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Towards a Definition of Virtual Community*

Hacia una definición de la comunidad virtual

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Resumen:

En la Internet, comunidades de personas se juntan, comparten intereses comunes, ideas y sentimientos por toda la red. En este artículo, nos centramos en el concepto de las llamadas comunidades virtuales (VCs) desde una perspectiva teórica y empírica. Queremos ofrecer una definición desde la investigación secundaria que puede ser útil a nivel teórico y empírico. Además, la comparamos con la definición que surge de las entrevistas, que es típica de la perspectiva del enfoque cualitativo. Las preguntas investigativas (RQs) son: (1) ¿Cómo se puede definir una VC?; y (2) ¿Cómo definen una VC sus usuarios? Utilizamos la tipología de VCs de Porter para seleccionar cuatro estudios de caso y realizamos 49 entrevistas a fondo con sus miembros. Nuestro estudio apunta a la aplicabilidad y utilidad de la tipología de comunidades virtuales de Porter y sugiere un nuevo enfoque para definir el concepto VC.

Palabras clave: comunidades virtuales, Web 2.0, comunidades online, investigación cualitativa, estudio de caso múltiple.

Abstract:

Online, communities of people aggregate, sharing common interests, ideas, and feelings over the Internet. In this article we focus on the concept of so-called virtual communities (VCs) from a theoretical and empirical perspective. We want to provide a definition from desk research which can be useful on the theoretical and the empirical level. Moreover, we compare it with the definition that emerges from the interviews, which is typical from the qualitative approach perspective. Research questions (RQs) are: (1) How can a VC be defined? and (2) How is a VC defined by its users? We used Porter's typology of VCs to select four case studies and conducted 49 in-depth interviews with their members. Our study points to the applicability and usefulness of Porter's typology of virtual communities and suggests a new approach for defining the concept VC.

Keywords: virtual communities, Web 2.0, online communities, qualitative research, multiple case study.

Introduction

This article focuses on VCs and their definition on the theoretical level (authors) and the empirical level (users). Four case-studies have been selected from two different digital platforms: the 'social' and 'professional' VCs are enabled by Yahoo! Groups, the 'non-profit' and 'commercial' VCs use Facebook. Today the amount of people involved in social media is around 2.7 billion (Hootsuite, 2017). 'Yahoo! Groups' began as an email list service named 'eGroups' in 1997 and was acquired by 'Yahoo!' in 2000, while now counts more than 100 million users and nine million groups (Longboan, 2011). 'Facebook' is the most popular social network site (SNS) worldwide, as well as in Europe and in Italy, and counts 1.23 billion daily active users on average and 1.86 billion monthly active users as of December 31, 2016 (Park, 2017). Its value is estimated on 400 billion dollars (Team TechNadu, 2017).

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In the following sections we will theoretically unpack the concept 'virtual community'. Next, we will provide our VC definition and describe the case selection procedure as well as our methodology. Through a cross-sectional analysis we will explore and describe how VCs users perceive and define the concept VC, so from 'the eyes of the participants' in Weber's words (Patton, 2002, p. 55). Moreover, we attempt defining VC in their perspective own words. Finally, results are presented followed by a short discussion and conclusion.

Virtual communities

Online groups are defined in many different ways, such as 'cyber communities', 'online communities' or even 'digital communities'. Still, there are good reasons to embrace the concept of virtual community over these other terms. The first, 'cyberspace' does not have a real grounding in scientific terms but refers to Gibson's novels (van Dijk, 1998, p. 41). The second, 'online communities' is a too generic and comprehensive term because it can refer to any computer mediated communication space between users, so all kinds of online groups can be included; moreover it can be also interchangeable with the term 'online group' (Matzat, 2004, pp. 66-67). In addition, online communities can represent VCs only when they are 'online'. The third phrase, 'digital community' refers to the technical characteristics of the contents, and seems to be more related to the ICT (Information and Communication Technology) and the information itself than to people. In favor of VC, the term 'virtual' has been preferred because it is more related to 'experience' (Castells, 2000, p. 404).

VCs can be similar to 'organic' communities (see van Dijk, 1998) on attributes such as shared interests or goals, sustained social interaction, shared values and membership rules or norms (Pentina, Prybutok & Zhang, 2008, p. 115) and they can also have in common the same reasons for users to join them – information exchange, social support exchange, friendship, recreation (Ridings & Gefen, 2004)– but in contrast to them they are characterized by lack of face-to-face communication and by anonymity (Postmes, Spears & Lea, 2000) and are not anchored to any particular place and time (van Dijk, 1998, p. 45). Porter (2004) elaborated a typology of virtual communities which we used to select four cases. In her paper the author mentions five attributes of virtual communities (*purpose, place, platform, population* and *profit model*) and the cases selected can be considered VCs because they incorporate all of them. More specifically, with regards to the attribute 'place', the minimum set of conditions required to label a cyber-place with associated group-CMC (Computer-Mediated Communication) as a virtual settlement is met (Jones, 1997).

There is not consensus defining the concept VC, as well as the community concept itself: Park's (1936) definition of community had a consensus for a long time and Hillery (1955) tried to find an agreement over 94 different definitions with no result (Bateman-Driskell & Lyon, 2002, p. 375); today the concept still continues to be 'problematic', indeed, how we define it evolves as society evolves in time. In the next paragraph we give to the reader the result of a desk research regarding the community concept presented over the 'role of place' first, then the concept VC over the 'imagined community' foundations, finally we provide our VC definition.

Virtual community concept

Virtual communities flourish in the network society where Information Technology (IT) plays an important role on many different levels (economy, social relationships etc...). Media can be studied by social theory and its most important classical positions (Bennato, 2007), the same can be done with web 1.0, 2.0 and 3.0 (Fuchs, 2014, pp. 37-45). So, before to get through the VC concept it is important to take into account the community concept, which was studied since the 'classical' sociologists and still it is largely debated by scholars (Jones, 1997): at the end of the 19th century community was studied in response to industrialization and urbanization and their contribution is still useful today. In contrast with Fernback (2007, p. 50), our

desk research shows that territorial ties were not considered essential by the 19th century classical sociologists: according to Tönnies, Durkheim and Weber some elements can replace it (table 1). In this context it is important to explain their view for community and VCs studies.

The role of place in community concept

One of the two main lines of development regarding the community concept in sociology is linked to the original Tönnies formulation (Brint, 2001, p. 2): in *Gemeinschaft und Gesellschaft* he uses a dichotomy making a distinction between communal relations and interest-based associations (Brint, 2001, p. 2) –which inspired other scholars like Weber (Crespi, Jedlowski, & Rauty, 2006, p. 192)– and that it is still used today also for the VCs studies (Katz, Rice, Acord, Dasgupta & David, 2004, pp. 318-319; Bateman-Driskell & Lyon, 2002, p. 380). He also states that the common place is not essential for community life because frequent meetings can replace it by providing a ‘spiritual’ friendship (Giovannini, 2009, p. 5). Weber develops similar typologies, but he moves a step forward claiming that in a community, anchored on blood ties, the belief is more important than the ethnicity, thus, community can be ‘invented’ by rational choices (Berti, 2005, p. 27) and blood ties are not necessary to be ‘real’ rather than thinking they are ‘authentic’ (Berti, 2005, p. 26) (Weber, 1961, p. 398-399). Durkheim also recognizes that: “(...) modern society develops community around interests and skills more than around locality (...)” (McMillan & Chavis, 1986, p. 8), thus, the ‘clan’ is not based on a territorial tie (residence or blood tie) but on the fact that they share a name, an emblem, the same ritual practices and the same worship; in other words a symbol system (Berti, 2005, p. 40).

TABLE 1
Substitutes for replacing the territorial tie

Authors	Substitutes of territorial tie
Tönnies	Frequent meetings
Weber	Beliefs
Durkheim	Symbol system

Source: own elaboration

Simmel, another classical sociologist, investigates how life changes with the urbanization process. In *The Metropolis and Mental Life* he studies life in big cities, in particular the relationship between the individual and the community, using the metropolis as a metaphor of modernity. His conclusions, relevant for VCs studies regarding the effects ICT (Information and Communication Technology) and CMC (Computer Mediated Communication) can have on people, are ambivalent: in big cities the individual has more freedom (Simmel, 2000, p. 47; Frisby & Featherstone, 1997, p. 180), is competitive and free from traditional ties (Lazzarini, 1993, p. 44), nevertheless, is also more dependent by institutions and technological equipments (Crespi et al., 2006, pp. 163-164); intellectualism increases, a blasé attitude takes place (Frisby & Featherstone, 1997, p. 179) as well as the development of a calculating mind (due the use of the money, which makes possible to measure almost everything) (Frisby & Featherstone, 1997, p. 252). So we have reserve and indifference, thus more privacy, but also loneliness (Simmel, 2000, pp. 47-49).

All these themes have been developed in recent times by other scholars. Parsons ‘follows’ the work of Tönnies (Parsons, 1951) while Bauman converges with him regarding the ambivalence of life, because we are: “(...) free to enjoy our freedom, but unfree to avoid the consequences of that enjoyment” (Bauman, 2001, p. 69), and this gives uncertainty to the individual as well as to the community itself which is under

'risk' (Beck, 1992, p. 44). Community can be represented as a 'mental construct' (Cohen, 1985, p. 97) so should not be studied starting from places (Zheng, 2009, p. 94), hence, the 'symbolic dimension' becomes fundamental (Turner, 1995, pp. 128-129) so that the territorial tie can be replaced by the 'idea' of a common place. Different kind of communities take form: 'deterritorialized' (Bryant & Jary, 1997, p. 87), 'world' (based on rhetoric) or even 'transnational' (migratory, diasporic or hybrid) (Delanty, 2003, pp. 156-158) and with globalization relationships become 'delocalized' (Mascheroni, 2007, p. 20) as well as mobility gets increased not only on a physical level, but also in 'imaginative' and 'virtual' terms (Sheller & Urry, 2006). Community can be seen also as an 'invention' or a 'cognitive fiction', as well as an impoverished version of the 'original' community as it was many years ago.

The 'imagined' community leads to the virtual community

In the never ending academic debate on the community concept, the idea that something 'got lost' along the modernization process is present since the beginning (Bateman-Driskell & Lyon, 2002, p. 374; Katz et al., 2004, p. 321) and invests also VCs with the 'lost community' subject (Castells, 2001, p. 117; Baym, 1998, p. 37). According to Nancy this nostalgia is based on the romantic idea of a community made by tight and harmonious bonds (Nancy, 1991, p. 60) on one side, and a society built up on its vestiges on the other side. Nevertheless society is unrelated to that spoliation, so in reality nothing got lost (Nancy, 1991, p. 11). Consequently, that kind of community is a 'mirage' because 'gemeinschaft' does not exist anymore; contrariwise we do have a 'pseudo-gemeinschaft' (Merton, 1946, p. 142), or 'pseudo-community', which for Barnes (2008) is characterized by mass media (p. 20): it is not 'real' but 'immaterial', so, 'virtual' (Katz et al., 2004, p. 323). Community can also be considered a 'mirage' because it could be seen as a product of our imagination, and this can let us move a step forward to the VC concept: Benedict Anderson claims that community cannot be supported by face-to-face relationships in modernity but by print and mass education, so that members can 'imagine' themselves as a community. This 'imagination' is the base of the modern nation-states (Anderson, 1983, p. 6), thus, this leads us to VCs (Fabietti, 1999, p. 50) and produces something similar to the 'contemporary situation' described by Schütz (Fabietti, 2002, p. 108), where the alter ego is not given flesh and bones, so into a spatial and temporal immediacy (Schütz, 1974, p. 257). Fabietti claims almost every community is 'imagined' in the way Anderson wrote, except for very small ones, like families and villages, because it is rare for community members to know each other and, above all, to have the possibility to personally verify the contemporary course of the experiences of all of them in comparison with their own (Fabietti, 2002, p. 108). In this sense, almost all communities are 'virtual'. The virtual as a concept has different meanings in everyday usage and refers to something 'distant', 'invisible' but important (Shields, 2003, pp. 22-23), not: "(...) tied to a particular place and time and not directly to a physical reality" (van Dijk, 1999, p. 250), or something which does not exist; on the contrary it exists but 'without being there', with no specific time and space coordinates (Lévy, 1995).

Focusing on the concept VC, it can be, apparently, a nonsense because community is related to staying together while virtual can be associated with an 'idea' (Fabietti, 1999, p. 43). In the past there was a contraposition between reality and virtuality, consequently, between organic and virtual communities, but for some scholars this does not make sense because different forms of virtuality are real, so they are both real (van Dijk, 1998; Ponassi, 2004; Delanty, 2003, p. 183; Giordano & Parisi, 2007, p. 20). VCs can be considered as *deterritorialized* (Ponassi, 2004, p. 23) even if they have a 'sense of place' (Steuer, 1992, p. 80). Furthermore, we can consider 'reality' as 'real virtuality', so everything is virtual (Castells, 2000, p. 404). Moreover, virtuality and reality, as well as online and offline, are difficult to be recognized as separate entities (Ward, 1999).

The most frequently used VC definition so far comes from Howard Rheingold (Lee, Vogel & Limayem, 2003, p. 49), defined as a social aggregation that emerges online when enough people carry on public

discussions and with sufficient human feeling (Rheingold, 1993). Other authors defined VCs as electronic networks (Castells, 2000, p. 386) over a common interest (Castells, 2000), in which weak ties (Granovetter, 1973; Preece, 2001) –also named ‘Internet ties’ (Boase, Horrigan, Wellman & Rainie, 2006)– play an important role in comparison with the ‘organic’ communities (Wellman & Giulia, 1999). VCs can be classified by categories (Lazar & Preece, 1998; Porter, 2004) and could be seen as a deterritorialized version of an imagined community (Fabiatti, 1999, p. 58) able of providing collective intelligence - an intelligence distributed everywhere, permanently valued and mobilised and coordinated in real time thanks to the connectivity and distribution potential of telematic technologies (Boccia-Artieri, 2004, pp. 90-91). Through the time course some scholars tried to combine different VC definitions together in order to provide their own definition (Lee et al., 2003, p. 51), as well as Porter, who proposed her own definition which is more exhaustive than others and recognizes different levels of virtuality (Virnoche & Marx, 1997, p. 88) but does not take into account the ‘virtual settlement’ (Jones, 1997).

In line with Rheingold, according to Castells a VC can be defined as a self-defined electronic network of interactive communication organized around a shared interest or purpose (Castells, 2000, p. 386). This involves people into new forms of sociability where ‘specialized communities’ can take place on flexible networks where due to the lack of commitment support is fragile (Castells, 2001, p. 132); Wellman (2001) gives a definition of community much wider than the classical one tied to the neighbourhoods or villages (p. 228), he also spots not only the emergence of personal communities (Boase & Wellman, 2006), but also of virtual communities made by members linked globally: “(...) with kindred souls for companionship, information, and social support from their homes and workstations” (Wellman et al., 1996, p. 214).

Summarizing the contribution of classical sociologists to the VC concept, and in particular Tönnies’ dichotomy, we note that some elements of VCs can be found in both *gemeinschaft* (dense and spontaneous sociability) and *gesellschaft* (the instability of relationships, the lack of a clearly defined territory and of the communication face-to-face, the central role of the individual over the collective) (Pizzaleo, 2002, p. 48) and Rheingold (1993) compares this dichotomy to the shift from ‘space’ to ‘cyberspace’. Also the will ‘behind’ VCs can be taken into account (Kürwille –the rational will– could be seen as their essence).

Regarding the contribution given by Simmel, If we stretch his metaphor of metropolis to the Internet (and to the CMC) we can find some parallels (table 2), which can help us to better understand VCs. Firstly, the privacy within the metropolis Simmel writes about can be found in the anonymity of CMC, as well as in its ambivalence - not only freedom but also a sense of loneliness can sometimes occur in VCs (Kraut et al., 1998). Secondly, the ‘objectify knowledge/culture’ could be referred to the mass storage systems and big data. Thirdly, while the rigid social organization of time, which if not pursued would block the activities in the metropolis, could refer to the necessary synchronization that technological equipments need to communicate with each other (which might be represented by the communication protocols between devices in the communicating system). Fourthly, the freedom the individual can benefit, which gives him the opportunity to ‘substitute’ a specific person for a task (Simmel, 1984, p. 429), could be similar to what we see in VCs, where people get in touch with strangers and enroll in virtual groups with not too much effort, as well as, easily, they can leave them (Bateman-Driskell & Lyon, 2002, pp. 381-382). Finally, the blasé attitude, a lack of feelings that could be the result of the large number of multimedia stimuli to which the user is subjected while browsing the web, as well as the ever-increasing amount of content he automatically receives by his friends through the main page of a SNS. Rationality, or a calculating mind, in modern life is another element we find in their thoughts, which is important when we choose to ‘activate’ a ‘node’ or ‘use’ a weak tie, which is much easier by technology (Comunello, 2010, p. 116), for instance, on SNSs.

TABLE 2
Parallels between the Simmel's metropolis and the Internet

The metropolis	The Internet
Privacy within the metropolis	Privacy on the Internet
Objective culture	Mass storage systems
Social organization of time	Communication protocols
Freedom to 'substitute' a specific person for a task	Easiness to enroll and leave a VC
Blasé attitude within the metropolis	Blasé attitude on the web
Calculating mind	Calculating mind

Source: own elaboration

Our VC definition

Taking the above into account, especially Porter's work, we provide an answer for RQ1 proposing a new VC definition:

A Virtual Community is an aggregate of individuals and/or business partners (in connection with one or more organic communities), that interacts on a shared (or complementary) interest and in which the interaction is implemented by a common language and eventually a possible common paralinguage, led by some protocols or shared norms. This is realized at least partially in a digital common space and is supported and/or mediated by the Internet or another ICT system (which can be synchronous, asynchronous or hybrid).

In the new definition we propose in this paper users are taken into account also when they are not online and this is very relevant because, as Anderson claims regarding the imagined community, a VC is in the mind of its members and this happens also when digital devices are off. Subscribing a parallel between mobile phones, wi-fi connection devices and smartphones in general, a study made by Kim (2002) on mobile phone users provides some hints. In fact, the author states that with ICT the border between public and private spaces becomes fleeting and the diffusion of mobile phones leads to the spread of nomadic life (Kim, 2002, pp. 72-73), where individuals are in 'perpetual contact' (Katz & Aakhus, 2002, pp. 307-308). Katz (2003) claims that while weak ties get stronger by mobile connectivity (mobile phones in that case) the stay together in one shared physical spaces gets feeble. People are uncomfortable in large urban spaces when no other humans are around, which is what happens when strangers are using their devices in the same place, because they are not available on a psychological level (Katz, 2003, p. 29), so that they can stay in a crowd but at the same time be 'alone', in fact: "(...) it can be hypothesized that strengthening weak ties through mobile phone usage almost eliminates possible ties with those in one's shared physical space" (Katz et al., 2004, p. 351). Of course, the blurring border between private and public space happens also with devices connected to the internet (Bennato, 2007). Consequently, in 'perpetual contact' with others who do not share the same physical space 'means' they are in their 'virtual communities' within their minds, and, according to Gergen, this happens when persons are absorbed by computer screen, television, CDs, telephone, newspaper, or even a book, so not only when they are in contact with others by devices. Consequently they are: "(...) present but simultaneously rendered absent; (...) an absent presence" (Gergen, 2002, p. 227). Thus, they do not need a smartphone or a computer connected to the network in order to be in an absent presence and stay in their 'virtual worlds'.

An important precondition for this definition is the distinction between a VC and some CMC messages, subsequently there is a reference to Jones' (1997) virtual settlement. The shared place, which was not crucial in the last forms of communities theorized by scholars, is again fundamental now (even if in its virtualized version). The definition also includes complementary interests instead of common ones only, furthermore there is a reference to paralinguage taken from van Dijk (1998, p. 56) and to boundaries from Lazar and

Preece (1998, p. 2). In addition a possible connection of the VC with an organic community is considered. Of course, the boundaries of the digital common space are determined by the software used and the decisions made by the user.

The criteria used for the case selection, and then methodology, are explained in the next sections.

Case selection

Porter's typology of VCs (figure 1) is a classification system for multi-disciplinary research on VCs which uses establishment type and relationship orientation as categorization variables (Porter, 2004). This typology was chosen for the case selection because its categorization is exhaustive and applicable on the empirical level. From a theoretical viewpoint the focus was on a 'social', a 'professional', a 'non-profit' and a 'commercial' VC, but from a practical viewpoint VCs were also selected because they were mainly composed by members located in Rome. 'Government' VCs were not taken into account because they were not widespread at that time.

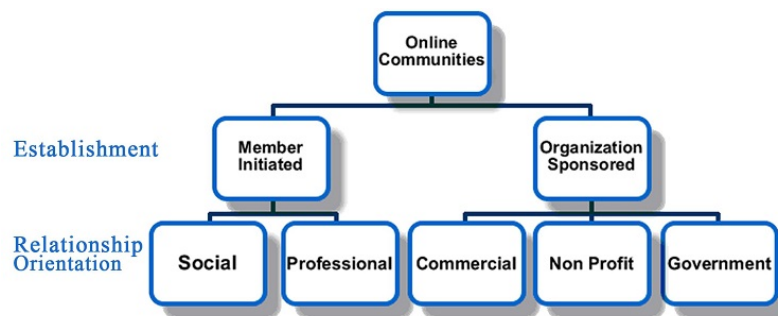


FIGURE 1
Porter's typology of Virtual Communities
Source: Adapted from Porter (2004)

The first-level categorization element of the typology (member initiated or organization sponsored VC) was hard to apply 'on the field'. Consequently, the second-level categorization, relationship orientation (which describes the type of relationship fostered amongst members), drove the case selection. Based on this principle the selected cases were: 'GSCAI' ('Speleological Group of the Italian alpine group') as 'social' (they share a hobby), 'Diarioclowner' ('Clown Diary') as 'professional' (they are co-workers), 'AZALEA' as 'non-profit' (they support a non-profit organization) and 'F&G' as 'commercial' (they are customers of the same dancing school). Unfortunately it was not possible to apply the typology on the empirical level as it was: as Porter (2004) herself wrote, the true strength of the typology is revealed over time. So referring to Markus (who is the author which Porter used in order to write her typology) a deeper reading of the articles has been done in order to fill the gaps of Porter's typology on the empirical level with Markus' (2002) article, as well as by the evidence that emerged on the field. Porter's typology it is not exhaustive on an empirical level because of some possible misunderstandings: for instance, a *social* VC could have a *professional* common interest which could generate 'professional' threads, regarding the 'tone' of communication or the content. Markus, who is clear in this regard, writes: "Professionals participate in this type of community in order to contact and exchange information with people outside of their own team or organization who require similar information to carry out their (professional) duties" (Markus, 2002). Consequently, it is not the subject and the name of the virtual community only which qualifies the relationship fostered among the members, what matters is the connection between the 'theme' of the VC and professional job area of their members. This deeper reading

and a table (see table 3) which was created with the main characteristics of every VC evaluated regarding the Porter's typology helped the researcher to identify and select the cases to be studied more precisely.

TABLE 3
Main characteristics of every VC evaluated regarding the Porter's typology

	Yes	No	Both
MEMBER INITIATED			
Was it created by its members?			
Is it managed by its members?			
Is it hosted on free web spaces?			
Is its name congruent?			
SOCIAL			
Do social or professional relationships take place?			
Do free time/non professional activities (e.g. hobbies) take place?			
PROFESSIONAL			
Do relationships between members with professional common interest take place?			
ORGANIZATION SPONSORED			
Hosted within the organization's web space?			
Are activities managed by the organization?			
Are contents produced by the organization and its members?			
Does the VC foster relationships between the members and the organization?			
Does the VC foster relationships between the members?			
COMMERCIAL			
Does the company give information about its products or services?			
Does the company promote its products or services or the company itself?			
Does the company give support to its clients?			
NO-PROFIT			
Does the organization give information about its services?			
Does the organization promote itself?			
Does the organization give support to its users?			

Source: own elaboration

Some of the contents of the table did not fit completely the VCs selected (e.g. regarding the hosting space). The characteristics which did not match the table were considered not so important (thanks to the Markus' article) and proved the limits of Porter's typology on the field.

The main features of the four VCs that were studied are summarized in table 4.

TABLE 4
Virtual Communities investigated

	GSCAI social	Diarioclowm professional	AZALEA non-profit	F&G commercial
Established	Over 4 years	Over 4 years	4 years	Over 4 years
Platform	Yahoo!Groups	Yahoo!Groups	Facebook	Facebook
Open/closed	Closed	Closed	Open	Open
Members	49	11	> 2000	> 600
Respondents	10	10	12	12
Male	8	6	0	7
Female	2	4	12	5
Average age (y.o.)	37.6	35.7	37.1	41.9

Source: own elaboration

'GSCAI' ('Speleological Group of the Italian Alpine Club', social VC) is a speleological group located in Rome. The group does activities (explorations, visits) which require planning (equipment, travel etc.). In order to facilitate the organization process and the coordination required they set up an online group called 'GSCAI' on 'Yahoo! Groups', in which they make decisions and share reports about their explorations. Expert members 'retired' from group activities, keeping exclusively in touch with other members via the VC (so called 'sleepers'), read the online messages and sometimes give suggestions. In January 2012 the group split and some of them left.

'Diarioclowm' ('Diary clown', professional VC) is a group created by a group of 'clown therapists' located in Rome working together. They work as a duo at hospitals (usually one male and one female), and try to change the energy of the young patients (most often children) from fear and depression to a positive emotional state. In 'Diarioclowm', their online group, they communicate weekly shifts division and daily reports, so 'professional' messages only. In January 2012, this group broke up and subsequently four members decided to move to another job place.

'AZALEA' ('Associazione Zampa Amica Liberi Ecologisti Animalisti' - 'Free Ecologists Animal right activists Paw Friends Association', non-profit VC) is a non-profit association located in Rome that supports a cat center where they host, feed and cure abandoned cats. They use various SNSs, but most of their online activity is targeted at a Facebook fan page, which is used for the purposes previously described and in order to 'check' the 'adoptions', periodically asking adopters to share pictures of the adopted cat.

'F&G' (the full name of the group is 'F&G salsa school', commercial VC) is a Caribbean dance style school in Rome. Apart from dancing classes, 'F&G' also organizes events not always related to dancing and music, providing great opportunities for social interactions and fun to its members on a regular basis. To do so 'F&G' uses a Facebook fan page, so they can disseminate news about their activities (e.g. changes in lessons schedules, special events...).

Methodology

As a single case study could not answer to the second RQ, consequently, a multiple case study, driven by a qualitative approach, was executed using a typology to represent the whole spectrum of users. The qualitative approach has been chosen in order to comprehend the point of view of the individual (so with a bottom-up perspective) using sensitizing concept as defined by Blumer (Corbetta, 1999, p. 57). Data collection has been

done by ethnography, which has been used to study the web by many different researchers (Al-Saggaf, 2004, pp. 4-5; Farci, Boccia-Artieri, Giglietto & Rossi, 2016); the technique chosen is the qualitative interview: from 22nd February 2012 to 16th June 2013 49 in-depth qualitative, semi-standardized, in person interviews were collected by a digital recorder with an average length of 90 minutes. Then they were literally transcribed using punctuation to make the reading easier for the reader (Colella, 2009, p. 142), although some authors (e.g. Cavallaro, 1981, p. 27) point out that a transcription only partially reproduces the interview in real terms, and, on the contrary, the use of too much punctuation could make the text incomprehensible. To better represent each group, respondents were chosen taking into account the duration of their inscription. There were four main areas investigated by the interviews: 1) information about their activities as a group; 2) information about their activities within the VC; 3) their definition of the VC; 4) advantages and disadvantages of the VC. The technique chosen is flexible and, at the same time, makes the thematic analysis between the cases possible (Gianturco, 2005, p. 129; Colella, 2009, p. 142).

A deductive coding methodology was used with three coding phases (Miles & Huberman, 1994). In the first phase descriptive codes are assigned to text snippets based on predefined areas of interest, whether factual, thematic or theoretical in nature (Lewins & Silver, 2007, p. 86). We also coded the type of respondents in order to understand whether the duration of membership to the VC played a role. Next, interpretative coding took place, digging deeper into the meaning of the descriptive codes. Using an exploratory-descriptive logic moving towards an analytical generalization (Yin, 2005), the parallels have been examined at the end (differences and oppositions between the descriptive and interpretative codes), pattern codes have been assigned. So thematic analysis was done decomposing macro and micro themes of the interviews, emerged on the theoretical level and on the empirical one (Gianturco, 2005, p. 127), coded using NVivo 10. The analysis was 'vertical' (considering every single VC) and 'horizontal' (considering all the VCs). The definitions given by the VCs users were graphically represented (figure 2 and figure 3). Moreover, they were summarized into one singular definition, which should represent the user's definition.

The choice of the cases has been done using the VC definition proposed in this paper, the typology selected as well as some other characteristics that were taken into account: a minimum duration of two years, a minimum level of interactivity (which refers to what Jones [1997] wrote about virtual settlement) and a minimum number of users. Another prerequisite was that the internet had to support the common interest of the VC, so that their online activities really concurred to their 'mission' (which refers to the typology chosen). Taking into account the budget available only VCs placed in Rome were chosen, because even if the physical localization could appear a nonsense in the virtual world, on the contrary, this had a great impact 'on the field'. Thus, firstly a netnography has been conducted in order to select the possible cases; secondly it was possible to get in touch with the VCs by e-mails (online); thirdly it was necessary to proceed offline, so by asking for a meeting; finally the availability was checked, in order to know if the VCs matched the criteria chosen and the RQs developed, as well as if there were enough available respondents to collect the data for every users subgroup. In doing so the first attempts to find a case study which was 'located' purely online had no results: as the literature says about the evanescence and the fluidity of VCs (van Dijk, 1998, p. 46; Bateman-Driskell & Lyon, 2002, p. 382; Howard & Jones, 2004, p. 33), all the groups contacted had a lack of commitment and motivation for the research; it was very hard to communicate with them and just few users replied (this happened especially with organization sponsored VCs). Consequently, the only way to break through these VCs was to contact them online by the admin and then meet them offline. Once it was evaluated a positive feedback from the admin, who generally knows everybody and the history of the group, he or she was firstly interviewed as a key respondent (Gianturco, 2005, p. 107) in order to better understand the activities and the history of the group and also to evaluate if the VC could fit the characteristics of Porter's typology. Then, once on the field, it was necessary to evaluate the real possibility to collect the necessary amount of interviews, so by meeting users during their meetings and their agreement to contribute to the research was asked. Then a snowball sampling was done (Colella, 2009, pp. 140-141).

The semi-structured in-depth qualitative interviews were particularly useful with the first two VCs because they are not open to non-members, so according to this issue and to the research questions, netnography itself could not be enough to collect the necessary data, even because there were also privacy issues with them. This affected also the first stage of the research, which is the congruent evaluation of the VCs with the RQs.

This study follows the principles given by Yin to conduct a good case study, which must be complete and significant, moreover, it should consider alternative perspectives and display sufficient evidence (Yin, 2005).

Based on the data collected, it has been reached the 'saturation' point, which is to say with regard to the topics of the interviews and their duration, even adding more respondents there would not be any additional information (Losito, 2004, p. 60), (Catalbianco, 2005). Moreover, in the VCs characterized by a greater number of subscribers we asked respondents how many members, in general, take part in online conversations. Almost all of them said that a small proportion of users is active in comparison with the number of subscribers; so, on average, the number of very active users is, approximately double, triple or fourfold the number of the respondents selected for each case, which is an adequate number of respondents involved.

In the next paragraph data from cases are analyzed individually and by a cross sectional analysis and a summary definition will be given to the reader.

Results

Respondents from the speleological group 'GSCAI' describe the VC as a working instrument for the group and at the same time as the group itself. For the majority of respondents VC is seen as a simple tool, useful and effective for operational purposes of the speleological group:

Well, let's say that is a group, I mean, very functional to the activities, so let's say, actually it's more like a practical communication tool that can be convenient because it allows us to communicate in real time with everyone within the group (...). It's a communication medium and it's just this, because what counts is the group, that one is a tool the group uses. Let's say what is important is the group not the online group. I mean, the online group is simply, it exists because it is easier to communicate that way, but it wouldn't exist if behind it there weren't persons with the same passion, so it wouldn't make sense. (Male, beginner, 47 years old)

As I mean, maybe it's, using that space, let's call it virtual, let's call it online, it's really useful (...). Virtual space, I can define it like this. But virtual, thinking about it, virtual up to a point, because then actually you share something practical, at least about the speleological group. (Female, average, 36 years old)

It's like sitting around a table because [laughs] because ... then, at the end ... staying really sit all around a coffee table, because maybe there are people who don't have the opportunity or don't have time to come to the CAI on Thursday, but they sit all around the Yahoo table [laughs] I mean that when a message is given or something is written or that... many respond lots and lots of [laughs] and lots of pages and pages and mail pages, especially when there is someone who has something to complain about and an incredible call-and-respond start so yes, it's like sitting at a big round table, here, there [in the VC] really the whole group is participating, even those who are not physically present then in the activities. (Female, beginner, 33 years old)

The mailing list is an excellent tool of communication in which members can freely express their own, their own questions, make their own ch... make their own questions, their own proposals, and... learn from, especially, from others. But actually I've never thought about being part of a speleological group [laugh]. Let's say that the online is a useful tool, and a useful tool I don't know to what extent it may be necessary to do speleology. (...) It's an easy communication tool, yes, it's a useful tool for communicating, communicating ideas and projects. (Male, expert, 37 years old)

The concept of VC expressed by 'Diarioclown' users probably is affected by the name of the online group itself; in fact, some of them define it as a 'diary': "(...) it was born as a diary on board (...)" (female, beginner, 28 years old), "The diary is online (...)" (male, average, 31 years old), but it also assumes other metaphorical descriptions: "(...) it is a container (...)" (male, expert, 52 years old), "(...) it is a square where we meet to talk" (male, average, 26 years old). For the interviewees it also represents an instrument:

(...) a tool with great potential, because it gives us the opportunity to face each other daily with what we do in the hospital, to think about it, to be able to tell what has happened so it's possible to give this opportunity of making a continuous auditing about what happens every day in the hospital. (Male, expert, 44 years old)

However, 'Diarioclow' is mainly described as a 'group': "The diary is online, we do, we have an online group where we share, so where it's mailed from time to time, and all the stuff, from which we obviously exchange all the information" (male, average, 31 years old); "It's an online site, an online group where each one of us publishes its own reports so that they can be visible and sharable with everyone else" (female, beginner, 27 years old).

Users of 'AZALEA' do not have a clear idea of what a VC is or a defined concept which can be related to it, conversely they talk about the emotive dimension of the online group and what happens within it. Consequently the VC is seen as:

An agglomeration of cat moms and cat daddies, to which you can ask for advice if you need a hand and maybe if you have some doubts about what the cat is doing and I do not know what it is doing or because it doesn't eat [laugh] that is what I have done already, and then we are all cats lovers then you put the picture of the cat that does the most stupid thing (...) we feel the same love for cats, it's a feline love and it is shared, in short it's nice to have people who share the same interest and who think in the same identical way you do. (...) it's just a community. (...) Well... we are all tied to our love for cats, they have a common interest that is the cat (...) someone is in Rome somebody is in the neighbourhood, the cat is always the main thing (...) I think we look a bit extreme from the outside (...). (Female, beginner, 29 years old)

(...) a very nice page because it's very active, all those who write in put photos so (...) there is a network of let's say friendship, no? There are so many people I know there I've never seen, maybe I wouldn't even recognize them during the party, but it can happen that we chat there [by the Facebook page], or, last year it felt bad [she talks about her cat], and I immediately wrote what it had and all of them replied to me, it's a way to share ideas, so, the page is very useful in my opinion, everyone tells their own experience. (Female, expert, 33 years old)

(...) a discussion plaza for, directly or indirectly, provide a service to Azalea (...). So, there is a good number of Azalea's volunteers or anyway people who permanently collaborate with Azalea who are extremely recognizable, not just because I know them in person, but because they are recognizable [on the Facebook page]. For the experience they have with cats, the way they speak about Azalea when we talk about Azalea and maybe because they are even more mature and conscious within the group. (Female, expert, 40 years old)

The 'F&G' users generally represented their VC as a communication tool through which the dancing school activities information are shared:

Well, I told you, it's the channel through which all the various activities are handed out and therefore they channel all through the Facebook page and therefore who might have been less attentive, for those who have not paid attention being part of (...) the page (...), because they end up the lesson saying what the next appointment will be and that the next day you will find the invitation on Facebook. And so obviously being all active on Facebook you cannot miss this thing and so it's definitely a good support for everything they do. And they do it well, because then they always put a lot of fantasy and they are artists also doing this. (Female, average, 42 years old)

In the F&G group, and... well, a group which is basically useful to give us appointments, however, especially to make everyone participate in what happens even if someone is not present. So it's a way to keep in touch and being up-to-date, so also to share with who don't physically join, so that it's possible to join later even if I couldn't do it before. A lot of people came back, I came back after a year too, ah this is a very nice thing, I mean... I did the same thing with another dancing school, but while before, with the other instructor, when I joined to the classes it was all right, but when I didn't go there anymore he didn't neither say hi, but the F&G instructors kept in touch with me even when I didn't go [to their dancing school]. So when we met in the clubs, and so on. And this F&G group serves a bit to this, that is, to keep us in touch even if, we are not physically all there. Maybe even to make us know each other a little better, everyone can express an opinion (...) it's a normal group of some persons who go out for a beer, and we talk about simple things of our everyday life. (Female, average, 35 years old)

This is congruent with the 'commercial' nature of VC, which provides support for the dancing school activities. Some respondents, however, provided a description that goes beyond the simple online bulletin board: It's also a way to let people know you (...) (male, expert, 36 years old).

In doing so, the wordlist and its graphical representation are just a starting point for the determination of the user's definition, where the terms provided are used as follows:

- 'tool' derives from the words 'Facebook', 'mailing-list', 'page' 'Yahoo' and, of course, the word 'tool' itself, which recalls what they use to communicate to each other;
- 'online' comes from the word 'online', moreover 'Yahoo', 'Facebook' and 'mailing-list', which are online tools themselves;
- 'common interest' comes from the words 'activity', 'Azalea', 'cats', 'dancing' and 'interest', which have a link to what is done in the group;
- 'group of persons' comes from 'group', 'community' and especially the word 'persons' which is very much represented.

Discussion and conclusion

This article departed from two main research questions: (1) How can a VC be defined? and (2) how is a VC defined by its users?

With regards to the first RQ, our desk research provided a definition which has two main advantages: firstly it is applicable to every VC; secondly it is validated on the empirical level and thus links the perceptions and experiences of real people with theoretical concepts from literature.

With regard to the second RQ, our interviews showed some recurrent main elements which, once incorporated into a definition, give a clear answer regarding how users define a VC. Next, there is also congruency between our desk research and the definitions provided by our respondents: all the main elements present in their words are contained in the definition we provided (table 5): a digital common space where a group of persons shares a common interest. Therefore, our definition of VCs converges with what emerged on the field, which means it is connected with the empirical level as it is known by this follow-up inquiry (see Blumer's sensitizing concepts [Corbetta, 1999, p. 57]).

TABLE 5
Elements in common between users' definition and the definition proposed in this study

Users' definition	Definition proposed
Online tool	Digital common space and it is supported and/or mediated by the internet
Group of persons	Aggregate of individuals
Common interest	Shared interest

Source: own elaboration

Consequently, coming back to our first RQ, not only we found a VC definition and we tested its applicability on the field for every kind of VCs, we also found important common elements between our theoretical definition and the one derived from the field. Summarizing it, we could say that RQ1 and RQ2 are answered likewise. Of course, the definition we provide is more exhaustive because it incorporates also the following elements:

- 'business partners', by reason of also companies can join VCs, or set them up;
- 'complementary interest', which happens when different interests meet each other;
- 'in part into a digital common space', because not all the interactions must be online;
- 'synchronous, asynchronous or hybrid', in fact not all the messages can be read in the same moment by the users of the community;

- ‘common language and, eventually, a paralanguage’, that is a fundamental element of the interaction;
- ‘protocols or shared norms’, which regulate the interaction.

Regarding the complementary interest, which is not present in the other definitions took into account in our desk research, it is present as a result of a research of Settles and Dow (2013) on creative collaboration in online communities, nevertheless not as part of a VC definition.

Obviously it is very difficult to incorporate all the characteristics a VC can have (see Katz et al., 2004, pp. 325-327) into a definition. Scholars choose the peculiarities of such ‘electronic groups’, and continue to focus on new different aspects – e.g. fluidity (Faraj, Jarvenpaa & Majchrzak, 2011) –or specific ones– like ‘information-exchange’ VCs (Zheng, Zhao & Stylianou, 2013).

Respondents did not define their VC theoretically, they just use VCs as a tool and they described them in those terms or with metaphors and needed time to focus on that and express their ideas. To address this issue we used a specific kind of qualitative interview that properly worked.

As shown by our desk research, virtuality and reality cannot be considered as separate entities but “(...) a false dichotomy” (Wellman, 2001, p. 248), even their effect on the brain it is very similar (Goleman, 2006, p. 35). This clearly emerged by the words of respondents, especially in GSCAI and Diarioclownd: in the first VC an online confrontation went to the offline, in the second one the confrontation started from the offline and went to the online. However, also in the other VCs there are clear evidences of this connection: in Azalea, where in case of need users help online and offline, while in F&G people better know each other also using the web as a ‘bridge’ between the online and the offline, so starting a conversation on one side and continuing it on the other side. Our results confirm this trend in research (see Preece & Maloney-Krichmar, 2005).

Van Dijk states VCs are good for community and can even replace organic communities (van Dijk, 1998, p. 47). In doing so, can them solve the lost community problem? Some scholars do not see any evidence of it (Uslaner, 2004), even if Wellman showed VCs are beneficial for glocalization (Hampton & Wellman, 1999) and other studies confirmed it (Kavanaugh, Carroll, Rosson, Zin & Reese, 2005). Today this effect should be even stronger because life is not only on the screen at home (Turkle, 1995) anymore, thanks to smartphones and ubiquitous connectivity; like Castells (2008) states: “(...) we now have a wireless skin overlaid on the practices of our lives” (p. 448). Our study shows VCs can have a positive effect on keeping together relationships detuned by distance or lack of time. In GSCAI they do not always have time for the meetings, someone lives far or even in another city, but the VC helps them to keep in touch; in Diarioclownd they change partner, hospital and even medical department every time, so they are dispersed, but still they are able to work as a team knowing what the others are dealing with. In F&G they support each other and the dancing school activities through the Facebook page and in Azalea they cooperate by that even if they almost do not meet each other. This is also what respondents think about VCs in general, apart from the VCs which are the cases of this study.

In order to strengthen this definition further testing is needed in other empirical research, which should consider variations of the typology used (see Agostini & Mechant, 2015), as well as specific devices (e.g. smartphones, laptops) or software platforms (e.g. mailing lists, SNSs, online forums).

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Notes

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