Clubs Forming on Crazyvote -
The Blurred Social Boundary Between Online
Communities and the Real World

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Abstract—With the rapid growth and development of information and communication technology, the Internet has played a definite and irreplaceable role in people's social lives in Taiwan like in other countries. In July 2008, on a general social website, an unexpected phenomenon was noticed – that there were more than one hundred users who started forming clubs voluntarily and having face-to-face gatherings for specific purposes. In this study, it's argued whether or not teenagers' social contact on the Internet is involved in their life context, and tried to reveal the teenagers' social preferences, values, and needs, which merge with and influence teenagers' social activities. Therefore, the study conducts multiple user experience research methods, which include practical observations and qualitative analysis by contextual inquiries and in-depth interviews. Based on the findings, several design implications for software related to social interactions and cultural inheritance are offered. It is concluded that the inherent values of a social behaviors might be a key issue in developing computer-mediated communication or interaction designs in the future.

Keywords—Social Computing, Social Interaction, User-centered Design, Contextual Inquiry.

I. INTRODUCTION

ON account of the rapid expansion and improvement of information and communication technology, the Internet has played an irreplaceable and dominative role in online users' social lives in Taiwan like in other countries. The accessibility to various emerging communication media has changed not only online users' living contexts but also their interpersonal relationships. These developing technology applications both support new platforms for communication and offer numerous possibilities for an unprecedented increase in social interactions. There are now a variety of new social communities, virtual and physical [1][2].

In the past twenty years, information technology applications have been developed and redesigned for different purposes. Some unexpected forms of social interaction and other side effects have emerged which have slowly been adapted and incorporated into people's lives [2][4]. For instance, the main functions supported by weblog have changed from traditional information disclosure to information sharing and exchanging. Besides, the development of community diaries and collaborative blogging present evidence of rich sociality and communicative competence [5]. In fact, personal on-line diaries not only serve as a means to record one's experiences and express one's emotions, but consequently also reflect one's attitudes and expectations toward society as a whole and in relation to one's cultural context [6][7].

In the related research fields of HCI and CSCW, it has become of great importance to comprehend the complex social interactions that take place in a real context in the online communities [8][9]. The extensive discussions of web 2.0, social software and social computing, also focus on the relationship of technology, interpersonal contact, and social communities. Individual social attitudes also rely heavily on one's social context and cultural background [10][11]. Hence, the fundamental issues of technology media or online application development have extended from general usability problems to wider social aspects of interpersonal contact, information sharing, participation and culturally inherent needs [12]-[15].

In this study, it is fully explored that the teenagers' social activities on the Internet are inherently embedded in their real life context. Therefore, a case study of unexpected phenomenon on a social website, teenagers' voluntarily club forming, is presented. The study applies user experience research methods, which include practical observations and qualitative analysis by contextual inquiries and in-depth interviews [16]-[18]. These methods could reveal different characteristics of personal perceptions, values and requirements in relation to the overall social context. Additionally, the potential design implications for social interactions based on the findings are also addressed.

A. Teenagers' Lifestyle in Taiwan

In Taiwan, the children are expected to study hard since they get into a primary school. Then teenagers in junior or senior high schools even study harder. They have to study from 7a.m. to 5p.m. at school Monday through Friday. If they are lucky at school which allows its students to take an hour a week to join extracurricular activities, they must be in very high spirit.

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However, the chance is very slim especially for senior high school students because a senior high school takes it a responsibility to help its students prepare themselves for getting into a university with a fine reputation. Matter-of-factly, senior high school students are under the academic competition pressure and for them university education is a top priority. After school, most parents also spend extra money sending their children to a cram school to learn more. Due to the tight schedule, making friends for them is to find friends from their classmates. However, there is no room for teenagers to have social activities with others.

The only fun the teenagers might have is to get on the Internet to surf the websites if they can steal some time at home after the long-hours studying. No doubt the majority of the teenagers in Taiwan are happily to be able to get on the Internet as often as possible. On different websites, the teenagers give themselves freedom to explore things new or challenging. However, parents do not approve their children, who are supposed to concentrate on school work, to have a face-to-face gathering with an online pal. Besides, they believe it might expose their children to risk especially when they are not companied by a reliable acquaintance. It is generally believed that online pals might hide their real identities.

B. The CrazyVote

CrazyVote (CV) is a project for efficiency-evaluation of a technology company in Taiwan (Fig.1a). For system testing, it is designed as a web-based social platform, which provides teenagers personal web space to easily access, including diaries (blogs), photos, and personal message boards.

Fig. 1 (a) CrazyVote website (b) Admirer list

The major characteristic of the CrazyVote is the appreciation of others' photos. It is different from regular on-line photo albums. Its rule is that a user can post only one photo on the CV, for the advantage of enabling users to browse all the photos of others in a short period of time. If the photo of a user is appreciated by others, who will give it a point ranked from 1 to 10, and 10 point means that the photo is the most admirable. The identity of the admirer shows when a high point arrives. Hence, the user is able to give a point back to that admirer about how he or she appreciates the admirer's photo too (Fig.1b). To rank others photo with a simple click and to notify users of where the

praise comes from make CrazyVote very unique. The simple interaction promises that one can definitely come into contact with others easily.

In addition to the space for users to write their diaries, bulletins and the name list of good friends, users can also share the information of their life context. *The Map: Where Users Live* shown in Fig.2, reveals how close those young users live to each other. It makes those who live not far away from each other have more local topics and experiences to talk about and to share. That makes the CV totally different from other websites too, and then the localization and familiarity do deliver young users a possibility of making an online pal ending up a friend in reality.

Fig. 2 The Map: Where Users Live

In 2008 summer, there were more than 25,000 young people registered on CrazyVote, and it became the biggest social website for teenagers in Taiwan. Not surprisingly, 55% of the CV users were senior high school students while 24% are freshmen and sophomores. The main reason for its popularity is that online pals can be real, safe, cool, simple, easy to chat and interact without age differences because users are mainly between 16 and 19 years old, and they are the original target users of the CV. During the summer vacation in 2008, some of the CV users take an action voluntarily to recruit some users to have a face-to-face together and turn the online interaction among users into reality.

C. Cultural and social context in Design Issues

People interact with others through many social cues, including those determined by facial expression, eye contact, gesture, tone of voice, and temperament. In common ground theory, it is suggested that people are constantly checking these social cues to make certain they are attaining mutual understanding. A shortage of social information will have a direct impact on communication [2][19]. By referring to the theories of social science, many studies have dealt with the importance of social concerns in technology developments [20][21]. However, social issues are fundamentally related to cultural dimensions. In different cultures, people's social activities, common understanding and needs are naturally not the same. In other words, the social issues emerging from interaction and interface design also represent the influence of contextual and cultural differences.

Since social context is one of the most important issues, understanding the culture that sustains a whole society is a must for interaction design. Most studies, whether of usability problems or commercial issues of localization, all reveal the importance of cultural effects by inductively analyzing and categorizing the interfaces of existing online applications that show usage bias [13][14]. However, these studies do not take into account inherent cultural background and the results can be applied only to redesigning or amending existing interfaces.

As social issues arise in science and technology development, cultural causes and effects have been discussed extensively in different fields and some researchers have tried to apply anthropology theories to the design process. However, these theories and findings sometimes range over many complex categories and are too detailed to translate into design guidelines. Nevertheless, the qualitative research methods of the social sciences, such as ethno-methodology and narrative inquiry or narrative research methods, are still essential for investigating the obscure connotations and inherent motivations behind users' behaviors, and for helping designers to comprehend cultural context.

Not only functionality and usability, but users' attitudes toward technology should be deliberated in the technology design process. In addition, people's behaviors, customs, motivations for usage and perceptions are all strongly influenced by their social and cultural context. To inspect whether the services and interactions provided by science and technology truly match users' social needs and expectations, it is necessary to examine what role emerging technologies might play and what effects they might have in real context.

In this research, a thorough investigation of teenagers' voluntarily club forming through a social website is conducted to present the ideas of identifying the abundant cultural features in their on-line behaviors and attitudes towards friendship and interaction. Understanding of teenagers' perspectives about and needs of friendship might offer to enrich computer-mediated communication or information designs in the future.

II. METHOD

The administrator of CrazyVote (CV) web service noticed that during the summer in 2008 there were more than hundred users using the same titles as *Saint*, *mdc*, and *CHIV* in front of their account names. The administrator, therefore, made an inquiry into such a phenomenon and then disclosed that parts of those users had formed their own on-line clubs voluntarily on CrazyVote website.

To investigate the club promoters' motivations and the members' perceptions, user experience research methods has been applied to this research, which include practical observations and qualitative analysis through the use of contextual inquiries [16][22]. In order to distinguish the significant meanings of clubs forming willingly, nine active website users were chosen in this study (see Table I). Seven of the subjects had different positions in their own club, including three founders of the distinctive clubs and four club members.

The others were two regular website users, who socially visited online but did not join any clubs. In addition, there were another forty club members and forty regular users selected at random. All of the eighty subjects in the sample already registered on CrazyVote more than half a year, and got on the website actively at least once a week. Hence, the two groups were selected to examine if their online social behaviors would have changes on account of clubs forming.

TABLE I
RESEARCH SUBJECTS

Subjects	Club Member	Regular User	Total
Contextual Interview	7	2	9
Online Behaviors Analysis	40	40	80

For attaining a thorough understanding of club members' perspectives and attitudes towards an online community and their actual social activities, in-depth open interviews were then conducted. The field date-gathering technique based on anthropology and ethnography are also applied to observation of the entire process of online social behaviors. All the data derived in the research were decoded into an affinity diagram to explore the significant meanings of club forming and to present the important design issues related to online communities.

According to the results of in-depth interviews and contextual inquiries, the enhanced cultural model (Fig. 3) was constructed to show that teenagers' club forming phenomenon is triggered and influenced by their present motivations and permanent cognition and attitudes toward online social activities. This model articulates several components with the key issue how cultural context and current social trend influence the overall activity. The model Participant(s) indicates those that have involved in the activity, representing either a single person or a set of people with similar motivations and attitudes toward the social activity. Interaction represents interpersonal contacts and communications, or people's actions upon the artifacts and environment of the activities. As shown in the Fig. 3, expansion of information and communication technology influences that the young generation have flexible communicating abilities to apply diverse platforms and to form their online friend-making processes. In addition, there exist social issues of meeting online friend which encourages them to form a unique network to ensure the true identities of their online friends and to develop the confidence in each other in reality (more details on this will be presented in the section of discussion).

By integrating the results of interviews and the simple comparisons of online activities between club members and others, the detailed description of teenagers' social behviors, purposes and requirements is given in the next section.

III. FINDINGS

The main issues examined in the research comprise the overall context of teenagers' online social behaviors and relevant activities at present. The results of interviews have been interpreted, analyzed, and categorized through a strict qualitative process. This section offers a complete presentation

of the club forming phenomenon, including the reasons of forming voluntarily, club structures, teenagers' social relationships and activities.

personal information, started to chat with each other through MSN and Yahoo messengers, and held several different actual activities.
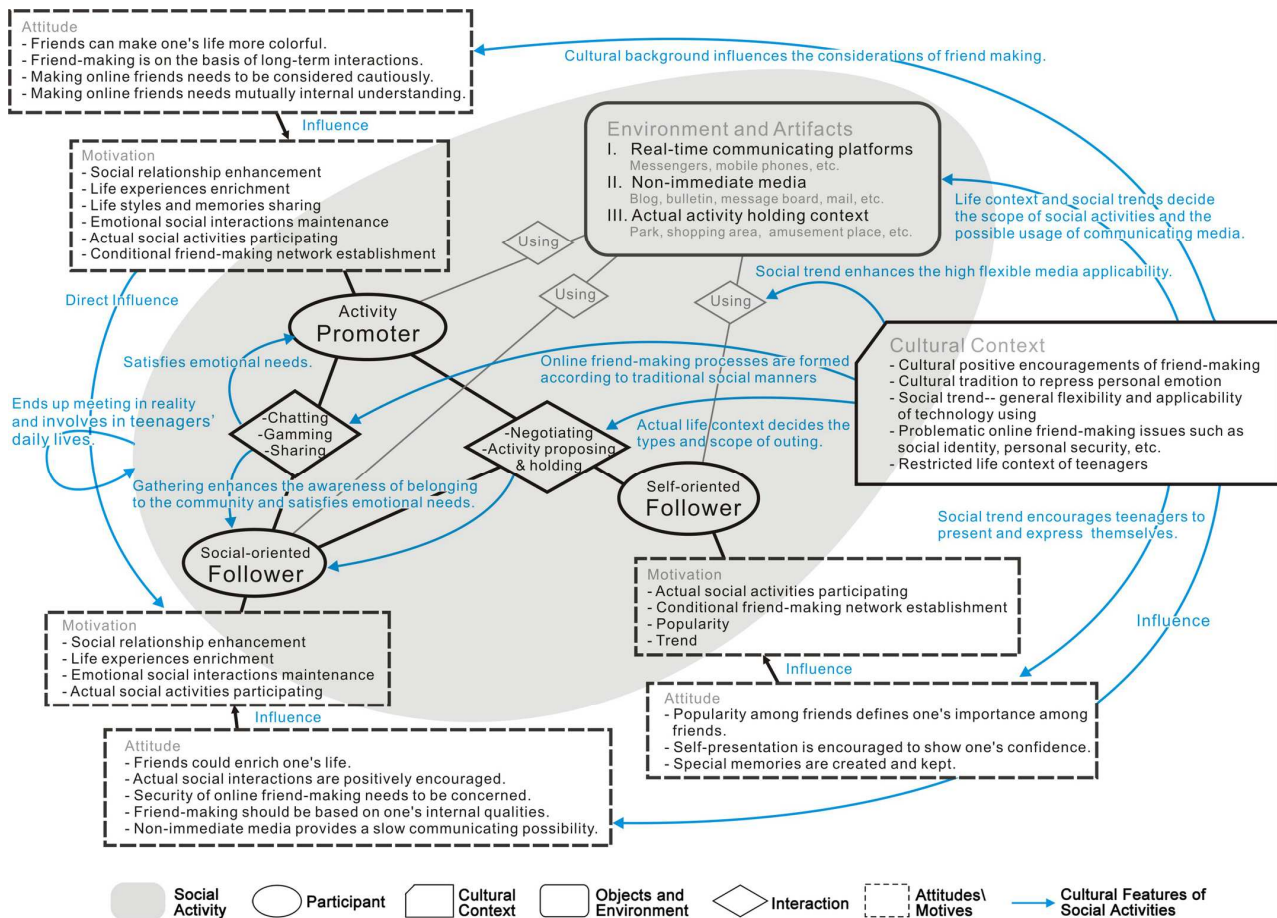

Fig. 3 An enhanced cultural model for teenagers' club forming phenomenon

A. Clubs Forming on CrazyVote

Three distinctive online clubs were formed continuously during the summer in 2008. All the young promoters have their own definite purposes and reasons to make friends, which indeed represent teenagers' perceptions and needs for their social life.

1) Having more actual social activities with on-line pals

The first club is named *Saint*, which was formed by a 19-year-olded user, Pz. He wanted to make a team or a gathering with other CV users to do something interesting, new or different.

In the beginning, Pz and his roommates added *Saint* in front of their CV accounts for the sake of a special identity to show their close friendships. In July 2008, he thought it might be cool to put into action to post the idea on his own blog to recruit other users to join them and form a club online. A few days after that, about fifty users were happily to join his on-line club, and entitled this club "*Saint*." The club members exchanged their

2) Making congenial friends by restrictions

Following Pz's step, other users started to form their own clubs for different reasons or purpose. A distinguishing club, *mdc*, was named after the initials of its three promoters and was set up for a clear purpose for making a circle of friends who must be congenial to each other one way or another.

The *mdc* promoters made a request that their members must have some qualifications. For example, a club member's score has to achieve 9000 points (which are ranked by other CrazyVote users) and there must be more than 20 users on his or her own friend list. The exacting restriction also reflects that the club founders expect their members already have logined in CV website at a certain time and are very enthusiastic about making friends with others. In addition, the membership of *mdc* club is limited. The club promoters select a few members each time, and even give a thought to the gender ratio while recruiting.

3) Removing limitation with understandings

Since August 2008, another club *CHIV* has appeared on the website, which has no restrictions on member recruiting. At the

same time, the *Saint* club became more and more well-known among teenagers, and the number of the club members quickly soared to one hundred. However, Pz and several core members decided to excluded the club members from their club to manage the club successfully, who hadn't joined in their online meetings enthusiastically.

A young girl then decided to form another club open to every user without restrictions, since many of her friends who might not be able to join club activities regularly had been excluded from *Saint*. It declared that *CHIV* means 'Hi, all CV users.' It allows those who are eager to join such clubs do not have much spare time interacting with others on the Internet, but do hope to be a member of one club.

4) Sharing and communicating within different clubs

With different club promoters' characteristics and rules, the style of each club seems unique and the main social activities of each are different from each other. For instance, the members of the *Saint* club are fond of music and outing, while the members of club *mdc* enjoy playing online games. Most of the promoters not only ask their members to participate in club activities to the utmost, but also encourage the members to partake in other clubs' outings. The following quotation collected from an in-depth interview and translated into English offers explanations about the benefits of various web clubs.

> *It's nice to have different clubs on CV... Because the characteristics of each club are different, that allows us to have opportunities to learn something new from each other by exchanging views and experiences. It seems that if the members of another club are style-conscious, we can learn it from them how to dress ourselves. And maybe, we can share something special with them too. On the contrary, if we all join the same club, we might be assimilated into a way without characteristics and might not learn anything new... (A. In-depth interview. 27 August 2008, translated from Chinese)*

Even though the styles of these clubs have no resemblance between each other, the main purpose of forming clubs is the same, having fun. In general, these club members are teenagers who are enthusiastic about making more friends with common interests and similar lifestyle. On CrazyVote website, the young users have developed their own ways to extend their social circle.

B. Roles and Organization

The average number of core members in each club is about 30, and the biggest one, *Saint*, has about 50 at present. To communicate with the others and hold club meetings successfully, teenagers develop their own club organization structures for sharing labor work. These positions include a club leader (chairman), publicists, managers, and chapter leaders.

1) Leaders: coordinated all interactions among members

A club promoter usually acts as a leader, who has the authority to accept or to terminate a club membership. In addition, a leader has to administer online meetings, to bulletin all information, and to make the final decision of club activities.

In the clubs, the elder members also take some kind of duty. The ages of club members are mainly from 16 to 19 years old, and the small difference in age could make huge diversities of opinions, thoughts and attitudes. The elder members often play the role of mediator, trying to pour oil on troubled waters and making things right. In addition, the elder usually not only have better organizational competence but also provide leaders with more appropriate advices to handle the club activities.

As a leader, the most important task is to coordinate all interactions among club members. In an interview, for example, an interviewee mentioned that several club members were harassed by someone, who persistently abused the online messenger to broadcast personal information to others. After the annoyed members appealed to their leader, the leader expostulated with the troublemaker on his ungracious behaviors.

2) Publicists advertised clubs and recruited members

To expand the club efficiently, teenagers knew how to use marketing strategies. They chose several members to serve as publicists, who had to advertise and canvassed more CrazyVote users to join their club. However, these publicists were not in charge of approbating the applications of admission to the club.

3) Chapter leaders held the regional activities

On account of different districts or locations, the clubs are separated into several chapters in the north and in the south. As general social networking sites, online pals might live in different places throughout Taiwan. Even though the club members want to hold some actual activities and turn the virtual social contacts into face-to-face gatherings, teenagers encounter the problem due to distance and the cost of money. In Taiwan, most parents hardly allow their children especially under 18 years old to take a journey to a distant place with on-line friends. That is the reason why the club members are compelled to hold the regional activities such as a short-distance outing. Therefore, north chapters and south chapters are gradually formed in the clubs. The chapter also has its own leader and managers to hold activities.

In the study, most interviewees were proud of being a member of their clubs, and they also described that their clubs are managed like enterprises, which have a clear destination to enhance members' social relationships and definite organization structures for work sharing to continue and to enlarge their clubs.

C. Club Activities

After joining a club, the members started to have frequent contacts with others. With common characteristics, such as habits, entertainment, or lifestyle, club members started to hold different social activities.

1) The process of holding activities is complex but effective

To conduct a club activity successfully, these teenagers show their flexibilities to access different web-based communicating platforms. The process of holding an activity includes proposing, discussing, and bulletining the final decision.

Firstly, a proposer writes an idea in his\her own blog, and asks club members to second the motion by leaving a message. If it is generally supported, club members would start to discuss

the details, such as when and where to manage an activity, through online chat room or messenger. Later, the club leader or activity promoter will collect and sort all suggestions for the members to choose their favorite one through the voting system on the Internet. The final decision will be bulletined on Club's official site and in the club leader's CV blog, which is made a final check to confirm who will participate to put the idea into action. In this case, the entire process of planning such an activity does not take a lot of time since all will be done on the websites.

2) Club activities are cohesive and diverse

Club members make arrangements for varied outdoor activities, such as going to a theme park, shopping, and singing at KTV (karaoke house in Taiwan), and they also develop their own online culture, like forming a small group to play online games or to chorus on Yahoo messenger:

We...about 20 to 30 members of our club...are very close now. There are more than ten members who participate in outdoor activities from time to time in Taipei...(B. In-depth interview. 27 August 2008, translated from Chinese).

We chat online every day and talk about everything. We play guitar and prepare our own music accompaniment to sing songs together on Yahoo IM Conferencing...Some people chat, some people sing, and some people request songs. It looks like sort of online KTV (A. In-depth interview. 27 August 2008, translated from Chinese)

Having leisure activities, these teenagers are also promoting the image of their club, and trying to make all club members feel close to each other and like to belong to the club. As shown in Fig. 4, they held a badge design competition for the club, and proposed to use the first design to make their own uniforms and peaked caps. Furthermore, they decided to write a song for the club:

Most of our members can make the animated GIF pictures, and we designed many logos as club badges.... There are no specific rules in our badge design competition. However, we set the prize that we will apply the winner's graphic design to make our uniform, a T-shirt probably, and the winner will receive a free one (A. In-depth interview. 27 August 2008, translated from Chinese).

Fig. 4 A badge design competition of club *Saint*

In the foregoing section, it is mentioned that the distance for teenagers causes the clubs to separate north chapters from south chapters. The regional differences, therefore, are reflected by the club members' subjects, attitudes, habitual behaviors and the type of usual social activities. Most interviewees consider

the members in the south of Taiwan are much more native, enthusiastic and active, even though the members of north chapters are more. These south chapters have held a lot of small-group activities by themselves, and they are fond of sharing the wonderful experiences to others by posting the travel notes. In fact, the frequent outings encourage more club members to join such actual social activities.

D. Social Contacts of Club Members

If Teenagers want to make more friends and have actual social interactions beyond the virtual online community. At the outset, the members congregate in the online chat room to discuss the time and the place to have a get-together party. Having common topics gradually increasing, the group talk continues every day and makes club members more familiar with each other. They care for each other and have established ties of comradeship.

In addition, one of the interviewees even believes that the club he belongs to is just like a big class, where students are very keen to know their classmates. The sense of belonging of an organization itself brings natural relationships among the members.

Before clubbing, I logined CrazyVote every day, but do nothing special...But now, there is a sense of belonging, and I have more motivations to visit here. I know I have a lot of friends, right here (C. In-depth interview. 27 August 2008, translated from Chinese).

I post something innermost in the blog...They (club members) may encourage me or respond to it with a message, which is very worth reading...It is some kind of attachment... (E. In-depth interview. 27 August 2008, translated from Chinese).

The club members have more interactions than those who do not join the club. In the study, 80 active users who regularly visited CrazyVote website were selected and their general online activities have been recorded. Half of the subjects are members of one of the clubs, and the others are ordinary users who are active on-line but do not join any club. In Fig. 5, the light blue line shows how many CrazyVote users there are that a club member interacts with in his\her own message board per day, and the dark blue line indicates the number of users that an ordinary user interacts with. As shown in the figure, those who join the clubs make friends faster and easily and then attract more users to visit their message boards. Since the first club *Saint* was formed in the beginning of July, the average of users each club member might interact with has increased obviously. In Fig. 6, the light green line shows an average of users who visit a club member's blog per day, and the dark green line indicates an average of users who visit an ordinary user's blog. Since clubs were formed, the average number of users who might share their sentiments on a club member's blog has increased from 3 to 13.

The sense of belonging also makes club members try to strengthen their own club like a small society. Leaders encourage members to participate in club activities, and members try to build the image of their own club by making the badges, uniforms and songs. They browse friends' CV blogs and message boards every day to make sure that they do care

about friends' daily life. However, most leaders soon figured out that it is difficult to have all members stick to each other. In the interviews, an elder interviewee said:

> After the summer vacation, everyone will become very busy...Maybe two or three years later, these senior high school students will grow up, and it will be easier for us to map out some activities. I think it is worthwhile to expect... (A. In-depth interview. 1 September 2008, translated from Chinese)

Most club members are students and have to put a lot of effort to study, especially for senior high school students at the ages between 16 and 18. In Taiwan, parents do not allow their children travel alone to a distant place and make some restrictions on children's social behaviors due to protection. Accordingly, the participation of club activities depends on several important factors such as age, region, money, (school) work and lifestyle. As the previous paragraph mentioned, the leader of *CHIV*, who did not ask her members to get online continuously, confronts this situation firstly.
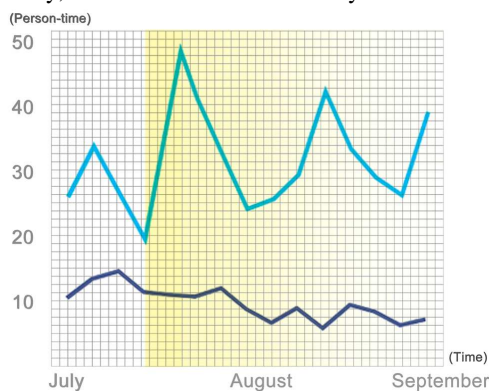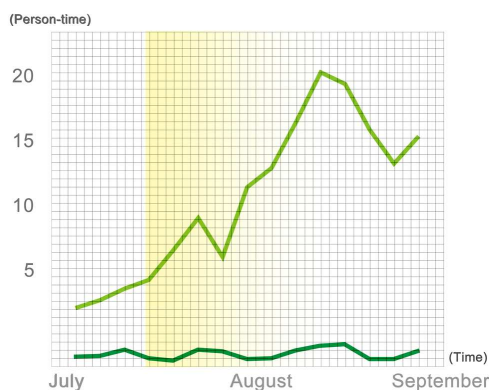

Fig. 5 Interactions on message board

Fig. 6 Interactions on personal on-line diaries

IV. DISCUSSION

Based on interpretations of the interviews in the case study which have explored teenagers' social behaviors and attitudes towards the on-line clubs, it indicates a teenagers' significant social model on the Internet in Taiwan.

First, the teenagers' considerations of making friends on the Internet reveal that the teenagers' intention to have real contacts with online pals. Second, the essence of the teenagers' social context with online friends seems bound to real life. In addition, they have developed their own process of making friends on account of their great adaptability in an online environment. Furthermore, the action of forming a club reflects that they equip themselves with solid strategies to expand their social relationships in group activities and attract more members to join their clubs. The aspects of teenagers' social issues will be discussed in the following sections.

A. Considerations

Teenagers' considerations of making friends online presupposed the real contacts. Caring about not only the general characteristics of a friend, such as age, stature, weight, blood type, and constellation, but also place, school and hobbies, teenagers express the most important one of making friends on the Internet is one's living area, age and honesty:

- Living Area: Most interviewees presented that their first concern is where they live. They expect to have sincere interactions in real life with the online friends. In terms of the distance problem presented in the previous section, one's place becomes of the most importance since it might decide if a teenager is allowed to come out with online friends having a gathering.
- Age: The age limit of making online friends is similar to that in reality. The teenagers tend to make friends of their age. That reflects the demographics of CrazyVote website: over eighty percent of users are between 16-19 years old. In the study, the freshmen and sophomores in college are willing to associate with senior high school students, and all these teenagers present that they have no inclination to making friends with those in 20s, who are adults in the eyes of the teenagers.
- Authenticity: Most teenagers use their real identities to register on the website, including age, gender and living area. They are honest and acquainted with others. For this reason, they ask each other with sincerity, but they also visit one's online album or blog to have a double check on one's authentic identity.
- Devotion: Teenagers are interested in others' social intentions, especially when they are earnest to maintain the relationships on the website. In the study, interviewees explained both situations would show one's devotion to making friend and keeping friendship. One is how much time a person hanged on the website and the other is how enthusiastically he\she was to respond to others messages.
- Lifestyle: Teenagers are very excited and interested to see someone who shares with them the same taste, hobbies or similar lifestyle. Hence, personal web space serves to share one's experiences and life backgrounds, which offer others with a topic to interact with.

For teenagers, the main motive of making friends on the Internet is quite different from others in their 20s, 30s, or above. For instance, in the case of one's living area, some of interviewees even declined to make friends with those they were

not able to meet in reality. Their major considerations of making friends reveal that the teenagers' intention to have real contacts with online pals.

B. From Online Community to Real Contacts

Followed the active purpose of teenager's club forming, their on-line social interactions didn't satisfy them anymore but having face-to-face gatherings. Teenagers then decided not to be restricted on the Internet and established real relationships with on-line friends in reality. The essence of the whole online social circle is bound to real life indeed, which could be demonstrated in several perspectives like social identity, activities, and the scope of social activities.

1) Social identity

Most teenagers do not have the concept of virtual relationship. As the most important social cue, identity directly affects the essence of social contact. Recently, a fundamental problem for social software is the difficulty to establish trust and to convey earnest feeling owing to the lake of social cues. However, in this case of teenagers' social behaviors, this problem does not occur. In the first place, most teenagers used their true identities to get online, and without reluctance gave their personal information, such as age how old they are, place where they live, and school where they go to. Hence, they believed that most users and online clubs they formed have no difference from people and communities in a real world.

2) Activity

In the case study, all of the interviewees expressed that they dreamed to have real contacts with new friend they had met on the Internet. However, they had never met them until they joined the clubs on CrazyVote. This is why the first outing planned by the club *Saint* could be responded by hundred users

With club founders' promotion, a great number of voluntary activities were held constantly by club members or even an ordinary website user. The way they interact with others and the way they think on the Internet show no differences either from those in their daily life. For instance, some of teenagers who enjoyed outdoor activities emphasized that they did not want to associate with who were only addicted to computer games, and some relatively tend to keep in the company with computer game lovers.

In sum, a teenager's activities to do with online friends, which include picnics, window-shopping, singing karaoke, or going to a night market, are very close to what friends will usually do in reality.

3) Scope

As what is mentioned in the previous sections, teenagers' attitudes take a serious thought about "real distance – where they live" between them and their online friends, which indicates that the online social circle for teenagers in this study is not restricted in virtual context, and the purpose of it is put into action in reality. They were trying to become acquainted with those online friends who live in the same area, such as in the same city or a county.

Furthermore, a very short distance is not an attractive feature to make friend, but sharing something in common and

familiarity are. The investigation on the website functions of *the map: where friends live* reveals a specific result. The map is originally designed for teenagers to be aware who live around them, and it makes them share similar experiences and local topics to chat and to have fun. However, the study reveals that comparatively the teenagers were not very interested in making friends with those who live in the same neighborhood. It is very rare to make a contact with someone by way of using the map function. The way teenagers think over the distance of choosing online friends is the same as the way they think of making friends in reality. Distance does cause a problem for friends to see each other from time to time.

To sum up, even though teenagers have several specific considerations for online environment, their online social behaviors and attitudes are still in accordance with what they are in their daily life.

C. Flexible Communicating Ability

In Taiwan most teenagers have plenty experiences of getting on the Internet, and their first time of accessing the Internet could be traced back to the time when they were in the primary school. That might give explanations about that club members in the study do have abilities to deal with varied types of communicating platforms and solve the problems they might face. It also reveals that teenagers equip themselves with abilities to access web-based media and adapt themselves to the diverse and complicated conditions on the Internet.

1) Communicating platforms

The choices and usages of different communicating platforms are based on the depth of acquaintance. In the study, synchronous communicating media as immediate messenger and chat-room are thought inappropriate to use between people who are unacquainted with each other. On the contrary, non-real-time platforms as a message board and a bulletin board are considered as places to concern with unfamiliar friends. In the study, teenagers explained their specific perceptions and usage occasions of the media, discussed in the following respectively:

- Messenger: Messengers are the most common social communicating media for real-time chatting. Teenagers usually use them to communicate with close friends and tend to present more personal information there, such as one's online status and emotions.
- Personal web space: A personal web space is complete open to any visitor, including personal blogs, message board and online photo album, personal web. Teenagers apply it to introduce themselves, to share experiences, and invite others to come into their life.
- Personal message board: Message board, sometimes a part of personal website, is the most important space to make new friends. Teenagers use the message board to welcome to an online stranger in the beginning, and then use it as a non-real-time text-based conversation function to have more interactions with other users.
- Mail: The study explores that the teenagers rarely contact with their friends through mails.

- Online bulletin: An open place for a group of friends to bulletin information, to change information and to make a decision by collection suggestions or opinions from others. In general, teenagers use bulletin to discuss some specific subjects.
- Chatroom: Chatroom or synchronous conferencing is used for real-time discussion in a group of friends, and they are not as private as messengers. In the study, teenagers use them to make group decisions or run a social activity. In addition, video-based meeting room is only used between intimates.

In teenagers' social activities, a messenger and a message board are both essential to communicate with others. However, a messenger board, compared with messenger, presents two specific features in the process of making friends. First, allowing people to communicate with unfamiliar friends, a message board gives people time to respond slowly to a question and to think over what to say attentively, since it is embarrassing to lose the subjects during real-time conversation. Besides, leaving a message is more appropriate as real-time communicating might sometimes disturb others.

2) Friend making process

Some of the teenagers have started to develop their own communicating model on the Internet while social resources like blogs, bulletins and chat-room are increasingly rising. In the individual inquires, all the informants have presented their active, natural and open-minded attitudes toward social activities. In addition, they possess a similar way to make friends, which has evolved their original personal styles with the accessible resources on the Internet:

- Greeting: The first step in the process is to greet someone they want to make friend with. They will make a contact by complimenting others' articles or pictures with a brief message or an emoticon. If they receive a nice response, it implies the seeds of a relationship might have sprouted.
- Understanding: The second step is trying to understand each others with patience. They are taking their time to know each other better and more via reviewing the updated dairies and photos. The topics sharing with each other in the next stage always flow out of the content of daily articles.
- Interacting: Further, on-line pals start to communicate with each others in this stage. They exchange their personal information like email, account of MSN, or Yahoo messenger. As time passes, they finally become intimate. This communicating model is applied to any case including regular website users and club members.
- Face-to-face Meeting: The final step of making friends is to have actual contact. In the case study of club forming, these members are keen on exchanging their mobile phone numbers, and join club activities such as an outing.

For an initiate of social platforms, it is hard to be aware of the whole thing about making friends. The process is accepted by most active teenagers, who gain experiences of dealing with on-line relationships for a long time. They have also admitted that becoming real friends indeed takes a lot of time and patience to understand and accept each other.

D. Other Culture and Current Social Trend Influence

In the research, the unexpected phenomenon of online clubs formed by the teenagers with a strong will to have face-to-face contacts reveals that group-based social interactions might be more appropriate and safer for teenagers while having a gathering.

1) Extending social relation appropriately

In Taiwan, teenagers under academic pressure mainly make friends with their classmates, a few neighbors or cousins. There are a few students who are able to join extracurricular activities in senior high school or even in college, as mentioned in the introduction.

As general social software, CrazyVote, has provided a web-based platform for teenagers to have opportunities to make friends with whoever living around, they might have different lifestyles but they do have something in common to keep a friendship. Hence, they can meet like-minded friends easily. A significant feature of club forming is that a club member can meet a bunch of online pals at a time. It is very different from traditional social platform, where users have to be acquainted with self-reliance and can only get in touch with a few at once.

In addition, due to club forming successfully the teenagers can get rid of the embarrassment of making new friends with strangers. While making friend, leaving messages to a stranger needs some courage even on the Internet because they might be refused or receive indecent response. Besides, it is generally believed that it's not an appropriate way to meet online pals in terms of Taiwanese culture and customs, while it is approved to meet new friends through mutual friends and earn support from their family or friends. However, in this study the teenagers as team members feel more comfortable without reluctance but with togetherness because they do know who the club members are and what they do.

2) Security and sense of belonging

Most web-based social platforms provide users lots of chances to be acquainted with other through bulletin boards, blogs, mails, messengers or chat rooms. The social context formed on the Internet does not support adequate social nuances, and users' social identities are hardly concerned in such online communities. Even though what users seek on the Internet might try to create a fantasy or to improve their social skills, it is still very unlikely for users to develop their relationships between each other without trust.

As the above-mentioned, club leaders will expostulate with discourteous one on the misbehavior to protect and take care of other members. And t is much secure for teenagers to be acquainted with others and then to go out in a group. These CV clubs are formed as a mini society with a sound purpose to make friends on the Internet and then in reality.

To extend the interpersonal relationships and to get in touch with different people, teenagers' motivation of making friends is straight and simple. They are not conscious of the differences of

social nuance between the virtual context and real world. However, teenagers tend to expose their personal information and lack the wariness of online fraud and potential dangerous existing intentions.

V. Design implications

The findings of research on teenagers' club forming voluntarily indicate the inner values of the teenaged on-line users and their expectations of interpersonal relationships. To enhance social interactions for a certain group, the design implications for social software offer suggestions based on several issues in this paper, which are teenagers' social considerations, communicating ability, friend making process and group social model.

1) Focusing on a limited range of user types: According to teenagers' concerns about age and similar lifestyle, members of an online community should be simple, clear, and restricted to well-defined target users.

2) Linking together with user's life context: The elements of design, including social interactions and features of appearance, have to be coherent with target users' original life context.

3) Participating in and perceiving: Developers and designers need to participate in certain online communities and to perceive the subtle variations of users' behaviors and concerns, which may present valuable information for creative redesigning.

4) Serving as a window for users to meet others: Most users already get used to communication by certain media. If the main purpose of social software is not designed to provide convenient communicating functions, it should be as simple as a window for users to meet others.

5) Lowering the threshold in the beginning: The first step to meet a stranger and to say hello should be considerate and appropriate. The first contact should be designed more easily rather than leaving a message.

6) Defining the friend making process: For the target users to make friend with others appropriately, developers and designers need to define a set of steps, which are noticeable and learnable.

7) Building the group social model: Social contacts based on the group relations possess the sense of belonging and trust. Hence, a group social model could be developed in the design concept of social interactions.

8) Making users' relations visible: The design allows users to expand their social circles spontaneously through the mutual friends by visualizing users' relations.

As the suggestions reveal, applying the wholly understanding of target users to design concepts could make a design more acceptable, reliable and consistent with users' original social context. For different groups and types, the design of computer-mediated communication and social interaction might take the same considerations into account to meet online users' deep needs.

VI. Conclusion

This study shows that the boundary between on-line social interactions and actual relationships is blurred to the teenaged online users on CrazyVote. Their motivation of making friends on the Internet is straight and simple while extending the interpersonal relationships and getting in touch with other users. The on-line social behaviors reveal that they have developed their own process of making friends on account of their great adaptability in an online environment.

The teenaged online users' social contact is not restricted in virtual context. In the case of voluntarily club forming, teenagers tried to organize themselves with definite social purposes and tried to bring their online communities into reality to have face-to-face gatherings. The action of forming a club reflects that teenagers equip themselves with solid strategies to expand their social relationships in group activities and attract more members to join their clubs. In addition, the group-based social interactions are more appropriate and safer for teenagers while having a gathering, since it is approved to meet new friends through mutual friends and earn support from their family or friends in terms of Taiwanese culture and customs. With trust and a sense of belonging, their clubs are formed completely as a mini society.

In conclusions, the case study of teenagers' behaviors and attitudes presents their on-line social activities are tightly bound to the real life context with plenty cultural features. It is hope that this study might inspire more design concepts for social software in the future by understanding and drawing more attention of the contextual and cultural concerns in technology development.

References

[1] B. Wellman and K. Hampton, "Living networked on and offline," *Contemporary Sociology*, vol. 28, no. 6, pp. 648-654, Nov. 1999

[2] J. Preece and D. Maloney-Krichmar, "Online communities: Focusing on sociability and usability," in *The human-computer interaction handbook: Fundamentals, evolving technologies and emerging applications*, J. A. Jacko and A. Sears, Ed. Mahwah, NJ: Lawrence Erlbaum, 2002, pp. 596-620.

[3] D. S. Ranson, E. S. Patterson, D. L. Kidwell, G. A. Renner, M. L. Matthews, J. M. Corban, E. Seculov, and C. S. Souhleris, "Rapid scout: Bridging the gulf between physical and virtual environments," in *Proc. the SIGCHI Conf. Human Factors in Computing Systems*, New York: ACM, 1996, pp. 442-449.

[4] H. Hutchinson, W. Mackay, B. Westerlund, B. Bederson, A. Druin, C. Plaisant, M. Beaudouin-Lafon, S. Conversy, H. Evans, H. Hansen, N. Roussel, and B. Eiderbäck, "Technology probes: Inspiring design for and with families," in *Proc. the SIGCHI Conf. Human Factors in Computing Systems*, New York: ACM, 2003, pp. 17-24.

[5] B. A. Nardi, D. J. Schiano, and M. Gumbrecht, "Blogging as social activity, or, would you let 900 million people read your diary"? In *Proc. the 2004 ACM Conf. Computer Supported Cooperative Work*, New York: ACM, 2004, pp. 222-231.

[6] S. Herring, L. A. Scheidt, S. Bonus, and E. Wright, "Bridging the gap: A genre analysis of weblogs," in *Proc. the 37th Annual Hawaii International Conf. System Sciences*, Washington, DC: IEEE Computer Society, track 4, vol. 4, p. 40101.2.

[7] R. Kumar, J. Novak, P. Raghavan, and A. Tomkins, "Structure and evolution of blogspace," *Communications of the ACM*, vol. 47, no. 12, pp. 35-39, Dec. 2004.

[8] J. A. Hughes, D. Randall, and D. Shapiro, "From ethnographic record to system design: Some experiences from the field," *Computer Supported Cooperative Work*, vol. 1, no. 3, pp.123-142, Mar. 1993.

[9] F. Kensing and J. Blomberg, "Participatory design: Issues and concerns," *Computer Supported Cooperative Work*, vol. 7, no. 3-4, pp. 67-185, Sep. 1998.

[10] G. Hofstede, *Culture's consequences, international differences in work-related values*. Berverly Hills, CA: Sage, 1980.

[11] H. R. Markus and S. Kitayama, "Culture and the self: Implications for cognition, emotion, and motivation," *Psychological Review*, vol. 98, no. 2, pp. 224-253, 1991.

[12] L. Herman, "Towards effective usability evaluation in Asia: Cross-cultural differences," in *Proc. the 6th Australian Conf. Computer-Human Interaction*, Washington, DC: IEEE Computer Society, 1996, pp. 135-136.

[13] A. Yeo. "Cultural effects in usability assessment," in *CHI 98 Conf. Summary on Human Factors in Computing Systems*, New York: ACM, 1998, pp. 74-75.

[14] W. Barber and A. Badre, "Culturability: The merging of culture and usability," in *Proc. the 4th Conf. Human Factors and the Web*. Available: http://zing.ncsl.nist.gov/hfweb/att4/proceedings/barber/

[15] T. Clemmensen, Q. Shi, J. Kumar, H. Li, X. Sun, and P. Yammiyavar, "Cultural usability tests – How usability tests are not the same all over the world," in *Proc. of the 12th Conf. Human Computer Interaction: Usability and Internationalization*, Springer-Verlag Berlin Heidelberg, 2007, pp. 281-290.

[16] H. Beyer and K. Holtzblatt, *Contextual design: Defining customer-centered systems*, San Francisco: Morgan Kaufmann Publishers, 1998.

[17] T. Lindlof, *Qualitative Communication Research Methods*, London: Sage, 1995, pp. 163-175

[18] A. Fontana and F. Frey, "Interviewing: The art of science," in *Collecting and Interpreting Qualitative Materials*, N. K. Denzin and Y. S. Lincoln Ed. London: Sage, 1998, pp. 47-60.

[19] L. Sproull and S. Kiesler, *Connections: New ways of working in the networked organization*. Cambridge, MA: MIT Press, 1991.

[20] J. Donath, "Mediated faces," in *Proc. the 4th International Conf. Cognitive Technology: Instruments of Mind*, London: Springer-Verlag, 2001, pp. 373-390.

[21] S. Agamanolis, "Designing displays for human connectedness," in *Public and situated displays: Social and interactional aspects of shared display technologies*, K. O'Hara, M. Perry, E. Churchill and D. Russell, Ed. Boston: Kluwer Academic Publishers, 2003, pp. 309-334.

[22] K. Holtzblatt and S. Jones, "Contextual inquiry: A participatory technique for system design," in *Participatory design: Principles and practices*, D. Schuler and A. Namioka, ed. Hillsdale, NJ: Lawrence Erlbaum Associates, 1993, pp. 177-210.

[23] K. H. Huang and Y. S. Deng, "Social interaction design in cultural context: A case study of a traditional social activity." *International Journal of Design*, vol. 2, no. 2, pp 81-96, 2008.

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