Social Networking Service Design: from User Cluster to Service Cluster

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Abstract

Fifty years ago, Licklider illustrated a future image of on-line community. Warner concluded the structure of users’ “clique” and then we have a consistent way to define users. Until today these theories keep inspiring us when we need to find a way out facing with the global crisis. Nowadays social networking service has already become the focus point in IT industry, but most social networks are generally doing the same thing which lead to the waste of internet resources and users’ energy. The question is: how to design services that are really needed or expected by users? In this paper we discussed the changing of focus from user to service. The definition and structure of service cluster may bring some opportunities to the development of social networking service design today.

Keywords: social networking, service design, interaction, user cluster, service cluster

1. Introduction

Community:

When you define communities as sets of informal ties of sociability, support and identity, they rarely are neighbourhood solidarities or even densely-knit groups of kin and friends. Communities consist of far-flung kinship, workplace, interest group, and neighbourhood ties concatenating to form a network that provides aid, support, social control, and links to other milieus. The evidences of the research on social networks proved that although communities are built on dispersive relationships, people still have strong and supportive communities. Internet technology not only affected our lives but also reconstructed existing social community patterns, and social networking based on web comes from one of the changes it brought.

Web-Based Social Network:

In 1960s, Licklider predicted that there will be a community connected by computers in the future. Then he started his research on it which led to the birth of ARPA web. He wrote in an article published in “International Science and Technology” in 1968: “What will on-line interactive communities be like? In most fields they will consist of geographically separated members, sometimes grouped in small clusters and sometimes working individually. They will be communities not of common location, but of common interest.” Based on his study, he further pointed out three key elements of web-based social network, they are: geographically separated members, members’ intermittent cooperation, the sharing of similar interests between members.

Service design differs from other designs fundamentally: its goal is no longer a material product but an immaterial service. Social networking service design pays more attention to users than any other factors and emphasize that users are the very first starting point of design.

2. User

Commonality and Personality:

Users get together due to commonalities, but it does not necessarily mean their needs do not differentiate. A service is developed according to its target user. More than just fulfilling their common needs, it should also take into consideration the possibility of creating personal space. For instance, let the users define their own functional modules, give them the right to accept or reject information, and decide the frequency, the pattern of information. Personal space is a platform where users can bring forth their personalities. It is the platform on which lies the opportunities of finding and digging users’ potential commonalities. iGoogle developed by Google Company is one good example. By using it, users can define their personal homepage. iGoogle platform prepares a wide range of themes, while users are allowed to develop their own themes as well. Furthermore, numerous practical applications are available on iGoogle, most of which are developed by users themselves. In this case, Google only

1 http://www.google.cn/ig/china, iGoogle is the personalized Google homepage. Users can add information, photos, weather forecast and other applications to it.
publishes its rules and opens the platform. The most accepted service products will be enhanced by Google teams and be added to the Google Lab. After several experiments and iterations, chances are that they may become permanent members of Google product family.

Participation and Management:

Warner terms “clique” as: an informal association of people among whom there is a degree of group feeling and intimacy and in which certain group norms of behaviour have been established (Warner and Lunt 32). His workmates further define the inner structure of clique into three layers: a “core” of those who participate together most often and most intimately, a “primary circle” of those who participate jointly with core members on some occasions but never as a group by themselves, and a , “secondary circle” of those who participate only infrequently and so are “almost non-members”. Everything is inevitably going through a metabolic process, so are the users of social networks. A social network’s users of different layers may upgrade, flow, metabolize, all proving the liveliness of services. In the case of comparatively more mature social networking services, user’s role is changing: from traditionally being controlled to participate in the management to fuzzy management. Taking douban.com2 in China as an example, users are tagged by movies, books and other interests, and each user’s content is regarded as a focus point. As user’s personal content enriches, his interests and experiences together constitute his own channel. Information on a platform whose providers are intimate users within a certain circle is usually more convincible. This is what makes searching engines felt threatened and started to take precautions. Users are no longer the simple information-providers, they now participate in the managing process. Such a change, without forced targets and rules, where users’ actions are completely spontaneous and self-controlled, enables social networking services to be more vigorous and vivid than traditional bbs.

Atmosphere and Trustworthiness:

Successful social networks will commit to build their unique cultures and atmospheres: being supportive, private, professional and open etc, these are the keys to attract users. In Sun Microsystem in USA, every employee has his own virtual epitome (similar to personal icon). At the beginning the epitome is small and simple, but if the employee has provided useful information or helped his workmates out, the system will automatically collect others’ gratitude. Thus, its body will grow bigger and bigger, hats and outfits will also be added to its image. Atmosphere requires a fairly long period of time for management and accumulation. It is the result of every member’s efforts and the symbol of a social network’s growing assets. During the building atmosphere, trustworthiness becomes a primary condition. The main reason why virtual communities were severely criticized in the past is that it was full of illusions. The success of xiaoei.com3 in China, whose major users are students, has proved to us that reality exists even in virtual community, and users are quite happy with the result. Users log in with their real names, communicate with real classmates and friends, and they even find long-lost friends by searching on xiaoei.com. The triumph it brings makes the users enjoy reality social network very much. Using real name is just a means to establish trustworthiness. By collecting users’ real information, social networks win wider attention in the future. The most frequently used atmosphere managing method of managing users of different layers is to adopt different grades of trustworthiness and openness. It indicates that fostering wider range of trustworthy atmosphere from users bears desirable potentials.

3. Service

Target and Scale:

A service should at first define its capable target and scale. Since the content and the form of a service are decided by users, its target should go align with users’ needs. But the real difficulty is that the target of a service is not simply to fulfill users’ needs, because: “a community is build upon the assembling of all social relationships, any individual living in the civilized world is no longer a particle in the space, but a member of a bunch of growing groups, that is to say, an individual has become a molecule moving among changeable groups” (Fei Xiaotong 294). Dynamic changes brought by users and their needs have set the bar of defining service target even higher. It takes time for users to group into different layers, and to buffer when a user’s circle is attracting, spreading and radiating. If the target is too big, and the circles become bigger too, the accumulation and radiation happening inside the layers will in reverse baffle the development of a service. Consequently, begin with a smaller starting point may be a better choice. Game applications such as “Trading Friends” and “Parking Cars” are initially aimed at entertaining friends, but behind the scene there are professional financial managers being the back-up, and the software engineers turning from participators to developers. The way Facebook and Twitter succeed4 tells us that it will reduce the pressure of defining the target if we begin with smaller scale. As a social networking service grows more mature, service A will naturally lead to the birth of service B. This kind of natural expansion is adjusted and developed by the market and the users. It will continue to scale up and reach higher goals, which is propitious to the healthy growth of a service.

Expansion and Organization:

“In the world of internet, each and every click or log-in is essentially changing the potential relationships of this virtual community (starting with quantitative change). And everybody’s any free connection built on the internet (it

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2 www.douban.com is a social network where users can get information about books, movies, music, blogs, scenic spots etc. Users would share information, give comments, and compare books’ prices.

3 www.xiaoei.com is a reality social network where users can get in touch with friends, share photos, music and movies etc. Now it changed its name into renren (www.renren.com).

4 Facebook first opened its services exclusively to students of Harvard University.
should be following certain rules), especially those connections between websites that are made out of personal needs, will contribute to the rapidly growing number of potential relationships within this virtual community. It may ultimately lead to the structural change of potential relationships of the community.” (Guo Yujin and Wang Huan 187). The network of social networking service is subtle, too. While users extend upon on-line relationships, the service network spreads with rapid pace. When people communicate information, Hall pointed out that the cultural difference lies in the patterns of communication, which can be divided into two categories: high-context culture and low-context culture. People of high-context culture bear in mind all the basic information, only a small part of information will be missing during communicating process. In contrast, people of low-context culture have to explain most information by explicit symbols. High-context culture and low-context culture exist in social networking service as well. In the case of high-context culture service, people need to learn to get used to it; but for low-context service, learning is unnecessary. It is worth mentioning that high-context service enjoys an edge in terms of user viscosity comparing with low-context service, because people using high-context service devote far more time, energy and emotion to it. For services, easy to use means early abandonment, the two rates are mutually dependent.

Open and Sharing:

Open and sharing should be respected and encouraged regardless of the extension of services. Right now opening API has become a trend for social networks in China. It is a brand new profit-making model and mutually beneficial method since it has created numerous entrepreneurial opportunities to developers. Mr. Ma Yun once said: the essence of internet is opening, sharing and taking responsibility. Opening API satisfies the needs of opening, sharing and taking responsibility for reality social networks like xiaonei.com. Being real in itself means taking responsibility; opening means win-win for both ends of the industry chain; and sharing is the most popular application of all social networking services which stands for the core driving force of the development of service.

4. Interaction

Natural Interaction:

Donald A. Norman talked about “natural interaction” in his book “The Design of Future Things”: “...a system of natural interaction that can be more effective and simultaneously less annoying. We manage well in the natural world, interpreting the signs and signals of the environment and its inhabitants. Our perceptual system conveys a rich sense of space, created from the seamless combination of signs and sounds, smells and feelings that surround us.”(Norman 58). But up until now we have been focusing on developing new ways of interaction via visual and auditory senses. “There are lessons to be learned from these natural interaction with the real world.” (Norman 59).

Reflection and Completion of Interaction:

The reflection and completion of interaction in both real communities and virtual communities.

Virtual communities have provided new forms and means for interaction in traditional communities. The relationships built on-line may still exist off-line; friends and relatives in real life will not change while on-line. Observing how internet is used in daily life, we find it amazing to know how internet is connected with real society and together contributing to the maintenance of social relationships. Some social networks are based on geographical proximity (for example: a social network of people living in the same residential community), in case like this we find that relationships on-line and neighbors off-line are mixed together. When traditional neighborhood relationships were put on internet, people’s life changed and new ways of socializing emerged. Social networks make it possible for users to interact more actively within a larger scale of social relationships. Due to the intense pressure of modern life and urbanization, people tend to accept more relaxed ways of interaction. Applications like farming and fish-farming games have served an opportunity for people who rarely have a chance to experience farm works. In order to support rescue works after Wenchuan Earthquake, a lot of social networks were established. They raised donations and helped people finding lost relatives via internet etc. These heartfelt examples proved that when faced with emergency, social networks can be far more efficient and reach more users than real communities can do.

5. From User Cluster to Service Cluster

User Cluster:

The diversity of user cluster: internet primitive cluster: members of this cluster may know or do not know each other, although they may not meet online every day, they share similar thoughts and keep regular relationships. Geographically proximate cluster: people get together basically because they have geographical connections. Relationships are naturally developed with a sense of similarity, understanding and trusting. Occupationalal cluster: members of this kind have connections in work or study, they interact frequently and keep stable relationships. Different from occupational cluster in real society, the members’ interaction may not be synchronized, and they may or may not be at the same place. Still, they are able to exchange information and foster attachment. Internet interest cluster: people with similar interests get together. All the above categories are not thoroughly isolated from each other, they are mixed in social networks and one user can be member of several clusters at the same time.

User clusters with different user viscosity: user viscosities in afore mentioned three layers of clique by
low, every upgrading or changing of the site will be a
viscosities of a site all remain extremely high or extremely
one-dimensional user viscosity can be lethal. If the user
social network relationships, one-layered user cluster or
and change, the service site can maintain it usual activities.
User viscosity is the cornerstone of the establishment of
social network relationships, one-layered user cluster or
one-dimensional user viscosity can be lethal. If the user
viscosities of a site all remain extremely high or extremely
low, every upgrading or changing of the site will be a
perfect sensitive testing point of user drain. In this case, we
should provide probable supporting solutions to allow users
different participation degrees to be involved. The
diversification of user participation degrees brings new
connections to social networks: new and old, high and low,
rising and falling. But be sure there are probable supporting
solutions for user clusters of different layers in sections of
different participation degrees. It will help users develop
and stabilize their social networking relationships.
Service Cluster:
High-context service cluster and low-context service
cluster: we have mentioned before the relationship of
high-context and low-context, different contexts naturally
lead to different service cluster. Besides, clusters formed
according to user clusters; clusters that have connections to
services’ content and process; and clusters that come from
the progressive relationships in interaction patterns, all
these clusters bring new opportunities and challenges to
service cluster. Google has gradually issued several
applications and platforms, which proved that it is
profitable to promote clusters of services under a brand. But
bigger opportunities lie in the corporation and sharing of
cross-platform, cross-brand service clusters.
“core”-“brim”-“outside” service cluster
Corresponding to three layers of users, there are three
layers of service clusters as well: “core” service, “brim”
service, “outside” service. “Core” services refer to those
services that have certain user share in the market, they
enjoy stable user clusters and user viscosities. The users of
“core” services have already established comparatively
static interaction experience, which means the upgrading or
changing of the services may cause users’ discomfort.
Thanks to the stableness and wide use of “core” services, a
lot of “brim” services that relate to “core” services have
emerged. “Brim” services usually depend on “core” services
sometimes they are derived from “core” services or just the other version of “core” services. “Brim” services are
more flexible, and they are much more likely to merge and
become new services than “core” services are. The
elimination and rebirth of “brim” services provide solid
ground for “core” services to innovate and optimize.

“Outside” service cluster is more experimental. They aim at
minor groups of users, whose needs usually do not share
any commonality.

Social networking service design should take user
cluster and service cluster into consideration. Since the
user’s role is changing dynamically, we need to grab
opportunities during the open process of user participation
(secondary circle)-user cooperation (primary circle)-user
creation (core). Simultaneously, we should find user
cluster’s value relation and turning point in the natural
custers of “core” service, “brim” service and “outside
service.

6. Conclusions: Retrospect on Social
Networking Service

The prevailing trend of opening up personal
information, is it a good thing or a bad thing? Quick access
of attaining information, is it efficient or useless? It seems
that people have become tired of the unbelievably growing
burden of finding information. Does virtual socialization
reduces us to permit and get used to the alienation in the
real world? Internet has held us back from communication
with people face to face—we only need to hide ourselves
behind the monitors. It isolates people who forget the
meaning of society, the establishment of internet society
leads to the split of real society. Is virtual community a
presence of degeneration? No doubt computer did intensify
the alienation of people in the real world, but it is not the
reason that caused the alienation. Technology endows us
with freedom and power, which is when alienation happens.
We need to understand how virtual community affects our
thinking, study, communication and management before we
comprehensively judge its role in social life.

No matter there are how many difficulties existing or
in store, we do not have to avoid them. At the prime time
when we are hit by this global financial crisis, we pin our
hope on the new economy to come and resolve the crisis. It
is not difficult to predict that new economy must be based
on creative technology and new type of social networking
service.

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5 In recent years, Google developed several services such as map,
calendar, document, image, cooperative platform and music etc.