of power which can empower not only the traditional hierarchical actors, but also bottom-up, grassroots actors who rely on horizontal connections.

On the one hand, crowdsourcing platforms that mediate an activity system, as in the case of the initial Dobrovoletz project or in the case of Rynda, allow the subject to “construct the self” through active participation in terms of how the “resource of the self” is used. This type of platform that mediates activity can be linked to the notion of strategic games between liberties where some groups determine the conduct of others, but anyone can participate in the game and choose the most appropriate framework for the mobilization of his/her resources. Moreover, as noted by Lemke, this type of technology can lead to the “empowerment” and “responsibilisation” of individuals.

On the other hand, we can see how the institutional actors affiliated with state actors are seeking to use crowdsourcing platforms as a technique of power to regulate and control the self as a resource. The forms of mediation that seek to determine how others are controlled move toward a state of domination. However, since the participation in these systems is (so far) not compulsory, platforms of this type can be approached as “technologies of governance” that are applied to networked subjects (the crowd). That said, one could suggest that state-sponsored crowdsourcing platforms could develop in the direction of technologies of domination that will enforce a compulsory framework for resource-sharing by individuals in specific countries.

I would argue that crowdsourcing platforms are a technique of governance that suggests the “control over resources” activity discourse can be conceptualized as *vertical crowdsourcing*. A notion of *vertical crowdsourcing* suggests that the structure of activity is defined by the institutional actor, with no space for the influence of agency on the system’s structure. In this case the purpose of the system, the boundaries, the structure of categories, the rules, the

right to participate in the community and the division of labor are dictated by the agent who created the platform. In many cases the major purpose of this type of activity system is not to produce the expected outcome, but primarily to control the activity of the crowd and to neutralize the potential for independent forms of activity.

In the case of Dobrovoletz.rf, the platform seeks to transform spontaneous volunteers into a community through the collection of data about them, and then to control them through the use of that data. The evidence presented above suggests that the main purpose of tools like Dobrovoletz.rf is not the engagement of people in response to an emergency or collaboration between the emergency services and spontaneous volunteers, but primarily the controlling of the volunteer resources. Lack of transparency around the protocol of activation and a vertical hierarchical structure of activation suggest that a platform is allowing the institutionalization of resources without necessarily using those resources, while the registered volunteers have no control over when they can be activated or over the form of their engagement.

One can suggest that in this case the actual intention of the platform is the *mediation of the passivity* of those who are not affiliated with the system. The platform is created as a tool for the mediation of activity in response to disaster, but the vertical structure allows the activation of particular resources to be avoided within the top-down structure of the division of labor. Accordingly, when the floods happened in the far east of Russian in 2013, the platform was used only by members of RosSoyuzSpas as an internal management tool, while the non-system volunteers remained beyond the range of activation. Since the system is not transparent, those who are not activated have no access to the decision-making process with regard to their role in a specific activity system in response to a particular emergency. The mediation of passivity becomes a major strategy for the control and prevention of engagement of particular crowd resources.

The mediation of “thin participation” (Zuckerman, 2013), which means suggesting very simple tasks like the distribution of leaflets, without providing an opportunity for participation in more meaningful activities in line with the interest of the volunteers, can also be approached as a form of vertical division of

labor that seeks primarily to control and to govern the resources of non-system volunteers and to remove them from the centers of activity.

To conclude, relying on the analysis of Dobrovoletz.rf, this paper identifies three elements of “vertical crowdsourcing”:

- Top-down definition of the structure and purpose of crowdsourcing applications.
- Embedded passivity: limiting the scope of forms of participation through the design of the structure of the application, and consequently reducing any potential impact of the crowdsourcing platform.
- Non-transparency of activity: the structure of participation in the crowdsourcing application is not transparent for the user, who has no control over the form of their engagement.

The idea of “vertical crowdsourcing” resembles what has been called “Putin’s vertical of power,” where the range of the vertical extends from various layers of government to the citizens (the crowd). As a political strategy, vertical crowdsourcing seeks to achieve three major goals:

1. To harness crowd resources in order to achieve the state’s goals.
2. To neutralize independent crowdsourcing resources - controlling the resources of the crowd in order to prevent self-organization and the emergence of independent collective action
3. To create a semblance of participation, a facade of transparency and accountability. (Asmolov, 2014b)

All that said, one could suggest that a vertical structure of activation of spontaneous volunteers, in the case of volunteering portals, creates inherited contradictions between the form of management and the nature of the resource, which leads to the emergence of alternative activity systems. These systems are created by non-system volunteers and mediated through independent crowdsourcing platforms.

The data from interviews also suggests that there is an association between the discourse of activity mediated through material artifacts (digital platforms) and the discourses mediated through psychological artifacts (language) around specific subjects (in this case the volunteers and their role as

a resource in emergency response) and communities (the crowd). The interviews conducted with emergency response officials in Russia demonstrate that, from the state's perspective, the emergence of "non-system" volunteers as a powerful actor has been approached as a threat to the image of state institutions, as well as to the capacity of the state to keep monopoly control over crisis situations.

Accordingly, people linked to traditional institutional actors approach volunteers not as a resource, but primarily as a problem and a threat that need to be regulated, which is conceptualized as a discourse of control over crowd resources. On the other hand, the discourses of volunteers concerning the emergency services emphasize the lack of trust in the state-affiliated actors. In this situation, the mediating artifacts created by volunteers seek to mediate an independent activity system that will be relieved of the control of institutional actors and able to facilitate the activation of resources without state regulation.

6. Conclusion:

Following their introduction in 2006, the emergence of crowdsourcing practices and platforms was approached by scholars with mixed assessments of this phenomenon. The cyberoptimist notion emphasized that crowdsourcing can contribute to the manifestation of cognitive surplus (Shirky), contributes to the development of a sharing economy and suggests new work opportunities for Internet users. The neo-Marxist perspective approaches crowdsourcing as a form of exploitation of digital labor that serves the interests of capital (Fuchs & Sevignani, 2013).

Conceptualizing crowdsourcing as a technique of power and a discourse of activity demonstrates that crowdsourcing is a field of struggle around the construction of the selves of the "crowdsourced individuals" and the construction of the crowd as a community. On the one hand, crowdsourcing platforms can empower individuals, give them more opportunities to decide how to use their own resources and increase the efficiency of resource allocation in response to a variety of challenges. In this case, the development of crowdsourcing projects and competition between different projects over the resources of the crowd can be described as strategic games between liberties. On

the other hand, we can see how crowdsourcing platforms suggest a discourse of control over activity and use a technique for the governance of the crowd, while one may suggest that crowdsourcing can also be applied as a technique of domination.

Applying the activity system framework to an analysis of the Dobrovoletz.rf project allowed us to identify the properties that can be associated with crowdsourcing as a technique for the governance of crowds and to introduce a notion of “vertical crowdsourcing.” In addition, the analytical apparatus of cultural-historical activity theory allowed us to introduce the association between the discourse of activity that has been embedded in the material tools and the discourse around the subject of activity that can be found in language (as a psychological tool).

An additional contribution of Vygotsky’s concept is a notion of the zones of proximal development: “the possibility of expansive transformations in activity systems.” (Engeström, 2009) Approaching crowdsourcing platforms as mediating artifacts that enable the development of activity systems raises questions about the new “horizon of possibilities” for potential forms of mediated activity. The discussion in this paper allows the framing of debates about the role of digital platforms as mediating artifacts and as a field of power struggle around the construction of a subject as either an independent or a controlled resource.

Analysis of the dynamics of innovation around the development of information technologies demonstrates a struggle between the self-empowerment of individuals and the application of a “vertical of power” political strategy for how information technologies are used. The latter includes the harnessing of human sensors and the transforming of crowdsourcing applications into technologies for the governance of crowds and new forms of command and control system. The methodological apparatus and the case study presented here should contribute to increasing reflexivity and the capacity to identify the discourses of activity embedded in the structure of digital platforms. This should provide new frameworks and tools for debate about the potential zone of proximal development of digital innovation, and increasing our sensitivity concerning digital-mediated forms of power relationship.

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