Paradise Lost? Primary Empathy in Online Communities of Interest and Ways of Use

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Abstract

The objective of this paper is to investigate the role of empathy related to the matching of the feelings of the other person in online communities of interest, connected to contribution, self-organized learning by observation in social contexts, group building, social relationships, as well as the use in HCI. In addition, active empathic groups are suggested to have revolutionary effect for eDemocracy. We are presenting results from two studies, related to the process of non-contributors’ engagement and ways members could interfere in policies and changes of their environment with the help of software-based research.

1 Introduction

Little research investigates the correlation between empathy, learning and online communities as well as the results of these parallels. Members’ informal learning in Online Communities of Interest is self-directed and based on attention, observation, potential engagement and contribution as posting. Empathy is among the essential ingredients for such learning that results to a change of behaviour i.e. the motoric response of contribution. As such, the objectives of the study were the following: (a) to identify empathy’s position within self-organised learning by observation in social contexts; (b) to identify empathy in CMC (c) to identify the implications for management and design explicitly related to contribution as the ultimate action for learning; (d) to search for the potential use of the empathic members; and (e) to identify future uses of the results for usability and human resources for eDemocracy.

2 Contribution in Online Communities of Interest

Collaboration in Online Communities’ needs trust to thrive (Typaldos, 2000) and trust needs empathy to be developed (Feng et al., 2004). Empathy is related to perception as capturing the colours and the overall painting in CMC. Research in online communities exists since the early 1990s (e.g. Rheingold, 1991; Bruckman, 1992; Harasim 1993). In the early 21st century, Jenny Preece from the academic world and Cynthia Typaldos from the business world led the research. Preece (2000) defined the online communities as the People who make the community where group dynamics, needs and roles shape the community; the Purposes as people come together for a purpose(s); the Policies as the behaviour governed by group norms, rules and sometimes formal policies. In addition, software is needed to support and influence community activity. Typaldos (2000) suggested that an online community is defined by the collaboration toward shared goals, and is more than merely an aggregation of users, or a collection of communication tools. She proposed the 12 Principles of Collaboration as Guidelines for developing successful social software and online communities: Purpose, Identity, Reputation, Governance, Communication, Groups, Environment, Boundaries, Trust, Exchange, Expression, and History. Rewards are not needed in online communities, common interest is enough (Miyake, 1986). Online communities are revolved around either common interest or common practice or both. Communities of Interest (CoI) and Communities of Practice (CoP) are not new phenomena. As terms, they echo Sherif and Sherif (1953) as well as Siegel and Siegel (1957) when they recommended a distinction between reference (RG) and membership groups (MG). The process of contribution is certain in MG/CoP and possible in RF/Col whereas RF/CoI are more likely to exhibit change i.e. development comparing to MG/CoP. RG/CoI members tend to discuss their cognitive dissonance with the content and are more motivated in a free environment comparing to the experts-disciples interaction in MG/CoP (McGuire, 1965). Engagement in CoP is crucial but not necessary in CoI. According to Wenger (1998), engagement in social practice is the fundamental process by which members learn and so become who they are as they pursue shared goals over time. Levels of engagement are depended in many factors, both external and internal to the individual. CoP and CoI suggest specific levels when a newcomer engages in the community. The procedure is called legitimate peripheral participation (LPP, Lave and Wenger,
developing community’s structure e.g. developing a constitution and voting a committee in CoI towards CoP. Constitution, shared visions, as well as shared products and roles are assigned by democratic procedures. The development might continue to an Online CoP (OnCoP), where shared identity, common individuals who belong to ‘real’ CoP to an Online CoI (OnCoI) is an interesting issue in both everyday and practice; (d) the production of artefacts; and (e) the division of labour (roles) external and internal motivation as central towards intention drive and its attributes (intensity and awareness) that leads to motivation, (b) the different levels of external and internal motivation as central towards attention; (c) the rules and the netiquette of communication and practice; (d) the production of artefacts; and (e) the division of labour (roles). The role of the leader as a sensitive instrument of the community is going to be investigated in this paper. The development of a group of individuals who belong to ‘real’ CoP to an Online CoI (OnCoI) is an interesting issue in both everyday and scientific life. The development might continue to an Online CoP (OnCoP), where shared identity, common constitution, shared visions, as well as shared products and roles are assigned by democratic procedures developing community’s structure e.g. developing a constitution and voting a committee in CoI towards CoP.

3 Empathy for Self-Organized Learning by Observation in Social contexts

Attitudes, motivation, attention and goals are outgrown on intention, actually focus on future outcomes and are continuous to circumstances in order to deliver the artefact. This results to the alignment of group dynamics as all members’ move towards the same direction. Right group intention provides the group with continuing aspiration and quality of work. Shared intention creates the self-organised system for community intelligence and enhances informal, social learning (Livingston, 2000). The corollary of the following levels is connected to the differences between CoP and CoI as well as to the determination of members’ levels of engagement: (a) the intention drive and its attributes (intensity and awareness) that leads to motivation, (b) the different levels of external and internal motivation as central towards attention; (c) the rules and the netiquette of communication and practice; (d) the production of artefacts; and (e) the division of labour (roles). The role of the leader as a sensitive instrument of the community is going to be investigated in this paper. The development of a group of individuals who belong to ‘real’ CoP to an Online CoI (OnCoI) is an interesting issue in both everyday and scientific life. The development might continue to an Online CoP (OnCoP), where shared identity, common constitution, shared visions, as well as shared products and roles are assigned by democratic procedures developing community’s structure e.g. developing a constitution and voting a committee in CoI towards CoP.

Although Wenger proposed a mimetic social form of learning (1998:226-7), he did not identify the mechanism and the learning process connected to legitimate peripheral participation (LPP). Historical influences for the Social Learning Theory can be traced back to 2,500 years ago. For Aristotle (384-322 BC), mimesis comes from a fundamental ‘desire to know’. The Social Learning of Imitation was first mentioned in 1890: ‘[learning as] a natural instinct to imitate the actions of others’ (W. James as sited in Thorndike, 1898) and Observational learning in the form of the study on ‘imitation’ by behaviourists such as Miller and Dollard (1941). It was then when Social Learning and Imitation was first mentioned connected to human behaviour as motivated by internal drives. In the 50s, the historical personage simulation was introduced by Auerbach (1953). Object appraisal involves scanning and appraising the input of information from the external world for its relevance to person’s motives, goals, values and interest; social adjustment refers to the mediation of self-other relations via the information that engages her motives to affiliate and identify herself with the group or to detach and oppose

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1 The nick name for the process is ‘The Path of the Dragon’ due to the difficulty to reach the final stages.
herself and in a individual-group circle. In 1969, Bandura conceptualised Observational learning as a multiprocess beginning with observation, resulting in simulation and reproduction. Observational learning entails two representational systems, the imaginal and the verbal. In 1977 (p. 65), Bandura uses the term of Vicarious Learning as ‘in vicarious expectancy learning, events become evocative through association with emotions aroused in observers by the affective expression of others’. Self-directed learning is situated in social online learning contexts and integrates both individual and social spaces as part of informal learning. The difference between SOLOS and situated learning is that SOLOS is interested more in learning as it occurs within the individual (Norman, 1993) as the learner defines his/her purpose, strategy, outcome and review in a reflective way, using verbal reasoning as in self-explanation towards an intention for engagement with the community via legitimate peripheral participation. Community building and mutual learning (CEDEFOP, Bjørnåvold, 2000) takes place under the perspective of ‘immersion’ and ‘co-presence’ (Beer et al. 2003). Presence (being located in an environment) and co-presence (being located in an environment with others) promotes reflection in learning in the search for personal meaning and understanding. As such, self-organised learning in online social contexts could occur in two levels:

- an internalisation of social construction of meaning via
  - self-awareness, self-observation (Bekoff, 2002)
  - observation of the Object (Bandura, 1969)
  - perspective taking, mimesis (Auerbach, 1953) and
  - empathy (Preston and de Waal, 2002);
- the outer self-explanation and contribution in communities
  - self-explanation (Chi et al., )
  - engagement (Aristotle; Maslow, 1970; Wenger, 1998)

The stairway between the two levels is interpersonal trust (Feng et al., 2004) connected to individual’s personal choices and decision making. Self-Organised Learning by Observation in Social contexts is a learning strategy based on the above theories. The learner is responsible for their own decisions, including decisions on what to select, think, reflect and act next (Lambropoulos, 2004). SOLOS builds on Self-Actualisation needs, which according to Maslow (1970) are related to realising personal potential and self-fulfilment. Maslow’s Self-Actualisation characteristic of being socially compassionate is explicitly related to empathy and contribution. Ickes, et al. (1993) suggested that empathy is strongest between people who identify similarities with others or who share experiences, whereas Preece (2000) found that empathy is important in online discussion, and is influenced by the discussion topic. As empathy is the ability to accurately infer the specific content of other people’s thoughts and feelings (Ickes, 1993), empathy is prerequisite to modelling. Modelling comprises the motoric response for self-actualisation. SOLOS is a subtle process, based on the learner’s choice and intention to observe actively and direct her/his own learning. The three stages could be briefly described as following: (a) Active Observation (setting intention, awareness, empathy, interpersonal trust); (b) Learning (Constructivist and Sociocultural Learning for retention and reflection); and (c) Contribution (Self-actualisation – decision making, motoric response and embedded behaviour). Awareness is viewed to be sensitive objectively and see the actual truth in both the Self and the environment without projections of the Subject. As such, action under real circumstance indicates intelligence since not being able to see the reality leads to false and neurotic actions or no actions at all. Empathy suggests equality between the users (Preece, 1998). Feng et al. (2004) identified that a link exists between empathy, trust and contribution: ‘In order to win other people’s trust online, a person not only need to correctly infer the other’s feeling, but also provide supportive response’. Members must be able to tell whether — and how much — they can trust other members (Typaldos, 2000). Empathy: is a ‘complex psychological inference in which observation, memory, knowledge and reasoning are combined to yield insights into the thoughts and feelings of others’ (Ickes, 1997:2). As such, it eliminates the space between the Observer and the Observant and broadens the space inside the individual as it allows the Other to spread in this space.

**Primary empathy** exists by design in all human population; it is defined as the automatic matching of the feelings of the other person (Fischer, 1980), and it is the relationship between the newborns on their first days on the earth: when one baby cries, everybody starts crying. Only in 1992, the development of cognitive neuroscience helped di Pellegrino et al. to identify the mirror neurons supporting representations of an Object from a Subject, verifying Lipp’s (1903) and McDull’s (1908) suggestions on empathy (cited in Preston & de Waal, 2002). In 1998, another verification of the mirror neurons was made by Rizzolati and Arbib as well as identification of the areas where the mirror neurons are located, interacting with areas in both hemispheres (Broca are 44 and PE/PC). Ickes, et al. (1993) found evidence that empathy is strongest between people who identify similarities with others or who share experiences, as in Col. In 1998 Preece and in 2001 Preece and

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*What really matters is the situation and the parts that people play*. Norman (1993:3-4) emphasis by the author.
Ghozati tried to analyze empathy in online communities as well as understand it better for supporting sociability and usability. The authors proved that empathy is widespread in online communities. In 2002, Preston and de Waal presented their Perception-Action Model (PAM), a process-based suggestion on empathy, stressing the importance of response: ‘attended perception activates subject’s representations of the state, situation and object, and that activation of this representation automatically primes or generates the associated autonomic and somatic responses, unless inhibited’ (p.4). Effortful processing and the mirror neurons discovery suggest that empathy could be awakened, re-taught and re-learnt. Eslinger et al. (2002), are among the first neuroscientists to search for Subjects’ empathy from written text. They found that text judging showed different human brain pattern activation, strongly influenced by emotional experience of the text due to reasoning and judgment. The use of contents arouses awareness among the members of the group and a general tendency appears to accept or reject others’ opinions (Hovland et al., 1953). Backgrounding irrelevant text and foregrounding needed text activates the process of learning and changes occur in or against the favour of opinions towards conclusions drawing on both individual and group level.

4 Usability

Cole (1991:412, cited in Crook, 1994:37) suggested that ‘the precise ways in which mind is distributed depend crucially on the tools through which one interacts with the world, which in turn have been shaped by one’s cultural past as one’s current circumstances and goals’. Usability is a measure of quality of user’s experience based on ease of learning, efficiency of use, memorability, error frequency and subjective satisfaction. These are related to usability engineering, practical GUI (Graphical User Interface) design, web usability, User Interface Design for online communities, web writing and web accessibility (Interface Consult, 2004). The basic issues searched in the studies were related to ease of learning, navigation and time needed for familiarization with the interface. Empathic members as sensitive organs who have the ability to simulate and identify members’ common visions, needs and suggestions (Goleman et al., 2002), could be detected on the internet, form a group and be mediators or messengers between the public and the authorities.

5 Social Network Analysis

Following Shneiderman’s concept on information visualisation(1998), we decided on the use of Social Network Analysis (SNA) as it depicts social relationships between a set of actors (Baroudi, et al., 1986). SNA was successfully used by Ackland and Gibson (2004) to map political parties in Australia. Politically, all governments have different levels of corruption. Following eDemocracy values and equal rights for all citizens we introduced to use of research methods for participation in Centrifugal Decision Making Processes (Lambropoulos & Birmbas, 2004). One of the goals of SNA is to visualize communication and relationships between community members as used in social research. SNA suggests two approaches, namely, Ego-centred analysis and Whole-network analysis. In ego-centred analysis, the focus is on the individual rather than on the whole. Various concepts are used to evaluate different network properties (Baroudi, et al., 1986), such as centrality (assessment of the power of an actor based on the number of alters that actor is directly connected to.), connectivity and cliques. Comparison of the graphs illuminates members’ directions of interactions and roles in the communities. In the second study, we used a GUI based network analysis tool called Netminer. Its unique feature lies in the integration of standard SNA methodology with modern 3D network visualization techniques in the spirit of Exploratory Data Analysis (Netminer, 2003:1). It provides visualization of the social network structures and positions of actors within the network using Sociograms, which are graphs with nodes and lines for actors and ties respectively. In the search for the leader as a sensitive instrument of a community, we propose that almost equal number of outgoing and incoming messages in CMC indicate the aware and empathic individual who is able to provide solutions as well as interacts and collaborates with the members.

6 The studies

6.1 Exploratory Case study I

The aims of this study were the identification and the results for empathy related to contribution. Other aims were the investigation of issues for contribution, reasons for not contributing, evidence of learning and problems with the interface. Thirteen individuals accepted to participate in a discussion forum in Taking IT Global. The specific cluster on Peace and War was selected from 58 discussion topics and investigated from the 15th of March, 2003 to the 23rd of July, 2003. The Discussion Forum system was the open source phpBB Bulletin Board package. The subjects were from 16 to 48 years old and came from Canada, India, Greece and U.K. They read the messages and kept notes simultaneously for 3 weeks, in a self-observatory way in order to be consciously
aware of themselves and the way they work from the stage of registration to contribution. Then, they had to answer three types of questionnaires (unstructured, semi-structured, structured) anchored in Soft System Methodology guidelines (Checkland and Scholes, 2004) and Dynamic Inquiry Methodology (London & McMillen, 1992) and hand in their notes. Data analysis was conducted with SPSS and ATLAS.ti software.

**Quantitative Research** (frequency of views and postings): Three hundred and forty six members out of 32,000 sent 2,850 (3%) messages to the forum; the views were 82,452 (97%). We could not detect the single views because the system did not have this facility. The invasion in Iraq started on the 20th of March. The reflection on the war is obvious due to the increased number of messages in March and April, from an average of 8,000 to 14,000 views and 80 to 190 postings on the 21st of April 2003.

**Qualitative Research: Empathy:** The results suggested that all 13 respondents (100%) were initially open to the other members: ‘The word that best describes my current approach is “open”’ (Subject B). However, after the second week of the study they were judging the messages and profiling the posters. Subject A was profiling two members the second day of participation: ‘Jacob seems to have a level-headed but fair approach and the post from Nigeria was the most inclusive and accepting, gently reminding members that this is a space for respect and open-ended discussion to find solutions’. Two out of 13 (15.3%) developed empathy as they replied positively to the questions on identification of other members’ feelings and developing compassion. The same members decided to contribute, which indicates that 100% of the members who developed empathy were self-actualized.

**Contribution:** Two members who replied that they developed feelings for the other participants were the ones who decided to contribute to the discussion. Subjects A and E sent the first message to the group. The reasons for their participation were the following: ‘Wanted to come up with a synopsis of sorts and state my position on the various opinions expressed. Also wanted to open up the discussion and take it to another level’ (Subject A). ‘The topic is of interest to me and I have an opinion which I wished to express to Lucia’ (Subject B). ‘My basic beliefs were challenged by a member’ (Subject E). ‘I read the posts carefully and reply, if I have something interesting or different to add’ (Subject A).

**Reasons for no contribution:**
‘I feel as if I am participating but it is a little bit in a vacuum, given that I am not involved in chats or messaging etc. The thinkers.net boards have created more of a sense of belonging to community, but that might well be due to the fact that the participants are fewer and thus interact more often on the boards’ (Subject A). ‘It was boring’ (Subject F). ‘I didn’t find anything useful’ (Subject K).

**Problems with the interface:**
The basic obstacles were of a technical nature: (i) the irrelevant title of the message due to continuing replying to the first message (70%), (ii) the quantity of topics and the numerous postings (20%), the unfamiliar interface and getting to the actual lists of messages (10%). Indexing the messages seemed to be another problem: ‘a lot of people write irrelevant things in posts supposed to be referred to a specific topic’ (Subject K).

**SOLOS - learning:**
‘I think these people can teach me a lot!!!!’ (Subject A). The participants gave more than one answers. The section criteria of the messages are based on (i) their own clarification (69,2%, 9/13) and (ii) view of innovative approaches of the subject (46,1%, 6/13). Secondly, they actively read messages because they wanted to (iii) integrate and promote their views with other people’s approaches (38,4%, 5/13), (iv) find their own innovative views based on what they read (23%, 4/13). The knowledgability of the message as connected to the person who wrote it was the criterion of revisiting the messages coming from the same person. [After reading the message] ‘the next steps were to think, reflect and respond’ (Subject A).

### 6.2 Exploratory study II

Twenty eight Online Community Managers participated as in focus group discussion (Cohen & Manion, 2000) in an e-mailing list (yahoo.groups). The discussion took place from 14/04/04 to 30/06/04. The aims were the identification of experts’ opinions on the contribution process, focused on sociability and usability. Qualitative Research Methodology was used, based on content analysis (Bauer, 2000) under the twofold perspective of CMC discourse analysis (Herring, 2001) and linguistic analysis (Herring et al., 2004). SNA with Netminer and Content Analysis with ATLAS.ti supported coding and indexation. The hypothesis was that some members could be detected with an objective and democratic way based on the theory of the emotional leader.

#### 6.2.1 X-Groups Methodology: Identification of Actors

Using Netminer, we searched for the directions of messages (In-Degree and Out-Degree) and the connection with the empathic members. There were 47 nodes from 26 participants. Cindy, Rebecca, Chris and Ewan received more responses according to Figures 1 and 2. Chris sent only one message but this message created lots

of objections and suggestions. Chris had overall 6 outgoing and 2 incoming messages, Ewan 1 to 6 and Rebecca 4 to 5. Jenny also sent only one message, although it was related to three different discussion correspondents (Figure 1). Based on our hypothesis, we followed Rebecca’s messages in the discussion in the content analysis.

Figure 1: Sociogram for Discussion Network nodes

Centrality in SNA is a structural attribute of nodes in a network and their structural position in the network. It is a measure of the contribution of network position to the importance, influence, prominence of an actor in a social network. The following sociogramme comes from a randomly selected discussion cluster (Figure 2).

Figure 2: Sociogram for Information Centrality

Cindy, Rebecca, Chris and Ewan were the ones who sent the highest percentage of messages, i.e. information in the discussion.

6.2.2 Issues for SOLOS, Management and Design

SOLOS: Community Knowledge Building is based on the alignment of asymmetrical interactions for the newcomers integration via legitimate peripheral participation (Lave and Wenger, 1992): ‘most of the conversation takes place between people with a fair degree of knowledge... Lurkers can learn a lot by paying attention to such groups, while not necessarily knowing enough to contribute much themselves... The ability to lurk makes it easier for those who don't 'talk the talk' to benefit from the knowledge of the community.’ (Peter). ‘some of us may not have anything relevant to add and just want to learn’ (Rebecca – perspective taking). Awareness is suggested to have an important role for preventing impish behaviour. ‘Yes, there needs to be an awareness that if/when a person decides to 'join-in' they are not going to be bullied or laughed at’ (Chris). Awareness and insight help the members to ‘be more forthright ;-)’ (Ewan).

Management and Contribution: Non-contributors is the biggest ratio of members: ‘there’s a large number of lurkers and nothing is going to change that’ (Dan). ‘it's important to respect lurker's wishes to lurk’ (Rebecca – respect to the Other). It is difficult to make the first post. Following Dan, ‘Posting the first message somewhere can be a scary and exposing action’. And ‘Fear of appearing patronising dogs me’ (Chris). ‘Making a first post is a big hurdle for a lot of people’ (Robin). Lack of confidence might derive from shyness, since non-participants are ‘too shy to join in the conversations’ (Lucy) Dorine suggested that ‘People lurk for both altruistic as well as for personal (selfish) reasons, and posters have more positive attitudes toward lurkers than lurkers themselves’. Another reason might be the lack of simple statements like ‘yes, I agree’ and ‘no’, statements that can be detected easily in ‘real’ life with body language like a movement of the head ‘With online communities, a lot of the signs are hidden therefore needs a lot of efforts to dig out what is what’ (Cindy).
The following messages come from Rebecca and are of emphatic as well as a leader’s nature: ‘I'll again make a plug for the backbone of any successful community - the members’; ‘you can come to a party at my place anytime’; ‘We build community one person at a time’; ‘It just means “putting the right person in charge of the right task and getting out of their way”’; ‘I’m a major advocate of volunteerism’; ‘I don't think our two statements are mutually exclusive’; ‘some of us don’t know how to share with a group’; ‘It's all okay with me. But I still believe everyone has something to share :) Whether they do it or not is another matter... Becs (2% lurker, 98% yacker - that's a welcomed 2% in some circles - heh) and ‘Sometimes, the only way to discover someone's brilliance is to spend time with them one-on-one’.

**Results supporting Management and Interface Design:**

Two to three days after registration are extremely important.

- Before registration: ‘I think getting them to register is probably an equal barrier’ (Robin)
- Good Registration System
- Induction and training
- Profiling
- Videoconferencing for community building (Miranda).
- Netiquette ‘there needs to be an awareness’ (Chris)
- Authentic Welcome: ‘We do our best to convert the lurkers to users by showing - by example - that new users are welcomed and appreciated’ (Ewan). Authentic welcome can be achieved by (a) live chat (Ewan, Cindy), (b) volunteers (Cindy, Rebecca – voluntary work for the sake of the community), chatbots, use of Meeters and Greeters ‘Actively say hi to every new joiner’ (Dan)
- Meaningful Subgroups as ‘small group-based social spaces’ (Dan).
- Follow up email. Good replies from the Community Leaders and Moderators especially to the first message as ‘a follow-up email’ (Cindy) and ‘see what would happen’ (Anne).
- New users have to be monitored: ‘One of the best techniques we've used is to ensure that new users are monitored closely so that our team can "pounce" on them a few moments after they choose to interact to ensure they get a response and are treated correctly’ (Ewan).
- Volunteers as seem to be ‘unnaturally keen’ (John).
- Time is a threefold issue:
  - the time-life of a community and the time needed to be developed ‘if they don't set up the community side at least three months in advance, then the community will not be developed enough to facilitate the informal networking that they are hoping for’ (Ian);
  - the time community members dedicate to the discussions ‘The problem is, how many of us has the time for one-to-one [contact]’ (Cindy); and
  - the time dedicated to the members from the community leaders and moderators: ‘Let alone we should contact the lurkers one-on-one’ (Cindy).
- Expert discussions (analyst, journalist, guru) (Robin).
- One-way and two ways of communication
  - Votes, polls and surveys giving the feeling that ‘the lurkers can feel that they've contributed something too’ (Will).
  - A dialogue requires different opinions to develop and lurkers might not get into argumentation. As such, asking about people’s experiences is another one-way communication that could ensure the first step: ‘I think you can encourage people into the discussion by asking for people's opinions and experiences - that way people feel they're offering something that can't be seen as "argumentative", or something’ (Ewan). Another example is ‘to say "I found this useful"'(Will).
  - Anonymous posting: ‘Allowing members to use an anonymous CGI form to post their opinion is a very cool idea’ (Rebecca – a democratic way of getting everybody’s saying).
- Keyboard skills might be an issue: ‘how many people, trying to collaborate online, have reasonable keyboard skills’ (Diane).

Twenty messages (53.1%) appeared to have a pattern: an initial introduction as a response to the selected message, an extensive explanation and justification of their point was made, an example was making suggestions very clear and lastly, a greeting or an interesting quote used to ‘sign’ the message.

### 7 Discussion

The fact that we did not get the results from the first study as part of self-observation was probably because the respondents did not detect the state empathy. The result that the empathic members were the self-actualised ones
is very significant. However, it is the only result in literature and as such future research needs to be conducted. The reasons for contribution were the following: add something different and interesting; clarify and state their own views; open a new topic and contradict someone with opposite views. Interesting postings and use of information are motivational factors for contribution. Shared identity and the sense of the community are stronger in small communities since interaction is easier and more frequent. The most common reasons for not contributing that were derived from the study agreed with other results (Nonnecke & Preece, 2001):

- The nature and the culture of the community are central
- Members wait until there is something relevant to their interests
- People hate and are petrified to speak in public
- Many experts in the community create hesitation
- Members are bored of the messages from the same posters
- Non-contributors see life in a more negative way than active members
- It doesn’t feel nice to reply and just say ‘I agree’ and
- There is a natural burn-out of the community.

When there is no action, the moderator or the system can create and sustain the common interest, challenge the members, create oppositions, ‘kick’ people on a personal level. The studies showed that one of the reasons that brings people together, open and sustain a dialogue as well as develop empathy is a crisis. The moderator and a system cannot create a crisis but real life problems and experiences could be initiated in the discussions. Encouragement of the use of experience and story telling helps the members to make a first step. As empathy increases, the levels of SOLOS and self-actualization increase as well. Self-explanation supports one way communication before s/he gets involve in argumentation. Directories are mentioned that enable people to search for others with similar interests (Feng et al., 2004). The basic obstacles had a technical nature and suggestions on improvements on the system might be the following: replying to the message is misleading so the newcomers need to be informed for the need of a new title if the subject changes; the creation of meaningful groups and subgroups as well as splitting the discussion when appropriate, introduction and induction for the newcomers, a search option with a thesaurus as well as the use of content management systems might help the members to not to feel that they waste their time with the interface. FAQs do not encourage empathy (Preece, 1998) as they obstruct dialogue; meaningful subgroups, private communication (chat, videoconferencing) especially for the newcomers, book-marking messages appeared to improve usability.

SNA identified Rebecca as the most empathic person and as such we followed her messages. Rebecca was voted as Co-Deputy Director two months after the study was conducted and before the final data analysis.

8 Conclusions

Several implications for sociability and usability, related to community management and interface design for groupz-ware were derived from the studies. Three dimensional environments need to be constructed; the developer’s, the user’s and the researcher’s dimension in order to improve groupz-ware. Live tracking systems could monitor the newcomers, applications for one way communication (e.g. polls, surveys, story’s area, connecting windows to news) are essential components of a system. As such, ‘Live Research’ as real-time research will be feasible to investigate current issues and develop interventions for the future and not for the past as it usually happens now. Based on empathy, groupz-ware could integrate Social Network Analysis algorithms identifying positive ties between groups and animate across them so as to give a movie representation in time (Bender-deMoll & McFarland, Pajer Project), data-mining techniques, automatic indexation and on the spot data visualization and statistics for immediate and objective feedback. SNA (Wasserman and Faust, 1994) is concerned with the study of connectivity and provides several methods for measuring the relative ‘standing’ or ‘importance’ of individuals or entities in an implicitly defined network. SNA research connected to Human Resources could bring the actors on stage. Two months after the study Rebecca was voted Co-deputy chair in E-mint. More research is needed in the field of human resources as SNA software proved to have the potential to fully support future studies. In large communities two stages are essential: (a) SNA and DA on CoP and Col level for Focus Groups identification and all members suggestions, and (b) SNA and DA on the Focus Group level towards decision making and reports for the e-government. As such, the results would portray the souls of the organisation and the common vision. We suggest the wide use of focus groups in order to gather and assess Co’s suggestions and identification of capable individuals. These individuals could be able to help the communities either as volunteers or even better as employees in organizations, companies and the government (eCitizens in political online communities involved in decision making for an eGovernment). The empathic Leader has the following abilities: be aware of the situation and identification of the context; describe the context in real; work collaborate in process; describe of problems and provide of solutions and suggestions in a

collective way; suggest new ideas based on members’ collaboration and brainstorming and participate in the process of changing the previous environment by implementing members’ previous suggestions. The mechanism of observing and understanding others’ text leads to emotional contagion and motoric responses exhibited as online engagement. Empathic members’ accessing and assessing other members’ states, direct them to engage themselves and initiate or terminate actions for the sake of the community. Empathy’s detailed properties and accuracy should be included in future studies. Empathy is feasible to be taught for deep communication as it is based on a clear time-oriented process. Self-organized learning is an effortful process where setting an intention is prior to empathy.

Newborns bring the qualities from heaven with them. They are forgotten in the process but Paradise is not lost, these qualities exist by design and there is no place more obvious to look for them.

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References

E-Mint - the Association of Online Community Professionals http://www.emint.org