

Forecasting the Mega Trends of Korean Women's Life Style Under the Ubiquitous Technology Environment[†]

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Abstract: Development of technology in the 20th century has made great contributions to women's lives. With the development of digital convergence, home network, and DMBs (Distance Method Bracings), the ubiquitous technology information era is expected to create a new progressive era for women. The purpose of this study is to investigate the lifestyle that Korean women would like to pursue, especially in regards to the sense of value within the personal and social life of each individual. As a method to suggest how the socio-cultural trends of women's lifestyle will change in the ubiquitous era, qualitative interviews have been conducted over 6 groups with 77 persons between the digital ages of 20s and 30s, living in Seoul. The majority had positive opinions regarding the economic, cultural, emotional, and physical prospects of the ubiquitous information environment. Results show high expectations evolved around freedom from household chores, the equality between the sexes (at home and in society), enhancing the working environment at home, an expansion of human relationships leading to creative knowledge, being able to maintain a single life without economic constraints, and the enjoyment that the internet provides. For suggestions to improve the quality of women's lifestyle through ubiquitous technology, issues such as individual based customization, time management, creating emotional hyperspaces, multi-media communication systems, and women as leaders were studied.

Key Words : ubiquitous computing technology, women's lifestyles, the creation of digital convergence, mega socio-cultural trends

I. Introduction

According to the urban sociologist Manuel Castells, the digital network society emerged following the path of various social revolutions and the fast-breaking technological revolution of the last two decades. Along with the telecommunications revolution, the changes in the environment entailed an immediate change in the lifestyle of customers (Sergio, 2000).

The rapid growth in digital mobile communication technology has brought about a considerable transition. The new message of "Only the first noticeable goods and service can survive in the digital world" as "The

winner takes all" (Robert *et al.*, 1981) has prevailed in the digital world. The ubiquitous era will in effect change the culture of the world since technology directly affects the actual communications between people in conjunction with the environment.

In Korea (where the transition towards a digital conversion is among the fastest in the world), a new generation dubbed the 'N-Generation' has created a large group of early adapters. As a result, Korea is experiencing rapid changes and development that enables the country to function as a test market for information related products. In addition, the digital age has had a tremendous affect on female attitudes and

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roles, because digital has very little requirements for physical strength. These advanced digital devices have already merged with women's lifestyle, transcending generations defying physical and psychological limitations that influence activities both within the home and out in society. Women's attitudes towards life are undergoing a major transition in modern Korea. Now, four out of ten unmarried women think it is acceptable to stay single. More women are becoming involved with society itself as well as with a mass of online communities, commercial clusters, and interest groups. A lesser number of couples are staying married and the birth rate has recently hit a historic low. In order for Korea to reach a target per capita income of \$30,000, the potential of women's professionalism must be optimized.

There has been little research regarding the relationship between ubiquitous technology and the lifestyle of women in Korea. There are even lesser cases of qualitative analysis. Considering how ubiquitous technology will revolutionize the future on a global scale, the socio-cultural mega trend of women's lifestyle is interesting, as women would play a significant role in leading a future ubiquitous society. This study is to provide basic trend analysis data by conducting a qualitative focus group interviews. The topic concerns what women in the digital age expect in a world which ubiquitous technology has become a norm.

II. Theoretical Background

1. Notes on the Concept of Ubiquitous Technology

Ubiquitous is in line with the environment or space in which the information communication technology between on/offline systems, communications, broadcasting, and electronics, are all integrated into one enabling next generation communication services (Michael, 2003). Mark Weiser at Xerox PARC first introduced the term ubiquitous computing in 1991 through a paper

entitled *The Computer for the 21st Century* in the September edition of the renowned science journal, *Scientific American*. Mark Weiser defined ubiquitous computing as an environment where computing access will be everywhere (Ha, 2003). Microsoft had introduced the concept of 'SPOT' (Smart Personal Object Technology) as well. The Vice President of IBM also mentioned that the realization of a dream is near as ubiquitous or pervasive computing will totally change the pattern for living (Lee, 2003).

In Korea, the term ubiquitous first appeared in the April 2002 edition of the *Electronic Newspaper*, followed by the foundation of the first U-Korea forum. In 2006, Korea established the Wide Broadcasting system and evolved it into providing Digital Media Broadband (DMB) services. The ubiquitous era exists through an invisible and pervasive technology (Joe, 2005), opens the possibility of infinite usages in the multi-faceted forms such as connection, mobility and location that information technology provides. The characteristics of ubiquitous technology are summarized as follows:

First, ubiquitous technology as a seamless network: ubiquitous technology enables not only mobility but invisibility or ambient computing, as each micro processor chip or sensor is hidden within each product as embedded computers. Ubiquitous technology also enables "Real Time" operation that means the information regarding the processes of production and transmission usages are communicated as each process happens. Becoming ubiquitous initially links entities with the internet, and ultimately links entities, computers, and humans through a network which enables a three dimensional communication among each of the entities.

Second, Things That Think (TTT): a new paradigm of information system is achieved through hypertext and artificial intelligence that can think and adjust each service according to each individual and the environment (eg. location, ID, equipment, time, temperature, and climate). Ubiquitous technology also guarantees immediacy and freshness by freeing information as it

ubiquitously exists everywhere at anytime to everyone at the same time.

Third, integration and fusion: ubiquitous technology creates a large value space completed by either the crashing or permeation between physical space and electronic space, or by a co-evolution between spaces. The result of this inter-space revolution is a new space concept that recreates both the structure of physical space and electronic space in creating the role for these spaces by substituting and supplementing between them (Ha, 2003). In addition, the integration between online and offline creates a hyper-space type structure that promotes ubiquitous access. In the end, ubiquitous technology must be a technology that evolves around the needs of humanity and not the other way around (Ethenberg, 2003).

2. The Qualitative Approach on Lifestyle Trends in a Digital Age

Foreseeing trends as a means to forecast the future has become an issue of the 21st century among companies and business policies. Lifestyle trend forecasting is the process of foreseeing the life story in the form of a scenario. "Scenario Development" has taken place as a practical method to strategically set policies and develop products in a changing digital information age.

Trends appear based on human psychological instinct that create a desire pursue what is perceived as good by fear of being outcast from certain laws and phenomena. In general, cultural phenomena of human lifestyle on a socio-cultural scale reflect a societal trend.

There are various approaches to define lifestyle; "a mode of life expressed by a certain culture or group" (Lazer, 1963); "the style of how time, money, and life are spent by a person" (Adler, 1969); "the type of life that is decided based on how one views him or herself" (Assael, 1983) are among the representative definitions. Naturally, the actions of the members in a given society show difference from that of another (Lee, 2000). By deducing the similarities and carrying out a thorough

analysis on each individual, family, society, and class the definition of a certain lifestyle can be determined (Lee, 2004). This selected approach defines the lifestyle within this study. To understand the new concept of brand for the new emotional generation, it is important to understand the difference between the needs and wants of consumers (Lee *et al.*, 2006).

For researching the lifestyle of the emotional N-generation, and to develop scenarios for creative branding strategies, data from in depth interviews with focus groups are used (Gobe, 2002). For researching wants of consumers, the British forecasting trend book *Viewpoint* used qualitative approaches through free association.

As qualitative techniques allow participants to discuss a range of topics unencumbered by a rigid format, they facilitate the identification of new and unanticipated information. The qualitative approach applies anthropologic research methods to elicit the viewpoints of insiders and provides a contextual understanding of cultural variables, relationships, and generates valid data that reflects the perceptions of participants (Jessie, 2003). Brainstorming is an important method that first brings out all ideas for a given topic (to evaluate and select) is also widely used in developing creative ideas (Hiltunen *et al.*, 2002). Like the 'Laddering Method' of potential values (in general) with the vocabulary gathered from various subjects, the research then draws a map that lays out the results (Hakuhodo Brand Consulting, 2002).

III. Research Method

The methods of this study include theoretical research and qualitative research through focus group interviews. Via a free association method, the subject associated the personal meaning of the subject, and the researcher deduced the key vocabulary within the sentences from the replies of the subjects. The in depth interview for this study was conducted as follows:

<Table 1> Questionnaire & Subcategories

Questionnaire	Subcategories
1. As a female, What would be your lifestyle and value that would make your dreams come true given that you have a support from ubiquitous information technology?	1) Support in social life: Economic life, Social life 2) Support in personal life: Family life , Mental life 3) Support in leisure: culture life and entertainment life
2. What is the biggest change in terms of women's values and relationships that ubiquitous information technology would bring about?	1) Marital relationships 2) Job relationships 3) Interpersonal relationships 4) Relationships 5) Product relationships
3. What kind of values do you expect as a woman in a ubiquitous information environment?	1) Changed values compared with that of today 2) Unchanged values compared with that of today

First, the focus group for the in depth interview was selected based on the following criteria. The 77 subjects chosen were in the twenties and thirties age group, were university students or graduates with jobs, understood the concept of ubiquitous technology and lived in the capital district. Some (especially students and graduates) taught the basic concepts of ubiquitous technology. The grouping of the subjects was based on the time when women usually experience a transition: ① University students ② Single Group ③ Married without children ④ Married with children. They were divided into six groups: ① University students in their early 20's (A1) × 13 persons ② Single women in their late 20's (A2) × 13 persons ③ Married women in their 20's (A3) × 13 persons ④ Single women in their late 30's (B1) × 13 persons ⑤ Married women in their 30's without children (B2) × 13 persons ⑥ Married women in their 30's without children (B2) × 12 persons. Each group were subject to free interviews or brainstorming sessions through which they were given a chance to freely write down what they felt regarding each topic.

Second, the interviews were conducted and evaluated through the following methods: The interviews that were divided into two sections were conducted in lecture rooms or cafes. The first section was undertaken as a test interview from May 1st to May 31st 2006 with subjects divided into four groups of five. Each of the four free-talk interviews took two hours. Based on the results of the first section, the study created interview questionnaires along with three experts: a marketer at an

information/female market related company; a lifestyle designer and a professor who is a specialist on female education. The second section was conducted six times during the period between September 17th and October 31st 2006. There was a pool of 40 persons in the student group, but to maintain balance with the other groups 13 were selected out of the 40. The integrated evaluation took place on November 18th and 19th 2006.

Finally, the evaluations were carried out as follows: As qualitative evaluation is strongly affected by the subjectivity of each individual, a group consisted of six experts specializing in information, trend, culture, and economics came together for the process of deducing keywords, and establishing a mental network map. The three part questionnaire asked what Korean women expected from a ubiquitous lifestyle. Table 1 shows:

IV. Results and Discussion

1. The Expected Lifestyle of Women in the Ubiquitous Technology Environment

A majority of the interviewees expected that UT would help fulfill values by supporting an economic and social life. They also expected women with multiple jobs and multitasking lifestyles to become the norm in a ubiquitous society. There were also high expectations that the possibility of working at home would increase. Current homemakers were mostly pressured by time,

and the future held hopes for time management in maximizing the efficiency of time.

They expected UT in personal life (family and mental) to reduce the time spent on domestic chores as the electronic products would automatically finish the work as programmed. They expected that discrimination between males and females regarding household affairs would eventually disappear and even lead to discrimination against males. Although most agreed that the technology will ultimately bring about an enhanced personal life, there were voices of concern regarding a sense of alienation and emptiness. The expectations for technological advances touched on health support, stress relief, and even personal emotional control.

Regarding leisure life (culture and entertainment) most expected the time used during the commute between home and work would provide opportunities for cultural activities. Even cultural activities were expected to come with additional time saved through virtual experiences, travels, and attending performances provided by a virtual reality. A whole new generation that is growing up on cyber images shows how much virtual reality has become a large part of lives. Leisure related opinions were positive, citing the convenience that the internet ticketing brings to us even today. The expectations for health management were also high, possibly due to the increased coverage on health in the media. Checkups and even medical treatment were thought to become available through networks and a combined effect with biotechnology was believed to continuously provide a healthy diet and consequent beauty.

2. Changes in Women's sense of Value Entailed by Ubiquitous Technology

On the marriage issue, most women were not anxious to get married and were willing to wait for the right person. Some even mentioned that the later the better. There existed a few that were confident that they could be happy without getting married. Adoption was also an

option. Common concerns evolved around freedom from household chores, better information on raising children, the equality between the sexes (at home and in society), and education costs for children. However, there were conflicts between opinions that stated that the convenience made available through ubiquitous technology might lead to a higher divorce rates, and that if the technology could further support emotional control, there may be more single women in the future. Concerning jobs, new technology development was positively expected to create new jobs, and that the increased income would lead to expenditures that would contribute to the economy. Equally positively, lifetime education was viewed as an opportunity to train amateurs to become specialists, leading to more in depth specialization.

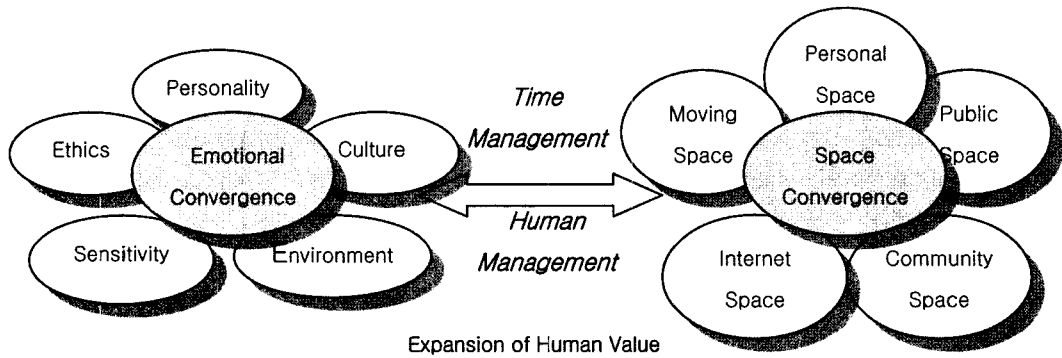
An expansion of human relationships, equality between the sexes, expectations for more second hand experiences, a fulfillment of the spiritual life, an increase in self-achievement, and self-satisfaction were expected to take place. Group activities and voluntary activities were also channels through which relationships were expected to mature and expand.

On issues related to men, more women expected to take the roles of leaders in a ubiquitous information environment. In addition, there would be men entering the conventional jobs of women, leading to a lesser discrimination between males and females.

On the issue of products, physical state-of-the-art functions would be complimented by the soft abstract attributes of the product appealing to emotions.

3. An Expansion of Positive Values: An Alternative for Solving Problems

Interaction between emotional and physical convergence in living spaces could expand positive human values under the ubiquitous technology environment. A majority of the opinions were quite confident that the quality of lifestyle for women would improve with positive prospects since the women of



<Figure 1> Expectation of Women's Lifestyle under Ubiquitous Technology Environment: Positive Interaction.

today were already satisfied with the current digital lifestyle. They expected that the world would grow out of the current conservativeness, the differences between the sexes would diminish while the number of female leaders increased, and there would be more cultural activities, more free time, and more job opportunities.

Lifetime education would train amateurs to become specialists, leading to more specialization. The expectation was that cyber images would expand second hand experiences. Group activities and voluntary activities would also work as channels through which relationships could mature and expand. Health related services would expand dealing with emotional issues (such as depression) and contribute to fulfilling mental life. It was believed that ubiquitous technology would positively support the creation of a lifestyle that achieves humanism. Figure 1 represents the positive interaction between emotional convergence and physical convergence within living spaces.

To fulfill personal values, most women in 20s and 30s pointed out working at home as one of the biggest hopes for the ubiquitous information environment. Working at home could let individuals continuously work on self-improvement, self-achievement, and on securing social status while fulfilling a career role and life at home as well.

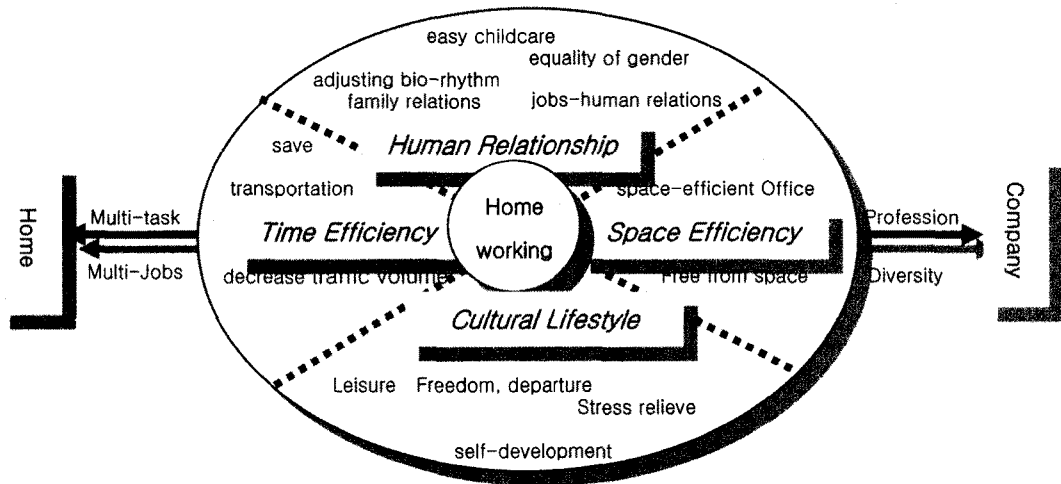
Working at home provides more time to spend with the family; secondly, it helps in raising children and may even save costs; thirdly, this would further contribute to

a more stable marital life. In terms of the job itself, working at home would save time spent on commuting and giving more free time. Expertise could be divided into more specific fields, in addition discrimination and inappropriate relationships would diminish, and final help improve women's self-esteem. As marital life and jobs become balanced, consumption would increase in contributing to the domestic economy. Because of the interviews, Figure 2 shows a model of how working at home was made possible through ubiquitous technology and could upgrade the quality of women's lifestyle both in the office and at home.

4. Changes in Values Entailed by Ubiquitous Technology

Values that were expected to change with the development of ubiquitous technology included mindset, marriages, families, male and female roles, jobs, the economy, love, and personal relationships. It was expected that these stereotypes and fixed ideas would diminish. At the same time, there were concerns about prevalence in materialism and egotism. Table 2 shows the specific keywords of values that were expected to change.

Values that were expected not to change despite ubiquitous information technology included selflessness, love, religion, human relationship, self achievement, health, ethics, human emotions, and basic humanity.



<Figure 2> Expectation of Working at Home in Women's Life style under Ubiquitous Technology Environment.

<Table 2> Women's Lifestyle Values That are Expected to Change with the Development of Ubiquitous Technology

Type	Age	Early 20s (unmarried)	Late 20s (single)	20s (married)	30s (single)	30s (married)	30s (married / with child)
1		<ul style="list-style-type: none"> • Breaking traditional thought • Open Consciousness • Change of Consciousness 	<ul style="list-style-type: none"> • Femininity • Equality of Sexes 	<ul style="list-style-type: none"> • Profession • Economics 	<ul style="list-style-type: none"> • Equability of Sexes 	<ul style="list-style-type: none"> • Profession • Space 	<ul style="list-style-type: none"> • Family • Marriage
2		<ul style="list-style-type: none"> • Equality of Sexes 	<ul style="list-style-type: none"> • The Way of Lifestyle • Convenience 	<ul style="list-style-type: none"> • Consciousness • Self Realization • Human Relationship • Free Lifestyle 	<ul style="list-style-type: none"> • Economic Life • Self Improvement • Rational Consumption 	<ul style="list-style-type: none"> • Marriage • Equality of Gender Role • Equality of Gender 	<ul style="list-style-type: none"> • Thinking • New Lifestyle Value
3		<ul style="list-style-type: none"> • Economics Life. • Occupation 	<ul style="list-style-type: none"> • Occupation • Achievement 	<ul style="list-style-type: none"> • Human Relations • Love • Family • Friends 	<ul style="list-style-type: none"> • Family Relations • Marriage • Gender Roles 	<ul style="list-style-type: none"> • Expansion of Lifestyle • Close Relationship 	<ul style="list-style-type: none"> • Cultural Lifestyle • Leisure Time
4		<ul style="list-style-type: none"> • Egoism • Individualism • Materialism 	<ul style="list-style-type: none"> • Consciousness • Cognition • Thinking • Action 	<ul style="list-style-type: none"> • Family Relations • Marriage 	<ul style="list-style-type: none"> • Expansion of Human Relationship • Personalization 	<ul style="list-style-type: none"> • Expansion of Lifestyle • Close Relationship 	<ul style="list-style-type: none"> • Continuing Education • Education
5			<ul style="list-style-type: none"> • Education • Diversity of Culture • Active Hobby Life 	<ul style="list-style-type: none"> • Lifestyle • Convenience • Hobby Life 	<ul style="list-style-type: none"> • Continuing Education • Education • Fast Change of Consciousness 	<ul style="list-style-type: none"> • New & Diversity • Human Relationship • Free Relationship 	<ul style="list-style-type: none"> • Functional Value
6					<ul style="list-style-type: none"> • Expansion of Cultural Lifestyle 		

<Table 3> Women's Lifestyle Values That are Expected not to Change Despite the Development of Ubiquitous Technology

Type	Age	Early 20s (unmarried)	Late 20s (single)	20s (married)	30s (single)	30s (married)	30s (married/ with child)
1		<ul style="list-style-type: none"> • Conservative Value • Male Dominance • Childcare • Filial Duty • Relations between the sexes • Conjugal Relations 	<ul style="list-style-type: none"> • Relief • Religion 	<ul style="list-style-type: none"> • Traditional Family • Relations • Family Relations 	<ul style="list-style-type: none"> • Human Emotion • Ethics 	<ul style="list-style-type: none"> • Humanity • Parents (Filial Duty) • Offspring 	<ul style="list-style-type: none"> • Tradition • Fundamentality • Consciousness of Gender • Difference
2		<ul style="list-style-type: none"> • Human Emotion • Ethics • Altruistic Spirit 	<ul style="list-style-type: none"> • Health • Love • Happiness • Passion 	<ul style="list-style-type: none"> • Human Emotions • Human Relationship • Ethics 	<ul style="list-style-type: none"> • Family Relations • Love 	<ul style="list-style-type: none"> • Human Relations • Ethics 	<ul style="list-style-type: none"> • Traditional Value
3		<ul style="list-style-type: none"> • Shrink from Hard Work • Beauty Supremacy • Value of Money 	<ul style="list-style-type: none"> • Self Achievement • Self realization • Achievement 	<ul style="list-style-type: none"> • Traditional Conscious 	<ul style="list-style-type: none"> • Health • Happiness 	<ul style="list-style-type: none"> • Self Realization • Reputation 	<ul style="list-style-type: none"> • Human Relations • Ethics
4		<ul style="list-style-type: none"> • Need of Future Value • Vision 	<ul style="list-style-type: none"> • Humanity • Human Relationship • Ethics 	<ul style="list-style-type: none"> • Economic Value • Financial Leeway 	<ul style="list-style-type: none"> • Economic Power • Money • Professionalism 		<ul style="list-style-type: none"> • Economic Value
5				<ul style="list-style-type: none"> • Gender Differences 	<ul style="list-style-type: none"> • Traditional Thought • Femininity • Self value 		<ul style="list-style-type: none"> • Education

This represents that most women in their 20s and 30s are conscious of maintaining an ethical and sincere life. Table 3 shows the specific keywords of values that are expected not to change under the ubiquitous technology environment.

5. Contextual Customization: Individual Management through the Integration of Time and Space Establishing a "Mental Network Map" based on Keywords

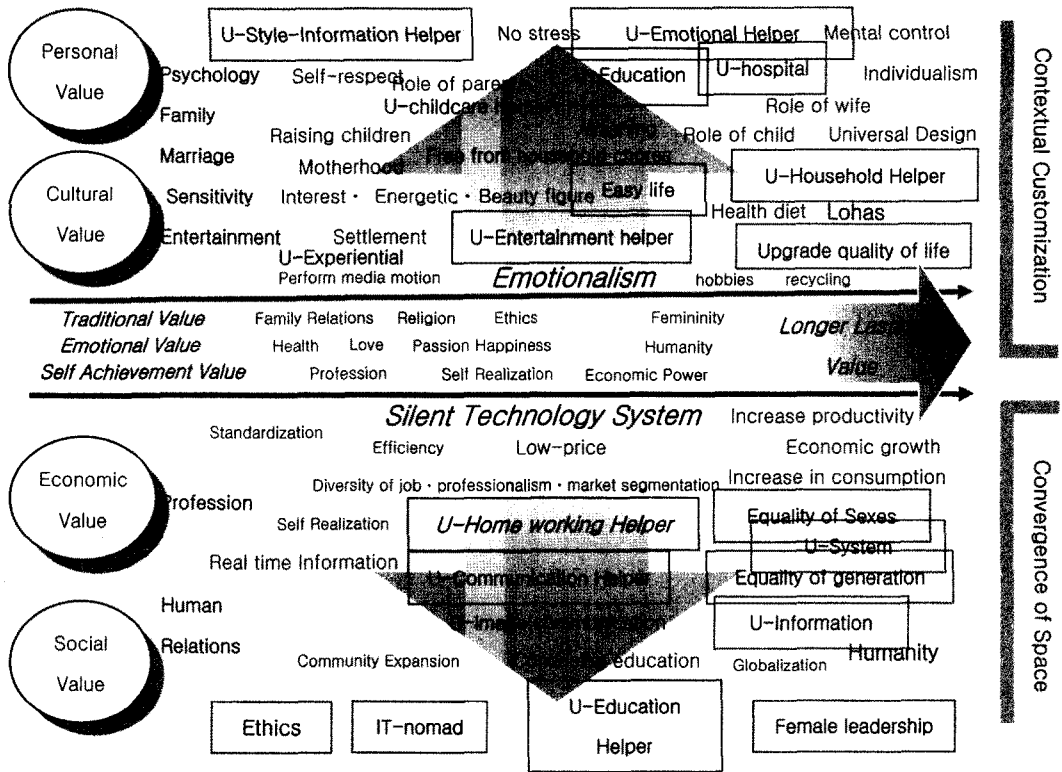
Creating desirable scenarios based on the expectancies of customers is essential to suggest and develop ideas for services. Through defining the potential wants of customers the creation of scenarios is an effective approach in generating design ideas for new products and can be widely used in proposing initial product designs.

Based on research, most expected ubiquitous

technology to provide an environment were it is possible to dream about personal freedom and deviation while maintaining individuality, independence, and personal emotional values. The keywords analyzed were translated into the ultimate form of customization and convergence of spaces, specialized expertise to make it possible to pursue such individualism. Therefore, further studies on an integrated, multi-dimensional online and offline recommendation process for personalization seem meaningful. In order to realize contextual customization, personal interests, time, space, and location must be integrated.

In the matter of personal interests as an emotional release, the women of the ubiquitous era were expected to become more self focused and more productive in terms of family, jobs, and even cultural activities.

Regarding time management as a means to expand human capacity, most interviewees expected to significantly contribute to reduce time expenditure in the



<Figure 3> Positive Values that Ubiquitous Technology is expected to bring to Women' Lifestyle: Harmony of Physical Comfort and Emotional Values.

end. Most homemakers (women) expressed how they were pressured by the limitations of time. Even today, many women are using in-between times to communicate, study, pursue hobbies, and watch movies through mobile technology. Therefore, time management that maximizes time efficiency is expected to become an even more meaningful achievement in the future.

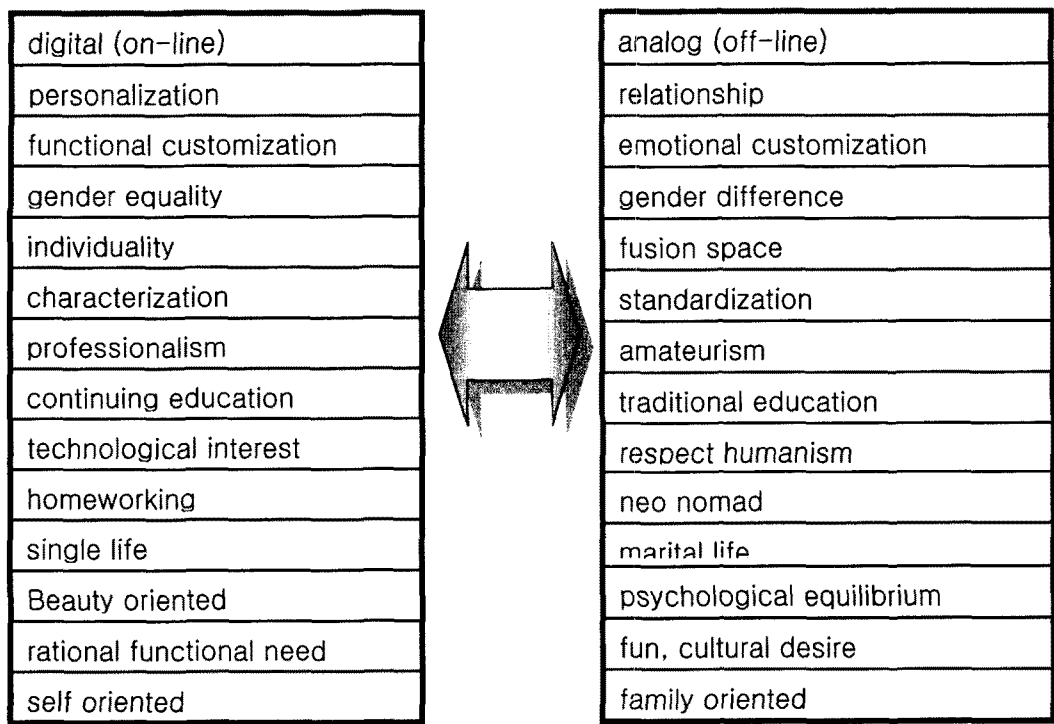
On the situational context as a blending of situation and space, most interviewees were already accustomed to using mobile image media, and expected that ubiquitous technology would expand multitasking features. All services and events would become available whether it is with the family, within society, at the job, and online or offline.

Figure 3 summarizes the positive values ubiquitous technology is expected to bring to women's lifestyles by evolving the harmony of physical comfort and emotional value. In Figure 3, traditional value, emotional value and self-achievement value were

concerned as longer lasting values. In addition, ubiquitous lifestyle values were generally consisted of two parts: physical comfort that comes with the silent technology system, and emotional values such as personal value, cultural values, and personal values.

6. Paradoxical Concept in Ubiquitous Women's Lifestyle

The modern digital society shows signs of paradoxes between thought and action. The ubiquitous era will take these paradoxes even further. Whether ubiquitous technology can also effectively deal with these internal conflicts will determine the satisfaction level of life. The in-depth interviews revealed that while digital technology was considered as emotional in linking human relationships through various channels such as online communities it was also considered as "technologically kind of cold". Indicating an expectation



<Figure 4> The Paradoxical Concept Keywords of Ubiquitous Lifestyle.

of a simpler yet more complex life, balancing between passive (relaxing) and active (more work done), or generalization and individualization were considered even more important. Also, while meeting the right husband was still important, securing personal expertise and keeping a job was a common shared value. While these contradictories were brought about in the digital age and were foreseen to become more prevalent in the future, there was hope that ubiquitous technology would be able to provide a solution for these contradictions as well. The paradoxical keywords are summarized in <Figure 4> that is a deduction of key words from the interviews compared with the key words of the paradox concept.

VI. Conclusion

This research was based on an in-depth interview that took place in November 2006 with 77 digital age

women in their 20s and 30s. The limitation of this study is that the interviewees were women who already understood the concept of ubiquitous. Therefore, it is difficult to claim that the results represent women as a whole. Secondly, this macro approach in forecasting may have limitations in the use of micro approaches.

Trend setters will be influencing the masses, the data is considered to have positive value. Modern women thought very positively of the role that state-of-the-art machinery has on everyday life. Based on this experience, they expected that ubiquitous technology would not only reduce discrimination against women, but would become an essential factor in improving human relationships, family relationships, and a relaxing abundant life.

The positive expectations under ubiquitous technology environment are summarized as follows: freedom from household chores, equality between the sexes, an increase of female leaders, working at home, an expansion of relationships, an expansion of knowledge,

humanity, freedom, independence, and globalization.

The areas that digital were not expected to be able to solve were the natural environment and human love. While most interviewees expected ubiquitous information technology to have a positive effect on women's lifestyle, women in their 30s with children had an especially stronger opinion on positive aspects, whereas students in their 20s had a mixed feeling between positive and negative prospects in evaluating a technology oriented society.

Several suggestions of the possible usages of the results as follows: First, the almost unanimous expectation was the urge to promote working at home in order to fulfill self-achievement, and to pursue cultural life. The government and enterprises may want to look into institutionalizing the working at home system. In addition, considering the current tendencies in late marriages and low birth rates, ubiquitous technology development may be a progressive alternative for solving these problems harmoniously with the aspirations of modern women. Second, the results of this report are utilized not only as academic/theoretical data, but also as trend research for related enterprises, and as a basis of scenario development for product planning or service strategy. A continuous study of women's lifestyle must be observed from various prospects. The results when logically systemized play the role of a creative energy source for developing a new driving force that will be globally influential.

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