

The Issue of Collective Agency in Community-based Open Content Creation

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Abstract

This paper explores the concept of *agency* in Information and Communication Technologies for Development (ICTD), and especially in community-based open content creation (OCC) initiatives. Our position is that in OCC initiatives involving collective contributions from a community's members, the concept of individual agency needs to be tackled in relation to, if not entirely replaced by that of collective agency, which is to be defined and analyzed as different from merely the sum of individual agencies. There are two main levels of analysis pursued in this paper. *First*, we clarify to what extent we can speak of "collective agency", and if we do, in what paradigm we situate ourselves with respect to the understanding of group processes, activities and intentionality. For this purpose, we draw on the literature on agency and collective agency in the philosophy of social science, sociology and social psychology. *Second*, we are interested to explore the mechanisms by which collective agency is established and maintained. Especially, we will analyze the factors that have an impact on the emergence of individual and collective agency throughout a technology intervention, and how these are linked to characteristic features of the community involved. These points will be illustrated by bringing empirical evidence from two OCC cases involving rural communities. By a comparative analysis of the OCC processes in the two cases, and an attempt to link observations and findings to the concept of collective agency, we hope to shed some light on the importance of this concept and practical implications.

1 Introduction

The concept of *agency* emerged in development research and practice in relation to bottom-up developmental interventions, and as opposed to top-down approaches (Malhotra and Schuler, 2005, p. 73; Sen, 1999; Samman and Santos, 2009). In the perspective drawn by this concept, people in disadvantaged positions are not passive recipients targeted by development campaigns, but *active agents*, able to pursue their goals and act towards bringing beneficial change in their life (Sen, 1999; Samman and Santos, 2009). The concept has been central to the work of Amartya Sen, whose vision of development emphasized the importance of expanding people's process freedom, or agency, as well as opportunity freedoms, or capabilities. An appreciable size of the literature approaching agency builds on Sen's work, and relates to other important concepts in development, such as empowerment (Ibrahim and Alkire, 2007; Samman and Santos, 2009; Drydyk, 2008).

In most of the development literature, the term agency is used to refer to individual agency. While the term "collective agency" is used, and in some instances related to that of "individual agency" (Alkire,

2008; Samman and Santos, 2009), it has received considerably less attention than that of individual agency. Nonetheless, collective agency comes out as an important conceptual tool for analysing situations where the focus on the individual cannot capture the complexity of factors that characterize group action. Authors agree that the analysis of collective agency requires a different approach from that of individual agency (Alkire, 2008; Samman and Santos, 2009). In addition, for arriving at a satisfactory operationalization, a few ambiguities around this concept need to be clarified. Is collective agency a sum-up of the individual agencies of members in a group or community? Is it something that transcends the individual agencies, and refers to qualities or properties of the group? And finally, how can collective agency be measured in relation to individual agency?

These are some of the questions treated in the paper. The starting point in this inquiry is the assumption that a clear definition of the concept of collective agency can only build on a just as clear theoretical position regarding the relation between the individual and the group, with deep implications for research at methodological level. To showcase the implications of this concept, our approach is to tap on the vast literature on collective agency drawing on disciplines such as philosophy of social science, sociology, and social psychology.

A second pillar of our approach in treating collective agency is a concern with understanding the mechanisms that drive, expand or limit collective agency. To do so, we considered it necessary to restrict the area of human agency as a generic concept applied to ICTD to agency in a defined developmental context, that of Open Content Creation (OCC) set at group or community level. Some features of OCC allow us to gain an in-depth vision of the fine-grain mechanisms for creating and expanding agency, and of how the individual-group dynamics can be related to the concept of collective agency.

The paper is structured as follows: In a first part, current approaches to the study of agency in development and ICTD research are reviewed, highlighting main theoretical frameworks and the correlations with other important concepts in ICTD, especially the ambiguous relation with the concept of “empowerment”. The second part contains a review of prominent approaches to the study of collective agency, from an interdisciplinary perspective. In here, we will be dealing with a huge field of inquiry, the object of debate across several disciplinary fields. To keep to conciseness, we will highlight the two important polar positions in the debate on collective agency (individualism and collectivism) and then point to alternative approaches. A series of well articulated theoretical frameworks for treating collective agency are described, selected based on their potential for use in ICTD. The third part focuses on agency in OCC, and relates the study of agency to authoriality and technology usage. Further, we will describe an approach to studying collective agency in OCC by drawing on Sen’s theoretical approach and further by employing a distributed cognition perspective. We will illustrate these points through the presentation of results from two OCC initiatives run with rural communities.

2 Agency in ICTD

Amartya Sen’s writings are credited with spreading acknowledgment on the importance of the concept of “agency” for development research and practice. Sen defines agency as “what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important” (Sen 1985, p. 203). An agent, in the same vision, is “someone who acts and brings about change, and whose achievements can be judged in terms of her own values and objectives” (Sen, 1999). At the core of these definitions

stand two important aspects: the scope for action; and the relation with the *inner drives* of the action, such as an agent's values or goals. For Sen, agency has a primarily intrinsic importance, it is a development end in and for itself (Sen, 1999; Alkire, 2008; Samman and Santos, 2009), in addition to its instrumental value and its role in the creation of values and norms (Sen, 1999: 157; Alkire, 2008). Development is the "process of expanding the real freedoms that people enjoy" (Sen, 1999), encompassing process freedom, or agency and opportunity freedoms, or capabilities (Sen, 1999; Des Gasper, 2007, Fernández-Baldor et al, 2009). Agency expansion is therefore one of the central concerns of development.

Sen has outlined several dimensions or facets of the concept of agency, that have been later used by other researchers, especially for developing measurement indicators. Alkire has used Sen's concept of agency for developing quantitative agency measures for individuals and households (Alkire, 2008). Alkire starts from the five core characteristics of agency as identified by Sen and works through the first four of them for developing measures of agency. The first characteristic Sen outlines is that agency is exercised in relation to multiple goals valued by the agent. Second, agency covers effective power (the power to attain the results), as well as direct control (the actual ability to make choices and exercise control over the procedures of an activity). It is important to note that effective power can at times be related to collectivities, and defined in terms of the interdependence of individuals (Sen, 1985; Alkire, 2008). Thirdly, Sen clarifies the relation between agency and well-being. Not necessarily agency is exercised for one's well-being, but it may also go against, for instance when one considers the well-being of others above her own. Fourth, the study of agency demands an assessment of the person's values and their reasonableness. The fifth feature regards the agent's responsibility over bringing about a specific state of affairs. One of the most elusive features of the ones identified by Sen is *effective power*. In most approaches, agency is indeed defined only in relation to direct control (Alkire, 2008; Bandura, 2000), and does not consider the power to actually attain to the agent's goals. Take for instance an alternative definition of agency: "Agency is defined as an actor's or group's ability to make purposeful choices—that is, the actor is able to envisage and purposively choose options" (Alsop et al. 2006, p. 11). As Alkire (2008) notices, these approaches fail to consider effective power, and hence the relation to the *achievement* of the agent's goals.

The *effectiveness* dimension, incorporated by Sen in the concept of agency, is, within alternative frameworks, rather associated with empowerment. We consider it important to illustrate the main differences between agency and empowerment, especially since there is some conceptual ambiguity among the two in the literature. The publication *Empowerment and Poverty reduction. A sourcebook* (Narayan, 2002), outlines a framework for the conceptualization of agency and empowerment that is shared as well by such scholars as Alsop, Bertelsen and Holland, (2006) and Petesh, Smulovtsov and Walton (2005). Empowerment is seen as "the process of enhancing an individual's or a group's capacity to make *effective* choices" (Alsop, Bertelsen and Holland, 2006, p. 10, *our emphasis*). This process builds on the interplay between agency and the opportunity structure. Agency is seen as people's ability to take decisions in accordance with the goals they designed. It is determined by individual assets and capabilities, as well as by collective assets and capabilities (for instance representation and identity). The opportunity structure refers to the institutional climate and the social and the political structure (Narayan, 2002; Samman and Santos, 2009). Agency is understood, therefore, as an ability to make choices, while empowerment refers to the effectiveness of this ability, when the right conditions are met in the external – social, political, institutional – environment. This framework has the advantage of highlighting the interplay of agent-dependent and agent-independent

features for fostering empowerment.

Sen advances a different view of the relationship between agency and empowerment: empowerment is the expansion of agency (Ibrahim and Alkire, 2007). A similar perspective is taken by Drydyk, who insists that agency differs from empowerment insofar as it refers to a state of affairs, while empowerment refers to a process of change and its result (Drydyk, 2008). Agency “refers either to a given person’s degree of involvement in a course of action, or to the scope of actions that a person could be involved in bringing about” (Idem). Empowerment is defined by Drydyk by insisting on the processual dimension and the central role played by the agent in bringing about change: “empowerment is not about merely gaining greater scope for action, but about pushing back the limits of what one can achieve.” In what the effectiveness of the action is concerned, for Drydyk this is part of empowerment rather than agency. Agency refers to “autonomous personal involvement in activities” alone, and does not cover the effects or consequences on the agent (Drydyk, 2008).

Despite the variety of approaches to defining and differentiating agency and empowerment, researchers have also indicated features that apply to both concepts, irrespective of the theoretical stance taken. Samman and Santos (2009) identify from the literature a series of distinctive features that apply to agency as well as empowerment. The first is *multidimensionality*: agency and empowerment can be analysed at different spheres (societal structures, such as the market, or the state), domains or dimensions (a person’s areas of life where she can have decisional power) and levels (from the micro - the household, to the meso - the community, and the macro - the state). Second, the concepts are *relational*, their definition implies setting a relation between the subjects and other human or non-human entities. Thirdly, the concepts are *culturally bounded*, they need to be considered in the context of a specific society’s cultural value systems and norms.

Agency, as well as empowerment have been mostly studied with applicability to individuals, rather than groups. Some studies in ICTD attempted to shift the focus from the individual to the *collective* in relation to concepts such as Sen’s capabilities (Ibrahim, 2006, 2008) and effective power (Alkire, 2005, 2008). Ibrahim (2006, 2008) observes that individuals and their actions are socially embedded; when part of a social structure, such as a self-help group, individuals may cultivate capabilities that can only be developed on virtue of being part of a collectivity (Ibrahim, 2008). In what the concept of “effective power” is concerned, as remarked above this was already in Sen’s approach one that could reflect a collective quality: at times effectiveness is related or conditioned by the interdependence of a group or a community’s members (Sen, 1985; Alkire, 2008).

One attempt to define and operationalize collective agency with applicability to ICTD and development comes from Albert Bandura. While Bandura’s research has not been in the field of development, as Alkire (2008) argues, his research on collective agency can provide the background for creating measurement indicators in development work. For Bandura, we can speak of collective agency when a group sets goals that are “achievable only through interdependent efforts” (Bandura 2000, p. 76). In his approach, personal as well as collective agency are linked to perceived self-efficacy: people are driven to act when they perceive that their action will produce the desired effects (Bandura, 1998: 52).

Perceived efficacy “refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given levels of attainment.” (Ibid.) Bandura’s concept of self-efficacy is applied to individuals as well as groups. “People’s shared beliefs in their collective power to produce desired outcomes is a crucial ingredient of collective agency.” (Idem, p. 65). These shared beliefs are not the sum of the efficacy beliefs of individual members, but emergent attributes of the group, referring to the performance potential of the *entire* group (Ibid.). With respect to the relation between personal and

collective efficacy, Bandura argues that both serve similar functions and employ similar processes.

They are not separate in an individual vs. collective realm, instead one as well as the other influence the future that the agent envisages, the effort invested in the activities, the use of resources, etc.

Moreover, Bandura believes that the personal perceived self-efficacy positively influences collective action: the more each member of a group believes in his own performance potential, the better they may all be able to successfully work together.

Despite attention to the collective dimension of agency, most of the literature on collective agency in development and ICTD falls short of providing articulated frameworks and models that could eventually become the basis for operationalization and measurement. This concept has been, on the other hand, intensively studied and debated across several disciplinary fields. To understand the implications of this concept, the following part explores the concept of collective agency across several disciplines, including philosophy of social science, economics, sociology and social psychology.

3 Collective Agency. An Interdisciplinary Review

The possibility to conceive of “collective agency” has been debated in the philosophy of social science in relation with the possibility to conceive of collective mental states, defined as constructs that characterize groups beyond the sum of individual mental states. The two extreme sides of this debate are held by *individualists*, affirming that social phenomena can only be explained through the intentions and actions of individuals; and *collectivists*, claiming that under certain conditions groups or communities of people can be endowed with collective intentionality, that cannot be attributed to a single individual nor be defined as the sum of individual intentionality. Reported to agency, these two sides argue *for* (agency collectivism) and *against* (agency individualism) the possibility that under given conditions groups can be approached as single agents. As we are going to detail further, both sides share however an important assumption: that agency unmistakably leans on the agent’s *intention* to act.

The idea of collective mental states, collective consciousness, or collective mind, to which that of collective agency will come to be linked is of very ancient origin. At the basis stands the assumption that an individual mental state or consciousness can be influenced by, or identified with a collective mental state, characterizing a group, a community or a society. Meanwhile, concepts such as Geist (Being, in the work of Hegel), collective consciousness (Durkheim, 1964), collective mind (Le Bon, 1896), have been put forward. Collective consciousness (“conscience collective”, Fr.) characterized, for Durkheim, early or traditional societies, and referred to a common consciousness shared by individuals on virtue of a common memory, religion and moral code (Durkheim, 1971; Misztal, 2003). In modern societies, this form of consciousness is reduced in scope, and tends to characterize groups rather than societies, such as for instance groups of a common profession (Durkheim, 1964; Misztal, 2003). Le Bon will introduce the concept of “collective mind”, from a very different perspective. Le Bon’s thesis is that “under certain given circumstances, and only under those circumstances, an agglomeration of men presents new characteristics very different from those of the individuals composing it. (..) A collective mind is formed, doubtless transitory, but presenting very clearly defined characteristics. (..) It forms a single being, and is subjected to the *law of the mental unity of crowds.*” (author’s *emphasis*). (Le Bon, 1896: 2). Le Bon mentions several driving engines for this merge of the individual in the collective mind: 1) individuals lose their sense of responsibility, under the cover of anonymity, yield to instincts and perform acts they would not otherwise have accomplished; 2) they become extremely susceptible to suggestions; 3) especially as a phenomenon of reciprocity occurs;

which causes 4) a contagious spread of the former. (Idem: 9-12)

These emblematic examples of collectivist approaches, and others, were discarded as unviable in social science research, especially after the introduction of Methodological Individualism (MI). First coined by Schumpeter, Weber's student, in 1908 (Hodgson, 2003), this position quickly gathered the consensus of established scholars and mainstreamed as the standard for rigorous research. The conceptualization of MI is not deprived of ambiguities, one of which is the distinction between an ontological claim (about the nature of reality) and a methodological claim (about the standard for the study of reality) (Hodgson, 2003). A mainstream position is that the study of all social facts and phenomena should be reduced to the states and behaviour of individuals, position illustrated for instance by Popper: "methodological individualism" ... rightly insists that the "behaviour" and the "actions" of collectives, such as states or social groups, must be reduced to the behaviour and to the actions of human individuals.' (Popper, 1945, quoted in Hodgson, 2003).

A revive of the individualism-collectivism debate has occurred later, with the writings of such scholars as Michael Bratman, Raimo Tuomela and Kaarlo Miller, Margaret Gilbert, John Searle, or Philip Pettit. Each of these authors construed specific constraints or conditions for sound conceptualizations of collective agency, or collective intentionality proper. Gilbert approached groups as plural subjects (Gilbert, 1989) and focused on the members' collective attitudes as shaped by a sense of mutual commitment. Tuomela and Miller claim that in order to be able to speak of collective intention, the action needs to be joint (Tuomela and Miller 1988, Gold and Sugden, 2006). Searle's concept of "we-intention" (1990) is a construct that implies a notion of cooperation among agents, done for achieving collectively held goals (Searle, 1990: 405-411). The relationship between individual intentions and collective intentions follows a pattern where the former (I-intentions) derive from the latter (we-intentions).

A well articulated position on collective intentionality comes from Bratman (1992) who treats the issue as part of the concept of *shared cooperative activity*. There are 3 conditions for a shared activity to be considered as such (1992: 328): (1) Mutual responsiveness: each of the individuals involved in a shared activity are responsive to the actions of the other, and aware of the other's responsiveness. (2) Commitment to the joint activity. The individuals involved in the cooperative activity are each committed to pursue it, though their underlying reasons for doing so might be different. Mutual responsiveness comes as a result of this commitment. (3) Commitment to mutual support. Each agent is committed to provide help or support for another agent to pursue their part of the activity. Bratman relates these three features to a *planning conception of intention*, in which the participants' intentions to participate in the joint activity is operationalized through the design of individual subplans for achieving the given activity. On virtue of a collective intention, held by each participant over a time period, participants are able to coordinate their actions over time, by devising subplans for achieving the action, and ways for meshing" (i.e. coordinating these) so that the final goal is reached.

Beyond the intentionality tenet

One distinctive feature of the collectivism vs. individualism debate resides in an underlying assumption accepted implicitly by both sides: that agency relies on the *intentionality* of the agent. Individualists, for instance, would say that agency can only be held by individuals, insofar as only individuals can be *intentional agents*. Collectivists, on the other side, relate the concept of collective agency to the one of collective intentionality. There are however other ways to approach the issue of collective agency, and the role of the concept of intentionality. In the rest of this section we will analyse closely two possible alternative approaches: one keeps the underlying assumption of a link between intentionality and

agency, but shifts the focus of the analysis from cooperativeness as *property* of intentional states, to group cooperation as a characteristic of the *process of forming* collective intentions. A different line of reasoning, that we are going to detail in a second place, completely refutes the direct link between intentionality and agency, and puts forward alternative modes of conceiving collective agency.

In the first alternative line of reasoning, scholars change the focus of their analysis: rather than approaching the collective nature of intentionality as a feature of a mental state shared by members of a given group, they look at the process which drives and supports the formation of collective intentions. In other words, a further step is added in the duo intentionality-agency: the reasoning that precedes the formation of intentions. This approach is well represented by Gold and Sugden (2006). The authors focus on the process of reasoning that precedes the formation of intentions in groups and borrow the concept of *team reasoning*, drawing on the literature on team decision-making. One key element in team reasoning is the passage from the preferences of each individual member of the group to decisions taken by the entire group. This passage can be understood by abstracting the reasoning of individuals from an *I-form* to a *we-form*, as in replacing the question “What shall I do?” with a “What shall we do?” core question. The “we” perspective permeates all aspects of intending the joint activity: for instance, each group member will reason a course of action based on a consideration of the *joint* capacities of the group members for achieving the stated goal, and the part that she can play *within*. We-intentions, using Searle’s terminology, or collective intentions, appear as a result of team reasoning. The intentions thus resulted are individual mental states, yet they result from a process of reasoning that involved the group, and considered the goals, the interests and the capacities for achieving these goals in relation to the entire group. This approach allows a scholar to look at collective agency while avoiding the pitfalls of metaphysical assumptions about the possibility to conceive and study group agency. Despite the advantages it brings to the study of collective intentionality, this approach can only be used in analysis when several conditions are met: there is a common goal shared by the members of the group; and the situation requires members to engage in open negotiation for pursuing this common goal and planning a course of action based on the contributions of the several members involved.

An alternative theoretical stance to agency is provided by scholars who propose a complete re-conceptualization of the role of intentionality in relation to agency and the division individual/group. An emblematic approach is illustrated in social psychology by Edwin Hutchins’ thesis on distributed cognition. Hutchins and his colleagues at the University of California, San Diego, have developed a perspective on cognition that challenged traditional approaches limited to the individual mind. In this approach, cognition is no longer a localised phenomenon happening in the individual mind, but can be best understood as distributed in a functional system made of the people in interaction inside an informational environment (Hutchins and Klausen, 1995). Two theoretical principles stand at the basis of the distributed cognition approach. *The first* regards the boundaries for the unit of analysis; cognitive processes can be located in the individual brain, but also in the interaction among people. The unit of analysis is the functional system that includes people, artefacts and representations. An important feature of this system is that it can be dynamically configured to coordinate various subsystems as specific functions are performed. *The second* principle regards the range of mechanisms that can determine cognitive processes. These mechanisms include the manipulation of representations inside the individual mind, as in traditional approaches to the study of cognition, but also the manipulation of objects and representations outside individual minds, during the interaction among agents. (Hollan et al., 2002). The focus of analysis in distributed cognition studies is on the propagation of information

inside a functional system, under the form of internal as well as external knowledge representations (knowledge and skills, but also tools and artefacts, such as maps). (Hutchins and Klausen, 1995). The socially distributed cognition approach provided a new foundation for studies beyond social psychology, and was used in anthropology, sociology, organizational and workplace studies (Rogers and Ellis, 1994), and Human-Computer Interaction (Hollan et al., 2002).

Summing up

Part of our concern in presenting an interdisciplinary account of collective agency was with understanding the implications, at theoretical and methodological level, of formulating a specific position on this concept. There are a few elements that stand out with respect to the conceptualisation of collective agency, irrespective of the analytical approach chosen. Firstly, a conceptualization of collective agency asks for a clearly defined *theoretical position* on the relation between the individual and the group, applied in processes that involve reasoning, intending, and acting at group level. It has been shown that collective agency can be conceptualized, or denied, along two extreme positions, both centred on an acknowledgement of a direct link between intentionality and agency: individualism, which negates the possibility of collective agency, and collectivism, which puts forward a theoretical construct of collective agency which necessarily relies on a series of assumptions regarding group-specific attributes. Scholars have also identified ways out of this debate, by either changing the focus of the analysis (for instance focusing on the group reasoning processes that precede the formation of intentions, Gold and Sugden, 2006), or by re-interpreting the link between intentionality and agency at individual and collective level. An illustrative approach is represented by distributed cognition (Hutchins and Klausen, 1995), which employs an analytical perspective that takes into consideration the various entities, human and non-human, as well as the web of activities coordinated towards bringing about a certain outcome.

Second, there are important implications at a methodological level that arise from the definition of the unit or units of analysis used in researching collective agency. Collectivists, for instance, focus on the group as a unit of analysis, based on the assumption that groups can be characterized by features and attributes that are different from the sum of individual attributes. In alternative, the methodological approach based on a distributed cognition paradigm focuses on the activity system as a unit of analysis, and looks at how the various entities that compose it perform jointly for reaching a goal. If analysis involves more than one unit of analysis, clear protocols for relating conveniently between data gathered at different units of analysis also need to be defined.

4 Collective agency in Open Content Creation

In the previous section, some of the implications of conceiving collective agency in relation to individual agency have been discussed. From this short incursion, we have identified a series of aspects that should be taken into account when studying collective agency. This section focuses on a field of intervention in community settings that bears distinctive characteristics. Open content creation covers processes where people are engaged with digital technology for creating digital contents, on themes that are usually related to and relevant for the social and cultural reality in which they live. A definition emerged from fieldwork in an OCC project in Asia (findingavoice.org) sheds light on how this process is understood by the people participating in such initiatives. Participants in workshops organized as part of the Finding a Voice Project define open, or participatory content creation as “content created after extensive discussions, conversations and decision-making with the target community; and where

community group members take on content creation responsibilities according to their capacities and interests” (Tacchi, 2010).

In order to be able to provide a detailed definition of the concept of collective agency in the frame of OCC, we will take into account very specific OCC instances, namely those that involve *collective* contributions at community level, and require cooperation among the members. Illustrative examples that make our case include: building a community website, a digital archive (e.g. Verran, 2006), a networked digital space (e.g. Srinivasan, 2004), or a video (Participatory Video - PV, see Lunch and Lunch, 2006, for a detailed review of PV processes). In all of these examples, a group or a community contributes to representing in a more or less complex form (from a video to a website), an issue or issues that are relevant for the entire group or community (from general themes such as cultural traditions or poverty, to specific problems such as for instance deforestation). It is at the level of this kind of initiatives that we are going to speak of collective agency.

Our concern in this section is to sketch a perspective on conceiving collective agency in OCC, while avoiding the pitfalls outlined in the interdisciplinary review detailed above.

4.1. Conceptualizing agency and collective agency in open content creation: points to consider

Several definitions of agency have been put forward in relation to the usage of ICTs. In the Human-Computer Interaction field, agency is defined in its most straightforward form by Brenda Laurel as “the ability to do something” (Laurel, 1993). Janet Murray reshapes the definition for interactive and cinematic storytelling, putting more stress on the importance of *meaningful* action, and the link between this and a person’s choices and decisions: “the satisfying power to take meaningful action and see the results of our decisions and choices” (Murray, 1997; Knoller, 2010). We shall notice that, just as in Sen’s approach, Murray includes the effectiveness of the actions in the definition of agency. These definitions are applicable across two broad dimensions of interaction with ICTs: usage and authoriality. As shall be explicated further, in OCC the authoriality dimension is emphasized, determining a series of considerations regarding the enablers and inhibitors of agency.

To be able to arrive at a more operational definition of agency in OCC, we highlight a series of key characteristics of this type of initiatives.

A first characteristic feature of OCC is the *centrality of authoriality in connection with technology usage*. The concept of agency in OCC cannot fail to take into account the central role of technology, and nor the way it comes to be linked to people’s capacity to act as authors. In order to become active agents in content production, the people need to have developed knowledge and skills for authoring digital contents, with a central focus on technology usage, but not only. We can then consider the acquisition of knowledge and skills for enabling authoring an essential element for developing people’s agency in this context. *How* this process of learning occurs is another important aspect to consider. We can synthesize this into the concept of *know-how*, with a concern at how it is distributed and flows in relation to the people and tools involved in an OCC initiative. For instance, in an OCC initiative involving an interventionist team, the know-how flow will be from the outside party towards the inside. The efficacy of this knowledge flow will be essential for determining if the people have acquired the necessary assets to act as authors.

Second, an OCC initiative is carried out in a defined time interval, in which attributes that can be linked to agency, such as people’s skills, are *created or expanded*. We can, for instance, hardly speak about agency in relation to authoriality in an illiterate community where a digital content production

intervention is about to start. It is only after some time has passed, people have acknowledged what they can do with digital media, have a clear grasp of the possibilities, and have acquired the skills to proceed, that we can speak of agency in relation to authoriality. An analysis, therefore, needs to account for a dynamic process, an evolution, with a focus on the several elements that support the enabling and the expansion of agency throughout an initiative.

A third related aspect regards the *distribution* of knowledge and skills in the participating community or group, and the relation with the type of contributions that people may bring. Depending on the type of initiative conducted, people may need to develop the same knowledge and skills (as for instance in Participatory Video, in which the roles are rotated) or complementary ones. In the second case, there are interesting implications for the concept of agency: depending on the know-how people will contribute differently to the initiative. We can say, from one perspective, that their agency is limited to the part they are able to directly control. Yet at another level, not the individual contribution, but the final collective result is the one that will adequately fulfil people's goals, which are essential elements in analysing agency. Individual contributions in themselves cannot attain to the goals, if not in their complementarity. The study of agency needs to take into consideration this shift between the individual and the collective and where the analysis focus will be placed.

Fourth, OCC enacts a situation that facilitates *cooperation* among people. OCC initiatives will create the spaces for people to come together, negotiate, decide, and act for common goals. This is why in the frame of OCC we may employ conceptual frameworks for conceiving agency that are only suitable for analysing openly cooperative settings. Conceptual frameworks that refer to team interaction and reasoning - such as Bratman's planning conception of intention (1992), or Gold and Sugden's (2006) approach to studying collective intentionality by focusing on team reasoning - can make appropriate conceptual tools in our case.

Next, we are going to describe a specific conceptual approach to CA in OCC, and see how it can be operationalized, allowing us to arrive at an identification of the mechanisms that can trigger the formation and maintenance of collective agency throughout an intervention.

4.2. A perspective on studying individual and collective agency in open content creation

This part puts forward a perspective on conceptualizing and analysing collective agency in OCC, drawing from the literature on agency, and the experience of running two OCC projects with rural communities. We focus especially on the OCC interventions involving an interventionist team that provides the tools and the initial support for enabling local people to use digital technology for content creation. The purpose is to highlight how agency is formed and expanded throughout this type of project, and how it can be analysed.

The *theoretical perspective* on studying agency employed builds on Sen's approach. The following dimensions are especially important: agency as scope for action, for achieving goals designed by the agent in accordance with their values, and exercised through direct control. Importantly, we also keep to Sen's focus on effective power, hence we take into account the effectiveness dimension, which is not taken into account in other approaches (for instance in Alsop et al. 2006).

Second, a distributed cognition approach is employed, based on Hutchins' theory (Hutchins and Klausen, 1996). The analysis of agency is not restricted to the scope for action of each individual, but takes into account also how they are interrelated and complementary into achieving the collectively held goals related to the OCC. At a methodological level, the unit of analysis is the system of activity

that is being enacted throughout an OCC, composed of agents in interaction, tools and representations. Throughout the analysis, the analytical focus will be shifted towards entities that are part of the system for providing more detailed accounts – for instance individual knowledge and skills, or type of tools used – however the approach is to see how each functions inside and relates to the activity system. The data collection methods used are qualitative, with a focus on observation, participant and non-participant, throughout the process unfolding, as well as interviews and focus groups. In this approach, agency in OCC is related to people's freedom to act towards accomplishing collectively designed goals, by exploiting the potential and through direct usage of digital technologies. This freedom to act, however, would be only a plain word if the people lack the knowledge and the skills to use technology, as well as a capacity to direct their intent tactically for achieving the short-term actions that, in the longer run, will enable them to reach higher-level goals. Ensuring that people have agency will revert to ensuring that they have the means and the power to formulate achievable goals, and the abilities to coordinate their actions towards achieving these goals. At an individual level, the *mechanisms* for driving people's agency cover, in this perspective, the processes that support people's acquisition of the necessary abilities and knowledge for acting as authors. At the level of the collectivity, the mechanisms for driving agency cover the processes that support people's formulation of collectively relevant and achievable goals, allow them to coordinate their actions for reaching these goals, and to take informed decisions, so that the outcomes are collectively acceptable. The *approach to analysing* the vast amount of data that can result from an OCC with a view to highlighting people's agency is to concentrate on two axes of the process, both mapped on a temporal dimension, as the project unfolds. One axis has to do with the *know-how flow*, or in other words with the processes that support the acquisition of the necessary knowledge and skills for people to act as authors and to distribute and coordinate their efforts so that the outcomes are collectively relevant. The other axis has to do with people's *participation* in the process and how it progresses.

Mechanisms for developing and expanding agency

As stated before, agency in OCC is not a pre-given. It does build on pre-existing factors, skills and predispositions, but needs to create anew, expand or re-direct some of these. For instance, a local participant may have prior skills in using the mobile phone, but no skills at all in using a video-camera. For enabling her to act as a cameraman, she needs to acquire further skills, that will build on her familiarization with digital technology. This process of skills-acquisition can be done through training in camera use. In this case, training is a mechanism instrumental to enabling *individual agency*. When we look at OCC that aims to create community-representative artefacts, there is also a need to run the initiative with a view to the collectivity. Within, mechanisms that are meant to support this collective dimension of the effort can be identified. For instance, if a community is engaged in creating a website in a participatory manner, people will come up with collective as well as individual contributions, and a specific strategy needs to be employed for the contributions to be grouped into a commonly acceptable outcome. Group discussions could be devised for discussing possibilities, while negotiation and decision-making sessions can be run with a view to ensuring that all actions are approved by the community members. These group discussions and the decision-making sessions can be taken as mechanisms for supporting *collective agency*. We can define broadly the mechanisms for supporting collective agency as those processes which support generating awareness of, negotiation and definition of collectively held goals, as well as of the means and actions for reaching them.

Without attempting to be exhaustive, we will present below a list of processes aimed to contribute at

enabling and expanding agency, and the rationale for each.

Examples of mechanisms for supporting development/expansion of *individual agency*: (1) *Enabling skills acquisition*. The type of skills depends on the initiative being run, however media literacy will be central to all initiatives. Training sessions in technology usage will allow people to develop the skills that will enable them to act as authors. (2) *Enabling knowledge acquisition*. Open lectures, or interactive sessions on digital media and related subjects can be devised, so that people develop sufficient knowledge about digital media to properly connect these to self- or community-related goals. (3) *Generating intent*. In order to avoid the pitfalls of a collectivist approach, we prefer to treat intent as an individual state; yet sessions aimed at generating intent will be best designed as group sessions, where people will learn about the benefits of using digital media, encouraged to relate these to their goals, and acknowledge a sense of reciprocity and togetherness that can strengthen their intentions to contribute. The generation of intent can be linked to three important dimensions: 1) generating awareness of the achievable benefits as a result of the OCC; 2) transmitting sufficient knowledge of the potential of digital and networked media for generating awareness and visibility in the world at large; and 3) developing a sense of trust in one's capacities to bring a useful contribution that could have an impact. It is interesting to relate this last aspect to Bandura's concept of self-efficacy (1998), as discussed above.

Some examples of mechanisms for supporting development/expansion of *collective agency*: (1) *Goals definition* sessions, in which the OCC goals are defined, should be organized in collective settings, using techniques that accommodate multiple opinions and negotiation towards reaching acceptable outcomes for all involved. (2) *Planning and organization* sessions allow participants to acknowledge the collective dimension of their effort and to properly position their individual effort in line with the contributions of the others. (3) *Decision-making* sessions can be organized in relation to several phases of an OCC project where collective consensus needs to be reached. Consulting people and employing appropriate negotiation techniques will give a heightened sense of participation and meaningfulness. (3) Sessions dedicated to the *presentation of intermediary results* aimed at generating awareness of the project progress should be organized all throughout. These sessions are relevant for showing individuals the results of their actions, but also of the actions performed by others. This will heighten the sense of collective effort and will enable individuals to see their work in relation to their peers'. These sessions, together with the planning and organization sessions, will also contribute to developing or expanding perceived self- and collective efficacy (Bandura, 1998).

4.3. Empirical insights. Open content creation in two rural communities

Romani Voices is a research project that aims to see whether and under what conditions digital technologies can become vehicles for collective cultural expression in communities with low literacy and digital literacy. The project employs ethnographic and participatory principles and techniques, instrumental to driving a process of content production that is embedded in the local infrastructure, and prone to produce community-relevant media products. The issue of collective agency is linked, in this initiative, to the possibility of producing outcomes that are representative for the collectivity, and from which all the members can derive a sense of collective ownership and pride. Our approach to cultivating collective agency is based on the theoretical and methodological model that we have outlined above. Rather than taking an equalitarian view of agency as reflected in each individual member, we focused our attention on the collectivity and employed a distributed cognition perspective

to seeing how individual members, as well as spaces and tools contributed to fostering and expanding agency all throughout the initiative. The mechanisms for cultivating agency were not fixed, but designed on the field, after sufficient data on the locale had been collected and interpreted throughout two main phases: ethnographic fieldwork (conducted by the researcher), and collaborative ethnography (in which the researcher and the community worked side by side). This design was then constantly refined throughout the implementation of the content production experience, using participatory research principles. Throughout these phases the focus of analysis has been placed on two essential elements: the product (the digital contents) and the process (how people worked and coordinated their efforts). Each phase resulted in a series of outcomes with respect to these aspects, that have been used throughout the consequent phases. Table 1 makes an overview of the four phases, and the outcomes resulting from each (for a detailed overview of the methodological framework as applied to one of the case studies see Sabiescu, 2011).

Table 1. A synthetic view of the main phases and the outcomes further used to shape and refine the design of the next phase (process outcomes) or as raw material for digital content production (product outcomes)

Phase	Outcomes
1 Ethnographic research	A socio-cultural and media usage profile of the community
2 Collaborative ethnography	A preliminary list of content themes An oral history guide Analysis of the dynamics of cooperation in technology usage
3 Content production	A database of audio-video contents A refined list of related content themes
4 Content organization	Information architecture A database of refined contents

The forthcoming part describes the mechanisms for cultivating and expanding agency during the research done as part of Romani Voices with two Romani communities, located in different villages from the same region in South-Eastern Romania: Podoleni and Munteni.

4.3.1. The communities

Podoleni is a village with a mixed Romanian - Romani population, 47,08% being of Romani origin (source: Barcea Urbanization Plan). The project involves the people living in the neighbourhood Roma Street (also known as M. Kogalniceanu Street). Munteni is located in the same region in South-Eastern Romania, some 33 kilometres from Podoleni. In both settings, the Romani community is located in a dedicated area of the village, separate from the Romanian villagers. While there are at present and there have been historically continuous exchanges between the Roma and the Romanians, in both communities, and most pronounced in Munteni, most of the social interaction takes place among the Roma. At the same time, on virtue of their being part of different Romani groups, there are notable socio-cultural differences between the two communities. The Roma in Podoleni are part of the assimilated Roma, who have embraced most of the traditions and customs of the Romanian. The social and cultural moors, such as rites of passage, celebrations, holidays, and social norms are closely similar to the Romanian ones or framed by Christian principles. The Roma in Munteni maintain, on the other hand, a vivid Romani identity. They are part of the Kalderash (Coppersmiths, or “Caldarari”) group,

nomadic until the end of the 1950s, when they had been settled by force by the Communist authorities. They maintain specific rules regarding rites of passage (such as weddings), social organization models, rules of conduct, or gender division. A distinctive feature of this community is that they are semi-nomadic: people travel during the spring and summer to sell their metal products in the Romanian countryside. In what economic aspects are concerned, both communities are characterized by extreme poverty, due to lack of professional qualifications, lack of work places, and, in Munteni, due also to the decline in demand for the traditional metal products that the members of the community are skilled in producing.

4.3.2. Developing and expanding agency

During the ethnographic research phase, we have identified some community features that were prone to have a bearing on the design of the OCC. The data were gathered using observation, interviews, and focus groups (for a detailed overview of data collection techniques, see Sabiescu, 2011). With respect to agency, the following relevant features have been highlighted:

- (1) Community values and aspirations, which could be related to the achievable goals of the OCC experience.
- (2) Community issues and problems, to which possibly OCC could provide a response, or a first step in providing solutions.
- (3) Communication patterns, on which the patterns of contribution and participation in the OCC could be emulated.
- (4) Media usage patterns.

(1) For the community in Podoleni, aspirations for the future were related to the children, to education and in some instances to breaking the cycle of poverty by leaving the village and starting a new life somewhere else. The values were related to Christian morale, work and commitment. In Munteni, values as well as aspirations converged in the high standing of the community and the traditional Romani lifestyle. In here, hopes for the future were related to breaking the poverty cycle, however the future was pictured inside the community, not somewhere else. Education was considered important only insofar as it did not conflict with traditional customs and norms. Girls, for instance, married in their early teens and had to leave school, therefore would usually complete elementary school only, if at all. The semi-nomadic lifestyle also caused continuity gaps in child education. Comparatively for the two communities, values and aspirations have in common a strong component of well-being and good economic standing, however bear differences with respect to the role that the community and the traditional lifestyle have (strong conservative tendency in Munteni; more orientation towards the outside world and its possibilities in Podoleni).

(2) Issues and problems faced by the communities were documented a) as part of the socio-cultural and economic profile of each community throughout the ethnographic research phase; and b) as part of the elicitation of content dimensions for the content production experience. Some issues (e.g. poverty) were common to the two communities, yet articulated differently in each setting. In Podoleni, the main problems can be mapped on a cycle in which poverty and lack of access to education conditioned each other perpetually, making it impossible for the community children and youth to break it: due to poverty, children could not be maintained in school, while lack of education conditioned them to walk on their parents' steps. Poverty was further connected to lack of work places, lack of professional qualifications, poor housing and lack of house places. In Munteni, poverty was as well the key issue. In

here however, this issue needs to be read in connection with the gradual fall of traditional professions (metalworking), and the need to balance the aspiration towards well-being with a strong determination to keep with traditional socio-cultural values and norms. Pursuing school and leaving the community, for instance, was not considered a desirable future for the community children and youth.

(3) Our analysis of communication patterns was mapped on the following dimensions: inside vs. outside the community; gender and age divisions; local hubs for interaction; the role of orality and media. Data indicated that in Munteni gender determined strongly the communication exchanges and the type of content that could be delivered in certain settings (who could talk to whom, about what). Also, the community appeared to be more closed to the outside than in Podoleni. In Podoleni, communication was not significantly conditioned by gender divisions in regular daily conversations. In both communities, local houses provided hubs for social interaction, where people would gather and chat at specific moments of the day or at special occasions. In Munteni, in addition, there was a growing Pentecostal community, that used the Church as a place for gathering, praying and communicating. Finally, in both communities orality prevailed as a medium of communication; we note however that whereas the community in Podoleni was mostly literate, the one in Munteni was mostly illiterate.

(4) Media usage patterns. In both communities the main source of information was the television, while radio and printed press were used very rarely if at all. Regarding recording devices, few people owned photo or video cameras, though in Podoleni most youth would have used one occasionally in the past. Internet was well-known in both communities, however access to Internet was not widespread among the Roma.

Mechanisms for developing and expanding agency in Romani Voices

The design of the content production experience in both settings was based on the Inquiry Cycle, developed by the Community Informatics Center at the University of Illinois (Bruce and Bishop, 2008), adapted through the application of Participatory Action Research principles and constantly refined and improved during field intervention in each setting. After continuous testing and refinement, the final model can be abstracted in the following six main iterative steps: (1) Inquiry: conducted as collective endeavour focused on aspects related to the *What-How-In what form* of a forthcoming creation session; (2) Planning: done with main informants, or following leads from the community, preceding one or a series of creation sessions; (3) Creation: recording sessions, organized in the presence or absence of the lead facilitator; (4) Observation: collective visualisation of raw footage or edited content; (5) Discussions: these are focused retrospectively on the creation process, and in many instances organized in association with observation sessions. Their main focus is on the product, and on how several glimpses of content relate; and the process, or the manner in which content production sessions have been held. (6) Reflection: triggered by observation and discussion sessions.

An important point regarding the implementation of this cycle regards the time format: in both communities, intensive content production sessions in the presence of the researcher were alternated with periods dedicated on the one side to community self-managed actions, and on the other side to data analysis and interpretation by the researcher. Data on the community-managed sessions were gathered in retrospect from the accounts of the participants, while visualising the recordings produced. Further, we will look at the mechanisms for developing and expanding individual and collective agency in relation to the design of the content production experience.

The main mechanisms for supporting the development of *individual agency* concentrated on: 1)

enabling skills acquisition; 2) enabling knowledge acquisition; 3) generating intent.

(1) In terms of skills acquisition, we considered skills related to media literacy, as well as interviewing and storytelling techniques. The learning model for the media literacy training sessions emphasized selection of participants based on prior interests and skills and encouraged peer learning: a small number of young participants were trained in camera usage, who would then spread the skills to their peers. Interviewing and storytelling techniques were not taught formally, but rather following an imitative model, by exposing people repeatedly to best practices and encouraging them to follow.

(2) For knowledge acquisition, informative sessions on the Internet, online communication, and social media services were run in Munteni. In Podoleni, where the youth were more familiarized with the digital media services and products, formal sessions were replaced by informal discussions, bringing best practices and examples relevant for the setting.

(3) In what the generation of intent is concerned, in our experience this was a result of the sessions for enabling knowledge and skills acquisition, combined with sessions where the benefits of taking part in OCC were highlighted and discussed. These discussions took place in group settings, as part of the content production phase, and were linked either to informative sessions or to sessions dedicated to exploring the subject matter for the future community website.

The sessions for supporting development of *collective agency* included sessions concerned with (1) goals definition; (2) planning and organization; (3) decision-making sessions; and (4) sessions dedicated to the presentation of intermediary results. All of these sessions took place in groups, and in most of them an opinion leader or the community leader was present.

(1) The definition of goals was done in several iterative sessions during the ethnography and collaborative ethnography phase, before the actual beginning of the content production (see Table 1). It was important for people to gradually become aware of the potential of digital media for helping them to attain or bring closer community goals and aspirations. Having a community website, rather than a digital archive was, for instance, a decision that emerged from such sessions. In both communities, it was important to have the consensus of the opinion leaders: the local Romani councillor and the head of the main informant family in Podoleni; and the local traditional leader and his family, in Munteni.

(2) The planning and organization sessions were part of the content production experience, and took place at the beginning of each new production cycle. In both communities, in-presence content production periods usually started with one or more sessions of inquiry combined with planning for the actions of the forthcoming sessions. In Podoleni, these sessions were done in the house of the main informant family, while in Munteni locations were alternated, however most sessions were done in the houses of the elderly and the current traditional Romani leader. Two important features for supporting good planning were identified as specific of both locations: one was the need to listen in and solicit ideas, opportunities and constraints from the participants for the organization of future production sessions. For instance, local people could suggest the best timing or important events and happenings that could become central to a content production session. Second, it was noticed that planning worked very well in connection to the last three steps of the creation cycle - visualisation, discussion and reflection – centred on the contents produced by the community during the self-managed content production period preceding an in-presence period. These steps provided two essential ingredients for good planning: an overview of the things achieved and a landmark for next steps to be taken.

(3) Decision-making sessions were permeating during phases and organized whenever needed within broader-scope sessions. What characterized the attitude towards decision-making in both communities was a tendency to release control in the hands of the researcher. This influenced the way decision-

making sessions were run. For instance, there was no need to employ specific negotiation techniques for meeting consensus on conflicting opinions. Rather, we needed to make sure there was a background for sound decision-making, and therefore that people were aware of their rights and possibility to take action, and of the importance of the outcomes pursued.

(4) The sessions dedicated to the presentation of intermediary results were organized as part of the content production cycle, and followed the progress of the content production experience. Footage shot in researcher-led sessions, or in community-managed sessions, or edited content was visualised and commented upon in group sessions. In addition, awareness of the content themes for the future website was generated by presenting in iterative sessions an expanding list of themes emerged from focus groups and from the analysis of the contents recorded. Together, these elements generated an awareness of the final collective product and of the role of each individual contribution in completing it.

5 Conclusion

In this paper we treated the subject of agency in the field of ICTD, with a special focus on community-based open content creation initiatives. The main argument was that in this type of initiatives the concept of “agency” needs to be tackled in relation to the collective dimension of the authoring effort. Further, a specific approach to studying agency in OCC initiatives has been described. This approach employs Sen’s concept of agency as scope for action towards accomplishing goals aligned to one’s values, exercised through direct control and effective power. Second, it uses a distributed cognition perspective where the focus of the analysis is placed on the activity system made of people in interaction, tools and representations. This approach allowed us to look at the interpenetration of actions throughout an OCC, and to highlight the mechanisms that make possible the coordination of individual efforts in the pursuit of collectively held goals.

It is important to note that the type of analytical approach employed is appropriate for OCC on virtue of a few essential characteristics that can be related to the study of agency: the centrality of authoriality in relation to technology usage; the importance of enabling people to acquire the knowledge and skills for becoming active authors; the dynamic and evolving nature of this process; the cooperative setting; and the distributed nature of the knowledge and skills across participants in an OCC. The distributed cognition perspective appeared, in these conditions, as a particularly useful conceptual tool, insofar as it allowed us to maintain a focus on the collective without losing site of the individual. Yet different considerations will apply for replicating this analytical approach for a different kind of ICTD initiative, or even more so for studies on people’s agency in developmental contexts out of the scope of specific technology interventions. In the cases we have presented there was a central concern for building and expanding agency with respect to specific dimensions, all circumscribed to the initiative being run. In a more general tone, we acknowledge two important aspects to be taken into account for sound approaches to the study of agency in relation to the collectivity. Firstly, there is a need for a well defined theoretical position on the relation between the individual and the group, applied in processes that involve reasoning, intending, and acting at group level. Second, there are important implications at a methodological level that arise from the definition of the unit or units of analysis used in researching collective agency, and on the protocols followed for opportunely relating data gathered at different units of analysis. The literature on collective agency offers a series of well-articulated positions in this respect. For instance, the distributed cognition approach that has been employed in the present study

focuses on the activity system as a unit of analysis, and looks at how the various entities that compose it perform jointly for achieving a goal.

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