

Global Village or Urban Jungle: Culture, Self-Construal, and the Internet

Stephen Biggs ¹

Cultural psychologists have known for some time that self-perception or self-construal is mediated in large measure by cultural boundaries and structures like geography: for example, that agrarian and collectivist cultures are more interdependent than so-called Western or individualistic cultures. Modern communication technologies like the Internet are blurring the distinctions between cultures and tearing down geographic boundaries, creating questions about the implications for the psychology of self. In this paper are addressed the psychological implications of the global network as a cultural context and whether the Internet promotes an individualistic or interdependent sense of self.

IT IS a safe assertion that modern communication technologies like the Internet have the potential to tear down geographic boundaries and blur the distinctions between what have been thought of as traditional cultures. So what are the implications for those cultures and the individuals therein? What are the implications for the psychology of self? In this paper I would like to address the psychological implications of the global network as a cultural context and whether the Internet promotes an individualistic or interdependent sense of self. This paper is an attempt to sort out a number of ideas in preparation for an empirical study of the relationship between self-construal, culture, and Internet use. I will begin with a cursory examination of current Internet use and what psychologists have said so far about the impact on individuals. The core of my work evolves from the cultural perspective in psychology that attempts to contextualize human experience and perception of self in relation to culture, which is essential if we are to examine the culture of the Internet and the impact it has on its netizens.

Life Online

IT HAS been estimated that 66 million Americans were online in 1998, 83 million in 1999 (Intellicquest, 1999, April 19), and currently just over half of the population of the United States (Moore, 2000, February 23). The American public is overall quite optimistic about computer use and the growth of Internet access (Pew Internet Study, 2000). We are witnessing an unbridled enthusiasm for the Internet. A recent Gallup poll (Moore, 2000, February 23) found the public to be engaged in a number of online activities from gathering information (95% of users) and e-mail (89% of users) to chat (21% of users) and online shopping (45% of users). Perhaps most important is the finding that well over half of Americans have Internet and e-mail access in their

¹ Stephen Biggs, MA is a PhD candidate in clinical psychology in the Psychology Department, York University, Behavioural Sciences Building, 4700 Keele Street, Toronto, Ontario, Canada M3J 1P3 (sbiggs@yorku.ca). The author thanks the students in his Research Methods course whose Honour's Theses inspired this project: Jane Heyes and Letizia Roppa for their work on self-construal and geographic variables, and Kathryn Mullrooney, Anthony Benvides, and Marta Stanczyk for their work on loneliness, isolation, and Internet use.

homes (NPR Online, 2000, February 29).

Despite recent concerns over online security, the public's drive to use the Internet for commercial purposes remains undeterred. Recent polls have shown that people have very positive views of computers and the Internet. Of those who use the Internet, 72% of American users believed it had improved their lives (Moore, 2000, February 23). A joint poll conducted by National Public Radio, the Kaiser Family Foundation, and Harvard's Kennedy School of Government had nearly identical results (NPR Online, 2000, February 29) and not surprisingly indicated that children are even more optimistic about computers than their parents. However, these results are tempered with concerns about the personal impact of technology on social relations, with reports of spending less time with family. Researchers are only just beginning to investigate how the growth in information technology use will affect individuals and society more broadly.

Internet Use and Social Isolation

RECENT STUDIES have raised some concern about the potential negative impacts of the new media. There is growing controversy among social scientists regarding the cognitive and emotional effects of the Net on its netizens, with particular attention on the potential for computer-mediated textual communication to provide a means of social connection. Specifically, among psychologists, a body of evidence has been growing which would seem to point to some startling contradictions. While on the surface the technology looks like it promotes social connection and interconnection, psychologists are finding the opposite to be true for a number of users. Psychologists at Carnegie Mellon University conducted a longitudinal study on this very issue (heavily funded by major players in new media: Apple, AT&T, Bell Atlantic, CNET, Intel, Hewlett-Packard, and Lotus). The researchers (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, & Scherlis, 1998) examined how connectivity would impact on social adjustment variables. What they found was a seemingly paradoxical relationship between increased connectivity and increased social isolation. While the Internet provided a potential increase in the number of social connections, in many instances those connections differed markedly from the kinds of relationships that people foster offline. People online tended to put their best face forward, to present their ideal selves (McKenna, 1999; Miller, 1995, June).

This is no different from what we attempt to do in the offline world. However, the constrained quality of online communication removes much of the information that is present in offline communication. Many netizens have developed online relationships, only to discover that the person they knew so well online wasn't quite the person they imagined offline (Biggs, 2000). I'm not talking about the sensationalized stories of 50-year-old men masquerading as teenage girls, but average folks who, when I interviewed them, had a real conviction that they were honest about who they were and felt that their cybermate was as well. They also described how in meeting people face to face they weren't confronted with someone they didn't know, as much as there was a lot more about the person they hadn't anticipated (Biggs, 2000). Some venues for online communication discourage discussion outside of the defined topics of the e-mail list, bulletin board, or chat room. As a point of interest, there is anecdotal evidence to suggest that gays and lesbians seem to have greater success in making the transition from online to offline relationships (Jo Bower & Maria Gurevich, personal communication, January 1, 2000). Another factor

at work is that online discourse tends to be slower and more time-consuming than offline communication. So the kind of situation that develops is one in which people are taking time away from a core, offline, differentiated social support network and substituting it with more tenuous, two-dimensional, and less supportive online social connections.

What the Carnegie Mellon study showed was that time spent away from face-to-face social interaction affected mood, loneliness, and social adjustment (Kraut et al., 1998). And these findings have since been replicated in a number of environments. Participants in the controversial Stanford University study indicated that they spent time online at the expense of other social activities (Nie & Erbring, 2000). Research looking more directly at the relationship between Internet use and social isolation showed a clear relationship between number of hours online and social and emotional isolation and loneliness (Mullrooney, Benevides, & Stanczyk, 2000). In a recent study of 1300 college students at eight institutions, 10% of participants in the study used the Internet to the degree that it interfered with their studies (Anderson, 1999, August). While there have been reactions to these findings, conflicting results seem to occur only where there have been offline channels of communication as well as online. For example, in the very recent work from the Pew Internet Project (2000) it was discovered that women found the Internet afforded them the opportunity to have more contact with *established* social connections, friends, and family and made them feel more connected and emotionally supported.

With respect to the psychological research that has so far been done on the impact of new media on society, it would be fruitless to raise the specter of Internet addiction or to debate whether computers are unplugging our minds. What is most striking is the failure to contextualize the individual experience of the Internet user in any broader social context. These previous studies are limited in that they focus on personality variables apart from the cultural environment context of human experience. I am sure, many would argue that such examinations are outside the realm of psychology. However, there is a long-standing tradition of cultural and cross-cultural psychology that was at least anticipated (if not founded) by the German father of modern psychology, Wilhelm Wundt (Danziger, 1983).

Culture and Psychology: Self-Construal

WHILE the traditional cross-cultural perspective in psychology pointed out how the individualistic West differed from the collectivist East in the espousal of individual-oriented values over those of family and state, it didn't take an anthropological microscope to see that many collectivist values are valued in the West, patriotism for example, and the continued adherence to rules of class and socioeconomic stratification. Americans may, for example, speak of the pursuit of liberty, but that is within the context of socialized, "culturized" or "collectivized" rules or means, which are endorsed by the group. Distinctions are often drawn between the points of self-reference between individualists and collectivists, but I believe these are really more semantic and bound to language than to any external phenomenon. For example, the oft-cited work by Triandis, McCusker, and Hui (1990) showed a contrast between North American and Chinese students, in that the former would more often choose personal descriptors that are idiocentric (reflecting personal qualities over the espousal of group goals). A North American might make a statement like, "I am intelligent"; however, it might be argued that he or

she (like the collectivist) was also adhering to group goals and standards. Indeed, he or she was identifying with the broader culture of intelligent people and subordinating him- or herself to the structure of that group.

Until the 1990s, when psychologists addressed cultural difference they thought in terms of these collectivist and individualist identities and societies, and perhaps this is true of other disciplines, as well. Coincident with the shift in relations between East and West, cultural psychologists began looking at more differentiated and, in many ways, more meaningful variables in relation to culture and identity. Notably, Marcus and Kitayama (1991) and Singelis (1994, 1995) developed a conceptual framework that examined individual self-perception or, more accurately, self-construal in relation to cultural identity. They divided this construct into two variables, independent and interdependent, and proposed that these were not orthogonal or mutually exclusive, but rather coexist in a person on continua, supported or suppressed by cultural determinants (Singelis, Bond, Sharkey, & Lai, 1999). Independent self-construal is singular and stable, tempered by an emphasis on internal abilities, thoughts, feelings, and the importance of being unique and the promotion of personal goals. Interdependent self-construal is flexible and variable, emphasizing public roles, relationships, and fitting in or occupying one's proper place. The advantage of using self-construal as a model for describing the individual in relation to society is that it allows for varying degrees of both independent and interdependent perceptions of self in relation to culture. Not surprisingly, individually these variables were highly correlated with the more traditional concepts of individualism and collectivism (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Youn, 1999) as self-perception or self-construal was mediated in large measure by cultural boundaries and structures like geography; for example, rural and collectivist cultures were more interdependent (Heyes & Roppa, 2000; Olowu, 1985) than so-called urban or individualistic cultures (Triandis, 1989).

Considering the potential overlap between independent and interdependent variables one can, for example, see how aspects of a collectivist culture might be found in individualistically oriented societies. Persons in more Westernized cultures will predominantly have self-perceptions that are stable across situations, or at least persons from an individualistic background will think of themselves in that light. Persons in a collectivist society will stress the similarities they share with an identifiable group; however, this might also be said of those in the West. I would draw a distinction between what we purport to value and what is in fact reality. I believe there is a gap between the two. To broaden this a little, culture might stand for any community that has some unifying characteristic: religious (Christian or Jew), geographical (Asian, African), temporal (baby boomers, Gen-X'ers), medical (people living with AIDS or cancer), psychiatric, (manic, schizophrenic), characterological (introverted/extroverted, morning people, night people) and even transient—I may become, for a time, part of the culture of persons having a bad hair day. All of the cultural contexts in which I find myself form my self-construal. I may aspire to be stable across the different domains of my existence, but this would in effect limit my experience of myself. If we look at the examples I have given, it is conceivable that one is part of many cultures and that it is not possible to identify with one only; to do so would be an exercise in curbing self-awareness (Heatherton & Baumeister, 1991). But conceivably there might be a culture of culturally limited individuals.

Since its inception the construct of self-construal has generated a great deal of academic work

in the area of culture and identity and adaptive functioning. In an examination of sex differences, Cross and Madson (1997) found that men had more independent perceptions of self, while women had more interdependent self-construals. Interestingly, it seems that self-construal is mediated not only by sex or politics, but also by socioeconomic status. In a predominantly interdependent culture, those with a higher socioeconomic status were more likely to individualize their place in that culture (Reddy & Gibson, 1999). Age seemed to have a similar effect, at least in some Asian societies, where the older an individual was the more independent their self-construal (Takata, 1999). With respect to interpersonal relationships and functioning, evidence indicated that independent self-construal was related to competitiveness (Oetzel, 1998a), while persons with a more interdependent self-construal were better at resolving conflicts (Oetzel, 1998b). In addition, psychological problems such as depression seemed to occur when an individual's mode of self-construal was incongruent with the predominant or professed mode of the social structures within which they lived and worked (Bissiri, 1999), what colloquially is known as culture shock. And finally, with respect to media, the personal appeal of advertising has been found to be mediated in some part by self-construal. For example, advertisements that portray "connectedness" or "togetherness" appealed to interdependent individuals, while ads that supported autonomous behavior appealed to independent persons (Lu Wang, Bristol, Mowen, & Chakraborty, 2000). Yet despite this breadth of work, there is nothing in the peer-reviewed psychology literature that looks at self-construal as it relates to any other media, in particular the new media.

Internet as Culture

IT IS not clear what impact the Internet will have on the psychology of the self, especially as it becomes more global and works its way into traditionally interdependent and rural cultures. There is the potential for a radical modification of interdependent views of self in relation to community. It would seem that the Internet is allowing aspects of differing cultures (collectivist and individualist) to leak or blur into each other. Considering the myriad of netizens and their varied interests, what kind of culture does the Internet constitute? Is the Internet predominantly a collectivist culture, or an individualistic culture? Does the Internet provide the intimate spaces of small-town life or neighborhoods, or does it promote the anonymity (or pseudonymity) of metropolitan life? Or, for that matter, is it a place without privacy, where everyone can peer over the fence into your back yard, where everybody knows your business, or perhaps a friendlier place, where everybody knows your name? Is cyberspace a friendly place? Are we really talking about a global village or some kind of urban jungle?

With respect to self-construal, it is challenging to consider whether we attach any value to one culture over another, particularly in determining the healthy ecological affiliations in relation to those that are pathological or dysfunctional. As a clinical intern I would argue that value is ascribed to those affiliations that are satisfying and nurturing emotionally, and cognitively, affiliations that promote growth. So, what of the computer-mediated affiliations of Net culture? The Net offers the opportunity for a seemingly infinite number of affiliations, or at least more than you could possibly explore in a lifetime, but do these affiliations promote growth?

A brief essay by Ellen Ullman (2000) in *Harper's Magazine* captures the essence of these is-

sues very nicely. She confronts head-on some fundamental aspects of the new media. She argues very perceptively that the increasingly commercial Internet appeals to a very childlike narcissism, a certain *meism*. Ullman derides the euphemisms of the new media: “My Computer, My Yahoo™, My Snap™.” The medium enforces upon us a kind of singular way of being. For example, I share my computer, at home, with my wife, and we are constantly confronted by software and online forms that force us to individualize ourselves, to separate our presentations of self in the world of the computer. It is difficult to be a pair or group online. Have you ever tried to surf the Net with your friend or a significant other? Unlike with television, radio, or hardcopy print, an Internet user can tailor his or her experience to a degree that is unparalleled by other media. Portal sites, NetRadio™, Napster™, customizable news services, individually crafted shopping experiences (Gilmore & Pine, 2000; Pine & Gilmore, 1999): These and the myriad of choices offered to users ensure a highly personalized experience. These are all tools of personalization taken to the extreme. And I think they lead to a kind of hyper-individuation that if left unchecked will defuse social connection and, more important, social responsibility. The Internet offers us the promise of a virtual experience without the clutter of offline life: Shop from home, travel from home, work from home, you can even see your therapist from home. It is, as Ullman points out, “the ultimate suburbanization of existence.” Ironically, some have feared that information technologies might make urban space obsolete (Naisbitt & Aburdene, 1990); however, it may be more likely to supersede suburbia.

Last year at the *Technology and Identity* conference at Cornell University, Ken Gergen (1999, March) talked about the phenomenon of ideological silos that can occur on the Internet, as they offer otherwise isolated persons an opportunity to find a shared voice and consolidate their points of view, even when unsupported by cultural mores. Obviously, this can be either good or bad, depending on whether you value the views of those in the particular group; but what the Net does not provide as yet is a virtual commons where, as in offline life, we are forced to confront and share dialogue with those who have different views.

Andrew Shapiro (1999, June 21), director of the Aspen Institute Internet Policy Project and a fellow media ecologist (though perhaps he doesn't know it), also addresses this issue of personalization. He notes that there is “plenty to like about personalization. But...customizing our lives to the hilt could undermine the strength of cohesion of local communities, many of which are already woefully weak” (p. 1). That is not to say that Net life does not provide the opportunity for shared experience, but how often is it tied to the user's local life? And notably, the most cohesive and long-standing online communities, the cultures that survive, are ones where the participants have met offline initially and or live relatively close to each other (pp. 2–3).

Considering the potential impacts of disintermediation, personalization, and hyper-individuation, can the Web be viewed as a unified culture, or is it more accurately described as a collection of one-dimensional affiliations? As a researcher I am interested in finding whether individuals can adjust to Net life and continue to function effectively offline as well as on. Self-construal is malleable; it can be primed or modified (Gardner, Gabriel, & Lee, 1999), so perhaps it is possible. It is also possible that in order to function in a wired world we may need to become more bicultural (high on both independence and interdependence). Availability of both types may be necessary to communicate and function in a multicultural environment (Yamada & Singelis, 1999). Until research is applied to these questions, this is all just conjecture. As I mentioned at

the beginning of this essay, these musings have been a means of sorting out some of my thinking with the goal of carrying out some empirical research on these phenomena. To that end, I plan to have begun an exploration of self-construal, as it is mediated by geographic locality, community size, and language, in relation to Internet use and reported social isolation and loneliness. Perhaps we'll follow up at the next MEA conference.

Epilogue

DURING his keynote address to the inaugural Media Ecology Association convention, Neil Postman (2003) asked us to consider morality in relation to technology and methods of communication. As part of that call we were also reminded to consider how technology informs its use. That is to say, how does any technology dictate the way that the technician or user uses it? It is this very point of inquiry that drew me from the discipline of psychology to media ecology, through the works of such scholars as Walter Ong (1982), Ilich and Sanders (1989), and Marshall McLuhan (1967). I believe it is incumbent upon us not only to study and examine these phenomena but also to act. I can't say that I have a quick prescription—the issues are complex and bear a great deal more study—but we can at least begin to think about how to make the new media a civil media, not just a personal media.

References

- Anderson, K. J. (1999, August). *Internet use among college students: An exploratory study*. Paper presented at the Annual Conference of the American Psychological Association, Boston, MA.
- Biggs, S. (2000). "Charlotte's Web": How one woman weaves positive relationships on the Net. *Cyberpsychology and Behavior*, 4, 655–663.
- Bissiri, K. A. (1999). Self-construals, culture change, and the expression of distress in Chinese and Chinese Americans. *Dissertation Abstracts International Section-B: The Sciences and Engineering*, 59(10-B), 5569.
- Cross, S. E., & Madson, L. (1997). Models of self: Self-construals and gender. *Psychological Bulletin*, 122, 5–37.
- Danziger, K. (1983). Origins and basic principles of Wundt's voelkerpsychologie. *British journal of Social Psychology*, 22, 303–313.
- Gardner, W. L., Gabriel, S., & Lee, A. Y. (1999). "I" value freedom, but "we" value relationships: Self-construal priming mirrors cultural differences in judgment. *Psychological Science*, 10, 321–326.
- Gergen, K. (1999, March). Keynote speech at the *Conference on Technology and Identity*, Cornell University, Ithaca, NY.
- Gilmore, J. H., & Pine, B. J. (2000). *Markets of one: Creating customer-unique value through mass customization*. Cambridge, MA: Harvard Business School Press.
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge-eating as escape from self-awareness. *Psychological Bulletin*, 110, 86–108.
- Heyes, J., & Roppa, L. (2000). *A rural-urban study on the relationship between self-esteem and interdependence and independence*. Unpublished manuscript, York University, Toronto, Ontario, Canada.
- Ilich, I. & Sanders, B. (1989). *ABC: The alphabetization of the popular mind*. New York: Vintage.
- Intelliquest. (1999, April 19). *Intelliquest study shows 83 million Internet users and 56 million online shoppers*. Press release retrieved September 9, 1999, available at <http://www.intelliquest.com/press/archive/release78.asp>

- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53, 1017–1031.
- Lu Wang, C., Bristol, T., Mowen, J. C., & Chakraborty, G. (2000). Alternative modes of self-construal: Dimensions of connectedness-separateness and advertising appeals to the cultural and gender-specific self. *Journal of Consumer Psychology*, 9(2), 107–115.
- Marcus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*, 98, 222–253.
- McKenna, K. Y. A. (1999). The computers that bind. Relationship formation on the Internet. *Dissertation Abstracts International Section-A: Humanities and Social Sciences*, 59(7-A), 2236.
- McLuhan, M. & Fiore, Q. (1967). *The medium is the message: An inventory of effects* (produced by J. Agel). New York: Bantam.
- Miller, H. (1995, June). *The presentation of self in electronic life: Goffman on the Internet*. Paper presented at the Virtual Knowledge and Virtual Space Conference, Goldsmiths' College, University of London. Retrieved December 16, 1999 from <http://www.ntu.ac.uk/soc/psych/miller/goffman.htm>. Available at <http://ess.ntu.ac.uk/miller/cyberpsych/goffman.htm>
- Moore, D. W. (2000, February 23). *Americans say Internet makes their lives better*. The Gallup Organization, Princeton, NJ. Poll analysis retrieved March 3, 2000 from <http://www.gallup.com/poll/releases/pr000223.asp>
- Mullrooney, K., Benevides, A., & Stanczyk, M. (2000). *The relationship between Internet use and isolation and loneliness*. Unpublished manuscript, York University, Toronto, Ontario, Canada.
- Naisbitt, J., & Aburdene, P. (1990). *Megatrends 2000: Ten new directions for the 1990's*. New York: William Morrow.
- Nie, N. H., & Erbring, L. (2000). *Internet and society: A preliminary report*. Stanford, CA: Stanford Institute for the Quantitative Study of Society. Retrieved February 28, 2000 from http://www.stanford.edu/group/siqss/Press_Release/Preliminary_Report.pdf
- NPR Online. (2000, February 29). *Survey shows widespread enthusiasm for high technology: Americans love their computers and the Internet; "Digital Divide" exists but there is good news, too*. Retrieved March 3, 2000 from <http://www.npr.org/programs/specials/poll/technology/index.html>
- Oetzel, J. G. (1998a). Culturally homogeneous groups: Explaining communication processes through individualism-collectivism and self-construal. *International Journal of Intercultural Relations*, 22, 135–161.
- Oetzel, J. G. (1998b). The effects of self-construals and ethnicity on self reported conflict styles. *Communication Reports*, 11, 133–144.
- Olowu, A. A. (1985). Differential effects of rural and urban upbringing on Nigerian adolescents' self concept. *Psychological Reports*, 56, 293–294.
- Ong, W. J. (1982). *Orality and literacy: Technologizing the word*. London and New York: Routledge.
- Pew Internet Project. (2000, May 10). *Tracking online life: How women use the Internet to cultivate relationships with family and friends*. Retrieved May 10, 2000) from <http://www.pewinternet.org/reports/toc.asp?Report=11>
- Pine, B. J., & Gilmore, J. H. (1999). *The experience economy: Work is theatre and every business a stage*. Cambridge, MA: Harvard Business School Press.
- Postman, N. (2003). The humanism of media ecology. *Proceedings of the Media Ecology Association 1*, 10–16. Available at http://www.media-ecology.org/publications/proceedings/v1/humanism_of_media_ecology.html
- Reddy, R., & Gibbons, J. L. (1999). School socioeconomic contexts and adolescent self-descriptions in India. *Journal of Youth and Adolescence*, 28, 619–631.
- Shapiro, A. L. (1999, June 21). The Net that binds: Using cyberspace to create real communities [Electronic version]. *The Nation* 268(23), 11–14. Retrieved July 6, 1999 from <http://www.thenation.com/doc.mhtml?i=19990621&s=shapiro>
- Singelis, T. M. (1994). The measure of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, 20, 580–591.

- Singelis, T. M. (1995). Culture, self, and collectivist communication: Linking culture to individual behavior. *Human Communication Research, 21*, 354–389.
- Singelis, T. M., Bond, M. H., Sharkey, W. F., & Lai, K. S. Y. (1999). Unpackaging culture's influence on self-esteem and embarrassability: The role of self-construals. *Journal of Cross-Cultural Psychology, 30*, 315–341.
- Singelis, T. M., Triandis, H. C., Bhawuk D., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross Cultural Research: The Journal of Comparative Social Science, 29*, 240–275.
- Takata, T. (1999). Development process of independent and interdependent self-construal in Japanese culture: Cross cultural and cross-sectional analyses. *Japanese Journal of Educational Psychology, 47*, 480–489.
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96*, 506–520.
- Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology, 59*, 1006–1020.
- Ullman, E. (2000, May). The museum of me. *Harper's Magazine, 300*, 30–33.
- Yamada, A. M., & Singelis, T. M. (1999). Biculturalism and self-construal. *International Journal of Intercultural Relations, 23*, 697–709.
- Youn, I. (1999). The culture specificity of epistemological beliefs about learning. *Dissertation Abstracts International Section-A: Humanities and Social Sciences, 59*(7-A), 2351.