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BABEL OR GREAT WALL:
SOCIAL MEDIA USE IN AN ACCULTURATION CONTEXT

A Dissertation in

Information Sciences and Technology

by

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ABSTRACT

The era of globalization is marked by communications penetrating national or cultural boundaries in all sorts of areas. Unprecedented levels of mobilization or migration, and the boom of information communication technologies (ICTs) such as social media, which free people from the limitations of space and time, have been two highly salient features that are rapidly and irrevocably changing the world. They brought many new opportunities for learning and exchange as well as social problems and challenges.

In the dissertation, I explored social media use in an acculturation context: Chinese students living in the United States. From an interview study of 20 participants, I collected 329 social media use activities. Based on these activities and existing use and gratification theories I developed a two-layer coding system of social media use, which evolved as the interview study went on. Furthermore, I explored these social media uses for acculturation processes. I identified two kinds of acculturation strategies: the Babel strategy, which refers to American identification efforts to get assimilated into new culture, and the Great Wall strategy, which refers to Chinese identification efforts to maintain their original self. I found that while social media helped students adapt to new culture through the uses such as maintaining weak tie and information surveillance, students extensively used Chinese social media to maintain their original self, through uses such as social bonding and social participation.

Based on a questionnaire study of 253 Chinese students in America, I compared the use patterns among four kinds of social media: American SNS (e.g. Facebook), Chinese SNS (e.g. Renren), American microblogs (e.g. Twitter), and Chinese microblogs (e.g. Weibo). I further conducted a SEM model to explore how social media use would help cope with culture shock through different acculturation strategies: American identification, Chinese identification, and bicultural identity integration.
This study expands existing HCI work on inter-cultural communication and collaboration activities toward consideration of acculturation strategies, online support for identity, and designing for individual development. The social media use work refines use and gratification theories in the context of different kinds of social media, which provide design representations for new media.
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Chapter 1

Introduction

The era of globalization is marked by communications penetrating national or cultural boundaries in all sorts of areas. Unprecedented levels of mobilization or migration, and the boom of information communication technologies (ICTs) such as social media, which free people from the limitations of space and time, have been two highly salient features that are rapidly and irrevocably changing the world. While most of HCI work in this area has focused on intercultural communication and collaboration (usually with comparisons), in this dissertation, I explore how social media use is influencing the acculturation process (i.e. learning about, experiencing, and participating in a new culture) in an expatriate context: Chinese students living in the United States.

In chapter 2, I investigated the literature on acculturations, culture shock problems, and acculturation strategies. Based on an analysis of acculturation strategies, I suggested investigating the underlying cultural identification processes rather than merely acculturation outcomes such as merger, separation, or assimilation. Therefore, in chapter 3, I explored the identification processes in light of identity theory and social identity theory, focusing on national and cultural identity as a specific case.

Such endeavor provides an innovative perspective to operationalize and explore the acculturation dynamics rather than taking a static conception of acculturation strategies, avoiding the stereotyping problem. It also demonstrates an exploration on applying social identity theories in specific contexts both qualitatively (as in chapter 5) and quantitatively (as in chapter 6) studies.

In chapter 4, I investigated social media in the facilitation of acculturation. I first reviewed traditional uses and gratification theories in media effects research; then I reviewed
existing studies that applied uses and gratification theories in social media contexts such as Wikipedia, Facebook, and Twitter. I further reviewed how social media can facilitate online community through three perspectives including social identity, social ties, and social participation. This study takes a developmental and social constructionist view of social media use in the investigation of social media use for personal development and community dynamics.

In chapter 5, I presented an exploratory interview study of social media use by Chinese students in the United States. I built coding system with 14 items of social media use, and categorized them into three groups: information use, social tie, and social participation. I described and analyzed each use with different kinds of social media. I further investigated how these social media uses facilitate the acculturation strategies, including American identification (i.e. the Babel strategy) and Chinese identification (i.e. the Great Wall strategy).

Based on the interview study, I conducted a questionnaire study of 248 Chinese students in America in chapter 6. I explored how acculturation strategies could predict their culture shock. I specifically compared the use patterns among four kinds of social media: American SNS (e.g. Facebook), Chinese SNS (e.g. Renren), American microblogs (e.g. Twitter), and Chinese microblogs (e.g. Weibo). And I further explored how these social media uses could predict participants’ American identification, Chinese identifications, and bicultural identity integration, and culture shock through structural equation modeling.

I present a conclusions and discussion in chapter 7. Integrating the results from the interview study and the questionnaire study, I discussed issues such as dealing with culture shock, social media use for American identification, social media use for Chinese identification, and designing for identity development.
Chapter 2

Acculturation Problems

Expatriation and Culture Shock

Increasing migration or expatriation has transformed cultural phenomena in recent decades. According to a report by the U.S. Department of Homeland Security (2011) in August 2011, there were 46,471,516 nonimmigrant admissions to the US in the single year of 2010; 1,595,078 of these were students, greatly increasing the ethnic diversity of American universities. Such exposure to a second culture (Tadmor and Tetlock 2006, Suarez, et al. 1997) could create many new opportunities for learning and exchange as well as social problems and challenges.

These expatriate students, confronting a new environment, may suffer from the feelings of loneliness and alienation (Suarez et al. 1997), as well as myriad difficulties in coping with cultural conflicts, referred to sometimes as “culture shock” (Oberg 1960, Taft 1977) or “cultural fatigue” (Guthrie 1975). Such culture shock in acculturation can undermine wellbeing, mental and physical health, psychological satisfaction, self-esteem, work performance, and grades in school (Liebkind 2001).

Culture shock is a term that embraces numerous phenomena that a person with certain cultural background may encounter when entering into a relatively strange culture. Even when the term culture shock was first employed (Oberg 1960), it was depicted with following six characteristics: 1) a sense of loss or deprivation resulting from the removal of friends, status, role, and personal possessions, 2) fear of rejection by or rejection of the new culture, 3) confusion in role definition, 4) unexpected anxiety, disgust or indignation regarding cultural differences, 5) strain or stress relating to psychological adaptation, and 6) feelings of helplessness, including
confusion, frustration and depression. Similarly, Taft (1977) identified six distinct sources of culture shock, confirmed by subsequent researchers (e.g. Mumford 1998): 1) strain due to the effort required to make necessary psychological adaptations; 2) a sense of loss and feelings of deprivation in regard to friends, status, profession and possessions; 3) being rejected by or rejecting members of the new culture; 4) confusion in role, role expectations, values, feelings and self-identity; 5) surprise, anxiety, even disgust and indignation after becoming aware of cultural differences; and 6) feelings of impotence due to not being able to cope with the new environment.

The high resemblance of these two depictions of culture shock implies its commonly acceptable characters, with regard to dealing with both original culture and new culture. First, the expatriates may experience a feeling of loss or deprivation of their original culture and many loved things such as family, friends, language, habits, food, and social events (i.e. “grief and bereavement” as in Bowlby 1969). Second, a totally new environment can be a challenging encounter, in which the expatriates are experiencing life change and are compelled to adapt to the strange situation with little cultural literacy or competency (i.e. “lacking social skills” as in Brown, et al. 1975). Thirdly, the differences between the cultures may cause cognitive dissonance (Tadmor and Tetlock 2006) and threaten the coherence of individual’s self-concept. These elements endue culture shock rich contents, from cognitive (e.g. cultural literacy, understanding, and cognitive dissonance), to emotional (e.g. feeling of loneliness, alienation, and depression), to behavioral (e.g. cultural learning, social skill training, new relationships) (Zhou et al. 2008).

**Acculturation**

A classical definition of acculturation was that “acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or
both groups” (Herskovits 1936, as cited in Berry 1997). In another word, in the acculturation process, people are encountering and experiencing a new culture, in which they are learning and changing in a new environment.

In this dissertation, I am interested in how expatriates learn and change with the facilitation of social media, as well as the strategies they adopt to cope with the challenges of culture shock. A priori there are a range of possibilities for acculturation. At one extreme, expatriates might assimilate into the new mainstream (e.g. Oberg 1960). This is the Babel strategy, referring to the story of Genesis in which, after the Great Flood, all of humanity spoke a single language and shared a common culture. Babel is a traditional view of the cultural trajectory of minorities.

At the other extreme, expatriates might isolate themselves from the new mainstream culture that confronts them. That is the Great Wall strategy, referring to the attempt of the early Chinese empire to prevent incursions from the north. For example, Duster (1991) described the tendency of students (at Berkeley) to group themselves racially. Duster emphasizes positive consequences of such grouping, including the development of in-group affinities, cultural pride, ethnic identity, and social support. Other researchers (e.g. D’Souza 1991) have argued that such self-segregation can also lead to increased ethnocentrism and racial intolerance.

This phenomenon not only denies the antiquated idea of mere assimilation, but also shatters the overmuch idyllic conception that diversity by itself benefits, which guided us to take a more rational and pragmatic perspective to explore how we could help. Researchers claimed that increasing interracial interactions were beneficial, because they enhanced cultural awareness and commitment to ethnic understanding (Smith et al. 1997), as well as college satisfaction and student retention (Chang 1996).

The emergence of information and communication technologies (ICT) and social media now provide people a new context and facilitation for acculturation, which may help alleviate the
loneliness, alienation, pressure, and other culture shock problems. Shklovski, Kraut, and Cummings (2006) investigated the coping strategy with Internet Use in the context of residential move. They found that changes in psychological well-being in response to residential move could drive changes in routine uses of the Internet. In this dissertation, I investigated in more detail how acculturation strategies are employed in social media contexts, as well as how the social media are specifically used in these acculturation strategies.

**Acculturation Strategies and Identity Structure**

In the context of acculturation, a society becomes *culturally plural* (Berry 1997) with regard to the acculturation issue, divided to “mainstream” and “minority” ethnic or cultural groups. The Babel strategy assumes that “minorities” cultural groups are inevitably (or should be in the process of) becoming part of the “mainstream” cultural group. The Great Wall strategy implies resistance to assimilation. Whichever strategy is employed, people in the acculturation context must deal with the culture shock problems in their daily encounters.

Cultural maintenance is one important issue for acculturation, referring to how cultural identities and characteristics would be considered and maintained. In response to incompatibility and dissonance problems, people develop a variety of coping strategies that eventuate in different patterns of identity structures. Berry (1997), for example, proposed a framework of four acculturation strategies depending on whether people value their native ethnic identity more or less than their new cultural identity. When individuals do not wish to maintain their native identity and seek adaptation into new culture, they adopt the *Assimilation* strategy; when individuals place a value on holding a native identity and avoid engaging in the new culture, they adopt the *Separation* strategy; when individuals seek to maintain native identity while also
adapting to the new culture, the Integration strategy is applied; and Marginalization, when individuals abandon the effort of reconciling identities, and display an interest in neither of them.

Roccas and Brewer (2002) further developed a Social Identity Complexity, describing four kinds of identity structures according to the subjective representations of multiple identities. Individuals may categorize themselves in an intersectional group (e.g. Chinese American) while maintaining both identities (i.e. intersection); they may also adopt one primary group identity to which all other group identities are subordinated (e.g. just a Chinese though temporarily living in U.S.), which is dominance; they may also maintain both identities, whether they are integrated (i.e. merger) or not (i.e. compartmentalization). Berry’s (1997) analysis seems to oversimplify the situation individuals holding both identities and ignores possibility of compartmentalizing and situationalizing identities. It was unclear how well the identities were integrated in Roccas and Brewer’s (2002) intersection group.

These categorizations regarded acculturation as a state instead of a process (Zhou et al. 2008). The acculturation, however, by definition should be a dynamic process. By identifying and stabilizing acculturation as fixed categories makes it awkward for further analysis. Furthermore, such categorizations risk stereotyping while individual’s identities are constructed and re-constructed (especially in acculturation context) according to the self-development view. Also these categories are confounded with mixed variables. For example, the assimilation strategy comprises both adapting to new culture and resistance to original culture; and the compartmentalization strategy mixed three factors: high new cultural identity, high original cultural identity, and low integration level of them. To get rid of the confounding problem, we need to figure out the underlying variables (or processes) that lead to these states (or categories).

A close scrutiny of these acculturation strategies as in a quadrant (figure 2-1) reveals at least two underlying mechanisms, the American Identification and Chinese Identification, drive the acculturation processes, and lead to above states (i.e. categories). Such a quadrant also
complies with Suarez et al.’s (1997) claim that biculturalism processes could be develop along with two possible dimensions: a process of accommodation to the host culture (i.e. American identification) and the other process of maintaining some values and attachments to the culture of origin (i.e. Chinese identification).

Figure 2-1. Chinese identification and American identification that drive acculturation
Chapter 3

In light of Identity Theories

Many studies have discussed social identities including national and ethnic identities (e.g. Amiot et al. 2007, Berry 1997, Ting-Toomey 1981, Ting-Toomey et al. 2000), with a consensus that social changes such as expatriating or migration would trigger deep intra-individual changes in social identities over time (Amiot et al. 2007). In this chapter, I would explore the concepts of “identity” and “identification” as a basis for further investigation.

Identity and Self-Concept

As Markus, Smith, and Moreland (1985) defined, the “self-concept” is as set of “self-schemas that organize past experiences and are used to recognize and interpret relevant stimuli in the social environment”. The “self-schemas”, in turn, was defined as “cognitive generalization about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual’s social experience”. From this definition, we could see that the “self concept” is a very important psychological construct that underlies all our social experience. Just as Turner and Reynolds (2003) put it, self concept as “a complex social psychological process”, is a “human universe”, “an undisputed given of human experience and life” that underlies “all phenomena of human consciousness, feeling and action”.

Whereas the consistency or coherence among different aspects of self (i.e. identities) was emphasized in western cultures, researchers (e.g. Suh 2002) found that people (especially from East Asia culture) embrace the idea of “multiple selves”, and viewed themselves more flexibly across situations. Actually researchers have considered self-concept as multifaceted dynamic
cognitive representations in terms of “self-aspects” (Linville 1987), which is a cognitive category derived from social experience which serves to process and organize information and knowledge about oneself. In this dissertation, I refer “identity” in the sense of such self aspect following Simon (2004), just as Deaux (2001) claimed, identities implies “a sense of integration of the self, in which different aspects some together in a unified whole”.

Identity theory and social identity theory have been two critical perspectives on the social basis of the “self-concept”, and both “regard the self as differentiated into multiple identities that reside in circumscribed practices (e.g. norms, roles)”, as Hogg, Terry, and White (1995) analyzed.

Table 3-1. Identity theory and social identity theory

<table>
<thead>
<tr>
<th>Basis of identity</th>
<th>Identity Theory</th>
<th>Social Identity Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content of identity</td>
<td>Self reflection of expectations prescribed by the role</td>
<td>Characters of the members of the category</td>
</tr>
<tr>
<td>Motivation</td>
<td>Role-congruent behavior</td>
<td>Self-enhancement</td>
</tr>
<tr>
<td>Antecedent process</td>
<td>Enactment of role</td>
<td>Social comparison and self categorization</td>
</tr>
<tr>
<td>Consequent process</td>
<td>Self-verification</td>
<td>De-personalization</td>
</tr>
<tr>
<td>Relationship to groups</td>
<td>Intra-group structure</td>
<td>In-group out-group comparison</td>
</tr>
<tr>
<td>Level of analysis</td>
<td>Between individual and society</td>
<td>Between social groups</td>
</tr>
<tr>
<td>Explain</td>
<td>Individual’s role-related behaviors</td>
<td>Group processes and intergroup relations</td>
</tr>
<tr>
<td>Related theories</td>
<td>Symbolic interactionism, Role structure theory</td>
<td>Self categorization theory, Discrimination, stereotyping</td>
</tr>
<tr>
<td>Key scholars</td>
<td>Stryker, Burke, etc.</td>
<td>Tajfel, Turner, etc.</td>
</tr>
<tr>
<td>Discipline</td>
<td>Sociology</td>
<td>Social psychology</td>
</tr>
</tbody>
</table>
Identity Theory

Identity theory views self as a multifaceted social construct that emerges from individual’s roles in society (Hogg, Terry, and White 1995). It originated from the symbolic interactionist view that society affects social behavior through its influence on self-concept (i.e. self is socially constructed) (Stryker 1987). It views society as a “complexly differentiated but nevertheless organized” (Stryker and Serpe 1982) system, and therefore, as a reflection of society, the self-concept should be regarded as a multifaceted (i.e. with multiplicity) and organized construct (i.e. with social structures).

Stryker (1987) proposed that individuals have distinct components of self, named role identity, for each of the role positions in society that they occupy (e.g. mother, son, captain, and student). Such role identity is self reflection and definitions of the meanings of the role. For example, as a “student” an individual should regularly go the school to enroll in courses to study and learn from the teachers and textbooks. Such a role identity is a set of expectations prescribing behavior that is considered appropriate by the society. Therefore, by definition, a role identity implies action (Hogg, Terry, and White 1995). In different social context, individuals may play different roles (e.g. a student in school, and a son in the family), which means individuals could have multiple role identities (i.e. multiplicity), and different role identity would became salient (i.e. salience of identity) in different social context.

The salience of identity is determined by individual’s commitment to the role, which is the “degree to which the individual’s relationships to particular others are dependent on being a given kind of person” (Stryker and Stratham 1985). Stryker (1980) identified two kinds of commitment: interactional commitment, and affective commitment. Satisfactory enactment of role in appropriate social situation not only confirms and validates an individual’s status as a role member, but also reflects positively on self-evaluation (i.e. self verification of identity).
Social Identity Theory

While the key idea of identity theory is *socially constructed and socially enacted role*, the key idea of social identity theory is the *social category* (e.g. nationality, ethnicity, affiliation, organization, social class, gender, etc.) for *social comparison*. According to social identity theory, social categories that individuals feel they belong to provide a definition of who they are, in terms of the defining characteristics of the category.

According to social identity theory and Self-categorization theory (Turner 1985, Turner et al. 1987), individuals tend to categorize themselves as members (*membership*) of certain social group or category. In such *self-categorization* process, they are defining boundaries of social groups, and accentuating perceived similarity of people’s cognitive representation of the defining features of the group (i.e. group prototypicality). In such process, individuals are essentially *depersonalized* in a way that they are perceived as, are reacted to, and act as embodiments of the relevant in-group prototype rather than as unique individuals (Hogg, Terry, and White 1995). Just as Deaux (2001) put, social identity “refers specifically to those aspects of a person that are defined in terms of his or her group memberships.” Although most people are members of many different groups, only some of those groups are meaningful in terms of how we define ourselves. In these cases, our self-definition is shared with other people who also claim that categorical membership, for example, as a female, as a Chinese, as a student.

Social identity being defined as “part of individuals’ self-concept which derives from his or her knowledge of membership to a social group (or groups) together with the value and the emotional significance attached to it” (Tajfel 1978), also implies its *multiplicity* because the same individual could belong to a variety of groups. Chinese students, for example, when exposed to American culture, will experience fluctuations of and conflicts between Chinese identification
(mainly based on ethnicity) and American identification (mainly based on living environment) in the context of social interactions.

Deaux (2001) identified five distinct types of social identities: 1) ethnicity and religion (e.g. Chinese), 2) political affiliation (e.g. feminist), 3) vocations and avocations (e.g. students), 4) relationships (e.g. son of parents, good friends), 5) stigmatized identities (e.g. people with AIDS). In the case of Chinese students in the United States, Chinese identity could be viewed as ethnic or cultural type of social identity, and American identity could be viewed as national or cultural type of social identity.

In Hogg, Terry and White (1995)’s critical comparison between identity theory and social identity theory, they claimed that it was “inadvisable to attempt to integrate very different theories” because of their levels of analysis, approaches to inter-group behavior, different emphasis on the social roles and social contexts, etc. (as in table 3-1). Researchers such as Stets and Burke (2000), Deaux and Burke (2010), and Simon (2004), however, argued that these two theories had far more in common, at least in below aspects as I summarized:

1) identities are self-aspects of self-concept;
2) identities are both cognitive and affective;
3) the multiplicity (or multifacetedness) of identities;
4) identities are socially constructed (and re-constructed) (i.e. developed from social interactions);
5) identities are socially enacted (i.e. they become salient in certain social context)
6) identities implies meaning that guide further social interaction;
7) identities imply certain level of commitment (including interactional commitment, and affective commitment);
8) identities have social and evaluative consequences (e.g. self enhancement, self verification).
Considering acculturation in light of social identities gives us an opportunity to examine identification processes separately, as well as how different identities become integrated (Amiot et al. 2007, Roccas and Brewer 2002). According to Turner et al. (1987), social identification is a process of depersonalization “whereby people come to perceive themselves more as the interchangeable exemplars of social category than as unique personalities”. In such identification processes, individuals identify strongly with their group, developing a prototype that embodies the beliefs, attitudes, feelings and behaviors associated with group membership. However, beliefs, attitudes, feelings and behaviors could be incompatible in different identification processes. For persons managing a multiplicity of social identities, these incompatibilities can create cognitive dissonance (Tadmor and Tetlock 2006) and emotional exhaustion through the pursuit of self-consistency (Grice, Jones, and Paulsen 2002).

Identity and Identification

The terms “identity” and “identification” are sometimes used interchangeably as though they characterize the same social psychological phenomenon. Korostelina (2007: 18) described “identity” as a psychological state, and “identification” as a process that leads to the state, which is also how I would use the terms in this dissertation.

It was Freud (1914, as cited in Korostelina 2007:18) who first used the term “identification” to describe the unconscious connection between child and parent as a mechanism of interaction between individuals and social group. Identification with a group leader (e.g. the father) was considered as the basis for group formation and as one of the latent forms of the Oedipus complex.

Following Freud, later researchers further analyze identification as a mechanism of individual socialization that influences the formation of an individual’s consciousness.
Identification was considered as a permanent, incomplete, and open process of socialization that prompts individuals to actively and independently search for his or her own personality, and strengthens the subjective component in the formation of self-conception.

Herbert Simon (1996) provided an intriguing view of identification by referring to the bounded rationality. He claimed that as individuals are incapable of dealing with the world in all of its complexity, they need to form a simplified picture of the world, viewing it from their particular organizational vantage point and organization’s interests and goals. His statements suggest that a prototypical conception of identification is necessary to deal with social reality.

Such identification process is situated in and also determined by social reality, including culture. Thus identification has both emotional and cognitive components. The emotional component usually develops during the first stage of a positive relationship (i.e. a bonding social tie) or as a result of positive feelings (e.g. self-enhancement, as in Roccas 2003). The cognitive component is based on emotional connections that lead to an acceptance of values, beliefs, attitudes, and worldviews (Roccas 2003, Korostelina 2007). As soon as an individual recognizes the similarity in perception and evaluation of the world with other group members, he or she feels a stronger positive emotional connection with the group.

According to Korostelina (2007:18), identification fulfills two main functions: 1) realization of personal needs to belong to a social group that provides protection, confidence, and feeling of value; and 2) inclusion of an individual into a system of social relationships. The social groups as objects of identification could be primordial groups (e.g. ethnic), socially constructed groups (e.g. nation), primary groups (e.g. family), contact groups (e.g. colleagues), as well as symbolic groups (e.g. generation). Individuals are always situated to multiple social groups, which implies they may experience various identification processes. For example, a Chinese person who work or study in the United State would experience both Chinese and American identification processes.
The consequences of identification process with such social groups would be a cognitive understanding and emotional feeling of “we-ness”, which we call “social identity”. Just as Deaux (2001) claimed, social identification is “a process by which we define ourselves in terms and categories that we share with other people”. This feeling of identity cements a social group as a social aggregate and leads to common forms of thinking and behavior; and further social interactions as involvement in the social group help maintain, change, or reconstruct the existing social identity.

Such a perspective of identity and identification greatly complements other theories in social psychology (e.g. social cognition theory, attribution theory). Social identity theories remind us that understanding the relationship between attitude and behavior requires careful attention to the salience of identities and the attitudes and behavioral norms associated with these identities (Augoustinos, Walker, and Donaghue 2006). When people are interacting with social reality, the underlying social and cultural identifications may significantly shape their attribution and response to social events.

The social reality including the history and culture provides a social context and ingredients for social identification process that constructs and reconstructs social identities. However, these social identities would be enacted in certain social context as a script for social interaction, and people would become active builders and developers of such social reality. Such reciprocity serves as a mechanism in the reproduction and reconstruction of both social reality and social identities. In acculturation processes, people are experiencing distinct identification processes, which provide us a great scenario to explore such social construction.
National and Cultural Identity

As discussed above, national or cultural identities could be viewed as a part of individual’s social identity, and as a collective phenomenon that unites people into national or cultural groups. However, national of cultural identity is a kind of specific social identity, because a national or culture is social category in such a large scale, that some characteristics of social identity may not apply.

Smith (1994) defined national identity as a product of both 1) ethnic history and identity of the continuity, religious and belief system, and 2) dominant ideology and conscious manipulation, including commemoration, ideology, and symbolism. Membership in the nation is based not on similarity among people (as in many other kinds of social identities), but on their feelings of strong attachment to the nation and solidarity with other members of their nation. Kelman (2001) claimed that, just like other social identities, national identity is constantly reconstructed to serve several functions: 1) to provide a sense of uniqueness and unity as well as a sense of belonging; 2) to develop positive self-image; 3) to offer a basis for cultural development, religious beliefs, and way of life; 4) to grant the foundation for ownership of land and resources; and 5) to justify claims and grievances of the group.

National identity or cultural identity is sometimes confused with ethnic identity. While in some cases when a country declares a national or cultural identity, it may lead to an ethnic conception of nationality (Korostelina 2007). Such ethnic conception usually leads to tensions between the majority and minorities, especially in a country of immigrants such as the United States. Therefore, in the dissertation, I am not using the term “ethnic identity”. By using terms such as “Chinese identity” or “American identity”, I am trying to include all social groups and all ethnicities with all sorts of cultures, histories, and living styles, as long as these identities are based on the identification (i.e. they recognize the membership) of “China” or “the United States”.
In the case of Chinese students in the United States, the social context (or society) of the host country (i.e. the United States) should be viewed as *culturally plural* (Berry 1997) with regard to the acculturation issue, which could be divided to “mainstream” and “minority” cultural groups. The Chinese students as expatriates in this case belong to the “minority” group. The Babel strategy implies an assumption that the “minorities” cultural group is inevitably (or should be in the process of) becoming part of the “mainstream” cultural group. The Great Wall strategy implies an endeavor of resistance to assimilation.

**Measurement of National and Cultural Identity**

Jean Phinney (1992) developed a questionnaire to assess ethnic identity, with items from following aspects:

1) *Cultural information search and cognitive understanding*, with items such as “I have spent time trying to find out more about this ethnic group, such as its history, traditions, and customs” and “I have a clear sense of this ethnic background and what it means for me”.

2) *Emotional attachment and sense of belonging*, with items such as “I have a lot of pride in my ethnic group and its accomplishments”, and “I have a strong sense of belonging to this ethnic group.”

3) *Behavioral involvement*, with items such as “I participate in cultural practices of this group, such as special food, music, or customs” and “I am active in organizations or social groups that include mostly members of this ethnic group.”

Phinney suggested that this measurement could be used to assess any ethnic identification, which should be equally appropriate for the Chinese American, or just Chinese in America.
The general measures of ethnic and cultural identity such as Phinney (1992) provided a common metric that allowed comparison between different groups (e.g. American vs. Chinese), or between different identities of the same person (American identification vs. Chinese identification for a person situated in both culture). However, different ethnic or cultural identities could have specific or distinct features, including the beliefs, experiences, and inherent cultural norms. For example, the identity contents of the ethnic group of Eskimo could be very different from that of people in South Africa. To capture such unique aspects of ethnic or cultural identities, some researchers developed questionnaires that are specific to a particular social group (e.g. the questionnaire of the Latino / Latina cultural identity by De La Garza et al. 1995). In this dissertation I am adapting Phinney (1992)'s measurements for both comparison purpose and its comprehensiveness of cultural identity dimensions.
Chapter 4

In the Context of Social Media

Most of studies on acculturation and identity structures were conducted offline, ignoring the fact that social media are radically changing the world. Social media, in terms of social network sites, weblogs, microblogs, wikis, Internet forums, social news, social bookmarking, and multimedia sharing, etc., introduce “substantial and pervasive changes to communication between organizations, communities, and individuals” (Kietzmann et al. 2011) with tremendous use all over the world. For example, Facebook (2011) reported that it had more than 750 million active users in global, with half of them logging in at any given day. Twitter, as another example, has around 200 million users as of 2011, generating over 200 million tweets and handling over 1.6 billion search queries per day (Wikipedia twitter 2012).

Ever since Putnam's famous paper "bowling alone" (Putnam 1995), the increasing use of technologies has usually been attributed to the decrease of local interactions, which leads to the "crisis of community". For Putnam it was television. Social network sites such as Facebook, as another example, were also criticized to alienate people from communities and public life. Closer scrutiny, however, reveals that all these primary causal relationships manifest in local interactions. It is difficult to imagine how participation in online communities does or could mitigate the problem. From a large survey study, Wellman (2011) argued that, besides decreasing social capital in communities, online activities can also increase and supplement social capital in different cases. However, how online social interactions actually influence offline community lives remains unclear.
Researchers have been studying how the Internet influences people’s life and in recent years many studies have been focused on specific social media such as social network sites. These applications provide an infrastructure for social participation in online and offline communities that facilitates user contribution, communication, and even collaboration (e.g. Zhang, Jiang, and Carroll 2011). Since using social network sites has become routine practices of everyday life, I would like to investigate how social media are used in the acculturation context of Chinese students in the United States, as well as how social media use would influence the acculturation strategies.

**Social Media Use**

**Uses and Gratifications Theories**

Use and gratification is one of the established theoretical frameworks to investigate motives and selection patterns of audience for the media. It is based on the assumption that audiences are active and goal-oriented in their uses of media (Ruggiero 2000).

According to Wimmer and Dominick (1994), use and gratification theories originated in the 1940s when researchers began explore why audiences engaged in media behaviors such as listening to the radio and reading newspapers. Since that, media researchers have been proposing different use models for different kinds of media.

For example, Lasswell (1948) claimed that different kinds of media served four kinds of functions for both individuals and the society: 1) *surveillance*, 2) *entertainment*, 3) *correlation*, and 4) *cultural transmission*. Based on Lasswell’s work, Blumler et al. (1972) proposed four primary factors of television use: 1) *personal identity or individual psychology*, which refers to psychological processes such as self-understanding, value assessment and reinforcement, 2)
surveillance, which refers to keeping track of information that may affect one’s life, 3) diversion, which refers to the escape from routine and problems with emotional release, and 4) personal relationships, which refers to utilizing information in social conversations.

Similarly, Mendelsohn (1964) identified seven generalized functions of radio listening: 1) providing useful news and information, 2) bracket the day, 3) companionship, 4) counteracting loneliness or boredom, 5) changing mood, 6) aiding social interaction, 7) allowing vicarious participation in events. Such frameworks covered the uses from individual level to dyadic and community level, although it mainly focused on uses in the individual level to fulfill both personal informational and psychological needs.

After a large literature review on the social and psychological functions of the mass media, Katz at al. (1973) identified a five-fold model of media use: 1) cognitive needs, which refers to audience needs to acquire information, knowledge and understandings, 2) personal integrative needs, which refers to audience needs to understand themselves (e.g. identity), 3) affective needs, which refers to audience needs for pleasure, 4) tension release needs, which refers to audience needs for emotional relief, and 5) social integrative needs, which refers to audience need to build connection with their families and friends (i.e. social ties). We could see that the first two uses were about personal cognitive needs; the second two uses were about personal emotional needs; and the last use was about socialization needs.

In the table 4-I I compared these classic works of uses and gratifications theories, and found that they could be categorized into four kinds for uses:

1) Information for personal cognitive needs: including surveillance or looking for information for their personal identity needs.

2) Information for personal emotional needs: including emotional pleasure and emotional relief.

3) Social tie needs: including building personal relationships with others.
4) **Social participation needs**: including participating social interactions and events in the community level.

Table 4-1: Uses and Gratification Theories for Traditional Media Research

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<td><strong>Social tie needs</strong></td>
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**Uses and Gratifications of Social Media**

The introduction of the Internet and social media has provided another outlet for people to use and seek these gratifications. Many social media studies (e.g. Joinson 2008, Park et al. 2009, and Lampe 2010) are following the traditional uses and gratifications theories in the context of new social media. For instance, Rafaelie, Hayat, and Ariel (2009) viewed Wikipedia as an online knowledge building community, and investigated Wikipedia uses from the perspectives of cognitive needs, affective needs, integral (personal) needs, integral (social) needs, and diversion needs, which was exactly the framework proposed by Katz et al. (1973).
However, more researchers recognized that the new features of social media could change or introduce new uses and gratifications. The differences between current social media and traditional media (e.g. radio, newspaper, television) is that 1) users are generating contents themselves, which was not covered by traditional use and gratification theories, 2) users could intensively interact with each other based on social media and generated contents, which greatly enhanced the social interaction (including both social ties and social participation) uses, 3) the Internet serve as an integrated digital library, in which all social media (e.g. Facebook, Twitter, Wikipedia) are in the same medium outlet, and all contents are accessible through the Internet, which greatly enhanced the information uses.

For example, based on a questionnaire study of 1715 college students, Parker et al (2009) identified four kinds of uses and gratifications of Facebook groups using exploratory factor analysis:

1) Self-seeking, which refers to the use that users tried to understand themselves and others through online participation.
2) Information, which refers to receiving information about environment and related events (e.g. news).
3) Entertainment: which refers to users’ online participation to amuse themselves.
4) Socializing: which refers to the use that users communicate and interact with others as a group.

Similarly, Joinson (2008) identified seven kinds of uses and gratifications of Facebook with online surveys: 1) photographs, 2) content, 3) social network surfing, 4) social investigation, 5) status updates, 6) shared identity, 7) social connection. We could find that the first four uses were about information needs; “status updates” was about self-disclosure that was not covered by uses and gratifications theories of traditional media; “shared identity” was about cognitive needs
in personal and group level; and “social connection” was about social ties. This framework seemed to miss the social participation uses in group level.

Besides the studies of Facebook uses, there were also studies of microblog uses. For example, Zhao and Rosson (2009) proposed two kinds of benefits of using Twitter: 1) personal benefits including (e.g. acquiring information), and 2) relational benefits (e.g. connectedness, common ground). Java et al. (2007) identified four kinds of main user intentions on Twitter: 1) sharing information / URLs, 2) reporting news, 3) daily chatter, and 4) conversations. While “daily chatter” was about personal information, the first two uses were about other information (e.g. social news). The “conversation” was about interactions between social ties or among social groups.

Interestingly, Java et al. divided Twitter users into three categories: information source, information seeker, and friends. The “information source” and “information seeker” were about information use, and the “friends” was about social tie use.

Based on existing uses and gratifications theories, Diolakia, Bagozzi, and Pearo (2004) identified five motivational factors of online community use, including 1) purposive value (e.g. giving or receiving information), 2) self discovery (e.g. self knowledge), 3) social enhancement (perceived personal value from participating in on community), 4) entertainment (e.g. for fun and relaxation), and 5) interpersonal connectivity. Such framework still lacked the gratifications in community level. Therefore, Lampe et al. (2010) leveraged the construct of “organizational commitment” as complement to Diolakia et al.’s (2004) framework, and investigated user motivations to participate in online community.

Besides these studies of social media use based on uses and gratification theories, there were also similar results without referring to these theories. For example, Nardi et al. (2004) conducted an ethnographic investigation of blogging of ordinary bloggers, and explored the five kinds of motivations (or use) of blogs: 1) blogs to “document my life” (to record activities and
events, and keep friends abreast of these activities), 2) blogs as commentary (to express opinions), 3) blogs as catharsis (to relieve emotional feelings), 4) blog as muse (to think by writing), and 5) blogs as community forum (to communicate among bloggers).

I also compared these studies of social media use in table 4-2, which could also be categorized into four kinds for uses:

1) *Information for personal cognitive needs*, which is greatly enriched in the context of social media. Social media provides users platform for thinking-by-generating contents (e.g. in blogs and status updates), to document themselves (self discovery), to disclose themselves to others, and to have surveillance on others.

2) *Information for personal emotional needs*. Social media provides applications (e.g. Facebook games) for participants play and interact.

3) *Social tie needs*. Social media help crystallize social ties to connect friends, which was impossible before.

4) *Social participation needs*. Social media also provide platforms for social groups and communities to communicate and interact together.
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**Dynamics of Online Community**

Besides analytically investigating specific uses and gratifications of social media, another way to examine social media use is to holistically explore the ecological system that is built on social media, i.e. online communities based on social media. Lyon (1986) reviewed a plethora of
definitions of community, noting that the vast majority enumerates three common qualities: shared place, distinctive social interaction and common ties. These three qualities are not independent, but mutually reinforcing. They are theoretically distinguishable, and do capture critical facets of what community is characterized for, as Nisbet (1976) observed. Based on Lyon and other researchers' work, Carroll (2012) proposed a conceptual model of communities, comprising of collective identity, community engagement, and network of social ties. These three elements emphasis different underpinnings of communities: social identities as psychological foundation, social engagement as behavioral manifestation, and network of social ties as structural depiction of communities (Zhang, Jiang, and Carroll 2011b).

In a study (Zhang, Jiang and Carroll 2011b) exploring how social media, Facebook specifically, can facilitate and influence proximal communities, we investigated scenarios in which users integrated their online interactions with offline activities, from the perspective of social identities, social ties, and social participation, which were mutually reinforcing and cultivating with the affordances of Facebook.

**Social Identities in Social Media**

Identities help us define who we are and give us guidelines for proper social intercourse with other people in social life. It is the most fundamental concept to community of the three. Ever since when "Gemeinschaft", the precursor of the concept "community", was discussed, Tönnies (1887/2001) claimed that the bonds of Gemeinschaft derive from personal identification based on the common place where people lived and worked. In the era of the Internet, the common place where people live and work has been dramatically extended and transformed. It is no longer physically bounded in time and location. This transformation can give rise to new features of identity in terms of how it is formed, developed, and enacted.
According to social identity theory, identity provides cognitive, psychological and even emotional connection to individuals with the groups they belong to (Turner 1985). More or less, an active identity can provide scripts for individuals to act in a given context, for example, interacting with members of that group and members from an out group. Shared identity also gives individuals psychological ground to understand themselves and others. As Ashforth and Mael (1989) pointed out, social identity helps define the self along with personal identity. Social identity also renders emotional bond that connects individuals to the collectivity, which is opposed to emotional bond between persons.

So in general, social identity fundamentally influences individuals’ well-being in social life, not only because of material benefits brought by being a member of a group, but also because of the non-material benefits such as belongingness rooted in social identity. Personal identity and role identity help define the self of people, and similarly they are ground of cognitive, psychological and emotional source of a person’s life, only working on a different level, person’s level (Simon 2004).

There are many studies on online identity such as Turkle's work (Turkle 1995). These work, however, focused on virtual spaces such as MUDs, where people are anonymous and identities are arbitrary. This is different from current social media (e.g. Facebook), where almost everyone uses their real name, and cannot escape their embodied selves and behavioral norms in their daily life.

Social media help people to present the self (Goffman 1959), and thereby support identity construction and maintenance. Several studies (boyd and Ellison 2007, DiMicco and Millen 2007, Farnham and Churchill 2011, and Zhao, Grasmuch, and Martin 2008) have discussed identity embodied in social media.

Zhao et al. (2008) conducted content analysis of profiles of 63 Facebook accounts, and divided users into three categories: visual (having wall posts and pictures) enumerative (having
interests and hobbies), and narrative (having "about me"), according to a continuum of implicit and explicit identity claims. Similarly, DiMicco and Millen (2007) investigated characteristics in Facebook user profiles including age, number of friends, number of company friends, job title, job description, job start date, number of groups joined, job-related groups joined etc., and divided users into three categories: reliving the college days, dressed to impress, and living in the business world. Hewitt and Forte (2006) investigated students' perception of their instructor based on whether they have seen the instructor's profile and whether they are connected to the instructor.

Closer scrutiny of these studies, however, reveals that most of them presented a static conception of identity, grounded only in user profiles and other characteristics. Goffman (1959) asserted, people try to control their self-presentations to other people through any type of social interactions, we view identity as a more dynamic conception of constructing self-presentations, and studied identification through social interactions in social media (Zhang, Jiang, and Carroll, 2011a). We identified the multiplicity and situatedness of online social identities, as well as how these identities were embodied and enacted in Facebook social interactions (Zhang, Jiang, and Carroll, 2011a, 2011b).

Social ties in Social Media

Hogg and Hains (1998) identified two sources of group cohesion, solidarity grounded in group identification, and the positive regard grounded in interpersonal relations, which is, social ties. While the social attraction to certain identity could be an attitude produced inside the group toward an embodiment of the group (i.e. social identity) and related to depersonalization, there is also personal attraction based on idiosyncratic preferences grounded in personal relationship. These social attraction and personal attraction were not isomorphic but were relatively independent. Social attraction was influenced by identification with the group, and was associated
with perceived prototypicality; personal attraction was associated with interpersonal similarity and was influenced by interpersonal relationship rather than group identification.

Supporting social ties and networks is the key business of social network sites. However, the idea of social ties and networks can be traced back to 1930s’ and the prosperity of computational science nowadays renders social network analysis with wider and more profound influence than ever before.

Social tie as a metaphor is the connection between social actors, while social network is an aggregation of social ties in a meaningful group. We view social ties and networks as structures of ongoing social interactions and social engagement. Social ties usually develop through social interactions, are maintained through further interactions, and may still exist when specific interaction ends. Different from those relationships or ties that are built in offline interactions, a large portion of social connections in social network websites are engineered and could be different from the offline social ties. Engineered networks supported by technology can reduce the cost of information sharing in a massive way: broadcasting one’s status, asynchronous information updating, information feeding based subscription, etc. This helps relieve tie maintenance to a degree, but the quality, richness and context of shared information are at stake.

Social media help maintain social ties. Young people are motivated to join social network sites to keep strong ties with friends, to maintain ties with new acquaintances, and to meet new people online (Acquisti and Gross 2006). Some researchers (Donath and boyd 2004) claimed that social network sites such as Facebook may not increase the number of "strong ties", but may increase the "weak ties", because the technology is suited to maintain them cheaply and easily. However, some other researchers reported that Facebook has a strong association to maintaining or solidifying existing offline relationships, as opposed to meeting new people (Ellison, Steinfield and Lampe 2007). Barkhuus and Tashiro (2010) reported that Facebook helped maintain potential or weak ties. People would not think of telephoning some friends, but feel fine to communicate
with them through Facebook. Such connectedness enable users to create and maintain a network of heterogeneous and weak ties due to the low maintenance cost (boyd and Ellison 2007, Donath and boyd 2004). Facebook use is especially helpful for students with low satisfaction and low self-esteem to increase their bridging ties (Ellison, Steinfield and Lampe 2007). Gilbert and Karahalios (2009) further explored how online activities in Facebook could predict the strength of ties.

Just like social identity, the strength of tie is often viewed multi-dimensional, and could be measured in terms of emotional intensity, time spent together, mutual confidence, and reciprocal services (Granovetter 1983). For Chinese expatriates in U.S., maintain “old” ties in China is an important commitment to Chinese identity; having opportunities to create “new” ties may largely facilitate American identification process.

**Social participation in Social Media**

Social participation is the commitment of a member to stay in the group and interact with other members. It can take many forms. A community is not just an aggregation of people. It has its tradition, history and culture. These elements are built throughout time and embodied in a spectrum of activities in everyday life (Berger and Luckmann 1967). It is virtually hard to characterize what activities can count as social engagement with one straightforward standard. In the research area of social network websites, there are few studies really digging into social engagements mediated by websites. Some studies of social engagement were reduced, intentionally or not, to website uses: how many posts had been posted a day, how many users were lurkers and how many were active users, how many emails were sent to nearby friends and how many to faraway friends, etc. It is true that intensity of activities can indicate to a degree whether a community is active, but how these or other activities contribute to the quality of social
engagement and what the deeper consequences are on individual or collective wellbeing were not well studied.

To Putnam (1995), a typical social engagement takes place in the form of participating in collective activities such as going to church and taking part in local sport league. These activities help reinforce and cultivate social norms, social capital and other established elements. It is reasonable that Putnam claimed that the overall social capital was decreasing in the North America from the perspective of this traditional view of social engagement, since technologies indeed add tremendous mobility to people living in modern society. Those locally engaged activities take place less and less in cities. However, other researchers (e.g. Wellman et al. 2001) do claim that information technologies transform social engagements instead of decreasing it.

Some studies found that social participation increase with the use of social network sites. For example, Valenzuela et al (2008) reported a positive correlation between the intensity of Facebook "Group" use of students and their civic participation and political participation. Kirman et al (2010) found that providing socio-contextual information can increase social game participation on Facebook, but didn't increase the number of users.

Social media disseminate information rapidly and have a low threshold for participation. Barkhuus and Tashiro (2010) reported that social media facilitate social events, and provide increased opportunities for participation. For example, telephoning friends requires an explicit social approach and action commitment. However, interacting through Facebook is more of an incidental social interaction. For Chinese expatriates in U.S., social media provide their opportunity to easily engage in both Chinese and American groups, these engagements will definitely influence their identification processes.
Mutually Reinforcing and Cultivating

These three perspectives, or more accurately three elements, are essential to social lives both in individual and collective level. They are distinguishable conceptually, but in actual world they work together, they are reinforcing and cultivating each other in social contexts. Social interactions take place in any form and in any place. Along with these emergent social intercourses happening, social norms and other representations are crystallized, externalized, and objectified. They become social culture, history and conventions, etc; and serve as the ground for new and further social interactions to act upon and refer to (Berger and Luckmann 1967). In this way, social engagement serves as the soil where social identities and social ties emerge and grow. Social identities are symbolized and objectified as projections of collective images, and are subjectively perceived and enacted by social actors. As part of the products of emergent social intercourses, when social identities are subjectively internalized, they guide our thoughts and behaviors consciously or unconsciously. Social network, too, is constantly enriched by social engagements. Social engagement forges and transforms social ties as well as the whole social networks.

Landscape of Chinese Social Media

There were 221 million bloggers, 176 million SNS users, 117 million bulletin board system users in China as of early 2010, which were huge amounts (Colaizzi 2010). But the social media used in China are totally different from that in U.S. While most of social media hosted in U.S. are lack of access in China, the landscape of social media there is dominated by local players. As a result, we can find the counterparts of almost all kinds of social media in China: Renren, for example, as a counterpart of Facebook, and Weibo as a counterpart of Twitter. In contrast to the
wave of “globalization” of social media, this phenomenon of “relocalization” (Warschauer 2000) introduces interesting communication issues. There are already some studies specifically investigating these Chinese social media in CHI community (e.g. Qu et al. 2011, Yang, Ackerman, and Adamic 2011).

Table 4-3. The counterparts of American and Chinese social media

<table>
<thead>
<tr>
<th></th>
<th><strong>American (US-based)</strong></th>
<th><strong>Chinese (China-based)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social network sites</strong></td>
<td>Facebook, Myspace</td>
<td>Renren, Kaixin001</td>
</tr>
<tr>
<td><strong>Microblogs</strong></td>
<td>Twitter</td>
<td>Weibo</td>
</tr>
<tr>
<td><strong>Wiki</strong></td>
<td>Wikipedia</td>
<td>Baidu Baike</td>
</tr>
<tr>
<td><strong>Online Forums</strong></td>
<td>Craigslist</td>
<td>MITBBS, Huaren.com</td>
</tr>
<tr>
<td><strong>Online News Portals</strong></td>
<td>NY Times, etc.</td>
<td>Sina News, Sohu News, etc.</td>
</tr>
</tbody>
</table>

For expatriates such as Chinese students in U.S., 1) how they choose and use American or Chinese social media; and 2) how their use of social media fulfills the acculturation needs become very interesting questions, which also serve as the two main research questions in this dissertation:
Chapter 5

Interview Study

To investigate the general social media use in acculturation context, I first conducted an exploratory interview to find out 1) social media use patterns, and 2) how social media were used for acculturation strategies.

Method

I interviewed Chinese students who have stayed in the United States for more than two years, with behavioral interview techniques (McClelland 1998), accompanied with questionnaires. Each study took about 60 to 90 minutes.

Procedures and Questions

In the study, I first asked participants to introduce themselves with background questions and the Twenty Statements Test (TST, as in Kuhn and McPartland 1954), which had been widely used to explore self concepts in cross-cultural situations (Watkins 1997). Participants were asked to give twenty brief descriptions of themselves, which helped us to understand their cultural identities (e.g. living in Pennsylvania, graduated from Beijing University, etc) and to relate them with social media use (e.g. connecting a college friend through SNS).

Then they were asked to report their general social media use with a comprehensive social media list adapted from Wikipedia (Wikipedia 2012) (by adding Chinese counterparts of these media) with about 40 application examples. With this list as a cue, participants reported
which social media they use. They were asked to rate use frequency for each discussed social
media application, with a 6-point Likert scale from 0 (never) to 5 (very frequently).

For each social media application that was used at least monthly, participants were asked
to describe how they used it. With questions such as why and when they adopted it, what they
usually did with it, who they usually interacted with, I leveraged behavioral interview technique,
which were usually used in human competency assessment studies (e.g. McClelland 1998),
asking participants to describe typical events in their past experience on how the applications
influenced expatriate life, in a storytelling way while interviewers helped them clarify the story.

The interviews were followed by questionnaires about acculturation to understand the
participants. I adapted the Multigroup Ethnic Identity Measure (MEIM, as in Phinney 1992) to
measure both Chinese and American identification, with 10 items about cultural information
searching, behavioral involvement, and emotional attachment. Based on bicultural identity
integration (Benet-Martinez, et al. 2002), acculturation strategy (Berry 1997), and social identity
complexity model (Roccas and Brewer 2002), I adapted the Bicultural Identity Integration
questionnaire consisting of 5 items measuring integration level of Chinese and American
identities (e.g. “these two cultures are just compatible”, and “I usually feel conflicts between
these two cultures’). I also leveraged the Culture shock Questionnaire (Mumford 1998), which
consisted 7 items such as feeling of strains, homesickness, and feeling of acceptance by new
environment. All questionnaires were in 7-point Likert scale.

Two of us took notes and discussed the data after each interview. The interviews were
conducted in both Chinese and English, depending on participants’ preferences. It was impossible
to count the numbers because many conversations were conducted in a mix of both languages. In
data analysis process we translated some of participants’ reports from Chinese to English, with
the agreement of translation between two interviewers.
Participants

I recruited participants by sending out a recruitment message twice in one month through a mailing list of Chinese students in a large eastern university in the United States. In the recruitment message, I asked for participants who had stayed in US for at least two years. Finally I got 20 participants, with 8 males and 12 females. Their ages ranged from 20 to 33, with average of 25.40 (std=3.38). Their years in the United States ranged from 2 to 6, with average of 3.47 (std=1.54). 15 participants were graduate students, and 5 undergraduates. Their average time staying on social media per day was 2.60 hours (std=1.38), ranging from half an hour to 4 hours. Participants were given $10 each to compensate for their time.

Table 5-1. Demographic Information of Participants.

<table>
<thead>
<tr>
<th>Demographic information</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>20</td>
</tr>
<tr>
<td>Chinese Identity</td>
<td>5.51 (0.64)</td>
</tr>
<tr>
<td>American Identity</td>
<td>3.77 (1.01)</td>
</tr>
<tr>
<td>Bicultural Identity Integration</td>
<td>3.74 (0.97)</td>
</tr>
<tr>
<td>Age</td>
<td>25.40 (3.38)</td>
</tr>
<tr>
<td>Years in U.S.</td>
<td>3.47 (1.54)</td>
</tr>
<tr>
<td>Culture shock</td>
<td>3.21 (0.73)</td>
</tr>
<tr>
<td>Social media use (hrs)</td>
<td>2.60 (1.38)</td>
</tr>
</tbody>
</table>

*Note: figures in parenthesis are standard deviations.*

Table 5-1 presents the descriptive statistics of participants. According to paired-sample t test, Chinese identifications of all participants (mean=5.51, std=0.64) were significantly higher than their American identifications (mean=3.77, std=1.01), t (19) =6.95, p<0.001. Their Chinese
identifications were all higher than four, which was reasonable because Chinese identities were their inborn ethnic identity.

**General Use of Social Media**

Participants’ usage of Chinese (CN-based) social media was reported higher than usage of American (US-based) social media. The existence of American and Chinese counterparts of different kinds of media (e.g. Renren vs. Facebook for SNS, Weibo vs. Twitter for microblogs) gave us opportunities to compare. Table 2 presents the average usage of some most popular media by different groups.

Table 5-2. Usage of different social media (in use frequency).

<table>
<thead>
<tr>
<th>Media</th>
<th>Overall usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNS</td>
<td></td>
</tr>
<tr>
<td>American (e.g. Facebook)</td>
<td>2.90</td>
</tr>
<tr>
<td>Chinese (e.g. Renren)</td>
<td>3.85</td>
</tr>
<tr>
<td>Microblogs</td>
<td></td>
</tr>
<tr>
<td>American (e.g. Twitter)</td>
<td>0.30</td>
</tr>
<tr>
<td>Chinese (e.g. Weibo)</td>
<td>3.25</td>
</tr>
<tr>
<td>News portal</td>
<td></td>
</tr>
<tr>
<td>American news portal</td>
<td>1.80</td>
</tr>
<tr>
<td>Chinese news portal</td>
<td>2.50</td>
</tr>
<tr>
<td>Wikis</td>
<td></td>
</tr>
<tr>
<td>American (e.g. Wikipedia)</td>
<td>2.65</td>
</tr>
<tr>
<td>Chinese (e.g. Baidu Baike)</td>
<td>1.80</td>
</tr>
<tr>
<td>Online Forum</td>
<td></td>
</tr>
<tr>
<td>American Forum (e.g. Craigslist)</td>
<td>1.50</td>
</tr>
<tr>
<td>Chinese Forum (e.g. MITBBS)</td>
<td>3.40</td>
</tr>
</tbody>
</table>

From table 5-2, we found that participants used almost every kind of social media in the acculturation context. The least used social media was American microblogs such as Twitter.
Social Media Use: Building the Coding System

From the interview, I collected 329 social media use activities. According to existing uses and gratifications theories of both traditional and social media, I tried to build a coding system from the beginning, which is like a top-down and theory-driven process.

This coding system emerged and evolved as the interview went on with more and more social media use activities collected, which is like a bottom-up and data-driven process. Below figure is an intermediate and temporary coding system in the early phase of the interview. I actually used such coding system as a cue to ask questions in the interview, which also kept me sensitive to refine the coding system as I conduct the study.

![Figure 5-1](image)

After interviewing 20 participants, another researcher and I sit together to look at these collected 329 activities, and discussed a final coding system, as well as definitions to each code. We then applied the coding system separately into these activities. We got 89.58% inter-rater reliability.
Table 5-3. Coding system of social media use

<table>
<thead>
<tr>
<th>Categories</th>
<th>Coding</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information</strong></td>
<td>Self discovery</td>
<td>Managing private photos, writing private blogs</td>
</tr>
<tr>
<td></td>
<td>Self disclosure</td>
<td>Updating status and photos that are visible to others</td>
</tr>
<tr>
<td></td>
<td>surveillance (friends</td>
<td>Keeping updated with friends’ status</td>
</tr>
<tr>
<td></td>
<td>around)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>surveillance (social</td>
<td>Keeping updated about social news</td>
</tr>
<tr>
<td></td>
<td>news)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information searching</td>
<td>Searching for information</td>
</tr>
<tr>
<td></td>
<td>Information sharing</td>
<td>Sharing or reposting funny or informative articles, videos, etc.</td>
</tr>
<tr>
<td><strong>Social Ties</strong></td>
<td>bonding</td>
<td>Chatting, posting, or commenting with friends</td>
</tr>
<tr>
<td></td>
<td>Bridging (maintaining</td>
<td>Stay connected or reconnecting</td>
</tr>
<tr>
<td></td>
<td>old ties)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bridging (new ties)</td>
<td>Meeting new people</td>
</tr>
<tr>
<td><strong>Social Participation</strong></td>
<td>Public opinions</td>
<td>Sharing opinions and commentaries publicly</td>
</tr>
<tr>
<td></td>
<td>Social groups</td>
<td>Posting, replying or browsing in social groups</td>
</tr>
<tr>
<td></td>
<td>Social events</td>
<td>Organizing or joining social events</td>
</tr>
<tr>
<td></td>
<td>Social games</td>
<td>Playing social games</td>
</tr>
</tbody>
</table>

I found that most confusing coding were 1) information sharing vs. self disclosure, 2) bonding vs. maintaining existing ties, and 3) social group vs. surveillance of social news. For example, we collected an activity that a participant posted photos of a social event in Facebook; one researcher considered it as sharing the event information, while the other deemed it as self disclosure behavior. In such situation, we looked for more detailed information of the activity from the interview notes, and had further discussion to make a consensus. In the discussion, we
redefined some coding, and finally achieved agreement on the coding system, which was presented in table 5-3.

**Information as Cognitive Resource for Acculturation**

Information needs had always been an important aspect of media use according to uses and gratification theories (e.g. Lasswell 1948, Mendelsohn 1964, Blumler et al. 1972, Katz et al. 1973 for media uses; Nardi et al. 2004, Rafaeli et al. 2009, Joinson 2008, Park et al. 2009, Java et al. 2007, Lampe at al. 2010 for social media use). Stafford, Stafford and Schkade (2004) also identified cognitive need for information acquisition as one of the principal motivators for online community use. According to existing literature, people use social media to explore their self-knowledge (e.g. “self-seeking” as in Park et al. 2009, and “self discovery” as in Lampe at al. 2010), to disclose self-information (e.g. “status updates” as in Joinson 2008), to share information (e.g. “sharing information” as in Java et al. 2007), to search for information (e.g. “information seeking” as in Lampe at al. 2010), and for information surveillance (e.g. “network surfing” as in Joinson 2008).

In acculturation context where people are distant from their original culture, and situated in a totally new cultural environment, information becomes even more important. They may need information about their original culture (e.g. social news) and previous friends to maintain an original self. Meanwhile, they need to know information about the new cultural environment so that they can live a better live there.
Self discovery

I identified 15 self-discovery activities that were seeking self-knowledge like “self-seeking” in Park et al. 2009 and “self discovery” in Lampe at al. 2010. In these activities, participants were using social media such as blogs, microblogs, and photo management tools to construct their self-knowledge and self identity.

Table 5-4: Self-discovery activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Blogs (e.g. Sina blog, Wordpress)</th>
<th>Micro-blogs (e.g. Weibo)</th>
<th>Photo management (e.g. Picasa, Flickr)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>6</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Examples</td>
<td>Private daily diary, catharsis, muse</td>
<td>Quick diary</td>
<td>Private photos as personal records</td>
</tr>
</tbody>
</table>

Participants reported 6 self-discovery activities in blogs, in which they write private blogs for catharsis or muse as Nardi et al. 2004 described.

I use Sina blog to write diaries. I keep these blogs private because they are simply diaries. I just want to keep a space for myself in a foreign cultural environment. (ID: 004)

I use blogs to record my life in US, or my reflections on life and religion. Every time after I write blog, I usually feel much better. I find all these things could be meaningful. (ID: 012)

They may also use microblogs as quick diaries for self-discovery. Participants also use Picasa or Flickr to manage their private photos as records of their life in the United States.

Self-disclosure

Compared with “self-discovery” activities, in which individuals explore their self concepts by themselves, “self-disclosure” is the act of revealing personal information, thoughts,
and feelings to other people (Archer 1980, Derlega et al. 1993). According to Goffman (1959), life is like a stage and individuals participate in it as performers. The performers use both verbal and nonverbal communication to express their identities. Researchers reported that the motivations of self-presentation could be to please the audience (e.g. Baumeister 1986), and to gain power in relationship between presenter and audience (e.g. Jones 1990).

Self-disclosure can be risky because it may invite ridicule or even rejection, thereby placing the discloser in a socially awkward or vulnerable position (Pennebaker, 1989). Consequently, people are more likely to disclose to strangers (Qian and Scott 2007) because they feel secure in that whatever is shared under such circumstances is unlikely to be shared with actual friends or acquaintances that may have some material impact on the discloser’s life.

Researchers found that general Internet-based behavior or computer mediated communication could be characterized as containing high levels of self-disclosure because of anonymity. For instance, Wallace (1999:151) argued that “the tendency to disclose more to a computer . . . is an important ingredient of what seems to be happening on the Internet”. Reingold (1993) argued that “the medium will, by its nature . . . be a place where people often end up revealing themselves far more intimately than they would be inclined to do without the intermediation of screens and pseudonyms”. Researchers (e.g. Joinson 2001) explained that anonymity inherent in Internet reduced the impact of social norms, self-regulation, and self-awareness (i.e. de-individuation) and thus increased individual’s adherence to their own personal standards.

When it comes to social network sites and social media, however, anonymity is no longer a distinctive character of online communication. Instead, most of people’s online contact are offline acquaintances (Ellison, Steinfield, and Lampe 2007), and their online and offline social lives are closely weaved and integrated (Zhang, Jiang, and Carroll 2011b).
In such online context with social media, users could present themselves by “verbally expressing” themselves in their status updates, posts, and comments, as well as by “merely performing” with visible actions such as connecting, poking, tagging, liking, sharing photos, joining online groups, and participating in online social events. From the interview, participants reported 26 self-disclosure activities.

Table 5-5: Self-disclosure activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Blogs (e.g. Sina blog, Wordpress)</th>
<th>American social network sites (e.g. Facebook)</th>
<th>Chinese social network sites (e.g. Renren, Kaixin001)</th>
<th>Micro-blogs (e.g. Weibo)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>11</td>
<td>3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Examples</td>
<td>Document their American life to Chinese friends</td>
<td>Academic life, travelling photos, conference photos</td>
<td>Daily activities, watching movie, status of mood</td>
<td>Ad hoc photos, anything come to mind</td>
</tr>
</tbody>
</table>

**Self-disclosure with blogs**

Self disclosure (disclose self-information as in Joinson 2008) was reported as the most important use of blogs. Participants used blogs to record their life in the United States, and update with their Chinese friends, to relate their lives to others by sharing their own personal stories. Just as Jenny, a PhD student reported,

*I started blogging just before I came to the U.S., when I realized that I may lose contact with my college friends. I decided to use blog to diary my future life, and share it with them. There were a lot of things to write, especially in the first couple of years: looking for houses, the new campus, American food, the orientation, new classmates, course projects, buying a car, homesick, etc. When I have some happy things, I would share with my friends; when I have some unhappy things, I would also share, and they will comment or even call me to comfort me. I also read their blogs to keep track of their new job or graduate life in different cities. In this way, we keep contact and provide emotional support to each other. (ID: 012)*
Participants used both American (e.g. Wordpress) and Chinese (e.g. Sina blog) blog sites for self-disclosure. Interestingly, their primary target audiences were all reported as Chinese friends, and all these blogs were written in Chinese. It shows that self-disclosure use of blogs is mainly for Chinese identification process.

Self-disclosure with social network sites

I collected 10 self-disclosure activities with social network sites. Three of them were in American social network sites such as Facebook, and the other seven were in Chinese social network sites such as Renren and Kaixin001. They disclose themselves by writing status updates or uploading photos which were visible to their friends in the social network sites.

While participants’ blogs were usually visible to the public, the audiences of their disclosure in social network sites were confined within people who had agreed upon their friendship when connecting each other. This situation is more like offline context, in which most self presentations occur with those who have some knowledge of the presenter’s previous behaviors – friends, family, etc (Goffman 1959).

As researchers stated, self-disclosure could be risky because it may invite ridicule or even rejection, and thus place the discloser in a socially awkward or vulnerable position (Pennebaker, 1989, Qian and Scott 2007). Our participants were aware of such risks, and had concerns when disclosing in social network sites.

Several participants expressed a cautious attitude for disclosing in American social network sites (e.g. Facebook):

“I only present academic and professional activities in Facebook, such as uploading photos of attending a conference. You know there are many foreign friends there, your advisors, other professors, professionals in the same area, or even potential employers. I am afraid my daily activities would seem too trivial
to those friend. And you don’t know which activities are not that culturally agreeable to foreigners.” (ID: 002)

Participants were much more actively on self-disclosure in Chinese social network sites (e.g. Renren), where there were all Chinese old friends. They present their daily activities in the United States and also get feedback from friends, which further provides consolidation of their identity.

“[in Renren] I uploaded some photos of my first meditation retreat in a retreat center in New York. Some friends were surprised and asked me what’s wrong with me, so I needed to explain it to them. More friends were interested; they thought it was so cool, and the scenery there was so beautiful, and serene.” (ID: 019)

Self-disclosure with microblogs

The audiences in microblogs could be different from that in social network sites. In social network sites, connecting two individuals requires the confirmation from both. In this situation, those who are connected with you should mostly be your acquaintances. On contrary, in microblogs, any people could get access to your posts as long as he or she “follows” you. So your audience would comprise both acquaintances and strangers.

I collected 5 self-disclosure activities with microblogs. All of these activities were in Chinese microblogs (e.g. Weibo), which shows that their target audiences of self-disclosure were Chinese. Just as participant 6 reported:

“I am a big fan of animation, comics, and games (ACG). I am followed by and also followed many other ACG fans. In Weibo I frequently update what I am reading and watching with my comments. In this way I share and recommend good comics, and get feedback on how other fans think about them.” (ID: 006)

Interestingly, one participant reported that she used microblogs as quick diary, but only disclosed them to strangers:
“I use Weibo to record daily interesting things and moods. I never follow or want to be followed by my acquaintances, because what I write may refer to them or people they know. But in the same time I want to share things with others, I hope someone could listen to me. For instance, last week I had a quarrel with my friend and felt wronged. I wrote it in Weibo, and there were several followers commented and comforted me. Weibo provides such a platform to share something to strangers.” (ID: 019)

**Surveillance (Friends)**

Social networking sites such as Facebook enable users to “track the actions, beliefs and interests of the larger groups to which they belong”, which was called “surveillance” function (Lampe, Ellison and Steinfield 2006). Joinson (2008) also reported that one most important Facebook use was social surveillance (i.e. watching and keeping track of friends’ activities), which motivated the frequency of site visit.

I collected 84 surveillance activities, which counts for 25.53% of all collected activities. It suggests that social surveillance was indeed an important and frequent use of social media, which confirmed the findings of Lampe et al. (2006) and Joinson (2008).

Participants reported 40 surveillance activities about their friends, just as Lampe et al. (2006) and Joinson (2008) meant what surveillance was. Furthermore, participants reported another kind of surveillance: surveillance about the social news, with 44 such activities.

<table>
<thead>
<tr>
<th>Table 5-6: Surveillance (friends) activities in social media</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>American social network sites (e.g. Facebook)</strong></td>
</tr>
<tr>
<td># of activities</td>
</tr>
<tr>
<td>Examples</td>
</tr>
</tbody>
</table>
**Facebook as a critical social surveillance tool for American identification**

American social network sites such as Facebook was reported as the most important media to get to know participants’ American friends. It provides a rich channel for participants to get to know everyday lives of American friends, which helped participants to cultivate American identity.

“Facebook provides a window for me to closely observe American lives. By reading American friends’ status, I can learn how American friends’ life is, what they usually do, and what they usually think. Also next time when I talk with them, I can have something to say about their lives.” (ID: 010)

Facebook is critical for the surveillance of American lives, especially for participants who were reluctant to get adapted into American culture. Actually Facebook was reported as scarce online platform to communicate with American friends.

“I don’t have much to talk with them [American friends] outside class, mainly due to our different cultural background. Facebook gives me some sense about their daily life.” (ID: 004)

“Besides email, Facebook is almost the only way to connect with American friends online.” (ID: 009)

**Chinese SNS and microblogs to keep updated with Chinese friends**

Participants reported that they heavily used Chinese social network sites (e.g. Renren) and Chinese microblogs (e.g. Weibo) to keep updated with their Chinese friends. Their friends in these websites could be divided into old friends in China (e.g. previous classmates) and current Chinese friends in the United States. Most of these friends used Chinese social network sites and microblogs, so participants could easily keep updated with them.

“I haven’t seen many of them [friends in China] since graduate, they started working, they changed jobs, they got married, some of them now even have child. Renren help me to keep updated with their status.” (ID: 016)
“Most of my Chinese friends here [in America] are using Renren or Weibo, so I can closely watch what they are doing. It may also remind me of things. For instance, one friend said in Weibo that he planned to go to an outlet in Philadelphia in Black Friday, and I asked whether I could join him.” (ID: 007)

“It is convenient because almost all my friends use it [Renren], whether they are currently in China or US. Watching and discussing what each other is doing makes my abroad life not that boring.” (ID: 015)

Similarly, participants reported surveillance activities of Chinese friends by browsing their blogs and reading their status updates in the instant messaging (e.g. MSN) headline. With rich status updates of these Chinese friends, participants users quick and wide access to their friend’s information, which provides participants the surveillance with regard to their Chinese friends, and thus help maintaining the Chinese identity.

Surveillance (Social News)

Participants reported 44 surveillance activities of social news with social media. The information of social events happened in the United State and China helps keep awareness of these two cultures and cultivate corresponding identification processes.

Table 5-7: Surveillance (social news) activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Social network sites (e.g. Facebook)</th>
<th>Micro-blogs (e.g. Twitter, Weibo)</th>
<th>Online News Portals</th>
<th>Online Forums (e.g. MITBBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>2</td>
<td>15</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Examples</td>
<td>Randomly see some social news</td>
<td>All hot news will be reposted a lot by friends</td>
<td>read news in news websites</td>
<td>Hot news will be discussed a lot in BBS</td>
</tr>
</tbody>
</table>
**Social network sites were seldom used intentionally for surveillance on social news**

Compared with social network sites that played a critical role in surveillance on friends, only 2 activities in social network sites were reported for surveillance on social news.

“When I am browsing the status updates of my friends, I would randomly see some social news shared by friends. Also I joined some Facebook groups, which also update some related news. For example, I liked the Facebook page of our university, so sometimes I can read some campus news.” (ID: 001)

Such statement suggests that social networks sites are not used primarily for surveillance of social news.

**Microblogs as a great tool for surveillance on social news**

While social network sites were seldom used intentionally for surveillance on social news, microblogs were reported as a great tool for such use. I collected 12 activities using Weibo to keep track of social news (mostly about Chinese news), and 3 activities using Twitter for surveillance of American news.

Participants reported that they use Chinese microblogs (e.g. Weibo) as news portal to keep abreast of current affairs in China, especially the big events happening in China. One participant reported that

“Every morning I read Weibo for the news. Any valuable information (e.g. news, opinion) would be posted and reposted quickly and extensively in Weibo. I use it as my primary news source because hot news transmits much faster in Weibo than in other news media.” (ID: 015)

“Although I am currently in US, I am really concerned about those things [that] happened in China, like the Yunnan earthquake, the bullet train crash, and recent flood damage in southern China.” (ID: 007)
Besides updating timely social news, microblogs further add value to the news by presenting different opinions and comments. As microblogs are so lightweight, every user could add opinion when reposting the news. Valuable and diverse opinions popularize through mass sharing, so that users could “learn opinions from different perspectives”.

“There are so many opinions, rumors, and debates. Weibo makes you open-minded and rational to these events, especially in the context that now China is developing so fast with so many controversial events happening every day.” (ID: 004)

**Online new portals and other online communities**

Participants heavily used online news portals for the surveillance of social new. Five participants read American online news portals (e.g. Dig, New York Times) at least every couple of days to have understanding and awareness of the American environment.

“I read American online news every couple of days. You know although I am a Chinese, I now live and study in the United States. I need to have a basic understanding of what is happening around. Besides, by knows these things at least I can have more topics when talking with American friends”. (ID: 010)

While some participants expressed the willing for American identification through reading American news, more participants reported that they were less interested in things happened in US. Eleven news surveillance activities were about using Chinese online news portals (e.g. Sohu news, Sina news) to read Chinese news.

“I read news mostly in Chinese online news websites, partly because Chinese is my native language. But more importantly, I am more concerned with an event happened in China than that in the United State. I am simply a Chinese in America.” (ID: 008)

I also collected 6 news surveillance activities in online forums such as BBS.

“Every time I go to MITBBS, I could see the hottest posts in the homepage, many of them are discussions of recent social news. In a Chinese online community in the United States, the news about China will obviously attract discussions. ” (ID: 012)
Such statement implies that both 1) living abroad itself and 2) communicating with Chinese peers make Chinese identity salient by keeping the social categorization in the national level (Amiot et al. 2007, Turner, et al 1987).

**Information searching**

People may found the needs for information in any social context (e.g. “information seeking” in Lampe et. al. 2010), especially in the acculturation context, where they need to acquire historical and cultural knowledge as well as “know-how” knowledge to build a culture competency. From this perspective, information searching is more likely to be used for identification with a new culture, which was confirmed by our interview.

From the interview participants reported 24 information searching activities. Six were about using wikis to understand cultural and historical knowledge of America. Ten were about using online forums including bulletin board systems (e.g. MITBBS) and Q&A communities (e.g. Baidu Baike) to look for answers to daily living problems in new situation. Seven were about using LinkedIn to search for job information or microblogs to look for information about social news (but mostly about Chinese news). Another one was about searching for great pictures in Flickr.

**Table 5-8: Information-searching activities in social media**

<table>
<thead>
<tr>
<th># of activities</th>
<th>Wikis (e.g. Wikipedia, Baidu Baike)</th>
<th>Online Forums (e.g. MITBBS, Baidu Baike)</th>
<th>Social Network Site (esp. LinkedIn) and Microblogs (e.g. Weibo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
<td>To know historical events and cultural phenomena</td>
<td>Questions for daily living (e.g. cooking, deals, travelling)</td>
<td>Looking for intern jobs in LinkedIn, looking for social news in Weibo</td>
</tr>
</tbody>
</table>
Using Wikis to Understand New Culture

Out of the 6 reported information searching activities using wikis, 5 of them were about using Wikipedia, and the other was about using Baidu Baike, a Chinese online encyclopedia. Besides to understand professional terms in their academic work, participants used Wikipedia mostly for understanding American cultural, historical events, and celebrities.

When I am communicating with American friends, I usually hear names and events that I have no idea. For example, one friend mentioned “the Ellen DeGeneres Show”, but I never heard of it. When I come back I searched for it in Wikipedia. Actually later I even listened to some of her talk shows. (ID: 013)

People could also use Chinese wikis to understand American culture. A participant (ID: 018) reported that he used Baidu Baike for both American and Chinese entertainment news, which implies information searching for both American identification and Chinese identification.

Using Online Forums to Support their Daily Life

Participants reported ten information searching activities in online forums, including eight in Bulletin board systems (BBS) and two in online Q&A systems (e.g. Baidu Zhidao, like Yahoo Answers).

Six of the reported information-searching activities in online forums were in US-based online forum of Chinese people, such as MIT BBS and Huaren.com. Such online forums provide content in Chinese and they cover almost every aspect of living in the US: traveling, finance, legal issues, health, and many others (i.e. scaffolding). They could be viewed as online communities of Chinese students in the US, which are divided into hundreds of subgroups of interests and topics, which were related to
“Almost every aspect of our lives in US, from flea market, to travelling to certain place, to repairing a car, to any discipline we study, and to fans of certain soccer team” (ID: 011).

These bulletin boards serve as a scaffold role for their lives in the US, especially for their first couple of years in the United States.

“Any time I have a question about, say, what are best Chinese restaurants in Boston when I travel there, or the procedures of renewing the visa, I just enter certain subgroup to browse or to ask.” (ID: 004)

“I use MITBBS to look for daily life information, such as deals, car problems, and travelling information. For instance, last winter I browsed MITBBS a lot for a trip to Florida. There were so many posts of hand-down experience about recommended places, necessary preparations, travel guidance, parking experience, and recommended restaurants.” (ID: 015)

Participants reported that they use similar American online forums such as Craigslist and StateCollege.com (a local online community) to search for used cars and furniture, other second hand goods, and apartments for rent or sublease. They used these US-based online forums because of its locality.

“Every time when I want to buy some, say, bookshelf, I would check StateCollege.com and Craigslist to see whether there are some used ones selling in the town (and there were always some). These second-hand goods are always cheap, and close, so I can easily and quickly pick it up.” (ID: 018)

Participants also used Q&A systems to look for information about how to cook, or even “coding problems” (ID: 016).

“I made some soymilk and wanted to add some honey. But I don’t know whether it is OK to mix soymilk and honey, so I just searched in Baidu Zhidao, and I found somebody had already asked such problems.” (ID: 002)

Such online forums helped supported participants’ life in new cultural environment by providing hand-down experience on how to deal with their living and acculturation problems in US, which help the American identification. On the other hand, they learn these hand-down
experiences mostly from Chinese community, which bridges Chinese identities with American identities.

*Using Microblogs to look for information about social news*

Participants also used social networks sites (mainly LinkedIn) to look for information about jobs or internship in the United States, which helped them to get adapted into the American environment. Participants also use microblogs to search for information.

Besides surveillance on social news as stated in above “surveillance” section, three participants reported that they actively searched for information about particular social events.

When there are hot topics that I am interested in (for example, a famous dispute about the author’s right), I would search it in Weibo, because it often updates the progress much quicker than any other news media. Besides, people will add their comments, evidence, and opinions when reposting related news, so I can learn different opinions and perspectives on the same social event. (ID: 019)

While one participant mentioned he may also use Chinese microblog (e.g. Weibo) to search for information about news happened in other countries including the United States, as mentioned above participants mostly used Weibo for look for information about news happened in China, which helped maintain their Chinese identity.

*Information sharing*

While participants were acquiring information through surveillance of others and information searching, the reciprocity rules would dictate that they would also sharing information to others (e.g. “sharing information” as in Java et al. 2007). I have reported self-disclosure above about participants disclosing their personal information, here I use “information sharing” to describe the behaviors of sharing information other than self-disclosure. Participants
reported that when they found some really interesting or informative posts, articles, pictures, and videos, they would post or repost it in social network sites or microblogs to share with others. Twelve such information sharing activities were collected from the interview.

Table 5-9: Information-sharing activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Social Network Sites (e.g. Renren, Facebook)</th>
<th>Microblogs (e.g. Weibo)</th>
<th>Online forums (e.g. Huaren)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>6</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Examples</td>
<td>Sharing interesting or informative web contents</td>
<td>Sharing interesting or informative web contents</td>
<td>Share daily experience</td>
</tr>
</tbody>
</table>

I collected 6 information sharing activities in social network sites and 5 in microblogs. As 9 of these activities were reposts, where the information was shared largely depend on where participants saw the information. They just simply click the “repost” to share with their own friends.

“I found this video really intriguing, so I just repost it to recommend my friends to watch it.” (ID: 002)

In 10 of these activities participants were using Chinese social network sites (e.g. Renren) and microblogs (e.g. Weibo), with only 1 information sharing activity in Facebook. It implies that participant were more willing to share information with their Chinese peers in Chinese context.

“To my Facebook is more professional and academic. You know your advisor and professors are there. So I don’t want to share trivial things in Facebook. But Renren is much more casual, and I could share any interesting things with friends there, most of them are my old friends from the elementary school to college.” (ID: 016)
I also collected one information sharing activity in the bulletin board systems. The participant was a big fan of photography. He sometimes shared his photographic techniques and experience in online forums, as well as gave suggestions on how to select cameras and lens.

**Social Ties: Bridging and Bonding for Acculturation**

Social identities and social interactions are embedded in a context of social relationships. We view social ties and networks as structures of ongoing social interactions and social participation, and building online connections is a precondition for further interactions in social media. People are motivated to join social network sites to keep strong ties with friends, to maintain ties with new acquaintances, and to meet new people online (Acquisti and Gross 2006). Facebook provide affordances that enable users to create and maintain a network of heterogeneous and weak ties (boyd and Ellison 2007). Such ties provide access to information and opportunities that might not be available within close-knit ties. Such Engineered social ties in social media can reduce the cost of information sharing in a massive way: broadcasting one’s status, asynchronous information updating, information feeding based subscription, etc. This helps relieve tie maintenance to a degree, but the quality, richness and context of shared information are at stake.

In this section, I divide social ties into three types: 1) bonding, in which people could intensively interact with (or “solidify” as in Ellison, Steinfield and Lampe 2007) their strong ties, and provide emotional support to each other; 2) maintaining existing ties, in which social media help crystallize social ties that otherwise might fade away (Barkhuus and Tashiro 2010) and maintain them cheaply and easily (Donath and boyd 2004); and 3) building new ties.
Bonding

Emotional bonding and intensive interaction with close friends were important in context of acculturation. Researchers (e.g. Jones, Carpenter, and Quintana 1985) found such closeness was a significant inverse predictor of loneliness in the context of biculturalism. Researchers found that the closeness of online relationship is a function of social similarity, content and activity multiplexity, and duration of the relationships (Mesch and Talmud 2006). Bonding friends were usually close friends from offline, and they usually have frequent online interactions through different kinds of social media (e.g. SNS, microblogs, instant messaging) (Zhang, Jiang and Carroll 2011).

I collected 48 bonding activities in social media such as social network sites, instant messaging, and microblogs.

Table 5-10: Bonding activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Social Network Sites (e.g. Renren, Facebook)</th>
<th>Microblogs (e.g. Weibo)</th>
<th>Instant Messaging (e.g. QQ, MSN, Skype)</th>
<th>Photo sharing (e.g. Picasa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of activities</td>
<td>12</td>
<td>7</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>Examples</td>
<td>Interacting and chatting with friends</td>
<td>Interacting and chatting with friends</td>
<td>Chatting and video-chatting with friends</td>
<td>Share photos with parents</td>
</tr>
</tbody>
</table>

Social network sites and microblogs for bonding

Bonding or interacting with close friends was reported as a main reason for participant to adopt, use, or leave certain social media, just as one participant reported:

“I used Renren much more frequently than Facebook because most of my friends were in Renren. Now I am using more and more Weibo because more and more friends are using it.” (ID: 015)
Bonding was also one of primary uses in social network sites and microblogs. While social network sites are designed to maintain the network of social ties, participants reported that most of their interactions were between several close friends (i.e. strong ties).

“We may have some simple interactions such as ‘like’, greetings, or general compliments with most of the acquaintances [weak ties], but we will engage in close relationships much deeper. For instance, in status updates I may write things that only some of my friends know or participated. I may even @ them in the message if it is related to them, or if I want to talk to them. Of course they will reply me, which usually initiates a deep chat of close friends in public. Such interactions give me a feeling of intimacy and emotional support.” (ID: 009)

**Instant messaging for bonding**

The most important social media for bonding use is the instant messaging. Participants reported 24 bonding activities using instant messaging such as QQ, MSN, and Skype to communicate with their family and close friends. Unlike in other social media, you are facing a number of audiences. In instant messaging, you are usually having focused, interactive, and private chat with certain person, which suits communication between close friends.

“I usually use QQ to chat with my college friends in China. We chat a lot. And the online chat could last for half to one hour. We talk about everything. Especially when someone has some problems and needs to pour out their worries, I would become a very patient listener and tries to give some emotional support.” (ID: 002)

Instant messaging is also heavily used to communicate with parents. 15 participants reported that they had weekly video chatting with their parents in Skype or QQ. One participant reported that

“I stay online in QQ almost every evening so that my parent [in the day time] could see me. We don’t need to chat every time, but when they see me online they know I am OK here. I remember once I was very busy with my homework and didn’t log on QQ for a couple of days. My parents were worries, and asked me whether I had had any problem when I again appear online.” (ID: 010)
Sharing photos with parents

Participants reported 5 bonding activities by sharing photos with parents in Picasa. In all these five activities, participants made their photos private, and only accessible to themselves and their parents, so that their parents could see them and their activities.

“As I am abroad it is hard for my parents to see me. I also want to share the scenes of the campus and my PhD life with them. So I started to use Picasa to upload my personal photos and share with them.” (ID: 013)

Maintaining existing tie

Besides intensive interactions for bonding relationships, participants leveraged social media to maintain a connectedness with previous friends and acquaintances. I collected 28 such activities. Participants reported that, get connected or reconnected with acquaintances itself is valuable.

“Although we don’t have many interactions with these acquaintances, but I know that I have contact with them, which give a potential or possibilities of further communication. Such possibility is important for relationship such as acquaintances.” (ID: 005)

Participants do not need to invest too much effort to maintain such relationships. Generally they just keep an eye (i.e. surveillance) on most acquaintances (i.e. weak ties). In appropriate situations, they could have some simple interactions such as “like”, birthday greetings, congratulations, or general compliments, as participant 9 mentioned.

“When reconnecting with acquaintances, at first we may have some chats, greetings, and status updates, but later we usually do not need further interactions, simply because we have already got connected.” (ID: 014)
Table 5-11: maintaining existing ties in social media

<table>
<thead>
<tr>
<th></th>
<th>Social Network Sites (e.g. Renren, Facebook)</th>
<th>Microblogs (e.g. Weibo)</th>
<th>Instant Messaging (e.g. QQ, MSN, Skype)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>13</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Examples</td>
<td>Reconnecting and connecting with old friends</td>
<td>Reconnecting and connecting with old friends</td>
<td>Connecting old friends in Instant messaging</td>
</tr>
</tbody>
</table>

Bridging New Tie

Participants seldom use social media to build totally new ties. From the interview, participants reported only 5 activities of building new ties. This confirms the findings of Ellison et al (2007) that most of online contacts in Facebook are from offline relationships.

Four of the activities were in Facebook. Participants were adding or added by somebody who were from the same university, from the same area, or even played the same Facebook game. However, none of the new ties became strong tie as reported by participants.

One participant reported that he also built new ties in microblogs.

“In Weibo I can easily follow anybody I am interested in. If I find their post really interesting, I would comment in their posts. Sometimes they would follow back if we share some interests. In this way we get connected in Weibo, although we know nothing about each other more than the online talks.” (ID: 011)

This result complies with Mesch and Talmud’s (2006) findings that social ties originated online were perceived as less close and less supportive, and such online friends were involved in less joint activities and less topics of discussion.
Social Participation for Acculturation

The feeling of identity cements a social group as a social aggregate and leads to common forms of thinking and behavior as well as social participation in the group. (Korostelina 2007:19) Social participation in community level is critical for acculturation and cultural identification. To Putnam (1995), a typical social participation takes place in the form of participating in collective activities such as going to church and taking part in local sport league. These activities help reinforce and cultivate social norms, social capital and other established elements. Wellman et al. (2001) claimed that information and communication techniques including social media are transforming social participation. Valenzuela et al (2008) reported a positive correlation between the intensity of Facebook "Group" use of students and their civic participation and political participation. Social media disseminate information rapidly and have a low threshold for social participation. Barkhuus and Tashiro (2010) reported that social media facilitate social events, and provide increased opportunities for participation.

In this study, I identified several kinds of social participation activities supported by social media, including expressing and discussing public opinions, joining social groups, planning and participating in social events, and playing social games.

Public opinion

Participants were using social media to express opinions publicly as Nardi et al. (2004) described. In the interview I collected 8 such public opinion activities.
<table>
<thead>
<tr>
<th># of activities</th>
<th>Blogs (e.g. Wordpress, Sina blog)</th>
<th>Online Forums (e.g. s1, Douban)</th>
<th>Social Network Sites and Microblogs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Examples**

- Blogs (e.g. Wordpress, Sina blog): Write commentaries on movies, social events, religions
- Online Forums (e.g. s1, Douban): Write commentaries on movies
- Social Network Sites and Microblogs: Repost and commentaries on social events

Four of the activities were in blogs. Blog is a great channel to publish their opinions to the public. Nardi et al. (2004) reported that the bloggers “blogged to comment on topics they found pertinent and important” and “a blog… can be ‘a point of view, not just chatter’”. Blog is usually in article form, in which bloggers can express their opinions completely and thoroughly.

“I often write critiques in blog after watching movies. People read them and gave comments, which may become deep discussion of these movies.” (ID: 014)

Participants also used online forums to publish their opinions. While blog is like a personal place, forums are like a club with many others with similar interests.

“I use some ACG (animation, comics, and games) forums such as s1 a lot. It’s like a family of ACG fans. There I sometimes post my reviews and analysis of the comics, which would be discussed by many other ACG fans.” (ID: 006)

Participants were also using social network sites or microblogs to express public opinions. Such statements are usually brief because they were written as status updates or microblogs. These opinions may also trigger further public discussion.

**Social groups**

Participants reported 24 social group activities, in social media such as online forums, social network sites, microblogs, and IM groups.
Table 5-13: Social group activities in social media

<table>
<thead>
<tr>
<th></th>
<th>Online Forums (e.g., MITBBS, Douban)</th>
<th>Social Network Sites and Microblogs</th>
<th>Instant Messaging (MSN group, QQ group)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of activities</td>
<td>17</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Examples</td>
<td>Interest-based groups such as fans groups</td>
<td>Interest-based groups such as fans groups</td>
<td>Classmate groups</td>
</tr>
</tbody>
</table>

Participants primarily used bulletin board systems and other forum systems for social group use. Such forum systems were usually designed by group and subgroups, so that people with similar interests could gather together to communicate and interact.

Participants also use groups in social network sites (e.g. Facebook group) and microblogs (e.g. Weibo group). These groups are also usually interest-based. For example, participant 7 reported that

“I joined a Weibo group on Chinese poems. In this group someone post classic Chinese poems and many others would comment and discuss on these poems. I join this group simply because I want to learn more about Chinese culture in America.” (ID: 007)

There were also two social group activities using instant messaging. These groups are usually a set of strong ties. For example, one participant reported that

“When in college we classmates built a QQ group, so we could share the course projects and homework information. Now after graduate, we still use it a lot to stay connected with these classmates. Every day I log in QQ there would be several messages from this group.” (ID: 018)

**Social events and social games**

I also collected 2 social event activities and 5 social game activities from the interview. Participants reported that they used Facebook Events to plan and organize social events such as BBQ or weekly tennis course. Participants also played social games in social network sites such as Facebook and Renren with their friends.
“I used to play the parking game a lot when I started using Kaixin001 [another Chinese social network site]. You know with Kaixin001 I got reconnected to many old friends. We played this game a lot to get closer with them. But later I stopped playing it because I became bored with the repetitive tasks in the game, and getting familiar with old friends again, I no longer need to investigate so much time there.” (ID: 005)

Social Media and Acculturation Strategies

All participants used both American and Chinese social media (table 5-2) and kept certain levels of American identity and Chinese identity (table 5-1). From the interview study, I identified two kinds of underlying acculturation strategies: 1) leveraging social media to maintain their Chinese identity (as the “Great Wall”) and 2) to get assimilated to American identity (as the “Babel”).

From the 20 participants, I collected 329 social media use activities. For each reported social media use activity, based on participants description of this activity, I further asked them to explicitly identify whether it was primarily about getting adapted to American culture (i.e. American identification), or maintaining their Chinese identities, ties, or events (i.e. Chinese identification), or not related to neither (e.g. using Facebook group for course project). Based on participants’ reports, I get the statistics on social media use for different acculturation strategies as in table 5-14.
Table 5-14. Numbers of social media use activities for American and Chinese Identification.

<table>
<thead>
<tr>
<th>Media</th>
<th>Total # of activities</th>
<th># of activities for American Identification</th>
<th># of activities for Chinese Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNS</td>
<td>American (e.g. Facebook)</td>
<td>40</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Chinese (e.g. Renren)</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>Microblogs</td>
<td>American (e.g. Twitter)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Chinese (e.g. Weibo)</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>News portal</td>
<td>American news portal</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Chinese news portal</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Wikis</td>
<td>American (e.g. Wikipedia)</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Chinese (e.g. Baidu Baike)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>IM</td>
<td>Instant messaging</td>
<td>51</td>
<td>7</td>
</tr>
<tr>
<td>Online Forum</td>
<td>American Forum (e.g. Craigslist)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Chinese Forum (e.g. MITBBS)</td>
<td>31</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>235</td>
<td>71</td>
<td>164</td>
</tr>
</tbody>
</table>

From table 5-14, I identified 71 social media use activities for American identification, and 164 social media use activities for Chinese identification, which suggested that 1) participants were using social media (especially American SNS such as Facebook) to cultivate their American identification; 2) participants were much more intensively using these social media (especially Chinese SNS such as Renren, Chinese microblogs such as Weibo, and instant messaging) to maintain their Chinese identification.
SNS: Maintaining Social Ties of American and Chinese

I collected 40 activities in American SNS (e.g. Facebook), and 45 activities in Chinese SNS (e.g. Renren). I found that Chinese SNS was exclusively for Chinese identification, while American SNS was mostly for American identification.

American SNS: cultivating American identity, in low level

The American SNS that participants reported were almost exclusive Facebook, which was originated in the United States and had gained popularity in many countries. Facebook users post messages not only for communication purpose but also for self-presentation [18] by publishing their personal information. It became a rich channel for participants to get to know everyday lives of American friends. Facebook was considered to provide critical information to maintain American ties and to cultivate American identification.

Facebook provides a window to closely observe American lives (i.e. information surveillance), as one participant informed us: “In Facebook I can learn how American friends’ life is, what they usually do, what they usually think”; another participant reported “I don’t have much to talk with them outside class, mainly due to our different cultural background. Facebook gives me some sense about their daily life”. Facebook is critical for American identification as a scarce online communication channel with American friends. At least 5 participants had statements such as “besides email, Facebook is almost the only way to connect with American friends online”.

The inter-cultural communication, however, often stayed at an “understanding” level with low level of interaction. While Facebook provided easy accessibility to American friends with information surveillance and simple actions such as “like”, “birthday greetings”, participants
reported that they seldom interact deeply with American friends on Facebook. 12 participants described their passive use of Facebook as merely viewing others’ posts to keep a peripheral awareness. A typical response was “I just check it every couple of days to know what’s happening around, I don’t write updates, neither do I share, though occasionally I give comments and add friends”. Some participants explained it with cultural incompetency such as “I want to get involved but I don’t know what to say”, but some others claimed “It doesn’t matter. I live well with so many friends online [in Chinese social media] and offline [with other Chinese students]. Why force myself to adapt to American culture?”

Even when engaging in Facebook activities, a large part of these activities (9 of 40 as in table 3) could be interacting with other Chinese students: “more than half of my Facebook friends are Chinese; usually they were my target audience when I was writing status updates; sometimes I just type in Chinese”. The awareness of the existence of American friends may even inhibit their active posting: “there are so many alien people [i.e. weak ties] in Facebook; to share something I would choose places like Renren”, which demonstrated that their use of social media are largely influenced by their cultural identity and culture-based social ties.

Chinese SNS: maintaining Chinese identity, intensively

Accordingly table 2, table 3 and participants’ report, Chinese SNS such as Renren and Kaixin001 were intensively used for Chinese identification. Participants used Chinese SNS actively and interactively, by updating status, uploading photos, playing social games, sharing articles and videos, commenting, and chatting. As one participant reported, “it is convenient because almost all my friends use it, whether they are currently in China or US, which makes my abroad life not that boring”. They reported that Facebook and Renren corresponded to two different groups of people (although overlapping): in Facebook there are “alien people” or
“professional” friends; but in Renren, there are “high school friends”, “college friends”, and “Chinese peers in US”, which were all Chinese social ties.

Accordingly, the use (and perception of use) of these two media differed: “Facebook is for professional use, and is more formal; Renren is much more casual and informal. I will share my daily things in Renren, but I won’t share them in Facebook because they look too trivial”, which greatly supported their cultural inertia in the acculturation process.

**Microblogs: Surveillance on Chinese Ties and News**

I collected only 5 activities on American microblogs (e.g. Twitter). Although 12 participants had registered in Twitter, most of them seldom used it, because “the [American related] contents are not relevant”, and “my friends are not there”. Only 2 participants used Twitter at least weekly. They followed celebrities such as famous movie critics, graphic designers, and industrial leaders to keep updated with the movies and industries. They have few friends to follow. In contrast with low use of Twitter, I collected 42 activities on Chinese microblogs (e.g. Weibo). 15 participants used Weibo, at least daily.

The use of microblogging tools is different from that of SNS. “Weibo is so lightweight” that they shared contents “more frequently and more casually” with Chinese friends than in any other social media including Renren. Updates in Weibo can be more “ad hoc”, as a participant reported, “I will create an album in Renren for the photos of my trip to Las Vegas; but if I randomly take a picture of a lovely squirrel on the road, I will definitely share it in Weibo”. According to participants, micro-blogs provide a more friendly way for instant sharing of trivial things that matters in daily bonding and acculturation. With these instant and rich updates, Weibo provided users quick and wide access to their friend’s information, which provides participants the surveillance with regard to their Chinese friends, and thus maintaining the Chinese identity.
Besides keeping touch with Chinese ties, participants used Weibo as news portal to keep abreast of current affairs in China. One participant reported that “every morning I open Weibo, I won’t miss any piece of hot news”. Any valuable information (e.g. news, opinion) would be shared and repost quickly and extensively in Weibo. In such way, the hot news and topics transmit much faster than traditional news portals. Nine participants mentioned that they used Weibo to get informed of Chinese news, especially in big events such as the Yunnan earthquake and bullet train crash in China. “Although I am currently in US, I am really concerned about these things [that] happened in China”, as many participants reported.

As Weibo is so lightweight, every user could add opinion when re-sharing information about hot topics. Valuable and diverse opinions popularize through mass sharing, so that users could “learn opinions from different perspectives” that added value to the news. “There are so many opinions, rumors, and debates. Weibo makes you open-minded and rational to these events”, especially when “China is developing so fast with so many controversial events happening everyday”. They also re-share messages for emotional supports. For example, a participant re-reposted a message calling for people around in Beijing to buy vegetables from an old poor lady; another participant re-shared a very popular message of blessing a child victim in the bullet train accident: “At that moment, I feel my heart is with people in China”.

Participants also sought for worldwide news and opinions (e.g. tsunami in Japan, uprising in Egypt) in Weibo. In such circumstances, the Chinese identity became salient due to the social categorization in the national level [2, 37]. With so many channels to understand the world, some of them chose Weibo to learn and share opinions with other Chinese people, which helped maintaining the Chinese identity.
News Portals and Wikis: to Understand the Cultures

I collected 7 activities on American online news portals, mostly for American identification, and 13 activities on Chinese news portal exclusively for Chinese identification. Participants reported that they read American news “so that I know what’s happening around, and I can have some topics to talk with American friends”, which implied an effort for American identification. More participants expressed that they were less interested in things happened in US. “I am more concerned with a similar event happened in China than that in US”, as one participant reported.

I also collected 16 activities using American wikis (e.g. Wikipedia) and 3 activities using Chinese wikis (e.g. Baidu Baike). While many activities were to understand professional terms in their academic work, participants also used wikis to understand American cultural, historical events, and celebrities, as one participant reported: “when I am communicating with American friends, I usually hear names or events that I have no idea. For example, one friend mentioned “the Ellen DeGeneres Show”, but I never heard of it. When I come back I searched for it in Wikipedia. Actually later I even listened to some of her talk shows.”

Online Forums: Scaffolding, and Bridging

Participants sometimes used US-based online forum such as Craigslist, but they used Chinese online forums a lot, including both Chinese forums located in US (e.g. MITBBS) and China-based online forums. In the Chinese online forums in US (e.g. MITBBS, huaren.com) were specific online community of Chinese students in the US, which are divided into hundreds of subgroups of interests and topics, which were related to “almost every aspect of our lives in US, from flea market, to travelling to certain place, to repairing a car, to any discipline we study, and
to fans of certain soccer team”. These bulletin boards serve as a scaffold role for their lives in the US. “Any time I have a question about, say, what are best Chinese restaurants in Boston when I travel there, I just enter certain subgroup to browse or to ask”, as one participant reported.

Such scaffolding role helps bridge Chinese identities with American identities. By interacting with Chinese peers in the US, they learned hand-down experiences on how to deal with their living and acculturation problems in US (e.g. the visa problem, how to cook, travel guidance, etc.). These interactions help them build up cultural competency, and thus better engage in American life.

Participants may also use American counterparts such as Craigslist. Although their usage of Craigslist was limited in things like purchasing “second-hand products” or house renting, it supported the American identification process in help solving living problems in the new environment.

**Instant Messaging: for Social Bonding**

Participants reported 51 instant messaging activities, with 7 for American identification and 35 for Chinese identification. They used instant messaging a lot to communicate with their Chinese strong ties. Fifteen participants reported that they had weekly video call with their parents in IM’s such as Skype and Tencent QQ. One participant reported that “I usually use QQ to chat with my college friends in China. We talk about everything. Especially when someone has some problems and needs to pour out their worries, I would become a very patient listener and tries to give some emotional support.”
Social Media Use and Acculturation Strategies

As participants explicitly identified whether each of the 329 social media use activities was primarily about getting adapted to American culture (i.e. American identification), or maintaining their Chinese identities, ties, or events (i.e. Chinese identification), or not related to neither (e.g. working on course project with Facebook Group). In the same time, two of us built the coding system of social media use, and applied it to all of the collected activities. I was able to further refer the social media use to the acculturation strategies as presented in table 5-15.

Enough has been discussed on how specific social media were used for acculturation strategies in last section. In this section I would summarize social media uses based on table 5-15 and results in last section.

A most salient trend suggested by table 5-15 was that, while social media were used for American identifications (with 67 reported activities in total), they were much more intensively used for Chinese identification (with 192 activities in total).
Table 5-15. Social media use for acculturation strategies

<table>
<thead>
<tr>
<th>Social Media Use</th>
<th>American Identification</th>
<th>Chinese Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self discovery</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Self disclosure</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>surveillance (friends)</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>surveillance (social news)</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Information searching</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Information sharing</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Social Ties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bonding</td>
<td>2</td>
<td>46</td>
</tr>
<tr>
<td>Bridging (maintaining existing ties)</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Bridging (new ties)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Social Involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public opinions</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Social groups</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Social events</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Social games</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>67</td>
<td>192</td>
</tr>
</tbody>
</table>

Social Media Use for American Identification

The biggest uses of social media for American identifications were:

1) *Surveillance of American friends*. Further analysis (also refer to last section) reveals that this information surveillance (friends) use mainly happened in American social network sites.
such as Facebook. Easy accessibility to the status updates of American friends provided participants a great way to understand American life and American culture.

2) **Maintaining weak ties with American friends.** The maintaining social tie use also mainly happened in American social network sites such as Facebook. Actually it is such easily crystallized social ties that make possible the information surveillance of (and further interaction with) American friends.

3) **Surveillance of American social news.** Participants mainly used American online news portal and American microblogs such as Twitter to keep track of American social news. In the interview, only a small number of participants regularly used either kind of media. I found that they had relatively high American identification, with average score of 4.70 (sd=0.14) based on the questionnaire of MEIM (US). This result suggests that using American online news portal or American microblogs for information surveillance of American social news could be an indicator of relatively high American identification.

4) **Search for US-related information to understand American culture.** Participants reported that they mainly searched in Wikipedia to understand historical events and cultural phenomena in the United States. They would also use online forums (especially US-based Chinese online forums such as MITBBS) to search for living information and related hand-down experiences.

From the analysis above, we could found social media (more specifically, American social media) facilitated the American identification process of participants, mainly through help maintaining the network of American social ties (i.e. bridging) and easily accessing to information about American friends (i.e. surveillance of friends) through American social network sites (e.g. Facebook), about American social news (i.e. surveillance of social news) through American news portals, and about American histories and cultural phenomena through Wikipedia (i.e. information searching).
Social Media Use for Chinese Identification

According with the findings in previous sections, social media uses were much more intensive with regard to Chinese identification. Based on table 5-15, there were 8 kinds of social media uses for Chinese identifications (compared with 4 kinds for American identification) that had higher frequency than 10.

1) **Bonding and interacting with close friends (i.e. strong ties).** While there was few bonding interaction for American identification, it was the most intensive use for Chinese identification. Participants not only used Chinese microblogs (e.g. Weibo), and Chinese social network sites (e.g. Renren) to communicate with their close Chinese friends, but also they used American social network sites (e.g. Facebook) for this purpose (usually communicate with Chinese peers in the United States), in the condition that averagely 56.55% of Facebook friends of these participants were Chinese.

2) **Surveillance of Chinese friends.** Information surveillance of friends was important for both American identification and Chinese identification. For American identification, it helps participants acquire a feeling of new culture; for Chinese identification, on the contrary, helps support the psychological continuity of their self concept (Simon 2004: 28), and a cultural inertia so that participants could maintain their self and feel comfortable in a new cultural environment.

3) **Disclose self information to other Chinese friends.** Based on the reciprocity rule, people who want to get updates from friends should also update information about themselves to friends in social media. Interestingly, this reciprocity rule only applies in Chinese identification condition. For American identification, there was an asymmetry for American identification: participants heavily used information
surveillance of American friends in Facebook, but they were not willing to disclose themselves too much. This could be attributed to their awareness as a foreigner in the new culture, as one participant reported that she was not always sure which kind of presented words or behaviors would be congenial in the new culture. But in the Chinese social media such as Chinese SNS (e.g. Renren) and Chinese Microblogs (e.g. Weibo), it was not a problem, so the reciprocity of information disclosure works. Furthermore, participants were in a totally new environment, so they needed to describe their new lives to families and friends in China, as reported by many participants, which also increased the self-disclosure uses.

4) **Joining Chinese social groups.** Participants joined group in online forums (e.g. MITBBS), social network sites (e.g. Facebook and Renren), microblogs (e.g. Weibo), and instant messaging (e.g. QQ Groups). These groups could be interest-based (e.g. photography fans subgroup in MITBBS), locality-based (e.g. Chinese peers in the same American university), and social tie-based (e.g. a group of previous classmates), which were closely related to their previous and current lives.

5) **Surveillance of Chinese social news.** Surveillance of Chinese news was much more intensive than of American news, just as one participant reported, “I am much more concerned about things happened in China although I am current in US, simply because I am a Chinese” (ID: 007). While participants leveraged Chinese online news portals a lot, Chinese microblogs such as Weibo were becoming more important medium to keep track of Chinese news due to its lightweightness and timeliness.

6) **Maintaining weak ties of Chinese friends.** Crystallizing and maintaining social ties seem to be an important affordance of social media for both American identification and Chinese identification. Only based on these connections that further information
surveillance and social interactions became possible. For American identification, it was more about crystallizing new social ties for potential communication; for Chinese identification, it was more about keeping existing social ties and reconnecting with old friends.

7) **Searching for China-related information.** Information searching seemed to be another important social media use for both American identification and Chinese identification, mainly because social media serve as integrated digital libraries with so much user-generated contents. Participants reported that they used Chinese Microblogs such as Weibo to search for hot news of China; they used both American (e.g. Wikipedia) and Chinese (e.g. Baidu Baike) wikis to understand Chinese histories (cultural shock may lead to further investigation of their original culture); they also used online forums such as MITBBS or Q&A websites (e.g. Baidu Zhidaq) to search for information about Chinese living skills (e.g. how to cook Chinese foods).

8) **Sharing China-related information.** Similar to self-disclosure use, there was also an asymmetry of information sharing for American identification, but reciprocity for Chinese identification. They intensively share funny or informative articles, pictures, or videos in Chinese social network sites such as Renren and Chinese Microblogs such as Weibo.

From the analysis above, we could found social media were intensively used for Chinese identification almost in every aspect, from information use, to social tie use, to social participation. For information uses, participants were much more willing to disclose themselves and sharing information in Chinese social media. For social tie uses, participants had more deep connection and interaction with their Chinese friends; for social participation, they join various Chinese online social groups.
The Context of Social Media Use: Temporarity of Social Media use

I found that participants’ adoption and use of social media were influenced by two other processes: the changing landscape of social media, and individual acculturation phases.

Social Media Migration: Changing landscape

As the time in the U.S. of our participants varied from 2 years to 6 years, I had an opportunity to observe a phenomenon of “social media migration” according to their reports. As different social media emerged in different time, a rough migration path was from instant messaging to blogs, to social networks, and then to micro-blogs. While they may use all of these social media, the usages seemed to have peaks of waves across the time. As one participant reported, “when Xiaonei (the predecessor of Renren) became popular about five years ago, I began using it with my friends. It is much better than blogs because we can build tangible connection there. We do not need to bookmark each friend’s blog anymore, and I got connected to friends who hadn’t written blogs before” (ID: 005). Several others reported “The use of Renren of my friends is not as high as a couple of years ago, mainly because we are using Weibo more frequently” (ID: 013).

Adoption and Decay of Media Use along Acculturation

Participants’ use of social media also changed depending on their acculturation stages in the U.S. Most of participants reported a leap in use of social media at the time when they entered the U.S. One typical example was:

“I used Renren much more frequently when I came here three years ago, although I had its account earlier. When in China we could see friends around...
[so we didn’t use it much], but right before I came abroad, I thought I should have something to stay connection with them”. (ID: 002)

The social media migration phenomenon becomes much more complex when accompanied with participants’ length of stay in the U.S. For example, the adoption (or leap in use) of certain social media largely depend on their time of entry. Both of the two participants who entered the U.S. in 2005 used blogs frequently to share their American lives; and most participants who came to the U.S. two year later chose to use social network sites.

12 participants mentioned the decay of use of at least one kind of social media. Facebook was a frequent example. One participant observed that the decay of Facebook use was common in his Chinese friends, “now just a few of my friends are still actively using it [Facebook], so I don’t use it either”. Although this decay could be partly attributed to the emergence of its Chinese counterparts (e.g. Renren) and new kind of social media (i.e. microblogging), participants indeed reported the influence of the acculturation phases. An interesting example is:

“When I came here [four year ago], I created a Facebook account to add friends. We used it a lot with silly features such as pokes and biting zombies. But a couple of years later my social network became pretty large, with many acquaintances, like some foreigner, or professional friends met once in conferences. I don’t like having too much revealed to so many people with whom I am not familiar [weak ties]” (ID: 010)

So now she just checked Facebook every couple of days but seldom posted anything.

A more salient example is the Bulletin Boards Systems. Most of participants reported that they used bulletin boards intensively in their first year in U.S., because they had “so many things to ask for help”. But several years later, as they got more adapted in new cultural environment, their usage decreased, just as one participant reported that now she “only check it weekly to keep updated, or to look for some deals when needed” (ID: 017).
Discussion

The Acculturation Process

This study expands existing HCI work on inter-cultural communication and collaboration activities toward research on acculturation strategies, the online support of cultural identity, and designing for individual development. Living abroad can be exciting and enjoyable, but it can also be challenging and even difficult. People reconstruct and maintain identities throughout life, but for young people identity development is an important social project. Young adults living abroad face a particularly challenging identity construction project, due to cognitive dissonance and emotional exhaustion caused by the incompatibilities of values, feelings and behavioral patterns implied in different cultural identity (Grice et al. 2002, Tadmor and Tetlock 2006). This challenge is even greater when the two cultural identities being managed are relatively more distinct, as they are in case of Chinese and American culture. Studying Chinese students living in the United States is particularly important because the two cultures they are dealing with are quite different, because more and more Chinese students are pursuing education in the U.S., and because the two cultures are quite important ones geo-politically and are broadly engaging at a scale and rate that is unprecedented.

All participants in our study showed strong identification with their original culture and strong needs for maintaining original cultural identity. All participants maintained a higher Chinese identification than American identification. This cultural inertia can be seen as a result of living in a culturally different environment, because according to social identity theory, group identity becomes more salient with presence of contrasting groups (Amiot et al. 2007, Turner et al. 1987). Living abroad is an extreme case of this kind, in which one has to interact with people from a different culture throughout everyday life. In this analysis, social media can be a tool to re-
access and re-energize one’s original culture, and thereby a tool for maintaining it within a contrasting cultural context.

In reacting to stimuli from wide social context, some participants showed certain level of neglect or resistance. This is a stage of cultural identity “separation” (Berry 1997). Our participants reported high use of social media to maintain Chinese ties (as the “Great Wall”) providing emotional supports, which alleviate the culture shock (Mumford 1998, Taft 1977). They also expressed high use of bulletin broad systems that are based in America but provide Chinese content as a Chinese online community, which is more of an indication of identity level maintenance.

Participants also exhibited efforts to get assimilated to American culture. For example, participants were using American SNS to connect with American friends and have an information surveillance of them; they used Wikipedia to understand culture and history of the United States; some participants even regularly use American news portals.

Use Social Media to Support Identity Development

The extensive use of Chinese social media can be a result of driving demands of maintaining one’s original identity. Social network sites (SNS) and instant messages (IM) contribute to this a lot. Although both SNS and IM do not necessarily work on the social identity level, they do provide a strong mechanism for Chinese students living abroad to maintain social ties, and thus cultural identities reinforced or cultivated. From our participants’ disclosure, these two types of social media kept the emotional connections between them and their Chinese friends (i.e. bonding). Facebook was not the most used social media for this purpose, although it is the most popular social network website. Instead, Chinese social network websites such as Renren served this purpose.
Another kind of social media that can help satisfy the need of maintaining and reinforcing Chinese cultural identity is Chinese news portal and a twitter-like system called Weibo. From these channels, Chinese students in the U.S can subscribe or read news related to China in a very timely fashion (i.e. surveillance). What I could see from the participants was that they cared about the happenings in their home country, showing high connection with original cultural identity.

Besides using social media as the “Great Wall” to maintaining their Chinese identity, participants also use social media to cultivate American identity. Facebook serves as a place where Chinese students can observe American life and as a channel for Chinese students to have personal contacts with American people (i.e. bridging).

Social media run by Chinese expatriates in the U.S provide content in Chinese and they cover almost every aspect of living in the US: traveling, finance, legal issues, health, and many others (i.e. scaffolding). Social media of this type plays a very important role in living abroad at least for the early years. These media provide information of very useful instrumental value at first, to help someone get one’s life going. It also provides a forum where the new expatriates can raise questions and seek for help in Chinese when their secondary language is not proficient. This is very important in that being able to find help in an unfamiliar culture can alleviate culture shocks (Mumford 1998, Taft, 1977). A social learning of those seemingly trivial and concrete experiences of others can help foreign students adapt their lives into a new environment and lead to further identity integration.

Some Underlying Mechanisms

Looking at the use of social media in our participants, I see a pattern of temporality of social media use. In the first couple of years, social media that provide China-related information and interpersonal interaction are intensively used and appreciated by Chinese students. They used
these channels to consolidate their connections with remote family members and friends, which is more emotionally bonded and less informational in nature. At the same time, U.S-based Chinese social media that provide content relevant to living in the U.S also was used intensively.

Use of these media becomes less after a period of time; but the use of social media such as Facebook that presents more American life continues, although with a relatively low interaction level with American ties. In later years, Chinese students also showed their interests in absorbing American news portals.

In terms of total social media use, I noticed the trend that the amount of time spent on social media decreased over time, accompanied with decreasing culture shock in our participants. One interpretation of this is that students with well-integrated cultural identity has less trouble in handling and reacting to social stimuli and they can spend more time on their offline life. It is not surprising, since as years spend in a new environment increases, familiarity and skills of coping in the environment will develop. However, this points to us that some social media are more of value to expatriates only for a period of time and the marginal value and actual use of these social media decrease over time.

I believe that it is a process of social construction. Both human agents and social media play interactively to achieve this cultural identity integration and successfully cultural coping. In the developing process, it is the agents actively choosing different social media to react to stimuli from the social world, and social media provide the possibility for human agents to do so. So in our case of Chinese students living in the U.S, it becomes a spiral circle: students living abroad experience difficulties to process culturally different events, certain social media can help; when students develop their understandings and skills of coping American culture in real life, not necessarily from those social media, old social media can lose their marginal value to the students and they may find new media and ways of life.
Summary and the Next Step

In this interview study I investigated how Chinese students in the United States used social media in acculturation process. Diverse social media were leveraged for accommodating American identity as well as maintaining Chinese identity. They provide value to participants such as bridging, social bonding, information surveillance, and scaffolding. This exploratory work expands existing HCI work on inter-cultural communication and collaboration activities toward research on acculturation strategies, and designing to support self development.

What we learned is that no single tool can serve well in cultural identity integration. Participants adopted different kinds of social media for different uses in the acculturation process. While Babel strategy represents an effort seeking for total assimilation into the host culture, the Great Wall strategy represents a resistance to adapt. Neither is enough as shown in the study. With supports of social media, we actually have better choice, to embrace cultural diversity and move towards a new self, by cultivating new identities and maintaining existing identities at the same time.

It should be noted that as I recruited participants through a mailing list of Chinese student in one university, the results could be biased due to the sampling issue. Most of the participants were graduate students, which further limited the generalizability of this study. While this is mainly a qualitative interview study, I presented some quantitative data, which suggested some trends without further statistical examination due to limited sample size. For these reasons based on this study I further conducted a questionnaire study with large sample of Chinese students in the United States, as in the next chapter.
Chapter 6

Questionnaire Study

In the interview study, I explored social media use in an acculturation context, by building a coding system of social media use, as well as examining these social media use for acculturation strategies. In this step, I would like to use a questionnaire study to confirm and further explore the acculturation with respect to three underlying processes: American identification, Chinese identification, and the integration level of these two cultural identities (i.e. bicultural identity integration, BII, as in Benet-Martinez, et al. 2002) with a larger sample.

Hypotheses

Studies (e.g. Amiot, et al. 2007) have indicated that social changes such as migration or expatriation would trigger deep intra-individual changes in social identities over time. Abundant studies were taking a stepwise view of the acculturation and culture shock process. As early as in 1954, when Oberg (1954) coined the item “culture shock”, he proposed that culture shock processes could be divided into stages such as incubation, crisis, and recovery. Gullahorn and Gullahorn (1963) depicted a U-curve of adjustment to a new culture over time, with stages such as excitement, disillusionment, confusion, and positive adjustment. Berry (1985) explored psychological adaptation of foreign students and listed four stages including honeymoon (or contact), conflict, identity crisis, and adaptations, in which scholars began to take an explicit view of identity crisis and identity change in acculturation. More recently, Amiot et al (2007), following social identity theories, proposed a four-stage model of social identity development and integration in the self, with stages including anticipatory categorization, categorization,
compartmentalization, and integration. These studies confirmed that social identities are not only capable of situational and short-term changes as proposed in social identity theories and self-categorization theories (e.g. Turner et al. 1987), but also capable of long-term and developmental changes (Smith 1996).

**Chinese Identification**

According to social identity theory and self-categorization theory (Turner et al. 1987), the change of identity was largely determined by the categorization and social comparison process, in which the salience of the ingroup-outgroup context was considered as a significant factor of identity development. In the case of expatriation when Chinese students entering the United States (i.e. in the early stages of acculturation), the comparison between Chinese culture and American culture become salient. This emerging context comparison suggests that both Chinese identity and American identity could become more salient.

Besides, inter-cultural contacts provide expatriates an opportunity to re-discover and re-affirm their original culture in the face of the other culture, which usually end up with strengthening their original cultural identity (Stosolska and Yi 2003). Just as Garza-Guerrero (1973) reported, a Mexico who migrated into the United States found that himself becoming “more Mexican than ever”.

As time goes by, the Chinese students are having more and more contacts with American culture, the differences between the two cultures become more striking, and such minority status could reinforce their Chinese identification and make Chinese identity even more salient than when they were in China (as Benet-Martinez et al. 2002 and Amiot et al. 2007 depicted). Just as Sussman (2000: p.363) reported: “outgroup membership appears to strengthen, at least initially, our identification with our home culture” in the early stages of cultural transitions.
While studies consented that the identity of original culture would become more salient in the early stages of acculturation, the identity change in the later phases was much more complicated, which largely depend on how identity integration goes. Just as Berry (1997) and Roccas and Brewer (2002) discussed, expatriates could end up with many kinds from identity structures such as separation, assimilation, marginalization, compartmentalization, and merger.

As the participants in this study are Chinese students in the United States, most of them would have been in the United States less than four years; I assume that they are in the early stages of acculturation and experiencing culture shock issues discussed above according to both literature (e.g. Gullahorn and Gullahorn 1963, Amiot et al. 2007) and the interview study. Therefore, it is plausible that participants’ Chinese identity would increase over time.

*H1: Chinese Students who have stayed in the United States for longer time will have higher level of Chinese identification.*

As I discussed above, while most of acculturation studies were conducted offline, I found that social media could largely change the situation as reported in the interview study. In acculturation studies, isolation from the original culture were usually emphasized, with issues such as “mourning of the forsaken culture” (Garza-Guerrero 1973), “grief and bereavement” (Bowlby 1969), and experience of “loss” and lack of “social support” (as Zhou et al. 2008 summarized). The situation is no longer true with the advent of information and communication technologies (ICT), especially recently emerged social media. As reported in the interview study, with the support of Chinese social media such as Renren and Weibo, the expatriates now can easily get connected with their ties in China including families, friends, and even acquaintances (e.g. in Chinese social network sites such as Renren); they can get timely information of social events and news happening in China (e.g. in Chinese microblogs such as Weibo); they can even participate online in manners such as public discussion (e.g. in microblogs), online group chatting, and interpersonal interaction (e.g. in SNS). Studies (e.g. Umana-Yaylor and Fine 2004) reported
that these socialization factors such as social support from family and close friends for the maintenance of one’s ethnic (e.g. Chinese) background, could predict the ethnic identity development with regard to participation in ethnic behaviors, positive feelings and commitment to the ethnic identity. In the expatriation context, the participants may experience some “bereavement”, cultural loss, or lack of social support offline. However, as the interview study reveals (also in table 5-14), participants largely rely on the social media to do these things as a compensation to maintain and enhance their Chinese identification process.

**H2:** Participants with higher use of Chinese social networks sites will have higher level of Chinese identification.

**H3:** Participants with higher use of Chinese microblogs will have higher level of Chinese identification.

**American Identification**

As discussed above, when expatriates enter into a new culture, the cultural level comparison become salient, which promotes the identification of both cultures. Acculturation with regard to the new cultural could be understood from the perspectives of culture learning (e.g. Furnham and Bochner 1986, Zhou et al. 2008) and stress coping (e.g. Amiot, et al. 2007).

Culture learning theory (Furnham and Bochner 1986) assumed social interactions as a skilled and mutually organized performance. When entering a new culture, the acquisition of culture-specific knowledge and skills are required to engage in new social interactions. Ward and Searle (1991) found that cultural knowledge (of the new culture) was significantly related to social difficulty for expatriates. As the expatriates engage into the new culture, they are acquiring the knowledge about the new culture; they also develop new social skills as the new friendship networks (Bochner et al. 1977, Castells 2011) change and increase. From a three-year study,
Chinn (2006) found that community practices with cultural immersion and cultural translators helped culturally diverse students develop the cross-cultural knowledge and literacy needed for the curricula. The theories depicting the stages of acculturation all implied a gradual identification of the new culture with stages such as “positive adjustment” (Gullahorn and Gullahorn 1963), “adaptations” (Berry 1985), and “integration” (Amiot et al. 2007).

\textit{H4: Chinese Students who have stayed in the United States for longer time will have higher level of American identification.}

The coping efforts for expatriates to meet the demands of their new environment and concretely deal with them also facilitate the identity development (Anderson 1994, Amiot, et al. 2007). A longitudinal study (Amiot et al. 2006) found that active forms of coping strategies would predict a stronger identification with the new social group. Now with the facilitation of social media such as Facebook and Twitter, culture learning and coping become much easier. As reported in the interview study (also in table 5-14), Chinese students in the United States were using American social media to acquire knowledge of both American culture and lives, as well as to get connected with American friends. American social media lowered the threshold to access, and made social interactions with American ties much easier.

\textit{H5: Participants with higher use of American social networks sites will have higher level of American identification.}

\textit{H6: Participants with higher use of American microblogs will have higher level of American identification.}

\textbf{Bicultural Identity Integration}

With the multiplicity of social identities, solving the possible intra-individual contradictions and establishing interconnections and cognitive links among the social identities
become important (Amiot et al. 2007). With the cognitive capacity to integrate distinct social identities, individuals are less likely to engage in all-or-none thinking (e.g. total separation or assimilation as in Berry 1997). The self concept usually represents a more balanced presentation of diverse self-components (i.e. identities). These identities may be kept “compartmentalized” (Roccas and Brewer 2002) without well integration, and highly context dependent. For example, Benet-Martinez et al. (2002) reported that Chinese Americans acted in culturally coherent ways to situational cues and shifted their behaviors depending on the cultural context.

Amiot et al. (2007) proposed that the stage after the “compartmentalization” is “integration” Identity integration usually begin with cognitive dissonance, when individuals are aware of the conflicting identities and the lack of internal self-coherence. They may try to consolidate the multiple social identities to construct an integrated and coherent self over time. As The theories depicting the stages of acculturation all implied a gradual integration of both identities such as “recovery” (Oberg 1954), “positive adjustment” (Gullahorn and Gullahorn 1963), “adaptations” (Berry 1985), and “integration” (Amiot et al. 2007).

**H7: Chinese Students who have stayed in the United States for longer time will have higher integration level of Chinese and American identities.**

According to the interview study (table 5-14), Chinese social media were mostly for Chinese identification and American social media mostly for American identification. There is no significant evidence that the use of certain kind of social media specifically influence the bicultural identity integration. There was also no evidence of significant correlation between American identification and bicultural identity integration. I would assume the influence of social media use on bicultural identity integration would be indirect effect through the Chinese identification and American identification.

Expatriates with high American identification are plausible to have either low bicultural identity integration (i.e. compartmentalization, or intersectional), or high bicultural identity
integration (i.e. integration). However, if expatriates have too high Chinese identification, they will have less time to engage in the new culture and coping with the integration problems, which implies the escaping from the new culture and avoiding of the cross-cultural conflicts (Morris et al. 1998), and thus the “separation” strategy (Berry 1997).

\[H8: \text{Participants with higher Chinese identification will have lower American identification.}\]

\[H9: \text{Participants with higher Chinese identification will have lower bicultural identity integration.}\]

**Culture Shock**

Culture shock, as a critical indication of individual wellbeing in acculturation process, embrace elements from cognitive (e.g. cultural literacy, understanding, and cognitive dissonance), to emotional (e.g. feeling of loneliness, alienation, and depression), to behavioral (e.g. cultural learning, social skill training, new relationships) (Zhou et al. 2008). As discussed above, culture shock originates from three kinds of sources. First, the expatriates may experience a feeling of *loss or deprivation* of their original culture and many loved things such as family, friends, language, habits, food, and social events (i.e. “grief and bereavement” as in Bowlby 1969). Second, a totally new environment can be a *challenging encounter*, in which the expatriates are experiencing life change and are compelled to adapt to the strange situation with little cultural literacy or competency (i.e. “lacking social skills” as in Brown, et al. 1975). Thirdly, the differences between the cultures may cause *cognitive dissonance* (Tadmor and Tetlock 2006) and threaten the coherence of individual’s self-concept. Accordingly, I propose the hypotheses below.

\[H10: \text{Participants with higher Chinese identification will encounter higher culture shock.}\]
**H11:** Participants with higher American identification will encounter higher culture shock.

**H12:** Participants with lower bicultural identity integration level will encounter higher culture shock.

![Hypothesized Model](image)

**Method**

To investigate the research questions, I leveraged questionnaires to measure social media use for American social network sites (e.g. Facebook) (US\_SNS\_Use), Chinese social network sites (e.g. Renren) (CN\_SNS\_Use), American microblogs (e.g. Twitter) (US\_MB\_Use), and Chinese microblogs (e.g. Weibo) (CN\_MB\_Use), and American identification (AI), Chinese identification (CI), bicultural identity integration (BII), as well as their demographic information.
Questionnaires

Based on the coding system of social media use I developed in the interview study, I adapted existing questionnaires including the Facebook Use Questionnaire (Joinson 2008), Social Searching and Browsing in Facebook (Lampe, Ellison, and Steinfeld 2006), Facebook Group Uses (Parker, Kee, and Valenzuela 2009), Social Network Activity (Burke, Marlow, and Lento 2010), Virtual Community Uses (Dholakia, Bagozzi, and Pearo 2004) and Internet Motives (Papacharissi and Rubin 2000) to a Social Media Use questionnaires. I developed one item with both English and Chinese for each code as below:

1) self-discovery: “managing your private photos and diaries (私人日志、私人照片)”
2) self-disclosure: “updating status or photos that are visible to others (状态更新、照片分享)”
3) surveillance (friends): “keeping updated with friends' status (朋友动态)”
4) surveillance (social news): “keeping updated about social news (社会新闻)”
5) information searching: “information searching (搜索信息)”
6) information sharing: “sharing or reposting funny or informative articles, videos, etc. (共享、转载)”
7) bonding: “interacting with friends (e.g. chatting, posting, commenting) (好友互动)”
8) maintaining existing ties: “staying connected or reconnecting (保持联系)”
9) building new ties: “meeting new people (建立新联系)”
10) public opinion: “sharing opinions and commentaries publicly (撰写观点、评论)”
11) social groups: “posting, replying, or browsing in social groups (群组)”
12) social events: “organizing or joining social events (组织、参与社会活动)”
13) social games: “playing social games, and other applications (游戏、各种 apps)”
I asked the frequencies such these uses in a 7-point scale from “never” to “very often” for four kinds of social media separately: 1) American social network sites (e.g. Facebook) (US_SNS_Use), 2) Chinese social network sites (e.g. Renren) (CN_SNS_Use), 3) American microblogs (e.g. Twitter) (US_MB_Use), and 4) Chinese microblogs (e.g. Weibo) (CN_MB_Use). In the questionnaire, the order of the 14 items was randomized. The order of the four questionnaires was 1) US_SNS_Use, 2) CN_MB_Use, 3) CN_SNS_Use, and 4) US_MB_Use. The Cronbach’s α was 0.92 for US_SNS_Use, 0.96 for CN_SNS_Use, 0.98 for US_MB_Use, and 0.96 for CN_MB_Use. All these questionnaires showed high reliability.

I also adapted the questionnaire from the Multigroup Ethnic Identity Measure (MEIM, as in Phinney 1992) to measure both Chinese identification (CI) and American identification (AI). The questionnaire consisted 10 items about ethnic information searching, behavioral involvement, feeling of belonging, and emotional attachment in a 7-point Likert scale from 0 (“not at all”) to 6 (“strongly agree”). Higher score implied higher cultural identification. I slightly adjusted the MEIM to measure cultural identification rather than just ethnic identification. The Cronbach’s α was 0.91 for CI, and 0.93 for AI. Both questionnaires showed high reliability.

Based on bicultural identity integration (Benet-Martinez, et al. 2002), acculturation strategy (Berry 1997), and social identity complexity model (Roccas and Brewer 2002), I adapted the Bicultural Identity Integration questionnaire consisting of 5 items measuring integration level of Chinese and American identities (e.g. “I am simply a Chinese who live in US”, “these two cultures are just compatible”, and “I usually feel conflicts between these two cultures”). Participants were asked to rate these items from 1(“strongly disagree”) to 7(“strongly agree”) in a 7-point scale. After reversing the scores of 3 items, the higher score implied that participants integrated these two cultures better. The Cronbach’s α was 0.57, which was problematic. After examining the questionnaire items and deleted item per item carefully, I deleted two items.
(“Chinese culture and American culture are just compatible”, and “Cultural difference is not a big problem for me”), leaving three items that measured whether participants perceived the two identities as separate or conflict. After deleting two items, the Cronbach’s α became 0.69, which implied that its reliability was acceptable.

I also leveraged the Culture shock Questionnaire (Mumford 1998) to measure their adaptation and wellbeing in new culture. It consisted 7 items such as feeling of strains to adapt to new culture, homesickness, and feeling of acceptance by new environment, with a 7-point scale. Higher scores implied the participant suffered higher culture shock. The Cronbach’s α was 0.82.

For the demographic information, I asked participants about their gender, student status (undergraduate, master student or PhD student), age, and the length of stay in the United States. I also asked how long they averagely spend on social media per day. Participants were asked to rate their use frequency of the four kinds of social media (American SNS, Chinese SNS, American microblogs, Chinese microblogs) in a seven-point scale from “never” to “hour per day”. I also asked participants to estimate the percentage of Chinese friends in their social media.

Recruitment and Participants

I distributed the questionnaires through mail lists and official online groups of Chinese students association (usually named “Chinese Students and Scholars Association (CSSA)”) in U.S. universities. After a survey of universities in the United Stated, I found 14 large universities with CSSA official mail lists or online groups with more than 1000 members, ranging from 1274 members (CSSA at University of Pittsburg) to 4743 members (CSSA at UC Berkeley). I posted the recruiting message to the online groups every other day for four times (i.e. in one week).

The recruiting message asked for Chinese students who had been studying in the United Stated for at least one year. It contained a web link that directed participants to the online survey
in Surveymonk.com. The first page of the survey was the informed consent form, which stated that the study’s purpose was to explore their social media use. Upon providing their informed consent by clicking a hyperlinked button, participants landed on the questionnaires. The whole study took participants about 15 minutes to complete. To compensate for their time, they were entered into a random lottery to win one of 6 prizes of $50.

253 Chinese students in the United States completed the survey. 119 of them were male, and the other 134 female. There were 70 undergraduate students, 76 master students, and 106 PhD students, with one missing data. Their age ranged from 16 to 42, with an average of 25.17 (SD=4.43). The years of them staying in the United States ranged from 1 year to 13 years, with an average of 2.86 (SD=2.01). 92.1% of the participants have been in the United States for less than five years. Their average hours spent on social media daily ranged from 0 to 16 hours, with an average of 2.18 hours (SD=2.11).

**Descriptive Statistics**

**Descriptive Statistics for Social Media Use**

I found that most of participants (79.59%) spent half an hour to three hours per day on social media. The use intensity of social media had significant negative correlation with participants’ age, with a Pearson’s coefficient of -0.24, sig<0.001 (two-tailed). It suggests that younger participants generally spent more time using social media daily.

Participants’ use frequencies of different kinds of social media were presented in table 6-1. I conducted the Repeated Measures ANOVA using SPSS General Linear Model with repeated measures, and found that social media use frequencies differed, F =107.18 (with Greenhouse-Geisser correction, according to Mauchly’s Test of Sphericity), sig<0.001. Further post-hoc
analysis suggested that the use frequency of each kind of media had significant difference with any other one. So I could claim that participants had the highest use frequency of Chinese social network sites such as Renren; they used American social network sites (e.g. Facebook) a little more frequently than Chinese microblogs (e.g. Weibo) (sig<0.05); and use frequency of American microblogs (e.g. Twitter) was the lowest, and very low (all significance coefficients < 0.01), which confirms our findings in the interview study that Chinese students in the United States seldom use American microblogs such as Twitter.

Table 6-1. Use frequencies of different kinds of social media

<table>
<thead>
<tr>
<th></th>
<th>Use of American SNS (e.g. Facebook)</th>
<th>Use of Chinese SNS (e.g. Renren)</th>
<th>Use of American Microblogs (e.g. Twitter)</th>
<th>Use of Chinese Microblogs (e.g. Weibo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.57</td>
<td>3.83</td>
<td>1.52</td>
<td>3.18</td>
</tr>
<tr>
<td>S.D.</td>
<td>1.51</td>
<td>1.82</td>
<td>1.69</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Table 6-2 presents the uses in different kinds of social media. The most important uses of American social network sites (e.g. Facebook) were social tie uses. The uses with score higher than three include 1) maintaining existing ties, 2) interacting with strong ties (bonding), and 3) information surveillance of all these friends. We should also note that a large part of these social ties were their Chinese friends. According to the survey, the average proportion of Chinese friends in American social networks sites were 56.55 percent (SD=26.65).

The Chinese social network sites (such as Renren, Kaixin001) were used heavily for social ties and information purpose. The uses with score higher than three include 1) maintaining existing ties, 2) interacting with strong ties (bonding), 3) information surveillance of all these friends, 4) information sharing, and 5) self disclosure. Participants used Chinese social network sites not only for acquiring information as in American social network sites, but also for delivering information, which was consistent with the interview results.
Table 6-2. Descriptive Statistics of Detailed Social Media Use

<table>
<thead>
<tr>
<th>Social Media Use</th>
<th>American SNS (e.g. Facebook)</th>
<th>Chinese SNS (e.g. Renren)</th>
<th>American Microblogs (e.g. Twitter)</th>
<th>Chinese Microblogs (e.g. Weibo)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self discovery</td>
<td>2.56 (1.72)</td>
<td>2.89 (1.89)</td>
<td>0.92 (1.49)</td>
<td>2.23 (1.91)</td>
</tr>
<tr>
<td>Self disclosure</td>
<td>2.84 (1.70)</td>
<td><strong>3.06 (1.94)</strong></td>
<td>1.07 (1.59)</td>
<td>2.78 (2.06)</td>
</tr>
<tr>
<td>surveillance (friends)</td>
<td><strong>3.61 (1.79)</strong></td>
<td><strong>3.74 (1.91)</strong></td>
<td>1.17 (1.63)</td>
<td><strong>3.17 (2.01)</strong></td>
</tr>
<tr>
<td>surveillance (social news)</td>
<td>2.60 (1.73)</td>
<td>2.87 (1.99)</td>
<td>1.34 (1.71)</td>
<td><strong>3.08 (2.04)</strong></td>
</tr>
<tr>
<td>Information searching</td>
<td>2.37 (1.74)</td>
<td>2.14 (1.89)</td>
<td>1.22 (1.71)</td>
<td>2.25 (1.93)</td>
</tr>
<tr>
<td>Information sharing</td>
<td>2.69 (1.68)</td>
<td><strong>3.36 (1.95)</strong></td>
<td>1.21 (1.65)</td>
<td><strong>3.04 (2.10)</strong></td>
</tr>
<tr>
<td><strong>Social Ties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bonding</td>
<td><strong>3.16 (1.68)</strong></td>
<td><strong>3.45 (1.91)</strong></td>
<td>1.07 (1.54)</td>
<td>2.94 (2.03)</td>
</tr>
<tr>
<td>Bridging (maintaining existing ties)</td>
<td><strong>3.39 (1.68)</strong></td>
<td><strong>3.29 (1.89)</strong></td>
<td>1.13 (1.65)</td>
<td>2.97 (2.00)</td>
</tr>
<tr>
<td>Bridging (new ties)</td>
<td>2.72 (1.68)</td>
<td>2.75 (1.94)</td>
<td>1.22 (1.70)</td>
<td>2.47 (1.92)</td>
</tr>
<tr>
<td><strong>Social Involvement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public opinions</td>
<td>2.37 (1.63)</td>
<td>2.95 (1.98)</td>
<td>1.05 (1.53)</td>
<td>2.76 (1.97)</td>
</tr>
<tr>
<td>Social groups</td>
<td>2.19 (1.68)</td>
<td>2.22 (1.87)</td>
<td>0.92 (1.49)</td>
<td>2.09 (1.89)</td>
</tr>
<tr>
<td>Social events</td>
<td>2.44 (1.74)</td>
<td>2.07 (1.91)</td>
<td>0.95 (1.56)</td>
<td>1.92 (1.89)</td>
</tr>
<tr>
<td>Social games</td>
<td>1.31 (1.52)</td>
<td>1.71 (1.83)</td>
<td>0.83 (1.50)</td>
<td>1.42 (1.75)</td>
</tr>
<tr>
<td>work</td>
<td>2.10 (1.78)</td>
<td>2.09 (1.90)</td>
<td>1.18 (1.71)</td>
<td>1.91 (1.85)</td>
</tr>
</tbody>
</table>

Note: figures in parenthesis are standard deviations.

The Chinese microblogs were mostly used for information purpose. The uses with score higher than three include 1) information surveillance of friends, 2) information surveillance of social news, and 3) information sharing.
Consistent with the use frequency results in table 6-1 and the interview results, participants seldom use American microblogs such as Twitter for any kind of use.

In sum, we could find from table 6-2 that 1) American SNS such as Facebook played an important role in connecting and reconnecting social ties, as well as information surveillance and searching of these ties; 2) the uses in Chinese SNS such as Renren were almost the highest in most of aspects including maintaining social ties (but also further bonding with strong ties), seeking for information but also sharing information, as well as social participation such as expressing public opinions and playing social games. 3) Chinese Microblogs such as Weibo was important for searching for, sharing, and discussing with information, especially information about social news and social events in China. 4) American Microblogs such as Twitter were seldom used.

**Descriptive Statistics for Identification Measurements**

In 7-point scales from 0 (Not at all) to 6 (Strongly agree), the average score of Chinese identification was 3.49 (SD=1.28); the average score of American identification was 2.55 (SD=1.25). Participants’ Chinese identification score was significantly higher than their American identification, t (221) =10.33, sig<0.001, which was reasonable considering Chinese as their inborn identity. In 7-point scale from 1 (“strongly disagree”) to 7 (“strongly agree”), the score of bicultural identity integration (BII) was 3.95 (SD=01.17).

Table 6-3. Descriptive Statistics of Identification Measurements

<table>
<thead>
<tr>
<th></th>
<th>Chinese Identification</th>
<th>American Identification</th>
<th>Bicultural Identity Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>3.49</td>
<td>2.55</td>
<td>3.95</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.28</td>
<td>1.25</td>
<td>1.17</td>
</tr>
</tbody>
</table>
Chinese identification had significant correlation with both American identification (r=0.423, sig<0.001) and bicultural identity integration (r=-0.267, sig<0.001). There was no significant correlation between American identification and bicultural identity integration.

**Structural Equation Modeling**

**Preliminary Analysis**

Prior to the analyses for testing the hypotheses, I cleaned the data by excluding cases with missing data and checking for normality and outliers. First I excluded 26 cases with missing data from the overall 253 cases, leaving 227 cases for further analysis. In the second step, multivariate outliers were revealed by calculating the Mahalanobis distance statistic, after which five outliers were removed from the data set, leaving a final sample size of 222. According to Kline (2005), univariate normal distribution can be confirmed with absolute value of less 3.0 for skewness and 10.0 for kurtosis. Measures of skewness and kurtosis indicated that the all variables in the model were normally distributed. In addition, multivariate normality was checked. According to Bollen (1989), the criterion for multivariate normality is that the Mardia’s coefficient be lower than p (p+2), where p is the number of observed variables. The Mardia’s coefficient for the current study was 4.71. Given that this study had 9 observed variables and p (p+2) equaled to 99, we can conclude multivariate normality.
Measurement Portion of the Model

Before the hypothesized model was examined through structural equation modeling (SEM), confirmatory factor analysis (CFA) was performed using AMOS 18.0 with a maximum likelihood estimation method to test the measurement portion of the model. In CFA, the latent variable Chinese Identification (CI) was co-varied with American Identification (AI) and Bicultural Identity Integration (BII); the latent variable Culture Shock (CS) had covariance with American Identification (AI) and Bicultural Identity Integration. The model fit was poor according to the following indices: \( \chi^2 = 1145.9, df = 399, p<0.001; \) RMSEA = 0.092 (CI = 0.086-0.098); CFI = 0.816; IFI = 0.818.

One item (CS3) of the “Culture Shock” construct, one item (CI3) of the “Chinese Identification” construct, and one item (AI3) of the “American Identification” construct were excluded from the dataset because they were not significantly correlated with and/or had low factor loading on the latent variable. After the elimination yielded the following fit indices: \( \chi^2 = 907.5, df = 317, p<0.001; \) RMSEA = 0.092 (CI = 0.085-0.099); CFI = 0.836; IFI = 0.837.

Furthermore, modification indices suggested allowing four pairs of error terms from other-directedness and eight pair of error term from value of self-expression to covary due to method-related effects such as similar wording of content (Eccles and Wigfield 1995). After covarying these error terms, the fit indices became as below: \( \chi^2 = 654.6, df = 306, p<0.001; \) RMSEA = 0.072 (CI = 0.064-0.079); CFI = 0.903; IFI = 0.904. The revised model had an acceptable fit, with the RMSEA (root mean square error of approximation) lower than 0.08, and CFI (comparative fit index) and IFI (Bollen's Incremental Fit Index) higher than 0.90 (figure 6-2).
Based on the results of the confirmatory factor analysis, reliability for each construct was assessed with the remaining items. Table 6-4 shows the reliability (Cronbach’s alpha) and the zero-order correlations that were computed to test the correlation among the constructs in the current model. Most of the bivariate correlations were consistent with hypotheses in the same direction at the statistically significant level.
Table 6-4. Reliability and Zero-Order Correlations for the Measured Variables

<table>
<thead>
<tr>
<th></th>
<th>1 (CI)</th>
<th>2 (AI)</th>
<th>3 (BII)</th>
<th>4 (CS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chinese Identification (CI)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. American Identification (AI)</td>
<td>0.423***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Bicultural Identity Integration (BII)</td>
<td>-0.267***</td>
<td>-0.0470</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Culture Shock (CS)</td>
<td>0.198**</td>
<td>0.306***</td>
<td>-0.502***</td>
<td>1</td>
</tr>
<tr>
<td>Reliability (Cronbach’s α)</td>
<td>0.911</td>
<td>0.928</td>
<td>0.690</td>
<td>0.822</td>
</tr>
</tbody>
</table>

Note: *** Correlation is significant at p<0.001

** Correlation is significant at p<0.01

Testing the Hypothesized Model

I tested the hypothesized model by carrying out structural equation modeling with a maximum likelihood estimation method in AMOS 18.0. The overall model was a poor fit: χ²=1249.349, df =457, p<0.001; RMSEA=0.089 (CI=0.083-0.094); CFI=0.794; IFI=0.796. Therefore, model modifications were conducted based on theoretical rationale and modification indices.

There was covariance between several pairs of exogenous variables including “Chinese SNS use” and “Chinese microblog use”, “American SNS use” and “American microblog use”, “Chinese SNS use” and “American SNS use”, “Chinese microblog use” and “American microblog use”, and “year in US” and “Chinese SNS use”. The covariance between the first four pairs was reasonable because it was related to either using the same kind of social media or using social media from the same country. The covariance between “year in US” and “Chinese SNS use” also made sense in that as students having been stayed in the United States longer they were
using less Chinese SNS websites. Therefore, I covaried these variables, rendering better fitness statistics: \( \chi^2 = 1142.2, \) df =452, \( p<0.001; \) RMSEA=0.083 (CI=0.077-0.089); CFI=0.820; IFI=0.822. The overall model fit was improved, but still failed to meet acceptable criteria.

In the second step, I also detected covariance between several pairs of items. For the latent variable “Chinese Identification”, item CN5 and CN9, CN7 and CN10, CN8 and CN9, and CN9 and CN10 had covariance; for the latent variable “American Identification”, item US1 and US9, US 2 and US5, US5 and US7, US6 and US9, and US9 and US10 had covariance; for the latent variable “Culture Shock”, item CS1 and CS2 had covariance. After examining the item contents, I found that these pairs indeed had theoretical correlation. For example, CN5 measured feeling of belonging while CN9 measured attachment to the group; CN7 measured feeling of pride while CN10 measured “feeling good” about the cultural background. Therefore, I covaried these items one by one based on the modification indices. The model was improved with better fitness statistics: \( \chi^2 = 919.039, \) df =442, \( p<0.001; \) RMSEA=0.070 (CI=0.064-0.076); CFI=0.876; IFI=0.877.

After that, a non-significant paths from “Year_in_US” to “Bicultural Identity Integration” (\( \beta=0.041, \) sig=0.582) was detected and eliminated, resulting in the following fit statistics: \( \chi^2 = 919.315, \) df =443, \( p<0.001; \) RMSEA=0.070 (CI=0.063-0.076); CFI=0.876; IFI=0.878. The overall model fit slightly improved.

The path from CN_MB_Use (“Chinese microblog use”) to “Chinese Identification” was also insignificant and thus removed (\( \beta=0.094, \) sig=0.209). After eliminating this path, CN_MB_Use lost its theoretical relevance in the model. This study failed to support the originally hypothesized path between the “Chinese microblog use” and “Chinese Identification” (H2), and the former had no relationship with any other constructs. Therefore, it held no theoretical value and was eliminated from the model. The overall model fit improved: \( \chi^2 = 867.7, \)
df =414, p<0.001; RMSEA=0.065 (CI=0.058-0.072); CFI=0.899; IFI=0.901. These changes resulted in a good overall model, with the RMSEA (root mean square error of approximation) lower than 0.09, and CFI (comparative fit index) and IFI (Bollen’s Incremental Fit Index) higher than 0.90. Figure 6-3 depicts the final model that was retained for interpretation.

Figure 6-3. The Final SEM Model with Standardized Path Coefficients

Note: Year_in_US = year have been in the United States; CN_SNS_Use = Chinese SNS use; US_SNS_Use = American SNS use; US_MB_Use = American microblog use; ChinesIdent. = Chinese identification; AmericanIdent. = American identification; BIIntegration = bicultural identity integration.
Summary of the Findings

Both H1 and H2 were supported; Chinese Students who have stayed in the United States for longer time had higher level of Chinese identification ($\beta=0.198$, $p<0.01$); participants with higher use of Chinese social networks sites had higher level of Chinese identification ($\beta=0.279$, $p<0.001$). Interestingly H3 was not supported; the use of Chinese microblog was not significantly related with Chinese identification ($\beta=0.094$, sig>0.05).

H4 was not supported. For direct effect, the “year in US” seemed negatively correlated with “American identification” ($\beta=-0.131$, $p<0.05$). Interestingly, the indirect effect (through “Chinese identification”) seemed to be positive but was insignificant ($\beta=0.080$, $p>0.05$). The total effect was neutralized and insignificant ($\beta=-0.050$, $p>0.05$). Both H5 and H6 were supported; participants with higher American SNS use ($\beta=0.261$, $p<0.001$) and American microblog use ($\beta=0.154$, $p<0.05$) had higher American identification.

H7 was not supported; both direct effect ($\beta=0.041$, sig>0.05) and indirect effect ($\beta=-0.038$, sig>0.05) between “year in US” and “bicultural identity integration” was insignificant.

“Chinese identification” was positively correlated with “American identification” ($\beta=0.407$, sig<0.001), which was in a direction opposite to that of H8. H9 was supported; participants with higher Chinese identification had lower bicultural identity integration ($\beta=-0.358$, sig<0.001).

H10 was also supported. For direct effect, “Chinese Identification” was negatively related to “culture shock” ($\beta=-0.256$, sig<0.01). However, the indirect effect through both “American identification” and “bicultural identity integration” was positive ($\beta=0.341$, sig<0.001). The total effect was neutralized but still significant and positive ($\beta=0.124$, sig<0.05).
H11 and H12 were supported; participants with higher American identification experienced higher culture shock ($\beta=0.313$, sig<0.001); and participants with lower bicultural identity integration level experienced higher culture shock ($\beta=-0.704$, sig<0.001).

Table 6-5 presents the estimates, standard errors, and critical ratios for the paths in the model.

Table 6-5. Estimates, S.E. and C.R. for the supported hypothesized paths

<table>
<thead>
<tr>
<th>Paths</th>
<th>Estimates (Standardized)</th>
<th>Estimates (Unstandardized)</th>
<th>Standard Error</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year_in_US $\rightarrow$ CI</td>
<td>0.198</td>
<td>0.107</td>
<td>0.040</td>
<td>2.688</td>
</tr>
<tr>
<td>CN_SNS_Use $\rightarrow$ CI</td>
<td>0.279</td>
<td>0.137</td>
<td>0.037</td>
<td>3.656</td>
</tr>
<tr>
<td>Year_in_US $\rightarrow$ AI</td>
<td>-0.131</td>
<td>-0.084</td>
<td>0.039</td>
<td>-2.146</td>
</tr>
<tr>
<td>US_SNS_Use $\rightarrow$ AI</td>
<td>0.261</td>
<td>0.182</td>
<td>0.045</td>
<td>4.027</td>
</tr>
<tr>
<td>US_MB_Use $\rightarrow$ AI</td>
<td>0.154</td>
<td>0.096</td>
<td>0.039</td>
<td>2.468</td>
</tr>
<tr>
<td>CI $\rightarrow$ AI</td>
<td>0.407</td>
<td>0.481</td>
<td>0.098</td>
<td>4.910</td>
</tr>
<tr>
<td>CI $\rightarrow$ BII</td>
<td>-0.358</td>
<td>-0.354</td>
<td>0.101</td>
<td>-3.516</td>
</tr>
<tr>
<td>CI $\rightarrow$ CS</td>
<td>-0.256</td>
<td>-0.230</td>
<td>0.084</td>
<td>-2.728</td>
</tr>
<tr>
<td>AI $\rightarrow$ CS</td>
<td>0.313</td>
<td>0.238</td>
<td>0.061</td>
<td>3.894</td>
</tr>
<tr>
<td>BII $\rightarrow$ CS</td>
<td>-0.704</td>
<td>-0.640</td>
<td>0.133</td>
<td>-4.816</td>
</tr>
</tbody>
</table>

In sum, the year in United States and Chinese SNS use predicted Chinese identification; both American SNS use and American microblog use predicted American identification; Chinese identification predicted American identification and bicultural identity integration; both American identification and bicultural identity integration were directly related with culture shock while Chinese identification had opposite direct and indirect effects on culture shock.
Chapter 7

Conclusion and Discussion

In this dissertation, I conducted two studies to explore social media use in an acculturation context: Chinese students living in the United States. In the first exploratory interview study, I collected 329 social media activities, and built a coding system of social media use, with intensive descriptive analysis on these uses. Furthermore, I explored these social media uses for acculturation processes. I identified two kinds of acculturation strategies: the Babel strategy, which refers to American identification efforts to get assimilated into new culture, and the Great Wall strategy, which refers to Chinese identification efforts to maintain their original self. Social media helped students adapt to new culture through the uses such as maintaining weak tie and information surveillance. Students extensively used Chinese social media to maintain their original self, through uses such as social bonding and social participation.

I further explored the research questions with a questionnaire study of 253 Chinese students in America. I compared the use patterns among four kinds of social media: American SNS (e.g. Facebook), Chinese SNS (e.g. Renren), American microblogs (e.g. Twitter), and Chinese microblogs (e.g. Weibo), as a triangulation to the interview study. I further explored how these social media use could predict participants’ American and Chinese identifications through a structural equation modeling.

This dissertation work expands existing HCI work on inter-cultural communication and collaboration activities toward consideration of acculturation strategies, online support for identity, and designing for individual development. The social media use work refines use and gratification theories in the context of different kinds of social media, which provide design representations for new media.
While acculturation was often described as a pressing problem for expatriates, information and communication techniques (ICT’s) and social media are providing a much more friendly environment for coping. Shklovski, Kraut, and Cummings (2006) found that people changed the routine use of the Internet to cope with the residential move. They found that higher level of depressive affect shortly after residential move predicted increases in use of the Internet for Entertainment and decreases in use of the Internet for communication with family and friends.

In this dissertation, I took a much more active view to explore how expatriate people could actively leverage social media to cope with acculturation problems. For example, which social media and how social media could help and facilitate their communication with social ties (and which kind of social ties), and how such social media use could further predict their culture shock problems.

**Chinese Identification and Social Media Use**

People in acculturation context are suffering problems such as loneliness, alienation and other culture shock problems. Researchers have found that loneliness and alienation could be prevented through involvement with others who are consonant with one’s value (e.g. interacting with other Chinese students in this study) (Peplau, Miceli, and Morasch 1982) and participation in relationships that include belonging and intimacy (i.e. bonding with strong ties) (Cutrona 1982, Weiss 1982), both suggesting the value of maintaining Chinese identifications.
Chinese identification across time

According to social identity theories (e.g. Turner et al. 1987), Chinese identity could become more salient in acculturation context because of the social comparison in the Chinese level. Also inter-cultural contacts provide expatriate an opportunity to rediscover and reaffirm their original culture in the face of the other culture, which also end up with strengthening their original cultural identity (Stosolska and Yi, 2003). For example, Garza-Guerrero (1973) reported that a Mexico who migrated into the United State found that himself becoming “more Mexican than ever”.

In the questionnaire study, I confirmed H1 that Chinese Students who had stayed in the United States for longer time had higher level of Chinese identification. In the acculturation context, these expatriates were having more and more contacts with American culture and American life, across the time. The cultural conflicts and social comparisons were reinforcing their Chinese identification and make Chinese identity even more salient. This finding confirms existing findings such as Sussman 2000, Benet-Martinez et al. 2002, and Amiot et al. 2007.

Berry (1997) and Roccas and Brewer (2002) proposed that expatriates could end up with different kinds of identity structures such as separation, assimilation, marginalization, compartmentalization, and merger. In separation and marginalization structure, participants may even abandon their identity of original culture. While it is plausible that some expatriate may take such acculturation strategies that could be attributed to individual differences, this study suggested that expatriates who have stayed abroad for longer time have higher level of identification of their original culture. However, we should also note that this is not a longitudinal study, so we cannot conclude that participants’ Chinese identification strengthened across time. Just as discussed in the interview study, the dynamics of identification should be considered in a
larger context including individuals’ acculturation phases, as well as the changing landscape of social media that facilitate the process.

**Social media use for Chinese identification**

In past, Chinese identification efforts might be difficult without information and communication technologies (ICT), because individuals in far abroad could be deprived of information of their original culture and lose contact with their old friends. But the emergence of ICT’s and social media has greatly facilitated their interaction with and engagement in their original culture. According to the interview study, people could maintain their original self by processing information about their original culture, keeping social ties and interacting with their old friends, and even participate in social groups and events that were related to their original culture. Chinese identification, as shown in the study, was actually the most intensive purpose of social media use for Chinese students in the United States.

According to the structural equation modeling results from the questionnaire study, the use of Chinese social network sites predicted Chinese identification (thus \( H2 \) was supported). The results from interview study were confirmed that Chinese social media use could help acculturation process by maintaining or strengthening their Chinese identification. From the interview study (table 5-15), we understand that Chinese identification efforts involved almost every kinds of social media use, including bonding with strong ties, maintaining weak ties, self-disclosing, information surveillance of Chinese friends, and participating in Chinese social groups. The social network sites perfectly fulfill these requirements as a platform for efforts from individual identification (e.g. private diary), to dyadic interactions (e.g. wall, messaging), to engagement in social groups (e.g. group sharing and discussing). Compared with American identification, in Chinese identification they not only acquire information, but also disclosing...
themselves and sharing other information for reciprocity, as well as closely interact and bond with each other besides simply connecting.

**American Identification and Social Media Use**

Identification with the new culture is also important because that culture is exactly the environment where the expatriates physically live, study, and work. Failing to get adapted into the new culture could result in cognitive dissonance, emotional depression, mental and physical health, psychological satisfaction, and poor academic performance (e.g. Tadmor and Tetlock 2006, Suarez et al. 1997, Liebkind 2001).

**American identification across time**

In H4 I hypothesized that the “year in US” could predict the level of “American identification”, because as the expatriates had stayed in the United States for longer time, they were acquiring more and more cultural knowledge and competence (i.e. culture learning, as in Brislin, Landis and Brandt 1983). This hypothesis, however, was not supported in the questionnaire study. The SEM model suggested that the relationship between them was complex, including negative direct effects (with significance) and positive indirect effects (without significance) through Chinese identification (though statistically insignificant). As a result, the total effects were neutralized. This further confirmed that the relationship between “year in US” and identification involved various factors as discussed in the interview study.
**Social media use for American identification**

Social media facilitated expatriate people to learn from the new culture and acquire social skills that are appropriate for the new cultural context, which was referred as “culture learning” (Brislin, Landis and Brandt 1983) and “social skills acquisition” (Furnham and Bochner 1986). From the studies we found participants indeed leveraged social media for American identification. In questionnaire study, both $H_5$ and $H_6$ were supported. Participants with higher American SNS use and American microblog use had higher American identification.

These relationships could be elaborated with the interview study results. From the table 5-15, we could see social media (more specifically, American social media) facilitated the American identification process of participants, mainly through help 1) maintaining the network of American social ties (i.e. bridging) and 2) easily accessing to information about American friends (i.e. surveillance of friends) through American social network sites (e.g. Facebook), 3) about American social news (i.e. surveillance of social news) through American news portals, and 4) about American histories and cultural phenomena through Wikipedia (i.e. information searching).

These social media uses mostly stayed in “understanding” level, without further interactions as in the Chinese identification contexts. Participants seldom involved in social participation uses; they simply acquire information about American culture but didn’t share for reciprocity; they simply maintain weak ties without further interactions and bonding. Such social media use for understanding facilitated “culture learning” as proposed by Brislin, Landis and Brandt (1983). Therefore, the use of both predicted the American identification.
Acculturation Strategies

While existing studies discussed intensively on surface acculturation strategies such as merger, assimilation, separation, compartmentalization, etc, I pointed out that we should focus on the underlying cultural identification processes such as American identification and Chinese identification, as well as the integration of these two processes. This perspective not only avoids the risk of stereotyping people into different categories, but also makes further analysis (e.g. relating social media use to acculturation) easy and possible.

In the interview study I analyzed how each of them was supported by the social media use. In the questionnaire study, I further demonstrated that they were not independent based on the SEM model.

I hypothesized that Chinese identification would be negatively related with American identification ($H_8$), because if expatriates had too high identification efforts (e.g. social interactions and engagements) with their original culture, they would have less time to engage in the new culture. The model, however, presented a positive relationship in an opposite direction. This could partly be attributed to personal characteristics. When measuring their cultural identification with MEIM questionnaire, I was actually measuring both their behavioral engagement and emotional attachment to the culture (Phinney 1992). It is highly possible that an individual who is extroversion would engage in social interactions in both Chinese and American environments; similarly, an individual who is more agreeable and socialized would have more emotional attachment to both Chinese and American culture.

$H_9$ was supported that participants with higher Chinese identification had lower bicultural identity integration. According to Roccas and Brewer (2002), there were two kinds of identity integration: restrictive integration and additive integration. In restrictive integration, cognitive links are formed and overlaps are recognized between social identities, depending on
the similarities between them. Such integration is usually restricted to the portion shared by both identities rather than encompassing the entirety of both social groups, which leads to a form of intersectional identity (e.g. Chinese Students in the United States as one integrated identity). In addictive integration, however, involves a broader and more inclusive conception of one’s group membership. This kind of integration encompasses people from both groups (e.g. the compatible Chinese identity and American identity). From the interview study, participants with high Chinese identification tended to use social media as the “Great Wall” to maintain their original self and protect themselves from cultural conflicts and culture shock, and thus did not try to include American identification for neither addictive integration nor restrictive integration. In this way, they may lose opportunities for personal adjustment and identity integration in coping with these conflicts.

**Culture Shock**

Acculturation has been regarded as pressing problem because expatriates may suffer the feelings of loneliness and alienation, as well as many other culture shock problems. Culture shock is a term that embraces numerous phenomena that a person with certain cultural background may encounter when entering into a relatively strange culture. First, the expatriates may experience a feeling of *loss or deprivation* of their original culture and many loved things such as family, friends, language, habits, food, and social events (i.e. “grief and bereavement” as in Bowlby 1969). From the perspective of social identity theories, this is related to identification with original culture. In past, identification with original culture was hard because of the deprivation. Therefore, expatriate people were suffering a lot of culture shock problems. But now the information and communication techniques (ICT) greatly facilitate the identification effects with their original culture. I hypothesized that Chinese identification could predict culture shock (*H10*).
The SEM model suggested that the relationship between “Chinese Identification” and “Culture Shock” was complex. The negative direct effects suggested that participants with higher level of Chinese identification had lower level of culture shock. This relationship partly explains the intensive use of Chinese social media for Chinese identification: by continuing involving in Chinese culture, with the facilitation of Chinese social media, participants were avoiding culture shock by alleviating the loss of deprivation of their original culture. The indirect effect between “Chinese Identification” and “Culture Shock”, however, was positive, when “American Identification” was involved. It suggests that cognitive dissonance between Chinese identification and American identification could lead to culture shock.

American identification is related to the second aspect of culture shock: coping with the challenging strange situations in a new culture. In the new culture, expatriates are encountering and experiencing life change and are compelled to adapt to the strange situation with little cultural literacy or competency (i.e. “lacking social skills” as in Brown, et al. 1975). Identification with the new culture becomes important to deal with the culture shock problems. In such identification efforts, the expatriates would encounter various cultural conflicts and problems, and may experience higher level of culture shock. Therefore, I hypothesized that participants with higher American identification would experience higher culture shock (H1), which was confirmed by the SEM model. Now with the facilitation of social media, the expatriates could even more easily get connected with friends from the host country, and get access to information about the new culture, which helps them to deal with culture shock issues.

Given the factor that people with high American identification efforts (including using American social media) were experiencing higher culture shock, it provides an excuse for participants not using American social media for American identification, so that they would not experiencing culture shock problems. That explains the results in both studies that participants...
used Chinese social media much more intensively than using American social media (to avoid culture shock problems).

The third aspect of culture shock is about dealing with the differences between the cultures may cause cognitive dissonance (Tadmor and Tetlock 2006) and threaten the coherence of individual’s self-concept. Integration of different identities (e.g. Chinese identity and American identity) for a coherent self becomes important. If the participants could better integrate these two distinct identities, they would suffer less culture shock. This hypothesis (H12) was confirmed by the SEM model.

While I operationalized acculturation strategies as three underlying identification processes, they perfectly match the three aspects of culture shock, which suggested that such operationalization of acculturation strategy is effective.

**Supporting Identity with Social Media**

Dominick (1999) once investigated following five self-presentation strategies in online websites that had been introduced by Jones (1990):

1) *Ingratiation*: saying positive things about others, or saying negative things about yourself, statements of modesty, familiarity and humor to be liked by others;

2) *Competence (self-promotion)*: show abilities, accomplishments, performances, and qualifications to be perceived as skilled and qualified;

3) *Intimidation*: use threats, statements of anger, and unpleasantness to acquire power;

4) *Exemplification*: use ideological commitment or militancy for a cause, self sacrifice and self discipline to be perceived as morally superior or possessing high moral standards;
5) **Supplication**: using entreaties for help and self-depreciation to appear helpless for nurturance or aid.

Dominick (1999) found that ingratiation was the predominant self-presentation strategy in websites, especially in homepages. The other four strategies were not obvious in websites.

Compared with general websites, social media greatly enriched the online environment and online experience with great modality and interactivity (e.g. MAIN model as in Sundar 2008), so that users could present themselves much better. In my dissertation, I found evidence for all sorts of self-presentation strategies. In the interview study, I found participants using both “ingratiation”, “competence”, and “exemplification” strategies in social network sites and microblogs. For example, one participant uploaded a photo of him when he was presenting in an academic conference in Facebook, which demonstrated his professional aspects. Participants were also using “supplication” and “intimidation” (e.g. complaining in Weibo) more in Chinese social media, just as one participant explained, she hoped to keep such trivial or not that agreeable things in Chinese social media rather than in Facebook.

Besides such self-presentation of identities, Klein, Spears, and Reicher (2007) further identified two key goals of identity performance: identity consolidation (confirming the worth of an identity), and identity mobilization (motivating collective action on behalf of one’s social group). As shown in the study, participants were using activities such information searching, information surveillance, and self-discovery in social media for identity consolidation; and they were using activities such as information sharing, public opinions, joining social group and planning social events for identity mobilization.

Furthermore, this dissertation work investigated users’ selections and uses of social media with the choices of dozens of counterparts of different kinds of social media (as in table 4-3). The results concurred with the idea of “active audience” or “active user”. The temporality analysis of social context in the chapter 5 remind us to keep awareness of a larger ecological
system of both changing acculturation stages and changing landscape of social media, and that all my analyses in this dissertation work was situated in and confined by such social context.

Theoretical Implications

This dissertation explored social media use in an acculturation context, with respect to cultural identification processes. While most of HCI work in cultural studies focused on intercultural communication and collaboration (usually with comparisons), in this dissertation, I tried to draw attention to personal development when influenced by different cultures. In the era of globalization and boom of information and communication technologies, we find ourselves are encountering and need to interact with people from different cultures with different background in many occasions. The issue of individual’s cultural learning and psychological adjustment becomes more important and pressing than ever before. By introducing the construct of identification, and exploring social media use for identification processes, this dissertation demonstrates a possibility on how acculturation issues could be investigated in HCI.

Existing studies took a static conception of acculturation, by categorizing acculturation strategies into different identity structures such as separation, assimilation, marginalization, and merger. Such static view risks stereotyping, and makes intervention infeasible. In this study, I took a developmental view, and operationalized acculturation into its underlying identification processes (instead of static identity structures). From this perspective, I explored how social media were used for identification processes (e.g. Great Wall strategy, Babel strategy); I also examined the effects of these identification processes in a SEM model. Both studies suggested that such operationalization was successful and effective.

Such an operationalization also matches the components of culture shock. The first aspect of culture shock was the loss and deprivation of their original culture. In this regard, the
identification with their original culture (e.g. Chinese identification, as in this dissertation) becomes an important acculturation strategy. Similarly, identification with the new culture (e.g. American identification) corresponds to the second aspect of culture shock: challenging encounters in culture. While people could suffer cognitive dissonance as the third aspect of culture shock, I explored the bicultural identity integration as a corresponding acculturation process. The SEM model confirmed the relationship between these identification processes and culture shock issue, although the relationships were a little more complex.

The relationships among Chinese identity (CI), American identity (Ai), Bicultural identity integration (BII), and Culture shock (CS) are interesting. The SEM results question the zero-sum cultural identification view (e.g. separation or assimilation: higher American identification entails lower Chinese identification and conversely). It is interesting that H8 was refuted: It seems that one strategy for managing strong Chinese identity is to make strong American identity commitments - though this does not necessarily lead to good culture shock outcomes. Perhaps to the extent that these Chinese students develop bicultural identity, they mitigate culture shock by integrating their identity; however, developing or adopting American identity does not help, since, it triggers dissonance.

I also explored social media use for these identification efforts. While many HCI research tended to explore the effects of certain design features, I took a perspective of “active use” (Carroll and Rosson 1987) or “active audience” (Rubin 1994), considering that with abundant options of social media, users would actively select certain social media, and actively use them for certain purposes. Based on the interview study, I built a social media use model that complements current theories. I also explored how use intensity of different kinds of social media could predict the identification processes in a SEM model. Both study provided evidences of the active use of social media. Both interview study and the SEM model helped explain the intensive use of Chinese social media and less use of American social media. Participants intensively used
Chinese social media for Chinese identification efforts, so that they suffer less culture shock (to mitigate the loss and deprivation). The use of American social media on the one hand helped American identification that was necessary for their living in US; on the other hand, the use of American social media exposed participants into culture shock encountering.

**Design Implications**

Both studies in this dissertation suggested the “active use” of social media. While in traditional HCI area, we design features and investigate the usability and effects of these features. In real situation, however, whether these features would be used or for what they would be used were seldom considered. In this dissertation, I examined social media use in an acculturation context, and demonstrated fourteen uses with respect to information use, social ties, and social participations. While each use could be supported by different kinds of social media, or the same kind of social media in different countries, how participants select and use these social media became interesting and informative.

The results of this dissertation tell us that functionality is not everything. While the same kind of social media had similar functions, participants used different social media for different purposes. For example, they used Chinese social network sites for Chinese identification, and American social network sites for American identification. They also used different kinds of social media for different use. For example, they used microblogs for information surveillance and sharing, and used social network sites for much broader uses. While there are a lot of overlaps of uses in different kinds of social media, participants seemed to embrace many for different purpose. This suggests that the idea of “one integrated platform for all” (e.g. Facebook) is not realistic, and that diversifying the social media market is helpful, as long as we take into account different uses as illustrated in this study.
This dissertation also provides social activists and researchers in community informatics 
evidence that social media could be intentionally designed and used for social activism or 
community development. In this dissertation, use intensity of different social media predicted the 
cultural identification processes and culture shock. It opens the door to analyze how detailed 
social media use (as illustrated in the interview study) could be related to these acculturation 
issues.

Limitations and Future Study

In this dissertation work, I conducted two consecutive studies to investigate the use of 
social media for acculturation from the perspective of social identity. I first interviewed 20 
participants as an exploratory study to investigate how participants used different kinds of social 
media for acculturation. While this study provided deep and rich information, the sample was 
limited. I interviewed only 20 participants, who were from a large university in the east of the 
United States (i.e. Pennsylvania State University). The representativeness of these participants 
was also a problem in such interview study.

In the second phase I conducted a questionnaire study based on the interview study. The 
questionnaire study provided a quantitative confirmation and complement to the interview study; 
and the interview study help elaborate and explain the statistics from the questionnaire study. 
Such methodological triangulation provided a rich picture of the complex acculturation 
phenomenon with support of social media with regard to social identification. However, there 
were also sampling problems for this study. The population of this study was Chinese students in 
the United States; I recruited the participants from 14 large universities from the CSSA (Chinese 
Student and Scholars Association) lists. The representativeness of students from the large
universities is questionable; and not all Chinese students in the United States would join the CSSA mail lists and participate in the questionnaire.

Furthermore, although I analyzed the detailed fourteen uses of different kinds of social media, I just utilized the general use of each kind of social media in the SEM model rather than using specific uses as latent variables. That was because different kinds of social media use corresponded to different kinds of uses, which was too complicated as illustrated from the interview study. For example, social network sites supported information uses, social tie uses, and social participation uses; on contrast, microblogs focus much more on information uses. Furthermore, for the same social tie uses, participants were using Chinese social media to support both strong ties and weak ties; and participants were using American social media to support weak ties with American friends. Therefore, it was impossible to reduce the 14 uses into several dimensions that fit each kind of social media.

In sum, this dissertation work took a new perspective on acculturation, by operationalizing acculturation strategies into underlying identification processes (i.e. American identification, Chinese identification, and bicultural identity integration) rather than the static identity structures (e.g. separation, assimilation). This operationalization was examined by relating to both social media use activities (with qualitative analysis) and culture shock (with quantitative analysis). This study also expands existing HCI work on inter-cultural communication and collaborative activities toward consideration of acculturation processes, online support for identity, and designing for individual development. All these issues are new for HCI researchers and social media designers, which requires further investigation.
Chapter 8

References


http://www.dhs.gov/files/statistics/publications/YrBk10NI.shtm


Appendix A

Informed Consent Form for the Interview Study

Title of Project: Social Media Supported Social Identities
Principal Investigator: Shaoke Zhang, Graduate Student
316C, IST Building
University Park, PA 16802
(814) 753-0303; suz114@psu.edu
Advisor: Dr. John M. Carroll
307H, IST Building
University Park, PA 16802
(814) 865-2476; jmcarroll@psu.edu
Other Investigator(s): Hao Jiang, Graduate Student
316C, IST Building
University Park, PA 16802
(814) 865-9838; hji112@psu.edu

1. **Purpose of the Study:** This study investigates how social identities are supported by social media.

2. **Procedures to be followed:** About one hour interview, with a survey for participant to fill. We will discuss your social identity and use of social media (with questionnaires), based on which we will discuss how the identities are embodied and constructed in online activities.

3. **Duration:** It will take about one hour to finish the interview, including the survey.

4. **Statement of Confidentiality:** Your participation in this research is confidential. We may take some pictures of the identity structure illustrated by cards. The pictures, note taken, and the survey data will be stored and secured in a locked office, and your identity is not revealed. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.

5. **Right to Ask Questions:** Please contact John M. Carroll at (814) 863-2476 with questions, complaints or concerns about this research.

6. **Voluntary Participation:** Your time will be compensated with $10. Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this consent form for your records.
Appendix B

Twenty-Statement Test

There are twenty numbered cards here. Please write twenty answer to the simple question “Who am I?” in these cards. Just give twenty different answers to this question, each answer on one card; answer as if you were giving the answers to yourself-not someone else. Write your answers in the order that they occur to you. Don’t worry about logic or “importance.”

WHO AM I?
Appendix C

A List of Social Media for Reference

What social media tools do you use? Tick all that apply.

Could you also write down the specific tool that you use in each category.

(*list adapted from Wikipedia®)

Communication:

  Blogs (Blogger, Wordpress, Sina blog, Hexun, MSN Space, etc.)
  Social Networking (e.g. Facebook, LinkedIn, MySpace, Renren, Kaixin001, etc.)
  Microblogging (e.g. Twitter, Sina Weibo, Tencent Weibo, etc.)
  Instant Messaging (e.g. Skype, MSN, QQ, Gtalk)

Collaboration/authority building

  Wikis (e.g. Wikipedia, Wikispaces, Baidu Baike)
  Social Bookmarking/Tagging (e.g. Delicious, GoogleReader, CiteULike)
  Social News (e.g. Digg, BBC, New York Times, Sina News, Sohu News, etc.)
  Document Managing and Editing (e.g. Google Docs)

Multimedia

  Photo Sharing (e.g. Flickr, Picasa)
  Video Sharing (e.g. YouTube, Tudou, Youku)
  Music and audio Sharing (e.g. Last.fm, Xiami, Douban music, Pandora, etc.)

Entertainment

  Virtual Worlds (e.g. SecondLife)
  Community Q&A (e.g. ask.com, Yahoo!Answers, Baidu Zhidao)

Other (please specify)
Appendix D

Questions for Media Use

For each of the social media, could you answer the following questions?

How long have you been using it?

How frequently do you use it?

What do you usually do with it?

Can you give me some typical events for example?

   Who were involved? Could you please describe the relationships?

   What were you doing with it? Any activity before or after that?

   How did you use it for this activity?

   Could you tell the reason why you use it?

   Could you identify whether it is about American identification or Chinese identification?

What is your purpose of using it for this activity?

   E.g. Get opinions, entertain yourself, Socialize, Stay up-to-date with friend's life, Share your experience, Communicate with family and friends, Share Videos/ Pictures, Make new friends

   Relationship, Keep up-to-date with social events, work and study, etc.

   (the list was evolving along the interview study)
Appendix E

Informed Consent Form for the Questionnaire Study

Thanks for participating in this study. This study is a survey on how Chinese students in the United States use social media such as Facebook, Renren, and Weibo. To participate in this study, you need to be a Chinese student who has been studying in the United Stated for at least one year.

The survey should take about 10 minutes to complete. We would like you to answer all the questions, but you may skip any questions that you don’t feel comfortable answering. Also, your responses will not be saved and recorded until you click the “Submit your survey” button at the end of the survey. This means that the survey must be completed in one sitting.

You will be entered into a random lottery to win one of 6 prizes of $50 (by check) after completing this survey. You can also request a copy of the survey findings. To be entered into the lottery and/or to receive the survey findings, your email address will be required at the end of the survey. Your name and postal mail address will be further required if you win the prizes. However your personal information will not be linked with your survey responses, nor will we share your personal information with anyone for any reason.

Participation in this study is voluntary. If you choose to participate, you may stop at any time without any penalty. But you will receive opportunity to enter the lottery only when you complete the survey.

This study is approved by the Institutional Review Board (IRB) of Pennsylvania State University with Protocol ID: 34711 for the protection of human research participants. Please contact Dr. John M. Carroll by email at jcarroll@ist.psu.edu with questions, complaints or concerns about this research.

Click “Next” button if you agree with this informed consent form, and are ready to participate.
Appendix F

Social Media Use Questionnaire (American SNS)

In this page, we ask about your use of American social network sites (e.g. Facebook). By "American social network sites" we mean: 1) usually US-based and used by people from different countries (so we exclude sites such as Renren and Kaixin); 2) we discriminate social network sites from microblogs (so we exclude sites such as twitter). Typical American social network sites include Facebook, Myspace, etc.

How often do you use American social network sites (for example, Facebook, Myspace) for following uses?

0 (Never)  1  2  3 (Sometimes)  4  5  6 (Very Often)

1) Sharing or reposting funny or informative articles, videos, etc. (共享、转载)
2) Keeping updated with friends' status (朋友动向)
3) Sharing opinions and commentaries publicly (撰写观点、评论)
4) Interacting with friends (e.g. chatting, posting, commenting) (好友互动)
5) Posting, replying, or browsing in social groups (群组)
6) Managing your private photos and diaries (私人日志、私人照片)
7) Updating status or photos that are visible to others (状态更新、照片分享)
8) Staying connected or reconnecting (保持联系)
9) Playing social games, and other applications (游戏、各种 apps)
10) Information searching (搜索信息)
11) Work collaboration & study (工作学习)
12) Keeping updated about social news (社会新闻)
13) Meeting new people (建立新联系)
14) Organizing or joining social events (组织、参与社会活动)
Appendix G

Social Media Use Questionnaire (Chinese Microblogs)

In this page, we ask about your use of Chinese microblogs (e.g. Weibo). By "Chinese microblogs" we mean: 1) China-based and merely used by Chinese (so we exclude sites such as Twitter); we discriminate microblogs from other social network sites (so we exclude sites such as Renren). Typical Chinese microblogs include Sina Weibo, Tencent Weibo, etc.

How often do you use Chinese microblogs (for example, Sina Weibo, Tencent Weibo) for following uses?

<table>
<thead>
<tr>
<th>0 (Never)</th>
<th>1</th>
<th>2</th>
<th>3 (Sometimes)</th>
<th>4</th>
<th>5</th>
<th>6 (Very Often)</th>
</tr>
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<tr>
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</tbody>
</table>

1) Sharing or reposting funny or informative articles, videos, etc. (共享、转载)
2) Keeping updated with friends' status (朋友动向)
3) Sharing opinions and commentaries publicly (撰写观点、评论)
4) Interacting with friends (e.g. chatting, posting, commenting) (好友互动)
5) Posting, replying, or browsing in social groups (群组)
6) Managing your private photos and diaries (私人日志、私人照片)
7) Updating status or photos that are visible to others (状态更新、照片分享)
8) Staying connected or reconnecting (保持联系)
9) Playing social games, and other applications (游戏、各种 apps)
10) Information searching (搜索信息)
11) Work collaboration & study (工作学习)
12) Keeping updated about social news (社会新闻)
13) Meeting new people (建立新联系)
14) Organizing or joining social events (组织、参与社会活动)
Appendix H

Social Media Use Questionnaire (Chinese SNS)

In this page, we ask about your use of Chinese social network sites (e.g. Renren). By "Chinese social network sites" we mean: 1) China-based and used merely by Chinese (so we exclude sites such as Facebook); 2) we discriminate social network sites from microblogs (so we exclude sites such as weibo). Typical Chinese social network sites include Renren, Kaixin001, Xiaonei, etc.

How often do you use Chinese social network sites (for example, Renren, Kaixin, Xiaonei) for following uses?

0 (Never) 1 2 3 (Sometimes) 4 5 6 (Very Often)

1) Sharing or reposting funny or informative articles, videos, etc. (共享、转载)
2) Keeping updated with friends' status (朋友动向)
3) Sharing opinions and commentaries publicly (撰写观点、评论)
4) Interacting with friends (e.g. chatting, posting, commenting) (好友互动)
5) Posting, replying, or browsing in social groups (群组)
6) Managing your private photos and diaries (私人日志、私人照片)
7) Updating status or photos that are visible to others (状态更新、照片分享)
8) Staying connected or reconnecting (保持联系)
9) Playing social games, and other applications (游戏、各种 apps)
10) Information searching (搜索信息)
11) Work collaboration & study (工作学习)
12) Keeping updated about social news (社会新闻)
13) Meeting new people (建立新联系)
14) Organizing or joining social events (组织、参与社会活动)
Appendix I

Social Media Use Questionnaire (American Microblogs)

In this page, we ask about your use of American microblogs (e.g. Twitter). By "American microblogs" we mean: 1) usually US-based and used by people from different countries (so we exclude sites such as Sina Weibo); 2) we discriminate microblogs from other social network sites (so we exclude sites such as Facebook). Typical American microblogs include Twitter.

How often do you use American microblogs (for example, Twitter) for following uses?

0 (Never)  1  2  3 (Sometimes)  4  5  6 (Very Often)

1) Sharing or reposting funny or informative articles, videos, etc. (共享、转载)
2) Keeping updated with friends' status (朋友动向)
3) Sharing opinions and commentaries publicly (撰写观点、评论)
4) Interacting with friends (e.g. chatting, posting, commenting) (好友互动)
5) Posting, replying, or browsing in social groups (群组)
6) Managing your private photos and diaries (私人日志、私人照片)
7) Updating status or photos that are visible to others (状态更新、照片分享)
8) Staying connected or reconnecting (保持联系)
9) Playing social games, and other applications (游戏、各种 apps)
10) Information searching (搜索信息)
11) Work collaboration & study (工作学习)
12) Keeping updated about social news (社会新闻)
13) Meeting new people (建立新联系)
14) Organizing or joining social events (组织、参与社会活动)
Appendix J

Chinese Identification Questionnaire: MEIM (CN)

For the ethnic group of CHINESE, please indicate how much you agree with each statement:

0 (not at all)  1  2  3 (moderately agree)  4  5  6 (strongly agree)

1) I have spent time trying to find out more about this ethnic group (i.e. Chinese), such as its history, traditions, and customs.
2) I am active in organizations or social groups that include mostly members of this ethnic group (i.e. Chinese).
3) I have a clear sense of this ethnic (i.e. Chinese) background and what it means for me.
4) I think a lot about how my life will be affected by being in this group (i.e. Chinese).
5) I have a strong sense of belonging to this group (i.e. Chinese).
6) I have often talked to other people about this ethnic group (i.e. Chinese).
7) I have a lot of pride in this ethnic group (i.e. Chinese).
8) I participate in cultural practices of this group (i.e. Chinese), such as special food, music, or customs.
9) I feel a strong attachment towards this group (i.e. Chinese).
10) I feel good about this cultural or ethnic (i.e. Chinese) background.
Appendix K

American Identification Questionnaire: MEIM (US)

For the ethnic group of AMERICAN, please indicate how much you agree with each statement:

0 (not at all) 1 2 3 (moderately agree) 4 5 6 (strongly agree)

1) I have spent time trying to find out more about this ethnic group (i.e. American), such as its history, traditions, and customs.
2) I am active in organizations or social groups that include mostly members of this ethnic group (i.e. American).
3) I have a clear sense of this ethnic (i.e. American) background and what it means for me.
4) I think a lot about how my life will be affected by being in this group (i.e. American).
5) I have a strong sense of belonging to this group (i.e. American).
6) I have often talked to other people about this ethnic group (i.e. American).
7) I have a lot of pride in this ethnic group (i.e. American).
8) I participate in cultural practices of this group (i.e. American), such as special food, music, or customs.
9) I feel a strong attachment towards this group (i.e. American).
10) I feel good about this cultural or ethnic (i.e. American) background.
Appendix L

Bicultural Identity Integration (BII) Questionnaire

Please use the numbers below to indicate how much you agree or disagree with each statement:

1 (strongly disagree)  2  3  4 (neutral)  5  6  7 (strongly agree)

1) I keep American and Chinese cultures separate.
2) I usually feel conflicts between American and Chinese cultures.
3) I am simply a Chinese who live in America.
4) Chinese culture and American culture are just compatible.
5) Cultural difference is not a big problem for me.
Appendix M

Cultural Shock Questionnaire

Please use the numbers below to indicate how much you agree or disagree with each statement:

1 (strongly disagree)   2   3   4 (neutral)   5   6   7 (strongly agree)

1) I feel strain from the effort to adapt to a new culture.
2) I have been missing my family and friends back home.
3) I feel generally accepted by the local people in the new culture.
4) I wish to escape from my new environment altogether.
5) I feel confused about my role or identity in the new culture.
6) I have found things in my new environment shocking or disgusting.
7) I feel helpless or powerless when trying to cope with the new culture.
Appendix N

Social Media General Questions

1. How many hours do you averagely spend on social media (e.g. Facebook, Renren, Weibo) per day?

2. How often do you use following social media?

   0 (Never)  1 (annually)  2 (monthly)  3 (weekly)
   4 (every couple of days)  5 (daily)  6 (hours per day)

1) American social network sites (e.g. Facebook)
2) American microblogs (e.g. Twitter)
3) Chinese social network sites (e.g. Renren)
4) Chinese microblogs (e.g. Weibo)

3. Could you please roughly estimate how many PERCENT of people in your American social network sites (e.g. Facebook) are Chinese? (Please enter a number between 0 and 100; ignore the question if you do not use it)

4. Could you please roughly estimate how many PERCENT of people in your American microblogs (e.g. Twitter) are Chinese? (Please enter a number between 0 and 100; ignore the question if you do not use it)
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