

# Social and Economic Incentives in Online Social Interactions: A Model and Typology

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**Abstract.** This paper tackles with the background theory and the typology of incentives that characterize behavior in online social interactions. Online social interactions are the major element of activity in online communities. Social network theory and in particular the strength of weak ties hypothesis can provide an analytical framework for studying them. We contribute by introducing a typology of social, behavioral and economic incentives by formulating related hypothesis. We then combine these hypothesis in a proposed structural model from which we theorize the different classes depending on the model configuration.

**Keywords.** Online Communities, Social Network Analysis, Weak ties, Incentives.

## Introduction

The incremental adoption of the web as a communication channel has resulted to a broad variety of online communities (groups of individuals with dense amount of social interactions over the internet) that dramatize a significant role into several application domains (e.g. opinion forums, online auctions etc). In this diversity of communities, there are cases where online social interactions are not only a way of communication but act as an enabler of transactions (e.g. in the case of online auctions) where in that case no contractual enforcement is present.

Conversely unless there is a formal protocol, a significant problem of these online communities is the issue of participation both in terms of membership and activity. In particular those online virtual environments require a certain amount of members or a “critical mass” in order to have some activity and thus retain their members. Nonetheless although there are profound flexibilities to form interaction (e.g. related with geospatial distance), this type of virtual communication is quite difficult to be formed in a non-ad-hock way. As (Finholt & Sproull, 1990) indicate, technological solutions that enable communication over the internet, address only the infrastructural solution to this problem.

An important perspective on online communities’ research is the behavior of the participant and the incentives that affect it. In the literature there are several studies that try to outline what are the incentives for participation and thus explain the behavior of individuals that participate on these online social groups (Jones, Ravid, & Rafaeli, 2004; Kollock, 1999). However there is little empirical evidence regarding *the nature of the incentives that affect participation on online communities* and their significance to the output. In principle we can classify incentives into two major groups: social/behavioral and economic. Social incentives study the way group interaction patterns are formed by taking a holistic view of the interaction structure and behavior under certain viewpoints (e.g. activity). On the other hand, economic incentives try to explain behavior by theorizing a rational agent model of the participant. That is, in the case that the individual’s objective function is to seek relevant information then a way to maximize his/her utility is by participating in a community.

Nonetheless empirical evidence may contradict this direction. One could argue that since members receive no profound compensation for their participation they have a high opportunity cost. For example an expert who participates in an online community (e.g. a forum of computer programmers) and spends a lot of time for answering to complex questions might have a high opportunity cost depending with his offline activities and the compensation he receives by doing them.

Similar to the later, one of the much cited problems in the case of communication activity is the factor of the membership size (Butler, 2001). As a club or a union, an online social structure in order to operate appropriately it

needs a critical mass of members. Related to that is the problem of activity. While due to design settings people are obliged to become members of a virtual community in order to participate, there are several cases where activity unless is obligatory (e.g. in terms of a community facilitating transactions such as e-bay) is not directly affected with membership size. This phenomenon has been placed in computer mediated communication literature as “lurking” (Preece, Nonnecke, & Andrews, 2004; Rafaeli, Ravid, & Soroka, 2004). Lurkers are individuals who although participate formally in the community they are not active. An online community with a high amount of “lurkers” has an activity problem which results to a low quality of social interactions between the members.

This research is motivated from an analytical view of social interactions involving studies of social positions and their apparent relation with incentives of participation. We contribute to the understanding of social interactions on online environments from a perspective deploying both social and economic incentives in a dyadic and group dimension in order to explain participants’ behavioral properties. Furthermore we develop an analytical model and formulate the related hypotheses that relate the different factors that affect behavior in online communities.

In particular, drawing from the related literature our ongoing research tries to answer the following: (a) How can the key factors that affect behavior on online communities be classified in Social and Economic terms (b) Do social factors matter more than economic ones? (c) Is there a (casual) connection between them?

At that stage of this research in progress, this paper is trying to provide a typology and a set of hypotheses by summarizing the related literature. To this end this paper is structured as follows. Section (2) provides a background on studying online communities and the social interactions that characterize the activity of their members. Section (3) provides a typology of the incentives/factors that characterize participation on online communities by classifying them into two categories: social and economic. For each type we formulate a hypothesis that relates this factor to the behavior of an individual who participates on an online community. Section (4) provides an overview of a structural equation model that we theorize based on the hypotheses that we develop on section (3). Finally section (5) provides discussion and possible ways of operationalization of the model and its empirical validation.

## Studying Online Social Interactions: A theoretical Overview

An online community can be defined as an asynchronous communication channel where individuals exchange information following a set of rules which are

defined in the communication protocol (Rheingold, 2000). The communication protocol dictates the way by which the communication parties interact. A community mechanism facilitates the interaction between the individuals by providing the necessary tools for (a) Identity management, (b) Organization of activities and (c) Facilitation of interaction (Koch & Wörndl, 2001).

Identity management refers to the infrastructural capability that an individual has in order to manage his/her identity inside the community, as well as the capability for the community administrators to track the membership. For instance Google Groups<sup>1</sup> has a subscription process which someone must follow in order to register on a specific group. While some communities allow open participation in terms of monitoring of activities (e.g. reading the discussions in a newsgroup), the majority of them require registration in order to participate (e.g. start posting questions). Several members prefer to hide their identity using pseudonyms due to privacy reasons although in some communities, the notion of trust is important and the pseudonyms might have a social cost at some point (Friedman & Resnick, 2001). For instance in the case of online auctions (e.g. e-bay) where the primary interaction is transaction dependent, communication is also an important element due to the fact that is enabler of trust among the sellers and buyers.

On the other hand, the part related with the *organization of activities* addresses the infrastructural side of the community. In particular it provides the communication protocol between the members. For instance in the case of an internet newsgroup the protocol dictates that in order for someone to receive an answer he has first to send a request. Communities also provide tools that facilitate interaction and make it more usable for the end-users/individuals. For instance a threading future on an internet newsgroup is useful because it organizes the information according to the topic or by the date. This part has also to do with the usability issues that someone may come up when using the community site. Usability issues are also a critical success factor for the development of a virtual community (Mynatt et al. 1997).

Although communication activity in an online community is group-based, most of the interactions that are facilitated are hierarchical or dyadic. For instance let us revisit the case of the internet newsgroups. A dyadic hierarchical way of interaction means that someone posts a request and several others reply to the individual and not to someone else thus creating a discussion thread. Then the individual establishes a virtual interaction with each one of the answerers but there might be cases where answerers interact between them during the thread/discussion. For instance an individual (A) is posting a question in a group and receives answers by four members (B, C, D, and E). As can be seen in the

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<sup>1</sup> <http://groups.google.com>

example pattern in Figure 1 individual *A* receives a direct answer by the individuals *B*, *C*, *D*, and *E* and forms a dyadic relation with each one of them.

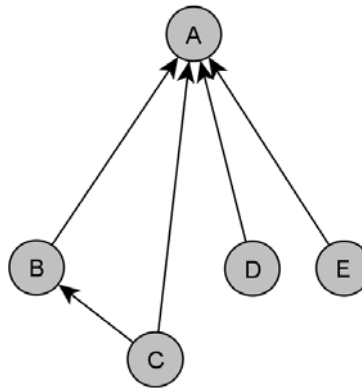


Figure 1: An interaction pattern representing a thread of an internet newsgroup

However individual *C* also forms a dyadic relation with individual *B*. This might be the case where *C* is commenting on *B*'s answer by providing as well his answer to the message posted by *A*. Dyadic relations formed among individuals on online communities provide a fruitful way of assessing activity by using established concepts and techniques from the domain of analytical sociology and in particular social network analysis.

## Social Network Analysis

As aforementioned online communities facilitate social interactions which regardless the activity context, require a concrete methodological formalization that may allow for inter-context studies of the behavior. One of the most suitable methodologies for observing social activity and modeling the interaction of individuals in a social group is Social Network Analysis (SNA). SNA has been established as a concrete methodology resulting from social psychology and communication studies (Wasserman & Faust, 1994). The growing amount of SNA research done in organizational context (Borgatti & Foster, 2003) supports a broad positivistic view on the study of technology oriented phenomena by using the formalism provided by SNA and Structural Analysis in general (Zack, 2000).

One of the basic assumptions of social network analysis and in general the part of sociology that relates with "structural" analysis is that the topology of an individual (actor) on his/her network of contacts/relations has a profound effect to his/her behavior (Scott, 2000; Wasserman et al., 1994). In order to model social interactions in an online community as a social network, we first need to classify the two major types of network variables namely the *structural* and the

*compositional* variables. Table 1 summarizes some of example operationalization of these variables. Structural variables form the core of the network and contain a dyadic record of social interactions between two actors that belong on the same network. By drawing the set of the structural variables we have the complete network. Nonetheless structural variables describe only the relations and not the individual characteristics of the actor. This role is undertaken by the compositional variables which provide a way for expressing actor related attributes such as demographics etc.

	Type of Variable	Operationalization
Focus on the group	Structural Variables	Interaction between individuals, friendship, business alliance etc
Focus on the Individual	Compositional Variables	Individual Reputation, Demographics, Activity frequency etc.

Table 1: Structural and Compositional Variable in Social Network Analysis

Apart from the variable definition, In order to construct a social network, one has to define the unit of observation from which the structural variables of the social network will be constructed. Due to the fact that SNA tackles with the topological properties of the unit of study we have the flexibility to follow the same set of methods regardless the size or the nature of the unit. For instance we can seek for exchange patterns with the same analytical methods both for individuals and institutions. In relation with the unit of observation we proceed with the “relational quantification” of the social network which defines the way the relational ties in the structural variables of the network are formed. Depending on the nature of the network a relational tie can be either directed (directed network) or reciprocal (undirected network). The relational quantification is also subjective to the research question that we follow. For instance if we are interested to examine information flow among individuals in online communities then the obvious way is to model it with as a directed network. However if the research question is broader for instance in the case of membership then an undirected network is more suitable. Relational quantification also depends on the network data available.

Nevertheless in order to have a concrete understanding of social interactions we have to take a broader look on dyadic interactions and their nature. The section bellow provides an insight on the nature of dyadic interactions.

## The Weak Ties hypothesis

Central to Social Network theory is the weak ties hypothesis that was first discussed by Rapoport (Rapoport, 1954) and later formalized by Granovetter (Granovetter, 1973; Granovetter, 1982) in the context of a job search network in a labor market. Essential to the weak ties hypothesis is the idea that there might be cases that the structural variables considered do not actually provide a realistic view of the network structure. In particular, there might be contexts where the abstract formalism doesn't consider different forms of strength regarding the relational ties which are formed between members of the network. In fact this formalization doesn't distinguish between the strong and weakest forms of relational ties. Based on the particular strength or weakness of the relational ties there can be assumed cases of influence/obedience or isolation of the individual from the group and this effect to the social interactions that are already formed.

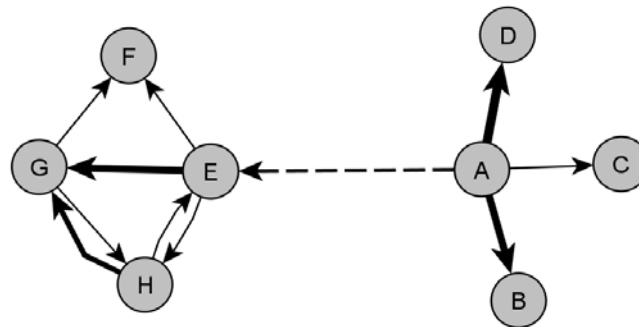


Figure 2: According to the hypotheses, weak ties (dotted) act as bridges between strong dyadic relations

Nonetheless defining a strong or a weak relation in an online setting is a matter of great complexity. Several sources of interactions could be used to define weakness or strength of a tie in a dyadic structure. Granovetter (Granovetter, 1973: page 1361) in his original formalization argues that the “*strength of a tie is a supposedly linear combination of the amount of time, the emotional intensity, intimacy and the reciprocal services which characterize the tie*”. For example in the case of an email network we could consider the number of emails those two persons have exchanged as an indication of social activity between them, thus being positive correlated with the strength of their social connection as a longitudinal effect.

According to that perspective, weak ties may act as bridges over time, between strong dyadic relations thus positioning an important role in the network structures by bridging strong dyadic neighborhoods of the network. Weak ties affect the cohesion of the group which in turn affects the activity. It is more likely that a group with strong cohesion will be more active and “energetic” than a

group with a weak one. This is because a weak tie is more likely to expose its weakness in an isolation from the other entities of the structure. However it often reestablishes itself with another destination. The possibility of this to happen depends on context dependent properties such as affiliation with a third party or a common activity.

## A typology of Incentives of individual Behavior in Online Social Interactions

So far we have reviewed the underlying concepts which formulate the theoretical background of our approach. In the next section we consider special cases of the theoretical concepts described above in order to explain behavior in online social interactions.

In order to frame better our research objective we theorize our typology on a community that exchanges information using the mechanism of an internet newsgroup. In that case the interaction protocol dictates that a member posts a question and other participants reply to that question or comment the answers that someone else has provided in relation with that question. The interaction pattern is the same with that of Figure 1. Based on theoretical and empirical work, we structure our typology in two groups that can be operationalized as constructs and latent variables in an empirical partial least square (PLS) model.

### Social/Behavioral Incentives

Having discussed the cases of dyadic ties in the context of social network analysis we discuss both social and behavioral cases that might affect the nature of relational ties and the behavioral outcomes of an individual participating in an online community. Social incentives relate with the network position (structural variables) while behavioral relate with compositional variables that affect individual's behavior.

#### Inequity Aversion

Experimental evidence in behavioral game settings indicates that a significant portion of individual's behavior is controlled by an aversion to "inequity" or "inequality". Inequity or inequality aversion addresses the case where individuals resist to inequitable outcomes and their constant behavior is controlled by that. Fehr and Schmidt (Fehr & Schmidt, 1999) provide a set of theoretical and empirical explorations as well as experimental evidence where they define two types of inequity aversion:



- The *disadvantageous inequity aversion* or “**envy**”: Where individuals dislike the case where other individuals receive more compensation than them
- The *advantageous inequity aversion* or “**overcompensation**”: Where individuals dislike the situation where they feel that they receive more than the other individuals.

Inequity aversion can be observed in any setting that involves exploitation over a common good. For example, in the case of an online community an individual might feel envy where another individual receives more relevant answers and in faster period than him/her. While an individual might also feel overcompensated if the quality of the service is more than he/she expects to have. Inequity aversion is a useful model to explain whether the behavior of the individual is affected by the general group behavior and thus explain attitudes towards the other members of the groups based on group outcomes. Following the model of the inequity aversion we formulate the following hypotheses:

- **Hypothesis 1(H1):** Members are willing to answer a question due to the overcompensation effect of their service.
- **Hypothesis 2(H2):** Members are less likely to respond to an answer if they haven't received a response to theirs which exploits their envy.

Inequality aversion has not immediate effects but evolves over time; therefore it should be treated as a longitudinal effect.

### Reciprocity

Reciprocity is a fundamental structural concept that relates dyadic relations with the behavioral outcomes. It is both a structural and behavioral topic that is often addressed with offline interactions. As can be also observed in offline settings, individuals participating in an online community tend to reciprocate the behavior or service they received from another individual during their participation in the online community (Fehr & Gächter, 1998). By receiving a conceivable good service by another individual individuals feel a debt to that and have a tendency to reciprocate. This is largely influenced by offline cultural settings and the interpersonal communication factors characteristics that may affect it (e.g. personal contact etc). However an interesting case to study reciprocation on these settings is the degree of anonymity that is provided under pseudonyms. Based on that fact we formulate the following hypotheses:

- **Hypothesis 3(H3):** An online community member is more likely to answer to a question of another individual if that individual has provided an answer before.
- **Hypothesis 4(H4):** An online community member is more likely to not participate if he hasn't had an interaction with that individual before.

In fact both H3 and H4 examines whether an online community member feels a debt to another individual that has provided an answer before or not. This is also dependent to the membership size controlling that there is the possibility of this interaction to take place over time. Reciprocation can be treated both as an immediate or longitudinal phenomenon controlling for a repeated dyadic bi-directional relation (Reciprocation of A-B is B-A).

#### Reputation Effects

Reputation as a social incentive relates with the status of an individual in the community and the perceived importance that he/she processes by the activity inside the community. At that case an individual would want to sustain his/her reputation and thus behave accordingly. We highlight two types of reputation: group perceived reputation and individual status. Group perceived reputation relates with the reputation/status that the individual possess inside the group as a whole. Individual status relates with the reputation in the individuals ego centric network. That is the network of first and second degree acquaintances in the part of the group that he is active. For instance someone may be active in some topics in the newsgroup and thus reputable on these however he/she might not possess the same status in the whole. Following these theoretical assumptions we formulate the following hypotheses.

- **Hypothesis 5(H5):** An individual will answer a question in order to increase or maintain his/her status in the community
- **Hypothesis 6(H6):** An individual will answer a question if he considers that it will increase his/her visibility in the network.

Both the above behavioral factors are subject to a broad case known in behavioral research as the “*end-game effect*”. The end-game effect denotes the negative influence of the prospects of the individual in his/her actions and the outcomes. In particular an individual under the end-game effect will try to be as much opportunistic as he can. This can be observed under longitudinal settings where the observed behavior at time  $t_1$  will be totally different from the observed behavior at time  $t_2$ , due to the fact that status will not have a value anymore.

- **Hypothesis 7(H7):** If the online community member is not going to participate in the community anymore then he/she is not motivated by his/her status

#### Preferential Attachment

Preferential attachment follows the theoretical assumptions of the triad closure in order to provide an understanding of interaction network growth. In particular that case denotes the willingness of an individual to join an existing active thread where he considers that there might be a higher probability to get a reply rather than using a thread of low activity. Following that theory we can formulate the following hypotheses:

- **Hypothesis 8(H8):** Individuals tend to participate to threads that have already a considerable amount of responds
- **Hypothesis 9(H9):** Individuals avoid becoming the first to reply to a question posted.

Preferential attachment might also be negatively correlated with shyness or exposure aversion. This can be interpreted as the case that a community member doesn't want to be exposed because he/she is not confident about his/her reply.

#### Membership Size

Community size affects directly the significance of reputation for an individual. Since reputation provides a way of social ranking it is logical that the higher the amount of people in the social group are then the higher is the significance of their reputation. Assuming that reputation is positively related with the membership size of the community then the higher the community size the higher the reputation. Thus we formulate the following hypotheses:

- **Hypothesis 10(H10):** Membership size affects positively the reputation incentive for an individual to contribute
- **Hypothesis 11(H11):** Membership size is a negative factor for the reputation incentive

#### Economic Incentives

So far we have examined cases where participation is motivated by factors which are not directly connected with *an individual's utility function*. As aforementioned we make the assumption that a participant in an online community follows the rational agent model which dictates that he/she has as an

objective the maximum utility that can be provided by the participation in the community. In that case we theorize those factors that have a negative reciprocal connection with participation in an online community since research designs that deal with the case of providing monetary rewards for online activities is out of our research scope.

### Opportunity Costs

The concept of opportunity cost addresses the “potential” loss of benefits that the individual could gain if he/she was not participating in the community. An obvious way to measure opportunity cost is through time consumed during the participation. If someone who participates in a community by providing answers loses a lot of time in order to maintain his/her presence then his/her opportunity cost is a function of the time spent in the community and the activities that could be done by this individual which could compensate him better for his/her participation. One particular issue with the opportunity cost is that is not easy to measure due to the fact that the compensation for the members of the community might be different referring to the set of other activities that could be accomplished by participating in other activities (e.g. free time, opportunities to participate in offline activities with friends and family etc). As discussed in the introduction the opportunity cost might affect negatively the activity in an online community, thus we have:

- **Hypothesis 12(H12):** The higher opportunity cost the less is the online activity for an individual

### Knowledge Acquisition Costs

Knowledge acquisition cost relates to the individual's effort of acquiring the information/knowledge required to address the post as well as his/her experience in the topic that the community is facilitating. Theoretically this can be compared with search costs (Nelson, 1970). This can be related with both the behavior in the community and the opportunity cost as well. It is more likely that high knowledge acquisition cost influences positively the opportunity cost as well. Thus we have:

- **Hypothesis 13(H13):** The less the knowledge acquisition cost the higher is the likeliness to participate in the community and answer a question
- **Hypothesis 14(H14):** The higher is the knowledge acquisition cost the higher is the opportunity cost of an individual

Knowledge acquisition cost is valued by actions that take place outside the community and has an immediate effect controlling for the individuals ability to reply to a topic.

#### Evidence of Previous Activity and Tragedy of the Commons

Previous activity is a longitudinal construct that refers to the perceived group activity by the individual at a specific point of time. For some individuals high communication activity is also a factor of lurking due to “tragedy of the commons” effects (Hardin, 1968). In that case if an individual participates in a group with a high amount of members then he/she perceives that fact that there will be the belief that there will be other community participants that they will provide a reply to a message posted by someone.

- **Hypothesis 15(H15):** The higher is the communication activity of the group at the time the individual wants to participate then the less is his/her willingness to do so.
- **Hypothesis 16(H16):** The higher is the communication activity of the group at the time then the individual participates to the threads that are more active.

H16 in fact relates previous activity with preferential attachment where individuals tend to participate to topics with high activity.

## A Structural model of Social and Economic Incentives

Having summarized the factors we consider as influential to an individuals behavior in an online community, we construct an empirical model that can be evaluated empirically in a later stage. In our model we reflect on a set of control variables in order to study “ceteris paribus” changes to the behavior under specific settings. In particular the main control variable derives from the fact that whether the individual is in position to answer a post by another individual. That is whether or not feels capable by doing that. As can be depicted in Figure 3, we operationalized the hypotheses discussed above in two groups: those that have longitudinal effects (e.g. after some time) and those that have an immediate effect. In that case we consider time as a control variable as well.

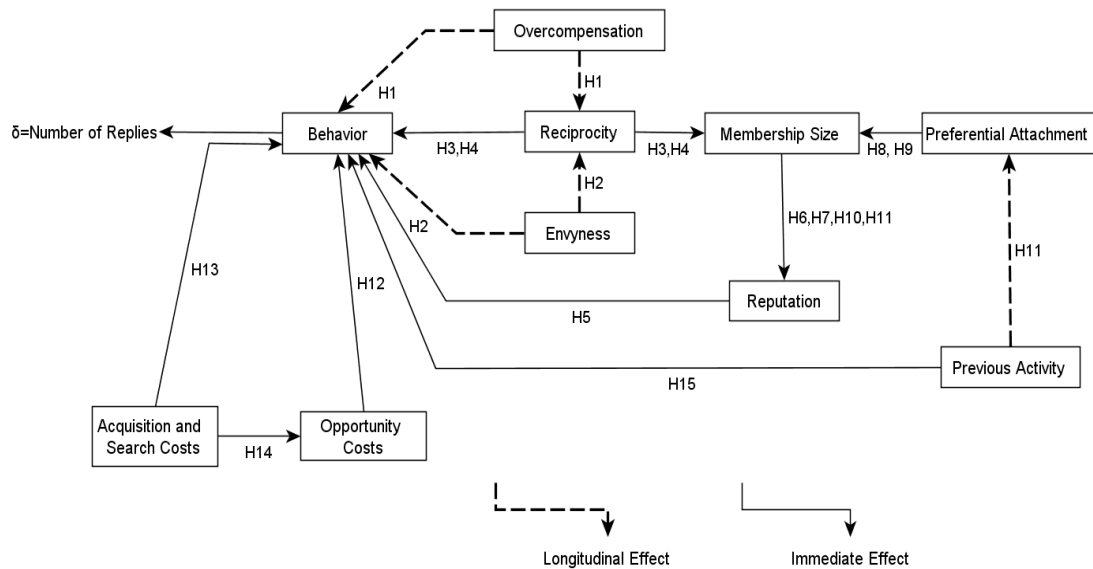


Figure 3: The proposed empirical model with the related hypotheses and constructs.

Formally we consider the “behavior” of the individual as an exogenous latent variable which can be operationalized for instance by the number of replies this individual posts to the community. Based on the different configurations of the proposed research model we are able to identify classes of behavior in an online community.

## The Selfish

The “selfish” is this class of members of the online community that seek to maximize their benefit by participating in the community and being as less active as they can. Judging from the fact this class of individuals is likely not to care about reputation in the community due to the fact that are not willing to maintain a status or find beneficial to possess a reputable one (H5 is rejected). H2 (disadvantageous IA) may be supported due to the fact that this class of contributors is trying to exploit as much as they can and might feel disadvantageous or competitive over those who have achieved that. Similar to that support of H1 (advantageous inequity aversion significance) may not be supported due to the fact that overcompensation may not appear to this class of members.

The hypothesis connected with opportunity and acquisition costs should be rejected since the members are likely to not contribute if they feel no debt about it. However a special case of selfish behavior might also be in the case that some of the hypothesis H6, H7, H10 or H11 can be supported (*ceteris paribus*) due to the fact that selfish behavior might be mirrored in actions that keep the reputation high without providing much value to the other community members.

A special case can be also the factor of the knowledge acquisition cost. In particular if someone had a high knowledge acquisition cost to obtain this knowledge then he/she might not consider sharing that with others due to disadvantageous inequity aversion (envyness over the potential benefactors of that information).

## The Altruists

The opposite case of the selfish members is mirrored to the Altruists. Altruists are those members that consider having little opportunity costs by participating in the community and being active on it. Due to this, connection between opportunity costs and knowledge acquisition costs may not be supported. Also a special case of altruism may be in the case H1 can be supported (conditional altruism). H1 may also expose a degree of morality due to the overcompensation over the group resource to the individual. Reciprocation is another characteristic factor that is supported in a fixed effect basis. That implies that an altruist will always act reciprocally over positive cases and will not consider previous activity as a condition to participate. In the case of IA members who have received a lot from the community feel overcompensated and therefore they try to give back. This can be seen as a case of generalized reciprocity since the effect is not immediate but longitudinal.

Altruists may be affected in a longitudinal way by previous activity due to the fact that high activity implies a certain degree of interactions which might expose altruism in the case of knowledge/information sharing. Also the direct connection of Acquisition and Search Costs (H13) will not be supported due to the fact that this class of users judges little over their personal experience when they contribute to the community/group. In fact some of the group members may act altruistically in order to help other group members adverse the knowledge acquisition cost that they have overcome before. Altruists are of high value to the community since they create value in return of very little compensation (opportunity costs, reputation).

## The Reputable

Reputable users consider reputation in the community as of high value and judge their behavior accordingly with the aim of maximizing their positive presence in the community and thus their reputation. This is a case that is an averaging between the selfish and the altruists due to the fact that their behavior is self maximizing but the means they use are altruistic in the sense that they act with the aim of getting exposed as members with a high value to the community (H3, H4).

This class of users will (positively) reciprocate conditionally a behavior if they consider it as an input to their reputation, regardless their knowledge acquisition

cost (H13 rejected). Preferential attachment (support of H11, H8, and H9) will affect their behavior due to the fact that they will seek ways of getting positively exposed to a large number of participants and maintain a public profile that is visible to a large number of members. For instance in communities where reputation plays a significant role (e.g. Slashdot) members might want to participate to threads with large activity due to the fact that they might get exposed to several members who will value this characteristic over their judgment (backward induction of previous activity, H11 highly supported).

Maintaining reputation might be costly (depending of the member's objective due to participation in the community) since might result in high opportunity and knowledge acquisition costs. For instance if someone in the community is considered as a very knowledgeable person he/she might have a high acquisition costs of the information required to maintain his profile. This will result to high opportunity costs as well (H13, H14 supported).

## Limitations and Further Research

The model presented here represents a preliminary configuration which might change depending on the research setting applied for. In particular we consider the contribution presented in this paper as a starting point regarding the development of a concrete empirical framework that will be in position to explore further the relation between social, behavioral and economic incentives. In particular some of the factors discussed here such as the Inequity aversion and Knowledge Acquisition costs might be difficult to extract under field settings. Therefore we are exploring the direction of applying laboratory experiments as a way of elicitation of this kind of behavioral/economic properties.

Social Incentives on the other hand, due to the fact that are dependent upon recordable interactions might be easier to extract and study in social network settings (e.g. the case of mutual dyads in connection with reciprocity). We can extend our theoretical case further by using social network metrics as operationalization of variables such as reputation and reciprocity.

Although some theoretical background has been given in relation with social network analysis, our hypotheses should include other theoretical implications from social networks analysis such as the case of structural holes (Burt, 1992). It is important though to theorize which type of communities we model since not-information based communities such as e-bay may be affected by other kind of incentives (e.g. supply and demand side factors) that affect activity as well.

We believe that the potential of this research can be used in several studies related with the information systems field and in particular the connection between behavior and technology. This in combination with empirical evidence can provide an analytical positivistic view on how social interaction activity is dramatized in online communities.



## Acknowledgments

The author acknowledges financial support from the DREAMS project at the Copenhagen Business School. Dreams is a project funded by the Danish Research Agency under grant number 2106-04-0007.

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