Electronic Communities as Intermediaries: the Issues and Economics

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Abstract

Virtual communities or electronic communities are social aggregations of a critical mass of people on the Internet who engage in public discussions, interactions, and information exchanges with sufficient human feeling on matters of common interest to form webs of personal relationships. Many such e-communities are rapidly evolving on the Internet, some formed, organized, and controlled by community members themselves, some organized and controlled by marketers, and some by third parties who act as intermediaries between members and other interest groups such as marketers and advertisers. The types of interactions that community members have, the type of content they provide to the community, the kinds of benefits they derive from the communities, and the types of exchanges communities have with other interest groups vary greatly from community to community. While some communities strongly disavow any interactions of a commercial nature, many communities view commercial interactions as being beneficial to the growth of the communities and to the community members.

1. Introduction

The notion of an online community is not new. The Internet in its early days was mainly viewed as an online community for researchers to exchange ideas and information and to collaborate on research projects. Other online services had local bulletin boards for special interest groups (SIGs) to exchange content. Later, as the online environment started flourishing many off-line communities (for example, those centered around magazines) started gravitating towards the Internet to take advantage of its connectivity and reach to help the communities grow. In addition, many communities started forming on the Internet itself. Although the early communities on the Internet were centered mainly on non-commercial interests and activities, many communities have been formed on the Internet that cater to members’ or organizers’ commercial interests. Thus, there are communities on the Internet that are formed, organized, and maintained by members themselves (with or without any commercial focus); some that are organized and controlled by marketers; and some that are organized and maintained by third parties who act as intermediaries between the members on one hand and marketers and advertisers on the other. Given the empirical evidence, it is clear that communities will be playing a very important role in the growth of electronic commerce.

Drawing parallels from extant research in intermediation, we explore conditions and incentive mechanisms under which such communities could thrive on the Internet. We also draw on limited empirical examples from the World-Wide-Web in support of our hypotheses.
from extant research in financial intermediation, we postulate conditions and market mechanisms under which e-communities could provide great impetus for the growth of electronic commerce on the Web. Wherever possible, we provide empirical examples to support our argument.

In the next section we provide a brief introduction to the various forms of e-communities and discuss how e-communities play a key role in creating value on the Internet. We follow this up in Section 3 with a discussion on how e-communities can act as intermediaries and provide services to community members and corporate clients. We also present an important postulate related to maintaining a healthy online community. In Section 4 we present the models for intermediary and extend our postulates. We conclude in Section 5 with directions for future research.

2. E-Communities and Value Creation

In its narrowest form, E-communities can be defined as social aggregations of a critical mass of people on the Internet who engage in public discussions, interactions in chat rooms, and information exchanges with sufficient human feeling on matters of common interest to form webs of personal relationships. According to this definition, e-communities are made up of individuals who aggregate into a critical mass driven by common needs which could be social as well as commercial. This common bonding is strengthened by personal relationships that ensure some degree of loyalty of the members to the community. However, commercial interests transcend the individual level, and it is not uncommon to find communities for business organizations – communities of buyers and sellers, such as GE Information System’s Trading Process Network (GEIS-TPN), a community of GE suppliers and other buyers, CommerceNet, etc. These business communities consist of a critical mass of members whose needs are mainly commercial and who use the communities mainly for networking and building business relationships. While these communities may lack the human element and the social interactions, we nevertheless consider these business-to-business communities as part of our analyses. Also, while members can choose to network with others or the sponsoring organization and build relationships, some members may choose just to transact business and not involve themselves in any networking. Some others may just be “lurkers” who may prefer to anonymously observe the interactions and content. All such members are still considered part of a community.

There are essentially four types of e-communities in existence on the Internet depending on the types of consumer needs they meet [1]. Thus, e-communities could be transaction-oriented, interest-oriented, fantasy-oriented, or relationship-oriented. It is also possible that some e-communities meet several of the above needs. Transaction-oriented communities primarily facilitate the buying and selling of products and services and deliver information that is related to fulfilling those transactions. These communities do not address the members’ social needs in any manner, instead the focus is on interaction between members either to transact business or provide informational leads or consultations about other possible participants in transactions. Examples of communities of transactions include Virtual Vineyards, where consumers get information tips from the vendor and buy products at the website, business communities such as GEIS-TPN or CommerceNet, Amazon.com where visitors can get reviews about books from other readers, etc. Although communities of transactions could be organized by any entity, organizers usually are the vendors themselves. For example, GEIS-TPN, which is now an independent entity, started as a community owned by GEIS. The second type of communities is community of interest, where members have significantly higher degree of interactions than in community of transactions and usually on the topics of their interest. Examples include Café Utne, a community of hip urbanites, Motley Fool, a community for financial investors, and the Well, one of the oldest communities and BioMedNet, a professional community for physicians. These communities usually have chat rooms, message boards, and discussion groups for extensive member interaction. Thus they are characterized by significant amount of user-generated content. The third type of communities are fantasy-oriented communities where users create new environments, personalities, stories and role-play. Examples include ESPNet, Sony.com, and many of the fantasy communities within America Online. The fourth type is the community of relationship built around certain life experiences that are usually very intense and lead to personal bonding between members. Examples include the Cancer Forum, a community for cancer patients, and their close
friends and family, communities focused on religion, divorce, and other topics.

There are many e-communities which may have several of the above orientations. For example, e-communities such as GeoCity and Tripod have allocated “concept spaces” where members with similar interest could put up websites, transact business with each other or others, get involved in their fantasies, and build relationships through interactions. These are meta-communities, which organize several smaller, focused, e-communities centered around common interests and relationships. In this sense, the concept of e-community is still evolving. In our discussions that follow we use the term e-community to encompass all the above interpretations.

Figure 1 above provides a snapshot on how value is created in a community [2]. Members’ input to the community consists of information content in the form of comments, feedback, elaborating their attitudes and beliefs, and informational needs. Members may provide such content unsolicited or in response to queries by other members or the organizer of the community. Thus, members input useful information to the community that is retrieved and used by other members. The community organizers may also put in their own content which members may find very valuable. For example, the organizers of BioMedNet provide content in the form of information on latest medical research and techniques, which the physician members would find very useful. In such communities, the members would also be willing to pay subscription fees for being members of the community as they may highly value the information they receive from the community. For becoming members of communities such as America Online or CompuServe members need to pay subscription fees. Such subscription fees may be viewed as a charge that members need to bear to be part of an exclusive community or for accessing the content in the communities that they value.

Another possibility for value creation in e-communities arises from the fact that the community brings together consumers of specific demographics and interest. This presents opportunities for transacting business and communicating messages about products and services, which marketers and advertisers value and are willing to pay for. In as much as business transactions take place in communities, value is created. In addition, e-communities can attract ad-revenues from advertisers eager to communicate their messages to community members. (This is currently a significant source...
of revenue for e-communities). There are also other opportunities for value creation besides business transactions and ad-revenues. These arise from the marketing information that is generated within communities, which the environment (marketers and advertisers among others) would find valuable. Such information include demographics and psychographics of members, their attitudes and beliefs about products, services, and issues, their behavior data with regard to business transactions within communities, and information on their interactions and interaction dynamics. Such information could be sold to marketers and advertisers if the members do not object.

The exact manner in which value is created in e-communities also depends on who organizes the community and who owns it. Transaction-oriented communities are generally organized, controlled and run by marketers. In such e-communities, value is created mainly through transactions and not through ad-revenues. The marketing information generated in the communities may also reside with the marketers who may or may not sell such information. In many cases, marketers who own e-communities can use such information to derive synergies for other related business functions such better customer service, mass customization in service and delivery, and marketing research feedback, etc. If the community is controlled and owned by members themselves, the main focus of such communities is to derive sole benefits for the members and value is created in content exchange and/or through subscription fees. If the community organizers and those who run it are not marketers, advertisers or members but unrelated third parties, such communities are in a better position to leverage the full range of possibilities of value creation. This intermediary role of e-communities is what we focus on in this paper.

3. E-Communities as Intermediaries

One of the main reasons why we chose to focus on the intermediary role of e-communities is that they are increasingly called upon to play that role in order to achieve healthy growth. As an illustration let us consider Parentsplace.com, which is a community started by a California couple interested in bringing together parents in the cyberspace to discuss issues of mutual interest. The community was started with an objective of selling kids related products to the community members as they ventured out of the chat rooms to the retail sections of the community. As the community grew in the chat rooms and discussion rooms, the members were more interested in their common interests, getting tips and information on child-rearing, rather than on transacting business. The organizers realized this quickly. In order to keep the community growing, they adopted a business model of ad-revenue supported community rather than transaction-revenue supported community by selling ad-space to advertisers and removing the retail section of the community, thereby pushing the community into more of an intermediary role than a marketer’s role. Another illustration of a similar role-transition involves GEIS-TPN (Trading Process Network). This business-to-business community was started by General Electric’s lighting division in order to manage their supply chain efficiently by bringing suppliers to a Web-based transaction system. The supplier community grew, more buyers joined the community, and GE at the appropriate time spun the venture off into a separate entity that helped both buyers and suppliers build relationship and transact business. While GE’s brand name and buying power was necessary to start the community, once a critical mass was reached, an intermediary role better suited TPN.

In addition to the above instances of role changes of e-communities, many analysts, manufacturers, and community members are increasingly questioning the idea that businesses can easily “build” a community to sell their products/services. While some marketers with strong brand presence may be able to sow seeds for forming a community and encourage its growth, it is not possible for them to control and manipulate what happens in community in the way they may envision. This increasingly supports the notion that communities grow essentially through members’ initiatives and through mutual trust and respect between community organizers and members. If members start questioning the motives of organizers or perceive a pushy agenda carried on by marketers, it may affect the communities adversely. These arguments lend credence to our following proposition.

**Proposition 1**

Electronic communities will have to adopt increasingly the role of an intermediary between marketers and members to ensure a healthy growth of the communities.
In order to understand the specific issues involved in performing the above role, it will be useful to list the services that e-communities provide members on the one hand and marketers and advertisers on the other.

Members enroll in a community for one or more of the following reasons:
1. Extract/download content from communities with the assurance that the content is of “good” quality and not “junk”. These could be input from other community members such as opinions and experiences with products/services; input from community organizers which could be investment advice, or tips on health, etc; and input from marketers and advertisers such as product and service information, information about loyalty programs, etc.
2. Provide content of their own that could be of use to other members – these could their own opinions and experiences about products, services, and issues.
3. Forge “useful” relationships with other members of the community and/or with marketers and advertisers without compromising their privacy. We define “useful” in terms of meeting social needs or commercial needs without opening themselves to “spamming” or “stalking” on the web.

Corporate clients could consider e-communities useful for the following reasons:
1. Obtain access to consumers of a specific demographic and psychographic profile on the web in order to communicate their messages such as advertisements, product/service information, etc.
2. Transact business with community members and provide personalized offerings using information on their demographics and psychographics. Forge long-term relationships with them and earn their loyalty.
3. Buy information from e-communities on members’ attitudes and preferences, their interactions with other members, their transaction information, and demographics and psychographics for marketing research purposes.

Given the above needs of the members and the corporate clients, e-communities have to ensure the following two conditions to be an effective intermediary:
1. Ensure that the content input by community members, advertisers and marketers are reliable and useful.
2. Ensure that members’ privacy is protected even as appropriate relationships are forged between community members and marketers.

There are several issues involved in ensuring the above conditions the absence of which could lead to a meltdown of an e-community.

Content Quality
If members join e-communities for its content, whether member generated or organizer generated or marketer generated, then one of e-communities’ major tasks is to ensure that all content made available in the community meet some quality standards. Depending on the content made available in communities this could be an easy or difficult task. For example, if content is generated by community organizers (as in BioMedNet) then their editorial staff is responsible for maintaining its quality. However, if content is member generated then maintaining quality may not be an easy task. Such member input could vary from opinions to experiences and reviews where it may be difficult to judge its quality. There is nothing stopping a community member from inputting deliberate lies, misrepresentations about their experiences about products/services, and misleading other community members. In most cases, e-communities can put up a disclaimer regarding the member-generated content -- they cannot fully vouch for the quality of the content, they are opinions of individuals and so on. But unless there is some intervention to assure quality, the community can easily disintegrate, as serious community members will start looking elsewhere. The intervention can be in the form of moderators in chat rooms or editors who will continuously monitor the nature and quality of input and interactions and take action against members who continuously disrupt the community. Ensuring the quality of information from advertisers and marketers may also be difficult, but in most cases the e-community can rely on their corporate image and reputation as proxies for their information quality. E-communities can thus ensure that their community members are not subject to the manipulations of fly-by-night operators and their schemes.
Free-Riding Members
For a community which relies on members’ input for value generation, members who “free-ride” can be a problem. For example, consider an e-community devoted to vacation traveling. Members can access useful information from travel agents and other marketers of vacation packages, but other members’ reviews of and experiences with different packages can be much more useful. If community members participate in a community only as “lurkers” and do not contribute any useful information (by trying out and reviewing a package/service themselves), then the community can suffer [3]. Over time such free-riding can lead to paucity of useful content in the community if the percentage of “lurkers” to “actives” is beyond a critical point. That is, the point at which the cost of lack of content exceeds the income from advertisements beamed at “lurkers”. Thus, as an intermediary e-communities have to ensure active participation of members possibly through economic incentives.

Members’ Privacy
Members who join e-communities usually provide demographic, lifestyle, and interest information to the community organizers. This information is usually needed to better meet member needs of social interaction and commercial interactions. (For example, a senior citizen would like to interact with other senior citizens who may have similar interests and concerns as himself; he may be interested in learning about new medical insurance plans that he may want to enroll in). The community organizers also need the information to maintain the relative homogeneity of the community in terms of interests and/or demographics. In addition, e-community can also generate significant information regarding members’ interests through chat rooms and discussion groups where they interact with other members. E-communities also can track members’ transaction information. While all such information has value for marketers and advertisers, most members expect e-communities to respect their privacy and safeguard their personal information and not let advertisers and marketers use the information indiscriminately to “spam” members. Members also expect similar privacy in dealing with other members. Thus, e-communities may choose to use aggregated personal information to provide to marketers and not divulge individual-level information. Any serious breach of privacy can lead to litigation, negative publicity and ultimately to the disintegration of the community.

Corporate Clients’ Needs
Advertisers and marketers expect value for the revenue that they provide e-communities by way of ad-fees and commissions. They derive such value through communicating their messages to the right target segment, forging long-term relationships with members, and getting information on how best to meet their needs. This implies that corporate clients expect to get from e-communities “good” quality demographic and interest information, one that does not contain deliberate falsifications and misrepresentations. In addition, they would like to focus on individual consumers and their specific needs to take advantage of the one-on-one marketing opportunities that the Web facilitates. This implies that corporate clients may demand individual level data from e-communities even as e-communities are concerned about protecting members’ privacy. If e-communities cannot deliver significant value to corporate clients, advertising and commission revenue may dry up quickly, thus adversely affecting e-communities’ financial status.

Maintaining the Critical Mass
For any community to thrive it needs to have a critical mass. If the chat rooms and discussion rooms are empty or do not have new content, memberships dwindles quickly. Business-to-business communities are also similar in this respect. For example, Industry.Net was never able to attain the critical mass in time for the community to thrive. Since many businesses adopted the “wait-and-see” approach, the community never took off. Critical mass is necessary for membership growth and for generating healthy revenues from corporate clients. As intermediaries, e-communities have a special role to play in achieving and maintaining a critical mass.

In the next section, we focus on a model of intermediation, and the economic and incentive mechanisms that are needed to maintain a healthy e-community while considering the various trade-off among the issues identified above.

4. A Model of Intermediation
We use the principal-agent framework to model intermediation [see, for example, [4],[5]].
Consider a cybermarket with two players – consumers, who are risk averse, and marketers, who are risk neutral. Assume that consumers possess demographic and psychographic information about themselves that is of significant value to the marketer. This information has value for marketers as it can help them design products and services tailored to consumer needs and thereby increase the chances of a significant earning. We also assume that consumers value their personal information – either because they know marketers value them and/or because they value their privacy. If their personal information is sold to other marketers, it could potentially be costly for them in trying to avoid or stop unnecessary “spamming”. Thus, consumer information has value for consumers just as monetary assets have value. While monetary assets have value that is practically homogeneous across consumers, the valuation, $v$, of consumer information can vary across consumer population. For example, marketers may value demographic and psychographic information about certain consumers more than the others. For now, let us assume that each consumers’ information, prior to obtaining the information, is valued at the distribution’s mean, $E(v)$. Without any loss of generality, let us assume that $E(v) = 1$.

In the absence of intermediaries, marketers have to go directly to consumers in search of appropriate consumer information. Also, they will need personal information from a significant number of consumers, say $m$. Using information from the $m$ consumers, the marketer would be able to realize a return which could be increased profits through personalization of their products/services or increasing customer loyalty and so on. The marketer could then share this profit with consumers as a return on their information. When consumers provide information to marketers in exchange for some future return as just explained, they would like to monitor what the marketer does with the information and also ensure that the marketer uses the information properly to generate a return for their investment (personal information). There is a cost involved in monitoring, denoted by $K$. Realistically, there is no available mechanism on the Internet for consumers to monitor what marketers do with their personal information, other the limited information they may obtain as they interact with the marketer over time (say, through loyalty programs, or through finding product offerings tailored to their interest, all of which may provide indications as to how their personal information is being used; or indications of misuse if they are subject to spamming). Thus, cost of monitoring can be assumed to prohibitively high, that is, $K >> 1$, which is the expected valuation of information. There is also savings, $S$, associated with monitoring. These savings could be interpreted as the benefits arising from the information remaining private.

Let us assume that a marketer enter into contracts with consumers for obtaining their personal information. If there is no monitoring by consumers of what the marketer does with the personal information, then the nature of the optimal contract will depend on the actual realization (or perception) of profits through the use of personal information. Let the profits earned be $Prf = m*1*f(m)$ where $f(m)$ is a function of $m$ that takes of a value zero for values of $m$ less than critical value, and takes on a value greater than 1 beyond the critical value, increasing at a decreasing rate. That is, the marketer cannot make profit from the information if he has less than the critical mass signing up, and the exact profit level depends on the number of customers beyond the critical level. One could specify the functional form of $f(m)$ and the probability distribution of $m$, but for now, let us assume a discrete distribution for $Prf$ as $Prf = m(1.6)$ with a probability $p=0.6$ and $Prf = 0$ with $p =0.2$. Assume that this information is common knowledge for the marketer as well as for consumers. What does this information mean for the consumers? The probabilities indicate that consumers give the marketer a 60% chance of succeeding in getting a return on their personal information (in whatever form – better products, longer ties, lower prices, better service etc). On average, if they are expecting a 10% return on their information invested, valued at 1, then the optimal contract payment, $Cp$, that the marketer needs to offer can be calculated from the equation $0.6*Cp = 1.1$, which results in $Cp$ to be 1.833, a 83.3% return. (In fact, since we have assumed consumers to be risk averse, the value of $Cp$ will be even higher). Thus, based on the uncertainty that the consumer faces regarding the success of any venture that requires their personal information, the marketer will have to promise a significant return for the consumers in exchange for their personal information. If the marketer fails to generate the return that the consumer expects or fails to share the realized profit with the consumers, then the consumers can blacklist the marketer and refuse to deal with him anymore. This ensures that if the marketer
profits then there is incentive for him to honor the contract. How does concerns about privacy impact the contract? At present there is no mechanism to stop the marketer from reselling the personal information to others to make profit. This is a clear disincentive for consumers to share their personal information. It is to be noted that even with a contract with an optimal \( C_p \), there will be consumers who will not enter into such a contract. These are consumers who have valuation in the upper tail of the distribution of \( v \) (those who value their privacy and information much more than the average consumer). Since \( C_p \) is designed with the average consumer’s valuation \( E(v) \), these consumers will not find \( C_p \) attractive enough to exchange their information.

On the basis of our above modeling framework, the following proposition can be made.

**Proposition 2**

Marketers will incur a significant cost in obtaining personal information directly from consumers in the cyberspace. This cost will be higher (1) for marketers with lower reputation, (2) as the return for information is less concrete, (3) as the percentage of consumers in the target population who already share information with other marketers is lower.

This proposition follows by noting the effects of the above factors on the variables that determine the optimal \( C_p \). When a marketer’s reputation is low, consumers’ perception of overall success of the marketer’s project will be low. This effect will be felt through a lower mean of the distribution of \( m \), that is, consumers perceive that the marketer cannot gather information from a significant number of consumers. The probability of success decreases and the optimal contract \( C_p \) increases, sometimes even beyond the level of believability that marketers cannot approach the consumers. If the return for information is in an abstract form – better service and better quality that cannot be easily perceived – then, given the risk averse nature of consumers, they may seek higher returns (say, more than the 10% assumed in the model). By the same token, if consumers already share their information with other marketers, the marginal return they may seek from sharing the same information may be much lower than if they were to share it for the first time (that is, their marginal costs of sharing their private information are much lower now).

The above proposition has many implications for a community of transactions. It implies that marketers with an established reputation in other channels have an advantage over Internet startups with lower reputation in building a transaction-based community. At the same time, startups have a better chance of collecting consumer information from consumers who already are cyberspace savvy and have shared information with other firms and by providing concrete monetary rewards – discounts, coupons, money – for information sharing.

What can marketers do to lower costs of acquiring consumer information without the intervention of any intermediary? One way to lower costs is to increase the probability of a larger community membership base, \( m \), through several value-added measures. They can provide chat rooms, and discussion groups, which can meet consumers’ social needs and increase the chances of a larger community base. These may lower the return they would seek for exchange of information as they already are obtaining some value is the social dimension. Value-added content on marketers’ website also has the same effect. In order to lower costs further the marketer may well have to take on the role of an intermediary. We discuss the impact of intermediaries in the value-chain below.

**Impact of Intermediaries**

In financial intermediary theory [see [6]], intermediation is often justified on the basis of avoiding duplication of monitoring efforts. Using the notation introduced earlier, if \( m \) consumers spend \( K \) (cost of monitoring), then the total cost of direct monitoring is \( mK \). \( S \) is the total savings from monitoring (that is, keeping all information private) and if there is no monitoring \( S \) is also the cost without monitoring. If the total cost of monitoring with an intermediary is less than the minimum of \( mK \) and \( S \), then intermediaries create value in the transaction. The cost of monitoring with an intermediary is \( K \) plus a cost of monitoring the monitor, \( T \). Thus, if \( K + T < \min (S, mK) \), then having an intermediary is cost effective [[5], page 54]. In the context of our application, if \( T \), the cost of monitoring the intermediary as high as \( mK \), that is, if the intermediary is just like another marketer to the consumers, then intermediation will not create any value. Thus, \( T \) has to be much less than \( mK \). Under what conditions can \( T \) be small? If the community, which providing the monitoring function, is controlled by the members
themselves this condition will hold. Also if the community run by a third party who has a vested interest in keeping the community alive, that is, the third party has no ulterior motive in running the community, $T$ can be small. We explain how this can happen in the context of our application below.

When consumers provide their private information to the intermediary, the intermediary has a conflict of interest with the members. That is, the intermediary can do whatever they want with the information. How can consumers avoid having to monitor the intermediary? This can be done through the intermediary entering into contracts with the consumers, providing an attractive return in exchange for their information. If the intermediary fails to do so, the intermediary will face the disintegration of the community. This threat of disintegration is enough incentive for the intermediary to honor the contracts, as not doing so will threaten its wellbeing.

**Proposition 3**

Electronic communities taking on the role of intermediaries can significantly lower the costs of obtaining consumer personal information and access for marketers.

The impact of intermediaries on the costs of obtaining consumer information can be gauged through an understanding of how the different variables such as consumers’ expected return on investment of information, the distribution of expected profits, membership base, and consumers’ perception of probability of success, get affected.

The first advantage that intermediaries can provide is diversification. That is, consumer information is provided to multiple marketers and, therefore, the probability of an eventual success increases significantly. This can be viewed as reduction of uncertainty through law of large numbers. This increase in the probability of successful return reduces the magnitude of $C_p$, the optimal cost of the contract. The second impact is through protection of privacy. Intermediaries are in as good a position as third parties with no connection to marketers to provide mechanisms and assurance for consumer information protection. Crafting clever mechanisms for consumer privacy and securing members’ trust can lower the expected return that consumers expect for their private information (say, from the 10% that we assumed earlier in this section to 5%). Third, given the different relationships that the intermediary can forge with multiple marketers, they would be in a much better position than individual marketers to provide value to members in terms of product/service information content and varied choice. This also enables them to secure members’ trust in less time than would be possible for an individual marketer as they would not be hindered by an agenda of pushing a specific product/service at members. By the same reason, intermediaries can better fulfill the social needs of members through chat rooms, discussion rooms, and content as compared to marketers. As intermediaries can effectively provide a variety of services to members of an e-community, they are also in a better position to maintain the critical mass of members and help grow the community. Meeting members’ needs in multiple ways also impacts the probability distribution of $m$ positively (that is, consumers will be more certain about the ability of the community to attract members) and this leads to a perception of higher profits and thus the return promised in the contract more believable. The net effect is that those consumers, who prefer to remain on the sidelines when a marketer approaches them for private information, are more likely to join an e-community because of the increased probability of success with their information. The protection of privacy also increases their likelihood of joining the e-community.

The preceding discussion provides a clear understanding of how even though intermediaries incur a significant cost in monitoring marketers ($K$), the overall cost of obtaining consumer information can be much lower. Intermediaries can incur additional costs in monitoring the quality of content that enters the community, whether from members or marketers. The costs in monitoring quality from members could be significant – moderating chat rooms and discussions forums etc. If there are still serious problems, then the intermediary could even charge subscription fees from members to weed out unwanted input, keep the membership exclusive, and to keep the quality of input high. Some e-communities charge a nominal fee of 25 cents for members to post their messages in the discussion forums to keep frivolous message from showing up. If members derive significant value from the content generated in the e-community (like, for example, in BioMedNet), then subscription fees act as a mechanism to maintain quality of content and
contribute towards a healthy e-community. Subscription fee can also help in reducing the enrollment of pure “free-riding” members as they have to incur a cost in enrolling. Such fees can be set high for initial enrollment and as members remain members for a longer time the fees could be gradually reduced. It should be noted that such charges are possible only if members value content significantly enough to enroll. However, revenue from marketers and advertisers could be used to subsidize these fees significantly, with those members who have been loyal for a longer time reaping the benefits.

We have seen that maintaining the privacy of consumers can bring the costs down appreciably. At the same time, however, intermediaries have to meet the needs of marketers to keep revenue flowing into the e-communities. Such a trade-off can be accomplished by clever mechanisms such as FireFly’s Passport (www.firefly.net). FireFly collects demographic and psychographic information from those consumers who apply for the passport and offers them full control over their personal information. That is, consumers can decide what information can be shared and what cannot, who to share with and who not to share with, and so on. When members enter the web sites of marketers who are clients of FireFly, they provide their passports, which depending on their previous consent, provides the appropriate personal information to the marketer. The marketer uses this information to personalize his service and product offering to the members, develop a relationship with the customer, direct the customers to their own communities with like-minded members and so on. FireFly also provides content to members, reviews on things of their interest from other community members. In addition, FireFly provides opportunities for marketers to build relationships among themselves (for example, airlines, hotels, and car rentals) centered around FireFly members’ interests.

5. Concluding Comments

In this paper we have focused our attention on e-communities from the perspective of how they can contribute to electronic commerce rather than viewing them as a pure social phenomenon. We have made arguments as to why e-communities need to take on an intermediary role to keep them communities healthy. Obviously, this argument is valid only when we view e-communities from a commercial perspective. It is not necessary for a relationship oriented community to take on this role is revenue generation is not one of the objectives of the community. What we have shown is that e-communities can offer a win-win situation for both members and marketers. Based on our exploratory work it could be hypothesized that for e-communities to thrive as a part of a digital economy, they need to transform themselves as intermediaries. Communities run by marketers will have their limitations in terms of offering members a variety. It may not be able to take criticism from members easily. Controlling a community will not be easy. These are not issues when e-communities are in the hands of intermediaries. In addition, as we have shown, there are strong economic arguments for their existence based on the value they create. Still, there are many interesting issues that need exploring. How do e-communities diffuse in cyberspace? What are the mechanisms – social, economic, cultural, or otherwise – that lead to their formation? What is the future scenario for e-communities? The thoughts expressed in this paper, we hope, would contribute in some way to this exploration.

References