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PhD Dissertation Summary

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Online groups from outside and from inside.
The social psychological study of internet communities

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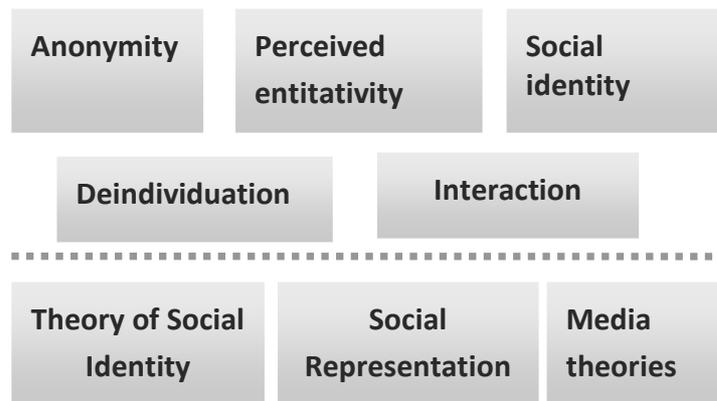
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INTRODUCTION, THE IMPORTANCE OF THE CHOSEN TOPIC

The internet is an increasingly ubiquitous technology. It can be characterized by features such as the anonymity of the user, the absence of non-verbal communication, physical separation and temporal flexibility. It is a unique media because it integrates both different modalities of communication (interpersonal interaction, broadcasting, individual searching, person-machine interaction) and different kinds of content (text, video, images, and audio). The internet also can be studied as a technology, an agent of communication, as a cultural context or an autonomous organism (Ropolyi, 2006). This complexity is reflected in the disciplinary diversity of the studies: they come from sociology, pedagogy, politics, law, media... In the field of psychology most of the researchers are coming from the area of personality or clinical psychology. To social psychology the internet is still an emerging domain of research. In this dissertation we have chosen the theme of online groups, because we think that social psychology fits this level of research most. But online groups are important not just from a scientific point of view; over the past decades the number of individuals who joins online communities increased exponentially. According to recent data if the Facebook community were a country, it would be the 3rd largest (FB Statistics, 2011). And the public opinion still questions whether these communities are 'real' groups.

THEORETICAL BACKGROUND

One of the main purposes of this dissertation is to demonstrate the usefulness of social psychology in the study of the internet. To fulfill this aim we have chosen a few concepts



and theories from social psychology, like anonymity, perceived entitativity, social identity, deindividuation, interaction, the Theory of Social Identity (Tajfel, 1970), Social Representation Theory (Moscovici, 1961) and Media theories (e.g. Uses and Gratifications) and tried to use it in 3 different research topics.

1. figure. Social psychological concepts and theories that appears in the dissertation

The theory that inspired the most empirical research in the field of online groups is the Social Identity Theory of Deindividuation, SIDE (Postmes et al., 1998). The SIDE is presented as an alternative account of the deindividuation phenomena. The model suggests that when social identity is salient, the anonymity of the members would decrease attention regarding interpersonal differences and enhance the salience of the group and social identity. Such situations would result in a greater adherence to group norms. But in other cases, when personal identity is salient, anonymity would encourage personal and individual responses. The SIDE model is based on the Social Identity Theory and the self-categorization theory. Whether the depersonalizing effect of CMC leads to more negative or more positive behavior relative to face-to face interactions is said to depend on the content of those group norms. SIDE distinguishes between the psychological consequences of two different aspect of anonymity in groups: anonymity of group members to self (cognitive impact) on the first hand, and anonymity of self to others (strategic aspect) on the other. The empirical research tells that in the case of anonymity,

the group polarization strengthens (Spears, Lea, 1994), the ingroup seems more attractive (Lea et al., 2001), the outgroup is treated in a more stereotypical and more negative way (Postmes et al., 1998, 2001). The model predicts that the anonymity of the group would heighten entitativity.

VIRTUAL COMMUNITIES, ONLINE GROUPS

Even the name tells a lot about the paradoxical nature of virtual communities: the traditional definition of a community is of a geographically circumscribed entity, but virtuality suggests something free of spatial restrictions. The inventor of this term was Howard Rheingold, who defines virtual communities as "social aggregations that emerge from the Internet when enough people carry on public discussions long enough and with sufficient human feeling to form webs of personal relationships in cyberspace" (1993. 5.). In simple words they are groups of people sharing common interests, ideas, and feelings over the internet. In this dissertation we prefer the term online groups to avoid the negative connotation of the attribute virtual.

THE MAIN FEATURES OF ONLINE GROUPS

On the net there are a wealth of venues where one can connect with like-minded others: chat rooms, newsgroups, e-mail lists, online games, blog, social networking sites... These provide individuals with the opportunity to join existing groups or to create their own. The various forms of internet groups share many similarities with groups that exists in the „real“ world (formation of norms and roles [Covert, Burke, 2005], same group dynamics [McKenna, Seidman, 2005;], conformism or group polarization [Postmes et al., 2001]), but there are also critical differences. Features of the internet such as *anonymity* and *its text-based nature* have been shown to result in greater closeness and intimacy between group members in some cases (Walther, 1996) and in greater hostility and aggressive behavior in others (Sassenberg, Postmes, 2002). Due to the possibility of *asynchronicity* many online groups are always in session and one can participate at any time. *Physical distance* does not matter on the net, physical appearance and *visual cues* more generally are not present and not an influential factor.

ANONYMITY

Most studies of anonymity have focused on the effects of anonymity, such as increases in aggressive behavior, deindividuation or status equalization. Just few of them tried to define it or to reveal its meaning, instead they treat it is a dichotomous, consensual concept. But according to the first empirical studies it has a complex representational structure. We can differentiate between two broad categories of anonymity: *technical* and *social* (Hayne & Rice, 1997). Technical anonymity refers to the removal of all meaningful identifying information about others in the exchange of material. Social anonymity refers to the perception of others and/or one's self as unidentifiable because of a lack of cues to use to attribute an identity to that individual. Burkell's empirical analysis (2006) revealed that there are 3 main factors: (1) *identity protection* (withholding of name or other unique identifiers); (2) *visual anonymity* (being unseen by others); (3) *action anonymity* (where the content and existence of actions are unavailable to others).

ENTITATIVITY

The term entitativity was first introduced by Campbell in 1958 to refer to 'the degree of having the nature of an entity, of having real existence'. Building on gestalt principles, he suggested that factors like common fate, similarity and salience increase the degree of

perceived entitativity of a group. Contemporary research on the concept has focused on both the antecedents (group variability, group size, interaction between members, presence of common goals, common outcomes, similarity of group members, the importance of the group for its members [Lickel et al., 2000; Sassenberg, Postmes, 2002; Moral-Toranzo et al., 2005]) and consequences (shift from memory based to online impression formation [Johnson, Queller, 2003], members of entitative groups will be perceived more negatively [Crawford et al., 2002], it strengthens the identification with the group [McConnell et al, 1994; Abelson et al., 1998; Castano, Sacchi, Gries, 2003]) of group entitativity.

MOTIVES FOR JOINING ONLINE GROUPS

Individuals join group to achieve an important goal or combination of goals. The main theoretical framework for this kind of research is Uses and Gratifications Theory. This mass media perspective first was used to study classic mass media (like radio and television) but it can be a useful tool in studying new media as well (McQuail, 2003). There are as many classifications of gratifications as many researchers, but the most common motives can be grouped into the following categories: *economic motivations, entertainment, self-enhancement, social need, escape and status.*

	other labels	studies
economic motivations	purposive value, instrumental need, information orientation, cognitive need	Eighmey, 1997; McKenna, Bargh, 1998; Stafford et al., 2004; Sheenan, Hoy, 1999
entertainment	relaxation, contextual or affective need, excitement	Eighmey, 1997; Parker, Plank, 2000; Sheenan, Hoy, 1999; Lee, Young, 2009
self-enhancement	self-discovery, self-esteem	Parker, Plank, 2000; Sheenan, Hoy, 1999; Ishii et al., 2008; Dholakia et al., 2004
social need	interpersonal or social integration, emotional need, relationship-orientation, interconnectivity	Eighmey, 1997; McKenna, Bargh, 1998; Wellman, Gulia, 1999; Stafford et al., 2004; Preece, 1999; Lee et al., 2003
escape	fantasy, imagination	Papacharissi, Rubin, 2000; Song et al., 2004
status	social enhancement, fame	McKenna, Bargh, 1998; Eighmey, McCord, 1998

1. table. Motives for joining online groups as they appear in U&G studies

AIMS AND HYPOTHESIS

In order to show how to use the existing methods, theories and techniques of social psychology in the study of the internet, we conducted three different but related researches.

The *first study* investigates the social representation of anonymity. As the framework of the research we have chosen the Social Representation Theory (Moscovici, 1961), as it has been proved to be a good technique to study new social phenomenoms.

1. *aim. To reveal the content of the social representation of anonymity (the consensuality of the meaning, the description of the core and the peripheries)*
2. *aim. The description of the structure of the representation (variability, rarity) and the identification of hidden dimensions of meaning.*
3. *aim. To reveal the differences between the representations of different social groups and categories: gender and age differences, and two special groups: hackers and the visually impaired.*
4. *aim. To describe the perceived social impacts (benefits and risks).*
5. *aim. To investigate whether the personal experience and the attitude toward the anonymity of the internet is making a difference.*

The second study focused on four specific issues regarding the perception of the entitativity of groups.

6. *aim. To examine the degree to which groups differ in perceived entitativity.*
7. *aim. To determine which group properties (interaction, similarity, common goals, collective action, temporal factors, closeness, importance) are most strongly related to entitativity.*
8. *aim. To empirically identify a smaller number of types of groups and to describe how these differ with regard to their underlying properties and their entitativity.*
9. *aim. To compare the clusters of the first task (with given properties) and the clusters of the free categorization.*

The third study was approaching from the 'inside', asking members of online groups to give a description of their own group, along properties like the perceived entitativity, the anonymity of the group, the importance it played in their social identity, the consequences of the membership. We also wanted to get a picture about the motivational factors behind joining to such groups.

10. *aim. To examine the degree of the perceived entitativity of ingroup.*
11. *aim. To examine the degree of the perceived anonymity of ingroup*
12. *aim. To determine which group properties (interaction, similarity, common goals, collective action, temporal factors, closeness, importance) are most strongly related to entitativity.*
13. *aim. To describe the motives why people are joining online groups.*
14. *aim. To draw a profile of the examined groups with regards to the following aspects: perceived degree of activism in the group, the role in the group, the importance of the group in social identity, the perceived consequences of being the member of the group).*
15. *aim. To examine whether the personal trait called affiliation need had an impact on the perception of the abovementioned properties.*

PARTICIPANTS

1. The sample of the first study included 259 'lay-people' of an average age of 28,7 and standard deviation of 13,7, 132 male and 127 female. Beside this 'normal' sample, we tried to find groups, that have a special 'connection' with anonymity: the first subsample consisted of blind, visually impaired persons (10 males and 12 females, 22 persons), in the second were experts who work on the field of net security, called ethical hackers (24 persons, 19 males and 5 females).
2. For the second study, a total of 142 participants (79 females and 63 males) – all experienced internet users – were selected. The average of age was 24,6 years (between 16 and 61 years).
3. The sample of the thirds study consisted of 337 respondents (232 females and 105 males) of an average age of 23,86 years (SD=7,67). The criteria in the selection were to be a member of an online group. We have chosen 6 different groups: (1) *Twiline Magazine* (a fan site, the members are connected by the shared enthusiasm about the Twiline books and movie); (2) the *Facebook*; (3) *moly.hu* (a site for book readers); (4) a *discussion forum* on the topic of dieting; (5) *World of Warcraft* (one of the most popular Massively Multiplayer Online Role-Playing Games); (6) and *Tumblr* (a microblogging platform that allows users to post text, images, videos, links, quotes and audio).

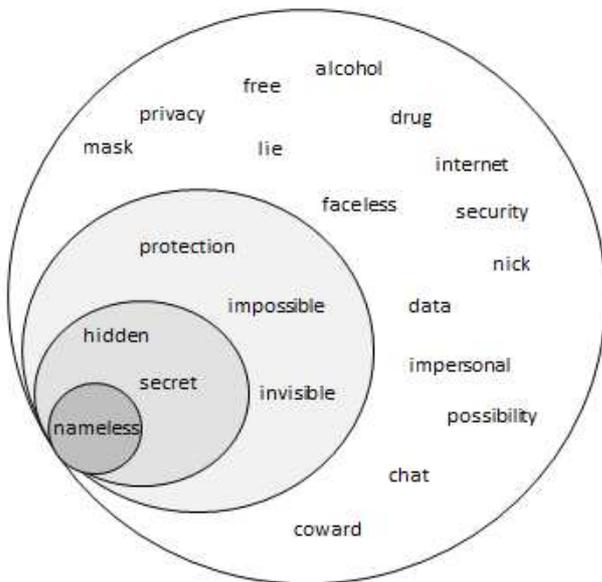
METHODS

1. For the study of social representation we have chosen a projective technique, the free association task, combining with a few more questions about anonymity (the perceived advantages and disadvantages of it, personal experience in anonymous communication, and attitude toward the existence of real anonymity on the internet). For the free-association task, participants were instructed to write down the first three words coming into their minds when prompted with the stimulus word anonymity.
2. In the second study we adapted the measurement of offline group perception (Lickel et al., 2000). The participants rated a sample of 15 groups (*a chatroom, commenters of a blog, a bulletin board, Facebook users, two e-mailing person, members of a dating site, internet-users, bloggers, moderators of a forum, Youtube users, readers of a newsgroup, online World of Warcraft subscribers, subscribers of a sex site, a flashmob, iwiw users*) on 9 properties of groups (entitativity, anonymity, common goals, level of interaction, duration, group member similarity, collective action, permeability and the importance of the group). Participants also completed a sorting task in which they sorted the groups according to their subjective perceptions of group similarity.
3. In the third study, a questionnaire was developed using the entitativity properties used in the second study, and questions from other research (Grace-Farfaglia, 2006: economic motivation, entertainment, self-enhancement, social need, escape; and LaRose, Eastin, 2004: status). The questionnaire also consisted of other scales measuring the importance of the group in members' life, the time spent with the group, the roles played in the community, its role in the person's social identity, the consequences of the membership, the level of anonymity and a personal attribute: need for affiliation (Flanagin, Metzger, 2001; Katz, 2003; Ruggiero, 2000).

RESULTS

1. STUDY. CONTENT AND STRUCTURE OF SOCIAL REPRESENTATIONS

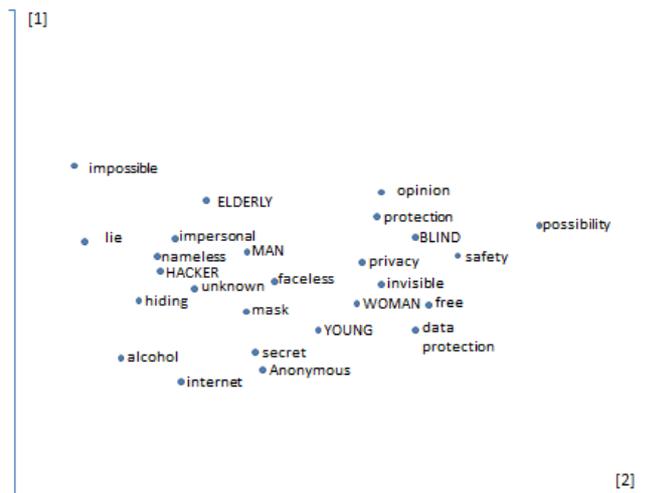
Participants produced a dictionary composed by 543 different words with a mean of 2,55



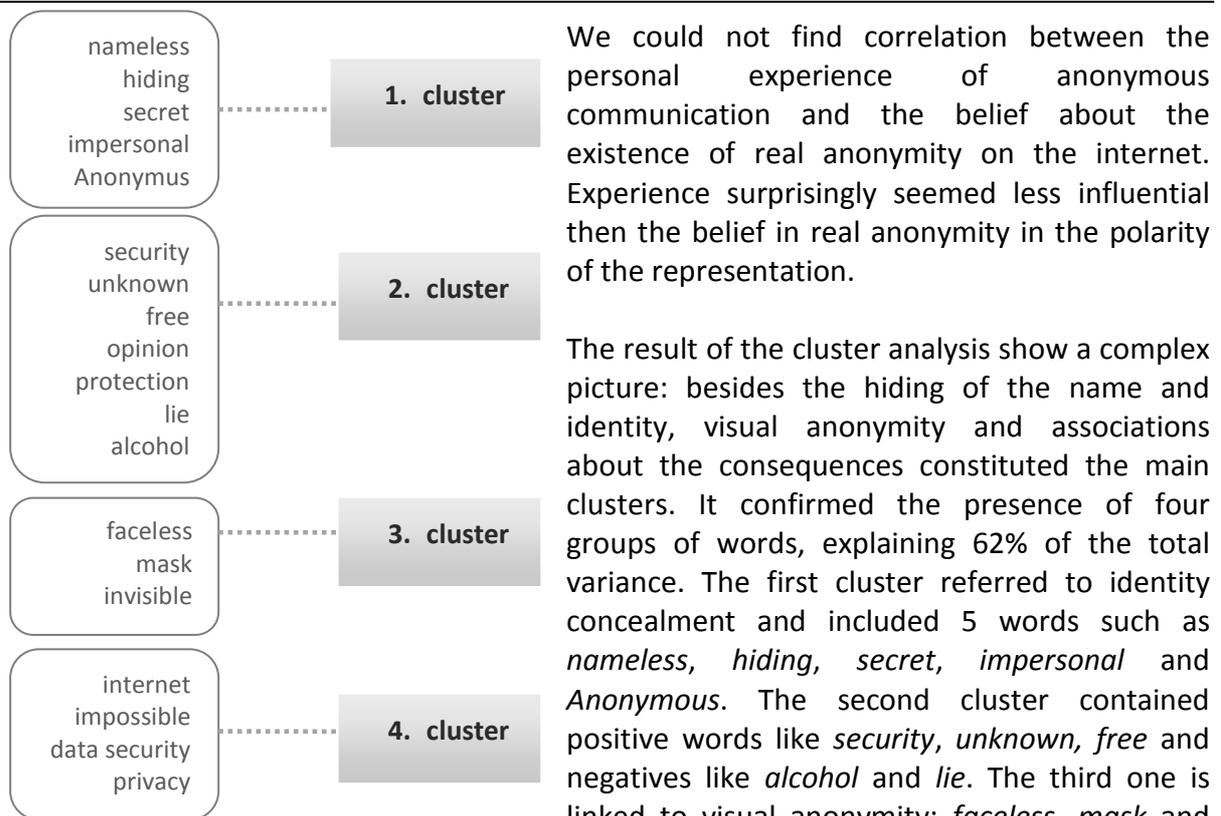
2. figure. Social representation of anonymity

words per participant. These words make 114 wordgroups. The most frequent was *nameless* (mentioned by 110 persons, with the average 1,3). This was the central nucleus of the representation (above average frequency and below average evocation order). The next ones are *secret* (35; 1,8), *hiding* (31; 2,0), *protection* (6; 1,3), *impossible* (6; 1,5) and *invisible* (5; 1,5). These constitute the primary periphery. Most of the words belonged to the secondary periphery (108 out of 114). At first sight, the core of the representation seems consensual, but this is misleading: they only used the word as a synonym. It may refer to the unsettledness of the concept. The large amount of peripheral

words also indicates that. There were no gender differences in the content of the representation, but we found some in the structure of it: the representations of men are more variable, but more negative too. The representation of the younger and the older generation differed largely, the younger's content is more consensual, but the emotional connotations are more extreme, more ambivalent. The meaning of anonymity is very negative and variable for the elderly. According to former expectations, the representations of the two subsamples are different. The hackers' representation is negative and unified. The blinds' opinion was consensual and more positive; they had a settled, structured representation. Interesting contradiction was, that in spite of the lot of associations about the internet, when asked directly, lot of doubt emerged about the real existence of anonymity on the net. The elderly and the hackers were the most skeptical. The former group had little personal experience, for the latter it is an 'occupational hazard'. Only the third of the participants admitted to communicate anonymously (this rate was highest among young ones: 45%).



3. figure. The multiple correspondence analysis map of the social representation of anonymity. The 1. dimension explains 24% of the variance (eigenvalue: 0,163), the second account for 21% (eigenvalue: 0,098). The demographic variables are in capital letters.



4. figure. The cluster analysis of words

We could not find correlation between the personal experience of anonymous communication and the belief about the existence of real anonymity on the internet. Experience surprisingly seemed less influential than the belief in real anonymity in the polarity of the representation.

The result of the cluster analysis show a complex picture: besides the hiding of the name and identity, visual anonymity and associations about the consequences constituted the main clusters. It confirmed the presence of four groups of words, explaining 62% of the total variance. The first cluster referred to identity concealment and included 5 words such as *nameless*, *hiding*, *secret*, *impersonal* and *Anonymous*. The second cluster contained positive words like *security*, *unknown*, *free* and negatives like *alcohol* and *lie*. The third one is linked to visual anonymity: *faceless*, *mask* and *invisible*. The last and more incomprehensible one is about the 'limits' of internet: *internet*,

impossible, *data protection* and *privacy*. The correspondence analysis revealed two main dimensions: evaluation and the level of abstraction.

The associated words can be seen as metaphors which reveal a lot about the hidden meaning of anonymity (Lakoff, Johnson, 1980). The four main associational circle: (1) crime: *lie*, *crime*, *spy*, *Klu-Klux-Klan*; (2) addiction: *alcohol*, *drug*, *addiction*, *dependency*; (3) information: *data protection*, *information*, *bank account*, *call register*; (4) internet: *internet*, *chat*, *user*, *social network*, *downloading*, *e-mail*, *flame*, *forum*, *IP-address*, *troll*. The first two categories are directly connected to the „dark side” of the internet, and even the two other contains some negative connotations: they imply the defending against attacks, naming trolling and flame.

The participant could name more benefits than risks. There were no gender differences regarding this, but age made a difference: youngers listed more benefits, especially in the „One can be anyone, he is not” category. They mentioned the *freedom of opinion and speech*, the *protection of privacy* and the *lack of responsibility* most frequently. On the other hand they feared most *irresponsibility*, *uninhibited behavior*, *deceit* and *crime*.

	Total (N=213)	Men (N=103)	Women (N=110)	Youngers (N=140)	Elderly (N=36)
Freedom of speech and opinion	74 (38%)	34 (38%)	40 (36%)	53 (38%)	12 (33%)
Protection of privacy	46 (24%)	21 (20%)	25 (23%)	24 (13%)	8 (22%)
Lack of responsibility	22 (11%)	13 (12%)	9 (8%)	12 (8%)	3 (8%)
Easier making contacts	18 (9%)	10 (9%)	8 (7%)	16 (11%)	1 (2%)
Can be yourself	14 (7%)	6 (5%)	8 (7%)	8 (6%)	1 (2%)
Free information gathering	14 (7%)	7 (6%)	7 (6%)	11 (8%)	1 (2%)

One can be anyone he is not.	8 (4%)	3 (2%)	5 (4%)	6 (4%)	1 (2%)
Equality	6 (3%)	2 (1%)	4 (3%)	2 (1%)	0
Total	202	96	106	142	27

2. table. Frequency data of the advantage categories

It can be seen from the categories, that sometimes the advantages and disadvantages are the same: two sides of the same coin. My anonymity is the positive side, but if someone else stays in the dark it could be dangerous.

	Total (N=213)	men (N=103)	women (N=110)	youngers (N=140)	elderly (N=36)
irresponsibility	77 (39%)	42 (41%)	35 (32%)	62 (44%)	13 (35%)
deceit, insincerity	55 (28%)	31 (30%)	24 (22%)	31 (22%)	12 (33%)
crime	20 (10%)	11 (10%)	9 (8%)	12 (8%)	6 (16%)
abuse of data	13 (6%)	8 (7%)	5 (4%)	9 (7%)	5 (14%)
being caught	7 (4%)	3 (2%)	4 (3%)	3 (2%)	3 (8%)
internet addiction	2 (1%)	0	2 (1%)	0	1 (2%)
Total	174	95	81	117	40

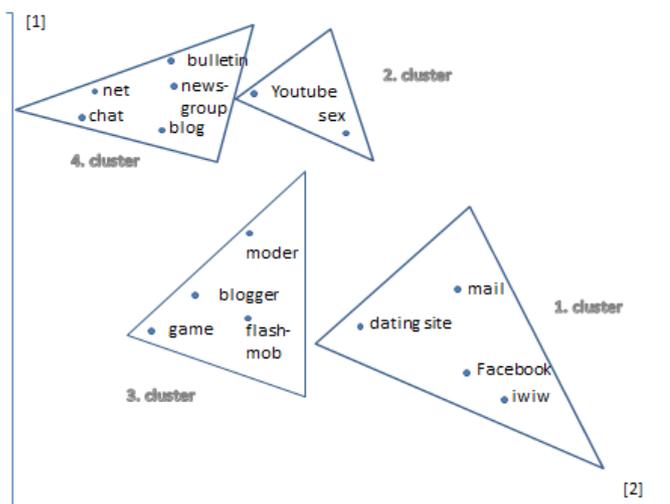
3. table. Frequency data of the disadvantages categories

2. STUDY. PERCEPTION OF ONLINE GROUPS

One of the most important findings of the second study, that the features that were used in the study of offline groups (Lickel et al., 2000) are applicable in the case of online groups as well. The perceived entitativity is somewhat lower, but online groups were also seen as differing in entitativity.

The result of the regression analysis indicate that the interactivity, similarity, *common goals* and *collective action* were the most influential predictors of entitativity, and these are the same as Lickel et al. (2000) found important in the case of offline groups. It can be seen from the matrix of correlations that anonymity is unrelated to entitativity, and only has a weak, but significant negative correlation with importance ($r=-0,213$; $p<0,05$).

On the basis of the nine properties we could create four clusters: (1) social network sites,



5. figure. The result of the cluster analysis of free categorization represented in a two dimensional space

(2) relationship-oriented, interactive groups, (3) large, anonymous, not entitative groups; (4) lowly permeable, very entitative communities. These differed mostly in terms of interaction, entitativity and anonymity. The difference between the classification based on the given properties evaluation and the free categorization showed that the properties did not cover the whole representation: the result of the multidimensional scaling suggested that the social presence and the modality of

the internet context also played in important role.

Though anonymity and entitativity were unrelated generally, but in the case of the individual groups we found significant correlations (commentators of a blog, readers of a newsgroup, members of a bulletin board, a chatroom. This is the 4th cluster of the free categorization task).

3. STUDY. ONLINE GROUPS FROM INSIDE

Our empirical study, conducted across six different virtual communities, found that entitativity (and even anonymity) seems higher from inside than from outside. The members found Twiline the most group-like, and the least entitative were Facebook and Tumblr. The most anonymous were the Twiline-page and WoW, the least anonymous was the Facebook. These two properties only correlated in the case of Facebook and Tumblr.

	entitativity	anonymity	correlation
Twiline	4,22 (0,66)	3,66 (0,92)	-
Facebook	3,51 (0,76)	2,08 (0,93)	0,355**
Moly.hu	3,95 (0,72)	3,02 (0,84)	-
Forum	3,98 (0,53)	2,90 (0,95)	-
WoW	3,66 (0,96)	3,50 (0,93)	-
Tumblr	3,52 (0,81)	2,98 (0,91)	0,433**
Total	3,78 (0,81)	2,91 (1,01)	-

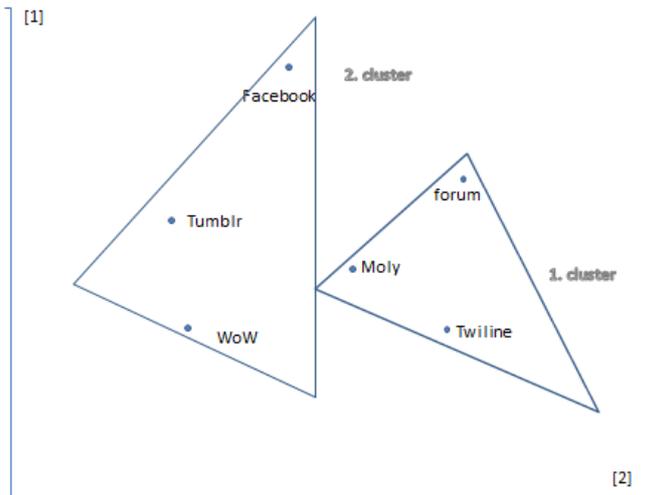
5. table. Entitativity and anonymity

The result of the regression analysis indicates that the interactivity, similarity, collaboration and *collective action* were the most influential predictors of entitativity. There were great differences between the groups in the importance of the five gratifications, but in general we can say, that the main motives for joining online groups are: entertainment, *social needs* and *learning opportunities*.

	status	escape	learning	social	entertainment
Twiline	1,77	2,49	3,4	3,25	3,55
Facebook	1,62	1,76	2,28	2,25	3,23
Moly.hu	1,55	1,83	3,31	3,20	3,21
Forum	1,65	2,01	3,26	3,82	2,42
WoW	2,06	2,13	2,56	2,72	3,92
Tumblr	1,92	2,09	2,65	2,76	3,43
Total	1,73	2,03	2,84	2,83	3,36

6. table. The averages of the different groups in the five gratification factors

The cluster analysis has confirmed that the 6 groups make two categories: (1) smaller groups with members who know each other – sometimes even personally; (2) large networks of people. This division reflects the classification of Prentice (Prentice et al., 1994), who differentiate between common bond and common identity groups. In the first the bonds between the members make up the attachment to the group. In the second one the attachment to the group is dependent on the identification of the group as a whole.



The multidimensional scaling added another aspect; besides coherence the degree of reality also plays an important role in categorization. It covers anonymity, how the life of the group rooted in 'reality', or rather it takes them to a fantasy world.

6. figure. The groups in a 2-dimension space (result of the MDS and the cluster analysis)

The correlation matrix suggests that entitative groups play a more important role in members' social identity, the members are more active, and the consequences of membership are more beneficial.

	anonymity	entitativity	status	escape	learning	social	entertainment
group features	-	0,44**	-	-	0,39*	0,37*	-
social identity	0,32*	0,45**	-	-	-	0,43**	-
activity	0,41**	0,30*	0,30*	0,30*		0,35*	-
comparing	-	-	0,52**	0,48**	0,31*	0,33*	-
consequence	-	-	0,57**	0,52**	0,40**	0,43**	-
affiliation	0,35*	-	-	-	-	-	-

7. table. Correlations between the properties and the gratifications ** $p < 0,01$; * $p < 0,05$)

RESEARCH FINDING AND LIMITATIONS

We have succeeded in fulfilling our main goal with our studies: to prove that the techniques, concepts and methods of social psychology are useful in the research of online groups. We addressed a few important issues: we explored the representational field of anonymity, we examined the degree to which perceivers saw different groups as varying in entitativity and anonymity, we identified two sets of distinct types of groups in terms of the two abovementioned properties, and finally we described the main motivational factors for joining online groups. In spite of these contributions, it is important to recognize the exploratory nature of this research, and its attendant limitations (mainly concerning the chosen samples). Further research is required to determine the contextual and personal factors that shape the perception of anonymity and entitativity.

DISCUSSION, FURTHER IMPLICATIONS

The internet is fast becoming a natural background of our everyday life. In 2010 more than 2000 million people worldwide had access to it. Children now grow up with the internet; they and future generations will take it for granted. This so called *digital generation* is very good at internet usage, but still has a lot to learn. The fast developments in digital technologies during the last decades confront members of the technological society with situations that require the utilization of an ever growing assortment of skills, termed '*digital literacy*'. It goes well beyond the physical use of the software. Among others it requires socioemotional skills, the knowledge of the "rules" that prevail in cyberspace and applying this understanding in online cyberspace communication. Examples that are

commonly given to these include the ability to join to an online group, to detect the trace of deception, to create a good impression online, to know how to replace nonverbal signs in written text...etc. The digital literacy not only important for the individual but its social consequences are enormous on many field: political (participation, publicity), legal (privacy, cyberbullying) or pedagogical (teaching the digital literacy).

The abovementioned *socioemotional skills* are partly functioning at group level. That is one of the reasons why this dissertation has chosen the topic of online groups as the theme. To date very little research has investigated this. If we could understand the method of operation, the structure, the motivations for joining them, and how they are perceived from inside and outside, it would help in 'handling them well', in order to raise our sociotechnical capital.

People are not passively affected by technology, but actively shape its influence. The technological development and the current trends suggest that these online groups are only likely to grow in importance, influence, and the activities for which they are used, so it is time to build a theoretical framework, to help the launching of a systematic investigation of the online social interactions.

*"The new media are not bridges
between man and nature;
they are nature."
Marshall McLuhan, 1969*

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