

Enhancement of discriminatory features in Facebook for advanced user experience

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Abstract

Online social networking sites are fast becoming a powerful tool for communication among people. In fact, social structures have extended their spatial boundaries due to such tools. Facebook is one of the leading online social networking sites. Currently it has more than 550 million members and is expected to grow even more. Facebook has enhanced the world's communication contributed to information flow and has provided new avenues to establish relationships and thus seek companionship. While, Facebook has some excellent tools for establishing such ideals, some enhancements in order to make this social utility tool more meaningful is suggested in this paper. This paper relies on the concepts of family (close and distant relatives) and kinship (consanguinal and affinal) in making such recommendations, and suggesting enhanced and more meaningful user experience and increased revenue generation to Facebook. feature

Key words: Facebook; Family; Kinship; Social networking.

Introduction

Online social networking today provides a remarkably compelling way in which users develop relationships with other users as well as companies they wish to do business. Now, it is a powerful tool organizations can embrace to connect more closely with customers by engaging with them, demonstrating brand and product value, and learning how to serve them more effectively and profitably (Browning, 2010).

Social network is a form of social support, with members building social capital by offering each other access to information and resources (Preece and Houghton, 2000; Burgess 2009), higher social status (Bezanson, 2006; Crowell, 2004; Burgess, 2009) and power (Chambers, 2006; Burgess, 2009). With the advent of digital technologies, the conventional wisdom of identity and social relations are undergoing a change and render space fluid and flexible (Mallan *et al.*, 2010). It is becoming rather obvious that with internet, social networking has carried itself from a real (offline) world to a virtual (online) world. Mallan *et al.* (2010) research on iScapes contends that online and offline worlds are not absolute or differing spatial zones but they interpenetrate. The identity

of online environments seemed to make people more "realistic and honest" (Ellison *et al.*, 2006).

Members exhibit themselves on these sites by showing their relationships (Dalsgaard, 2008). If these relationships are a form of social support then they build social capital. One of the three resulting benefits on building social support as discussed by Bezanson (2006) is the benefit of bonding capital, which is associated with family, kinship and frequent interactions with existent contacts.

Brief history of social networking - offline and online

Though, online social networking is a comparatively recent development, the idea of social networking is not. It is an often-discussed concept in the world of social sciences. Though discussed in the vast literatures of sociology and anthropology, recent research works of Braun and Plog (1982), Hamilton *et al.* (2007), Skoufias *et al.* (2010) have shown that the concept of social network does not only exist among urban communities, but also among tribals, hunters and gatherers. Gamble (1998), even applies network analysis to Paleolithic society. Scott (2000) discusses the social network analysis being

established as a part of structural analysis in 1970's. Pachucki and Breiger (2010), say that today, social ties within and between social groups are examined with an awareness of culture, it was not so in the 1970's. Further, Pachucki and Breiger (2010), also argue that works on culture and social networks are mutually constitutive and coevolving with relational thinking as a common root. With such a popular concept of social networking, it is beyond the scope of this paper to capture every detail on the evolution of social networking as a conceptual theory and science of analysis. Several researchers have contributed to the conceptual knowledge base of social network theory from several dimensions. Some examples can be briefly stated in order to understand the panorama of contributions to social network. McPherson *et al.* (2001) elucidate the concept of homophily in social networks, while Ibarra (1992) discusses homophily and differential returns and sex differences in network structure. South *et al.* (2004) discusses friendship network in mobile adolescents, and Pachucki and Breiger (2010) discusses cultural holes beyond relationality in social network and culture. Moreover, Siegel (2009) discusses social network and collective action, and there can be several papers that can be quoted as discussing several more concepts of network analysis.

Wellman *et al.* (1996) discuss the idea of computer networks as social networks when they link people and call this as computer supported social networks (CSSN's). Cerf (1993) traces this development to 1960's when the advanced research projects agency network (ARPANET) was developed. Similarly Freeman (1986) and Hiltz and Turoff (1993) discuss the development of electronic information exchange system in 1970's. Wellman *et al.* (1996) discuss about the development of World Wide Web (WWW) in 1980's. Craven and Wellman (1973) called this along with other interconnecting networks as the network of networks or just the net.

Wellman *et al.* (1996) say that this was open only to non-profit computers at the start and in early 1990's were open to commercial users.

Treese (1995) quotes a statistic of 26 % for the number of internet hosts that grew between October 1994 and January 1995. Similarly, Wellman *et al.* (1996) quote that the net has seen the number of users doubling annually, and this is quoted following an elucidation on the commercial enterprises that started using these services. Wellman *et al.* (1996) also quote that at that point of time and, three forms of CSSN's that were rapidly developing and each of these forms had its own desire and research agenda. An important aspect quoted by Wellman *et al.* (1996) is that members of the virtual community wanted to link globally with their kins for the sake of companionship, information and social support. Similarly Wellman *et al.* (1996) also quote that white collared workers wanted computer supported cooperative work, which in turn induces organizations to see the benefits in reducing managerial cost and travel time. In fact, Wellman (2001) notes that the modern social network research in North America began in 1960's and 1970's and in the 21st century, the internet maintains the kinship ties and friendship over long distances. Several aspects discussed by Wellman *et al.* (1996), can be identified with today's social network.

Today, there are several social networking sites such as Facebook, MySpace, LinkedIn, Orkut, Bebo, Hi5 available online (Dalsgaard, 2008). Based on the interests of members they are drawn together, for professional interests for example, LinkedIn, for romantic interests for example, e-Harmony and for social interests for example, Facebook (Burgess, 2009). MySpace and Facebook seem to be the best-known social networking websites on a worldwide basis (Boyd, 2006; Ellison, 2007; Dalsgaard, 2008).

YouTube is a public video-sharing website where people can experience varying degrees of engagement with videos, ranging from casual viewing to sharing videos in order to maintain social relationships. The participants maintain social networks by manipulating physical and interpretive access to their videos (Lange, 2008).

Reason for Choosing Facebook for the present study

Facebook (FB) is an online social networking website, first launched in 2004 for college students then subsequently extended to high school students and non-college affiliated adults (McClard and Anderson, 2008). FB constitutes a rich site for researchers interested in the affordances of social networks due to its heavy usage patterns and technological capacities that bridge online and offline connections. In FB individuals can socialize through friendship connections, group memberships, wall postings, shared photographs and self description. FB enables its users to present themselves in an online profile, accumulate “friends” who can post comments on each other’s pages, and view each other’s profiles. Members can also join virtual groups based on common interests, see what they have in common and learn each other’s hobbies, interests, musical tastes, and romantic relationship status through the profiles (Ellison *et al.*, 2007).

By the year 2006, the FB site was tightly integrated into the daily media practices of its users; the typical user used to spend about 20 minutes a day on the site, and two-thirds of its users logged in at least once a day (Cassidy, 2006). By the year 2009, it had 300 million users (Browning, 2010). At present, its panorama of users extends from individuals to several fortune 500 companies. The list of interesting statistics published in the press room page of FB claims that FB has more than 500 million active users, that an average user of FB has 130 friends. Peoples are spending over 700 billion minutes a month on FB. An average user is connected to 80 community pages, groups and events and creates 90 pieces of content every month. The press-room page also reveals that about 70 % of the users are outside the United States and over 70 translations are available on the site.

Readers Digest (2011), quotes from Time magazine (Grossman, 2010) that FB has crossed 550 million users and is expected to grow to one

billion by August 2012. Further, it also quotes that 145 million users are from USA, 31.7 million from Indonesia, 28.9 million from UK, 24 million from Turkey, 20.4 million from France, and 16.5 million from India. It also quotes that FB receives over 500 thousand comments every minute, 230 thousand messages are sent, 136 thousand photos are added and nearly 100 thousand friendships are approved.

These statistics rightly flow with Mallan *et al.* (2010) opinion that FB is one of the sites that has demonstrated how spaces which are becoming fluid and flexible, support social contact and enable individuals to develop profiles that can extend beyond the geographical limits of their offline world. With very little overhead, people can actively establish and maintain connections (McClard and Anderson, 2008).

Given that MySpace and FB seem to be the best known on a worldwide basis (Boyd, 2006; Ellison, 2007; Dalsgaard, 2008), people consider them as competitors, though they do fundamentally different things (McClard and Anderson, 2008). According to McClard and Anderson (2008), MySpace is a platform that represents self-representation, self-promotion and user generated content-termed individualistic, while on FB the content created is through the interactions between individuals and is more of an application platform-termed collectivistic. Further, McClard and Anderson, (2008) also are of the opinion that FB shifts identity making on the web from the individual to the collective in a new way. Based on McClard and Anderson (2008) argument that FB is collectivistic and the statistic on FB press room page that 70 % of the users are outside United States, which is predominantly a country that ranks high on individualism score (Hofstede, 1980).

What has enabled FB to flourish is the premise that users are trustworthy, well-intended and respectful contributors. Fostering this culture of trust by granting the freedom to communicate without moderation is a crucial building block for healthy implementation of social media features (Browning, 2010). This becomes crucial when it comes to factors such as family and kinship. While,

much of the existing academic research on FB has focused on identity presentation and privacy concerns (Gross and Acquisti, 2005; Stutzman, 2006), this paper explores enhancements on bonding capital specific to that of family and kinship that can be added to the social networking site specifically FB as an automatic feature when a member signs up.

Relevance of Family and Kinship in social networking

The concepts of Family, Kinship and social network find extensive applications in the disciplines of Anthropology and Sociology and to a lesser extent in other social sciences and humanities. Bott's (1957) extensive study on family and social network is an example of how this concept developed some 50 years ago. Wellman (1992) conceptualizes that close friends, family members provide emotional support to a person, and Plickert *et al.* (2005) elucidate the concept of network capital and note that a person exchanges many types of network capital with the relationships that he establishes including those of family and close friends. They note that one of the network capital established with family is that of emotional support. Plickert *et al.* (2005) quote that Wellman's (1979) study focused on the help available to a person from their social ties, but with experience researchers started focusing on the help available to a person from different kinds of relationships including parents, immediate family etc. In fact, Plickert *et al.* (2005) build the reciprocity theory from relationship strength and network ties, which include family and kinship ties. Their research on reciprocity focuses on relationship ties including those with parents and siblings. There is also an example of how people find emotional support through their network of friends whom they identify as a surrogate family member in the absence of one. There have been innumerable studies conducted on family and social networks and there exists a repository of rich literature in these areas of research.

Kinship relations, as compared to friendships, are less prone to decay (Burt, 2000) and appear to require less maintenance due to the norms and obligations that come with kinship, and the dense network structure in which kin are embedded (Plickert *et al.*, 2007; Roberts and Dunbar, 2010). Friendships need regular investment to be maintained whereas kinship relations do not, the level of emotional closeness between the individual and network member will have more of an effect on the time to last contact for kin, as compared to its effect for friends (Roberts and Dunbar, 2010). Plickert *et al.* (2005) research also focuses on how kinship ties established through a personal network helps a person.

Further, for anthropological research and reflection, the digital culture is an unavoidable destination (Boellstorff 2008; Coleman and Golub 2008; Coombe and Herman 2004; Kelty 2004; Mazzarella 2006; Reed 2005; Boyer 2010). Some social networking sites that concentrate exclusively on family online are Geni, Genealogy Wise, MyHeritage, Familylink and yet another host of websites. It is rather obvious that FB is the new digital culture phenomena, which has attracted considerable fascination and media attention, motivated discussion among social scientists and has led to research on FB (McClard and Anderson, 2008).

With several studies establishing the importance of family and kinship ties that a person builds in one's own personal network, establishing family trees and kinship structures become important for a person in order to record and secure family history, explore family maps, visualize an extended family network, exchange information with family members, garner emotional support, understand legacy and so on. Further, it can help social networking sites to make the site as user friendly as possible based on the relationships that a person establishes through family trees and kinship structures. Several family network websites cater to this need and some of them are Famiva, Family Crossings, Geni and others. FB currently does not

do this in default though it is a social networking site, which has several family members on it.

FB allows members to create their profiles and recruit friends to be a part of their social network and FB is based on the social interactions between individuals and groups (McClard and Anderson, 2008). Thus, as a common individual user of FB, one can add in one's family, friends, acquaintances, colleagues and a host of other real world characters who also exist in FB under the segment of friends. One can segregate them into groups such as family members, friends, co-workers and under a host of other simple stratifications. A common user may find that FB assertively tracks and recommends friends and even an acquaintance or a friend's friend is recommended to be added in as a friend. Any user can understand that once he/she registers for becoming a member of the FB world. FB uses information from one's email address book to add in and recommend contacts-in FB terms are called as friends. To the user, provided the contact person already exists in FB or it recommends the user to send an invite to the email contact of the user inviting the contact to become a member of FB and thus a friend to the user. An individual user thus builds his/her own network on FB and social interaction and exchanges between individuals and groups takes place in many forms based on the applications a particular user chooses to use (McClard and Anderson, 2008). Generally, a common individual user ends up building a virtual society around himself/herself in FB.

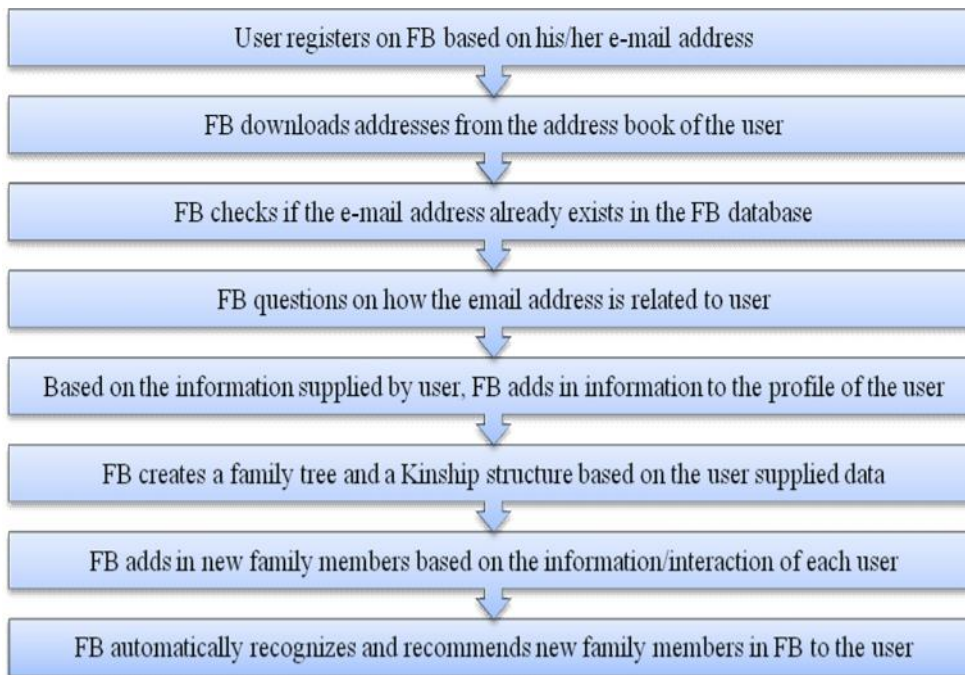
In the real world, where each individual has a social identity, social structures such as family and kinship form an integral part. Based on Dalsgaard's (2008) research that the Melanesian sociality is in many ways comparable to the FB phenomena where each individual has an online social identity and any person can be shown as being in center of their own social universe, then this paper argues that an integral part of such a society is family and kinship. FB recognizes this fact and already has applications such as We're Related, Family Tree and a host of others, which sometimes are third party applications that exist to fulfill this aspect of

online social structure. However, the onus falls on the user to add in information relating to his/her family after becoming members of FB and assertively searching for such applications. This paper contends that respecting the user privacy, FB can recognize family and kinship as a basic structure of any society and establish these structures for the user in the registration step itself without the user exerting oneself and adding in an application to do it. Further, FB can always secure such user information under closed group information that need not be shared with anyone other than user.

Finally, according to McClard and Anderson, (2008), "FB describes itself as a social utility tool intended to help people communicate more efficiently with friends, family and coworkers". However, this paper's contention is that communication becomes efficient only if every member has an understanding of the exact relationship that they share with other members. If everyone is added under the segment of a friend of the user, recognition or identification of relationship gets lost and efficient communication may lack. It becomes obvious that understanding the exact relationship that a member of a society has with others becomes an important part of the social identity and thus sometimes understanding that a friend in FB is not actually a friend but a distant relative of the user becomes important not only for the user but also for the contacts of the user in furthering their social interactions. Communication between two members who recognize each other as a distant family member (relative) can be very different.

Suggestions for enhancements in FB

The first step in the enhancements suggested is for FB to recognize and differentiate family members (close and distant relatives) from friends' right in the registration process itself. The following flow chart might help in elucidating this idea for enhancement much better.



Further, users can recruit family members who are not yet a part of FB to collaborate and participate in building the new family and kinship structures and thus discover the nature of relationship. At a very high level, such recommendations can be formed through understanding the semantics of the texts used to describe the type of relationship. Understanding the relationships between individuals can be used to construct kinship charts such as genealogies and pedigrees in social sciences such as anthropology. Family tree or kinship charts of users can be linked but at the same time can be made to look from the user's point of view. If X and Y are parallel cousins related to each other paternally and if Y and Z are related to each other through Y's maternal side. X and Y have their own kinship structures. If X and Y's kinship structures are linked, they form a structure where X and Z know their relationship to each other.

Through logic, FB can recognize the members of a family or kinship structure in various user generated trees and link them together, to help grow a user's family and kinship structure, thus enabling the same family users to stay in touch and discover the undiscovered relationship that the user did not even know that it did exist. This might

seem like the Geni platform, but the ultimate aim of both differ. According to the Geni website, Geni "is the leading collaborative genealogy platform and the users of Geni work together to build a single, comprehensive family tree. Users can build a private tree of their close relatives to connect to the shared public tree", whereas the family and kinship structure of FB is not for a single comprehensive family tree, but to fulfill and complete the missing

part of the user's social identity automatically.

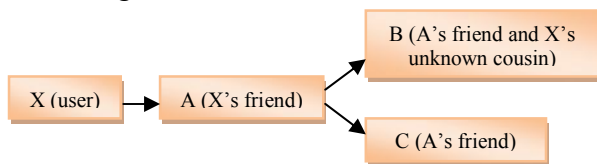
Currently FB recommends a friend's friend as someone. The user might know and need to add him/her as a friend of the user. This might even be people that one might not even know. In other words, FB recommends people giving equal weights to all relationships and does not recognize that certain relationships might be important or interesting to the user than others.

Though there is a recognition that not all FB friends are equal and the recognition comes from FB allowing people to interact with friends or a group of friends in specific ways depending on a number of factors like how well the friend is known in the real world, what kind of a relationship is desired and the knowledge of the social interaction that a friend might participate in (McClard and Anderson, 2008). The recognition that not all FB friends are equal to the user as it is based on the interactions that the user has with them once they are added as friends and the entire onus of decision making falls on the user.

Before recommendation, if FB recognizes that friend's friend is not a friend to the user but a relative based on family and kinship structure information provided by the users, then

recommendations become more meaningful and insightful. In other words, equal weights should not be assigned to all relationships. This can be better elucidated with an example.

If X is an individual user of FB, let's say the following exists



A is X's friend, B is A's friend and X's unknown cousin and C is A's friend.

In FB, the following scenario currently exists - A is seen as X's friend, B and C are seen as friends of the user. A, B and C are recommended with equal weights or in other words B and C are recommended equally to be added to the network of X as friends that X might know. Finally, X, the user, decides who should get added to the network of friends. However, FB can help in recommending the user X to make an informed choice where B is seen as X's cousin identified by FB through logical matches of family and kinship structure of X and B and FB recommends B with a slightly heavier weight over C to be added to X's network, still leaving the onus of choice to the user X. This need not be an extra application, but can simply be a feature of FB that can be turned off at any time.

McClard and Anderson, (2008) report that the newsfeed feature in FB that has social interactions of a user goes to user's friend and a user's friend's friend whom the user might not know or whom the user might not even meet. This feature automatically feeds in information of one's friends and even changes in profile information made to any of one's friends FB page is automatically fed into one's page. Some of the news that happens to a FB friend who might just be an acquaintance in real life, might not be of great interest to the user, while news from one's own family like that of a cousin geographically separated might be of a greater interest. FB allows prioritizing newsfeed, but again the onus rests on the user. Newsfeed can automatically be linked to family (relatives) rather

than to general friends. FB can automatically prioritize such newsfeeds based on each user's family/kinship structure. News from one's family might be of a greater importance than news from an acquaintance added as a friend for a common individual user. Though FB allows prioritizing such feeds, automatic prioritizing might serve a common user better and might be more user friendly, user specific and fast. In addition, news-feed from a distant relative not added into the user's virtual social circle yet. Nevertheless, it is recognized through FB's family and kinship structure matching logic, which needs to be developed as a part of this feature in order to combine relatives. They are not yet added to the social circles of the user, can be asked to be fed into the user's page thus prompting the user to add the relative into the virtual social structure of the user.

Further, users who log into FB should be encouraged to stay on FB for a longer period through profile hopping, recommended by FB. Generation of news-feed from a distant relative not added into the user's virtual social circle yet, but recognized through FB's family and kinship structure match logic, can prompt the user to visit the profiles of those relatives.

Similarly let us assume that a FB user called X is related to FB users A, B, C, D and E. Family trees/kinship structures are constructed, by understanding the relationship between X and the others. FB can show X the interesting features in the world of A B, C, D and E privy to X as a family member but not to the world by recommending the profiles of the people that X should visit, before X logs out, based on text mining the profiles of A, B, C, D and E. The idea again is to make sure that the user X stays on FB for an optimum time and is led through a jungle of profiles related closely to X, in this case the profiles of A B, C, D and E who are related to X through family and kinship structures formed in FB. Such profile hopping through recommendations by FB based on family tree and kinship structure of relatives (close and distant) and friends who are close or also random profile hopping can make sure that the user X stays on FB

for an optimum time. Given that FB has an advertisement revenue business which makes money through advertisement views and advertisement clicks, FB can generate more revenue by keeping users hooked on to FB by showing aspects such as profiles and news on what is important and relevant to the user. The idea being that, the higher the amount of time a user spends on FB, the higher the probability that the user might click on the advertisement. This can help both the users and FB simultaneously. However, a discussion on turning clicks into sales is beyond the scope of this paper.

Conclusion

If the vision of FB is to make the world more open and connected, while also making it a secure place to be in, then developing a more user-friendly approach with greater attention paid to basic social structures like family and kinship becomes very important. Further, it very clearly can become a win-win situation for both the users and the FB administration. The user gets a better network capital and FB gets a better user capital. A user capital built through enhanced user experience, can lead to increased revenue generation through advertisement views and clicks.

The enhancements suggested in this paper, strive just to introduce this idea that online social network with meaningful connections improves networking and this should be a mainstream application rather than an application that needs to be added independently. As these enhancements rely on the anthropological and sociological concepts of family and kinship structures, there is a greater scope for borrowing much more from these concepts and establishing an inter-disciplinary approach.

Though, a large amount of literature with qualitative research on the concept of social network in general exists, much more qualitative research that enhances understanding of online social networks is warranted as they can also help solve challenges associated with complex online social structures and networks.

Further, though the several sources of statistics are spell the number of users profiles connected, messages sent and other such information. There is a dearth of understanding in terms of research and statistics on the number of basic social structures on FB, like how many families use FB, how many family members are connected through FB, how such families use FB, how many kinship ties are established in FB, how they interact and help each other and so on.

Thus, with FB being the world's largest social networking site or social utility, more research on understanding social structures within FB and thus helping it to enhance applications for better user experience might help the world of social network in general.

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