

University of Hawai'i Manoa

What is "Keitai Culture"?
Investigations into the social impact of
mobile telephony with society in
contemporary Japan.

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By
Michael J. Dziesinski

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Defining and Deconstructing "Keitai Culture"

"The datasphere, or 'mediaspace,' is the new territory for human interaction, economic expansion, and especially social and political machination. It has become our electronic social hall...the media events provoking real social change are media viruses."

—Douglas Ruhkoff, (Kyoto Journal #46, page 19.)

"To not have a keitai (cell phone) is to be walking blind, disconnected from just-in-time information on where and when you are in the social networks of time and place."

—Mitsuko Ito, (Japan Media Review, Feb, 14, 2003)

In recent years, a new term, "*Keitai Culture*", has been popping up in numerous media outlets across the world in reference to Japan. What precisely does *Keitai Culture* mean? Perhaps taking the first step of deconstructing the individual definitions of each part of the phrase itself may prove informative before examining its meaning in a broader context.

The term "*keitai*" is a rendering in the roman alphabet, or *romaji*, of the Japanese *kanji*, Chinese ideogram, of 携帯 which carries the connotations of something you carry or bring with you in your hand; in other words, something portable. *Keitai* as used in the term '*Keitai Culture*', is a truncation of a longer phrase in Japanese of 携帯電話 which, when rendered in *romaji*, is '*keitai denwa*'. '*Denwa*' translates into English as 'telephone', so the longer phrase of *keitai denwa* is a native Japanese rendition of 'hand-held' or 'cellular telephone', of which latter English phrase in the United States is also shortened in daily usage to the abbreviation of 'cell phone'. It is interesting to note that within the popular daily usage of *Keitai Culture* that the *kanji* for *keitai*, 携帯, is as often as not, rendered instead into the much simpler *katakana* script as ケータイ, instead of the more correct ケイタイ. A transcription that softens or drops the 'i', イ, sound in favor of a longer 'e' sound to follow the syllabic of 'ke', ケ, thus transforming the pronunciation into 'kay-tie'. *Katakana* is traditionally used in the phonetic transcription of foreign loan words, *gairaigo*, into Japanese. *Katakana* is also used to great effect in advertising to emphasize a word

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or phrase, an industry that is also not above using a dash of foreign words or phrases to spice of its slogans. The dash after a syllabic, ー, is often utilized to phonetically render a word with no easy Japanese equivalent. So what we have with the *katakana* rendering of *keitai* is possibly image building emphasis on the word *keitai* as trendy and hip, along with the subconscious implication it is a loan word, a non-native term, which further enhances its consumer appeal. In Western media *keitai* is defined as:

Keitai

Keitai (pronounced k-tie) is a Japanese term that refers, in general, to cellular telephone sets, particularly the handheld variety, and their associated hardware, programming, and services. The term has acquired cultural significance (even a fad status) in Japan, especially among young people. Examples of keitai include portable cellular telephones with the capability to transmit and receive e-mail, surf the Web, and play interactive games online. Global Positioning System (GPS) devices and other wireless navigational systems in cars are also examples of keitai.

—searchnetworking.com, (Apr. 28, 2002)

With this greater understanding of the meaning and origins of the term *keitai*, an examination into the second half of the term *Keitai Culture*, the word 'culture', is in order. As this paper will take a predominantly sociological stance in examining the *keitai* phenomenon in Japan, it would be instrumental to define what 'culture' is understood to mean within a conventional sociological framework. Culture as defined by Sociologist Craig Calhoun at New York University:

"Culture shapes all of social life, and indeed makes it possible. At the same time, culture is created, disseminated, experienced, and used only in ways shaped by and dependent on other aspects of social organization. Likewise, culture informs social action--literally giving it shape--and it is also produced, reproduced, and altered by social action. Culture, in other words, is never 'free-floating'."

—Craig Calhoun (SOC G93.3214 Course Syllabus, NYU)

Calhoun further states that in the interest of studying culture within sociology it is accepted that the process of culture involves the "conditions of production, dissemination, experience, and use" which in turn can create "objects identified as specifically cultural" that can be analyzed by the sociologist in that context (Ibid). In terms of the topic at hand, '*Keitai Culture*', individual *keitai* are both the means as well as an observable cultural product of the process.

With this definition of culture in mind, let us move forward in examining the structure of complete phrase 'Keitai Culture'. The combination of *keitai* with the appellative of *culture*, to form the phrase 'Keitai Culture' first appears on the in the popular consciousness only a few short years ago and then within the context of non-Japanese media articles. In fact, the phrase 'Keitai Culture' is apparently the construction of Western observers Ernest S. Johnson and Sean Odani (Via, pp. 24-25, 2001). So, the question that follows is: 'What framework or context is implied by the purposeful combination of 'culture' to mobile telephone usage in Japan; what are Johnson and other foreign writers observing in Japan in connection with keitai that they feel deserves classification with new terminology?' Johnson further elucidates his reasoning for their coining of the term "Keitai Culture" in an article for the magazine Eye-Ai:

"The term "keitai culture" is the result of the authors' reflection on the effects of popular mobile phones on the present Japanese culture. An empirical survey of freshman age college students revealed that nearly all of the students' friends possessed mobile phones. Students were asked if they had any friends without mobile phones and exactly how many. Out of the students surveyed, only one could think of a friend without a mobile phone. This friend is also considered to be anti-social. In short, the mobile phone has become such a part of the modern young person's life that the possession of one is taken for granted. "

— Ernest S. Johnson, (Eye-Ai, April 2002)

Despite its origins in the foreign press, it should be noted that the phrase 'Keitai Culture' and its native variant *keitai bunka*, 'bunka' being the native Japanese word for culture, has now been adopted into Japanese literature on the topic (xxx).

Hinted at in Johnson's definition, the application of the term *Keitai Culture* would appear to be much more encompassing than a simple reference to the phenomenally rapid adoption of mobile telephones in Japan but rather also involve an observable sociological phenomenon of some scope (xxx). The high numbers of Japanese citizens now using mobile phones is certainly a part of what *Keitai Culture* is, but beyond this head count and the literal definition of the words, "Keitai Culture", just what exactly is encapsulated within the phenomenon of *Keitai Culture*? As evidenced by the coining of the phrase first by outsiders to the society, it would appear that the Japanese do not recognize a unique cultural or social phenomenon surrounding their

contemporary use of hand-held telephony; rather they see those things that arise out of keitai use as parts of their greater cultural milieu (xxx). This could be a matter of immersion in the *keitai culture* phenomenon; of not seeing the 'forest for the trees' as it were.

This is a issue that this paper proposes to explore: that the presence of mobile telephones, termed 'keitai' by Japanese, and their widespread use in Japanese culture, with February 2003 estimates at 79.3 million mobile telephone users (www.cellular.co.za, 2003) within a population of 126.9 million people (www.geohive.com, July 1st, 2002)— 62 percent of the population— has created a whole range of new social behaviors as well as altering otherwise longstanding cultural behaviors. The introduction of the *keitai* into daily Japanese life has irrevocably altered Japanese society—**without** *keitai*, these social patterns would **not** exist, be impossible to undertake, or be sufficiently cumbersome that they would not be practiced in such a widespread manner in daily activities as they are today. To borrow from Calhoun's definition of culture, *widespread keitai usage in Japan has shaped, created, and disseminated social organizations dependant upon keitai in such a way that it has created a distinct and unique culture surrounding it—keitai culture.*

It is beyond the scope of this paper to establish a basis of comparison between Japanese *Keitai Culture* and mobile phone use in countries such as the United States. However, the assumption will be taken that given a similar factors in the societal environment such as wealth, familial organization, social institutions and corporate presence as in Japan today, other countries would likewise develop a parallel "*Keitai Culture*" as evidenced in Japan. In fact, there is evidence of that this may actually be the case in Northern Europe as in countries such as Finland and Sweden (xxx). Likewise, other types of technology perform similar society changing and empowering roles of *keitai* in Japan; a prime example is the Internet and PC boom of the last decade in the United States (Tsuchiyama, 2000). The point being that the author of this paper is aware of the thorny issue of the *nihonjin-ron* argument of Japanese cultural uniqueness as discussed in Images of Japanese Society (Mouer and Sugimoto 1986); there is no desire to further

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propagate further perception of Japanese uniqueness through *Keitai Culture*, despite the etymology of the phrase. The 'uniqueness' of *Keitai Culture* is within the cultural behaviors surrounding the use of the enabling technology convergence of wireless telephony, non-voice digital applications and web connectivity, *not* Japanese culture; the phenomenon would arguably arise in another nation-state given similar societal circumstances. In the United States, such technological convergence is occurring but coming from the opposite end of the spectrum with desktop Personal computer users increasingly embracing integrated wireless devices with connectivity with the World Wide Web. However, these are topics for another paper. That being understood, this paper will explore the deceptively straightforward question 'What is *Keitai Culture*?' with in an attempt to elucidate upon the breadth and scope of the phenomenon.

A history of *keitai denwa* in Japan

"Cell phones here are fashion accessories and toys above all."

—Tim Clark, president of Internet consultancy TKAI.

Before examining the behaviors and social phenomenon surrounding *keitai culture* today in the year 2003, it would be instructional to retrace the development of the enabling apparatus for this 'culture', namely the evolution of the mobile telephone industry in Japan. Unless the technologies and capabilities of mobile telephony in Japan are first understood, the whole picture of consumer adoption and utilization in the daily lives of Japanese will only present partial picture of the consequent development of *keitai culture*. Primarily, this is to establish an important case for the socio-historical factors of government intervention, corporate markets, and technological developments as the foundation for the societal outgrowth of *keitai culture*. These segments of Japanese society have played an important yet overlooked role in the *keitai* culture phenomenon in Japan thus far. Most cultural observers look at the resultant individual behaviors of *keitai* usage, tie it in with Japanese pop-culture, make linkages of *keitai* with changing familial power structures, or analyze the socio-spatial aspects of *keitai* on community (Mizuko Ito 2001, Hirofumi Katsuno 2002, and to a lesser extent Geser 2002). What these analysis fail to do in

undertaking ethnographies of *keitai* end-users is recognize that *keitai culture* as it exists today is not the sole result of individual consumer choices. Neither is *keitai culture* the simple adoption of cell phones by 62 percent of the Japanese citizenry. *Keitai culture* and its popular appeal did not appear in a vacuum: *someone* provided the physical artifacts of the 'culture', they were responsive to consumer demand, as well as sensitive to the needs of *keitai* clientele by modifying the physical manifestations of *keitai culture* as the need arose. According Jun Tanaka of Seiko Instruments' Product Planning Development division,

"In this country, designers tend to listen more to consumers ('The customer is God'), and rarely allow their egos or individuality to interfere with customer needs."

—Thuresson, (2001)

George Fields, an Australian-Japanese consumer-marketing expert adds, "In marketing, culture always comes first" (Tsuchiyama 2000). While the Japanese end-consumer does indeed vote with their Yen, it is the active collusion, a supply-demand feedback loop, between large Japanese societal structures such as regulative government institutions, attentive corporate conglomerates, reactive R&D sectors *as well as* the end mobile phone consumer that brought *keitai culture* to fruition. The shaping of the *keitai* market to the needs and sensibilities of the Japanese customer was paramount for technology adoption; mobile telecoms had to respond to the daily realities of consumers and take into account that,

"Japanese do not own large homes. They have long commutes. They gather in urban districts with a plethora of choices regarding eating, drinking, and listening to music. Even while standing in line for a movie or concert, one has time to explore and choose via I-Mode. Life outside the home (at least in Tokyo and Osaka) is richer and more vibrant."

—Tsuchiyama (2000)

Many of the physical manifestations of *keitai culture* are not the creations of the buying public of Japan but the result of a symbiotic relationship between customer desires and businesses producing items to meet that demand such as designer covers, 'personalized' phone straps and many other items that perpetuate *keitai culture's* popularity. *Keitai culture* is not just the handset in the end-user on the train station platform, but it is the entire framework: it is the interaction

between both the institution and the individual that makes *keitai* possible and maintains its existence as well as its continuing growth.

In 1979, Japan developed the first analog cellular network in the world and with it, a bulky yet hand-held cellular telephone. Despite this innovation, it was not until 1994, fifteen years later, that there was widespread consumption and use of cellular telephones within the Japanese public. In the intervening fifteen years, the principle customers of cell phones remained a small elite group: the business executive on corporate expense accounts (Tsuchiyama 2000). What was the change in circumstances that made the environment in Japan conducive to the introduction of mobile phones at affordable price points for mobile handsets and subscriber fees; what paved the way for rapid growth in Japan? The first factor was, that up until 1994, there existed an artificially induced bottleneck of accessibility via stringent government over-regulation of the mobile telecommunications market:

"The [then] ministry of Posts and Telecommunications kept stubbornly to a leasing scheme and high tariffs for cellular phones that restricted subscribers to executives on expense accounts. By the Spring of 1994, 15 years after the first wireless handsets were introduced in Japan, there were only 2.1 million subscribers."

—Tsuchiyama (ACCJ Journal, July 2000; web vers.)

This circumstance of government intervention that Tsuchiyama details served to ensure cellular telephones stayed primarily in the hands of Japanese society's wealthy stratum. Strict tariff and regulation that meant no noticeable growth in the number of mobile phone subscribers over more than a decade and a half; the social status quo was more or less maintained in Japanese society. Cell phones remained a toy for the rich and scarcely a catalyst for social change during this period of stringent regulation.

The second factor to foment change would be outside trade pressure from foreign interests, *gaiatsu*, by the United States which led to the 1994 Cellular Telephone Agreement; a classic example of a *saikoku/kaikoku*¹ reaction by the Japanese bureaucracy. In the case of mobile telecom markets, the foreign pressure emanated from a group of interests outside the

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bureaucratic structure of the Japan's government and corporate institutions, the United States whose pressure:

" . . . abolished restrictions and delays in establishing the technical networks necessary to meet growing demand for cellular service." The ACCJ study pointed out that "a further important change was that customer-owned and maintained cell phones were permitted, removing the requirement that all cellular telephones had to be leased. (Ultimately) this brought about new competition, reduced prices and a tenfold increase in cellular service in two years."

—Tsuchiyama (ACCJ Journal, July 2000; web vers.; excerpt from 'Making Trade Talks Work: Lessons from Recent History', ACCJ, 1997)

While the United States forced telecommunications deregulation in Japan and elsewhere in the interest of open world markets, in 2003 the U.S. would probably not be considered a world leader in wireless communications standards and its associated technology in comparison to Europe and Japan. Instead, the U.S. is two years behind the GSM (Global System for Mobile telecommunications) mobile networks standard in Europe utilized by most all mobile telecom companies in the market. And Europe is considered by industry experts to be two years behind Japan's current generation of voice and digital integration technologies such as DoCoMo's 'i-mode' and J-Phone's 'sha-mail'. However, Japanese telecoms intend to maintain their significant lead in world markets by phasing out the current 'second generation' of handsets and networks in the next year or so in favor a new third generation, '3G', network standard technologies executed through DoCoMo's FOMA (Freedom of Mobile Multimedia Access) handsets (Metropolis, 2002). Further, Japanese telecom companies hope take the 3G standard beyond their national markets and export it worldwide—in direct competition with existing foreign markets (Sakamaki & Macintyre, 'We want to capture the Global 3G market', Time 2000). What places the United States at a distinct disadvantage against European and Japanese markets, and as a consequence, four years behind Japanese telecommunications was a 'hands-off' lassie-faire policy by the U.S. government and its cellular markets. This model of government non-intervention had worked with the personal computer and Internet booms in the U.S. with markets there now considered

world leaders in high tech so why not also allow mobile telecom markets to shake themselves out in the best traditions of Darwinian Capitalism? The result is today that:

" . . . the U.S. is not a wireless world leader, but instead has five incompatible wireless standards. U.S. carriers are selling American consumers bulky phones that teenagers in Shibuya would find ridiculously old-fashioned."

—Tsuchiyama (ACCJ Journal, July 2000; web vers.)

So how was the Japanese cellular telecommunications market able to rapidly snap back from a heavily regulated, almost stagnant telecom business model catering the business elite to a vibrantly expansive market; one that has come to permeate almost every aspect of daily life in Japan such that cultural observers coined the term *keitai culture* to describe it? From the 1994 Cellular Telephone Agreement (CTA), it was only two years later that the cellular market began to exhibit extraordinary growth (Tsuchiyama, 2000). Post-CTA, the answer to 'how' was through quiet adoption of an informal *keiretsu* business model by deregulated telecoms in Japan. A *keiretsu* is where a loose conglomeration of companies is organized around a single bank for their mutual benefit while co-investing in each other, co-developing technologies, and creating formal business alliances. The Japanese *keiretsu* business model is a less formal post-war version of pre-World War II *zaibatsu*, in which most of the economic power of pre-war Japan rested in large family-owned business conglomerates in collusion with government subsidies. *Zaibatsu* were abolished by the Allied Occupation after the war, as they were key contributors propping up the military-industrial war machine of Imperial Japan. However, less family-centric *keiretsu* have formed to the mutual *intellectual* advantage of Japanese corporations in notable contemporary business sectors rather than the previous focus on the financial advantages of *zaibatsu* arrangement (Meyer 2002).

The formation of a 'mobile *keiretsu*' would not prove overly difficult, as the Japanese telecom market has been monopolized for eighty years by Japan's only telecom provider, Nippon Telephone and Telegraph (NTT), who undoubtedly had no small part in the stranglehold on the pre-1994 mobile phone market. Amy Webb states that the reality of NTT is that:

"For decades, the telecom industry in Japan suffered under NTT's government-sanctioned monopoly. NTT alone was big enough to handle new R&D and invest in building Japan's infrastructure, and it never hesitated to impede competition. The Japanese consumer ended up footing the bill, paying much higher prices for local and long distance phone services than actually necessary." "But NTT doesn't just have its hands in voice telephone service; it also controls cable operations, data, wireless (mobile), and Internet services, and it influences a large portion of Asia's economy." And that "NTT 'might actually be the most powerful telecommunications company in the world.'"

— Amy Webb ("The End of NTT's Monopoly?", 1999)

When the passage of CTA in 1994, NTT responded by forming DoCoMo, a mobile telecom subsidiary, in an effort to maintain the company's dominance of cellular telecom. With backing by monolith NTT, Richard Meyer observes that in the '*keitai keiretsu*':

"DoCoMo alone is massive. As of March 31, 2001, it was the largest company in Asia in market capitalization and the 11th largest in the world. It was just a few billion dollars less valuable than IBM and worth about \$10 billion more than Intel. It is not only large in an absolute sense. It is also large in a relative way." And that "The company controls 60 percent of Japan's wireless market, giving it considerable power and influence within the industry. Its direction and strategy, backed up by a huge balance sheet and a large customer base, are almost impossible to resist. The handset makers and the other operators are compelled to follow DoCoMo's chosen path."

—Meyer ("Kei(tai)retsu", J@pan.Inc)

So this '*Kei(tai)retsu*' with DoCoMo at its core along with the second largest competitor 'J-Phone', a subsidiary of Japan Telecom, dominate the cellular market in Japan with both the market reach and R&D muscle to, in effect, set a universal market standard whether smaller telecoms such as KDDI's Au or Digital Tu-Ka like it or not. J-Phone has been called a 'follower' of DoCoMo's lead but has pioneered many market innovations such as text messaging and internet email service in 1997, web browsing in 1998, and Java applets in 2001, which all ultimately end up benefiting DoCoMo's market share (Meyer 2002). Starting with strict market monopolization from 1979 to 1994, to a deregulated market in need of a technological standard, to the formation of '*kei(tai)retsu*' shortly thereafter, the stage was set for the market explosion from approximately 1997 onward. Up to this point, we have established how corporate market conditions evolved and became favorable for the current phenomenon of *keitai culture*, now a discussion is in order on the pivotal technologies that has led to the socialization of the *keitai* as

an integral part Japanese life. What made the concept of *'keitai'* much more than just the handset device in hand; what made a phone more than just a phone?

The turning point: network saturation

While business executives were toting bulky cell phones and the accompanying monthly services charges excessive for the average Japanese citizen in the early 1990s, a more low tech communication 'revolution' was occurring on the streets of Tokyo and other urban centers: it was the *pokeberu*, an abbreviation of *katakana*-ized English word 'Pocket Bell' and the name of the most popular pager service in Japan. From the *pokeberu's* introduction 1992 to its widespread adoption in 1993, this pocket pager was originally marketed to the corporate businessman. However, it was wildly popular with female teenagers that adopted the *pokeberu* in large numbers and made it business success (xxx). The high pager traffic incurred by these female teens was as Hirofumi Katsuno recounts:

"According to Masayuki Sasaki, director of the pager division of NTT, 'while people usually receive pager messages no more than one hundred times a month on average, in the case of female teenagers, some of them get four or five hundred in a week' (Asahi Shimbun 13 August 1996)."

— Hirofumi Katsuno,
(Face-to-Face: online subjectivity in Contemporary Japan, 2002)

Katsuno goes on to further state that NTT even took steps to curb this high usage by actually restricting sales of the pager units by 1996. This adoption of *pokeberu* by teenage girls is relevant to the discussion for as the year of 1996 approached, cell phones became a desirable item for this young female demographic. But what would draw this segment of Japanese society to cell phone usage? One theory is that by 1996, cell phones were offering text-messaging services similar to those of the previously favored pocket pagers. As Tsuchiyama (2000) notes, "J-Phone service was the first in Japan to provide SMS (Short Messaging Services)." J-Phone's 1997 innovation of text messaging and internet email capabilities, SMS, in their cell phones and similarities to the function of a pager may have something to do with the transition by teenage girls from their now forgotten *pokeberu*.

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As the number of keitai users increased owing to affordability and desirable features, an unanticipated cellular telecom crisis similar to the earlier *pokeberu* one arose in 1997 when the NTT's Personal Digital Cellular (PDC, a variant of TDMA) cellular network standard, proved insufficient for the millions of new subscribers using the network simultaneously. It might not be too much of a supposition that the habits of high usage on *pokeberu* by female teens and other non-business subscribers most probably continued the trend with their transition to cell phones.

Tsuchiyama notes that:

" . . . frightening scenarios were aired about the collapse of the Japan-only PDC digital network by 2001. Too many subscribers were making calls simultaneously, which meant that available 'time slots' (hence the 'time-divisional in the TDMA protocol name) fell short of demand."

—Tsuchiyama, (2000)

Within the substantial subscriber base in 2001 of 40 to 50 million users, or roughly 50 percent of the entire Japanese population on the archipelago (Larimer, Time, 2001), a solution presented itself as DoCoMo and J-Phone noticed that cell-phone subscribers were ". . . changing handsets at a phenomenal rate—every eight months on Average" (Tsuchiyama 2000), while today the turnover of handsets is approaching every six months (Sahdev, 2002). This high rate of handset turnover meant that DoCoMo could undertake R&D for the next standard, 3G, to replace the overtaxed PDC networks without fear of delayed adoption by the installed user base. In the meantime, an attempt was made to encourage subscribers to use more non-voice features on their hand-sets to keep voice traffic bottlenecks on the strained PDC network down. Little did the DoCoMo realize this stop-gap measure would turn into a phenomenon in and of itself and become the key component in creating *keitai culture*.

i-Mode arrives; digital convergence

As long as cellular service in Japan consisted of voice based transactions, cell phones changed the way people functioned in daily life—they were more accessible to contact and stayed 'networked' with the rest of their social relations—but a change in social behaviors using voice

based mobile communications seemed to be changing Japanese society in only small ways, significant yes: but not on the scale seen from 1998 onward (Tsuchiyama 2000). The lynchpin that 'changed everything' and created a nascent *keitai culture* was the incorporation wireless connectivity to digital services and entertainment into hand-held devices. As mentioned previously, DoCoMo, J-Phone and its keiretsu partners were in a fix, in an attempt to shape subscriber traffic, they incorporated an increasing number of 'bells and whistles' into the mobile hand-sets to lessen voice traffic. Continuing this trend, DoCoMo introduced the 'i-Mode project' utilizing 501i handsets produced by Fujitsu, Mitsubishi Electric, NEC and Matsushita in February 1999 that feature color screen, MIDI (Musical Instrument Digital interface) that allows synthesized music, music jingles for ring tones, text messaging, World Wide Web access and more (Curtis 2001, Tsuchiyama 2000). What further sets i-Mode handsets apart from previous voice-only models is it combines the voice based PDC network with a new packet-based digital network using HTML 3.0 language to view Web sites. i-Mode's hand-sets are connected to the Internet twenty-four hours a day, so the limitations of wireless transmission speeds, in i-Mode's case 9.6 kilobytes per second, access speed for the end user is reasonable (Curtis, Electronic News, 2001; Larimer, Time 2001). With the introduction of i-Mode handsets, the trend towards smaller units reversed as screens became bigger with each new handset revision (Ibid). In addition, i-Mode was a great success with the public:

"As for the success of i-Mode, from zero in February 1999 there were five million subscribers in March of this year. By 2002 there should be over ten million i-Mode subscribers—about 30% of all cell-phone users in Japan accessing the Internet. All new cell phones sold by DoCoMo are now i-Mode."

—Tsuchiyama, (2000)

Tsuchiyama's estimate proved inaccurate as the actual number of i-Mode subscribers reached 19 million in 2001 (Larimer, 2001). As for the choice of the name, Tsuchiyama (2000) points out that the 'i' in i-Mode was not meant to represent 'internet' as in products marketed by U.S. such as Apple Computing, but the 'I' or 'Me' was marketed to appeal to the fashionable young segment of contemporary Japanese society. By 1999, the mobile phone industry appeared to eventually

acknowledge that the youth market was their principle customer. The *kei(tai)retsu* now cater directly to youth consumption with a hand-set device that can truly be termed as a '*keitai*'—something much more than a simple voice cell phone—for as Yuko Inoue (Reuters, 2000) observes, "The i-Mode service owes its popularity to a marriage of Japanese high-tech and pop culture, while allowing easy access to the Net". It is interesting to note that i-Mode is cobbled together from the existing PDC network, a newer digital service, and JAVA enabled Web applications (Inoue 2000). With the arrival of the 3G standard on the horizon, i-Mode will prove to be only a 'taste' of future connectively and technological convergence of Internet connectively and the convenience of mobile telephone portability:

"The i-mode communication and information access paradigms have proved to be well-suited to Japanese society. In a country where long commutes on public transportation are the norm, the advantage of staying connected while on the move is obvious."

—Curtis (Electronic News 2001)

i-Mode, and by extension *keitai culture*, is a variation of the Internet revolution seen in the last decade in the United States arrived at from a different technological solution; rather than desktop PCs chained to high-speed cables in the U.S., Japan the internet revolution evolved from mobile phones. PC penetration in Japan in 2000 was 20% compared to 41% in the U.S., in addition, getting 'wired' is almost cost prohibitive as NTT controls the landline market and as a result Japan has some of the most expensive ISP service charges in the world (Scuka, J@pan.Inc, 2000). *Keitai culture* evolved out of market hindrances: the empowerment and capabilities of the World Wide Web arrived in Japan through mobile technologies; that convenience and affordability as well as the future of 3G devices promises to release the keitai from its traditional handset shape into touch screen PDA configurations, mini hand-tops with keyboards, and watch shaped appliances. Even today, keitai integrated capabilities are years ahead of western cell markets allowing users to even download melodies, attach a microphone, and sing to lyrics that scroll across the keitai screen in order to partake in 'Mobile Karaoke':

"Keitai (portables) combine in one sleek device the functions of three separate gizmos: cell phone, handheld computer, and wireless email receiver." "This is the consumer-

electronics mentality. It has to be easy, it has to be fun, and most of all, it can't be boring."

—Frank Rose (Wired 9.09)

These non-traditional wireless convergence appliances boast the integrated capabilities of digital cameras, GPS (Global positioning Satellites), video, voice telecommunications, Internet purchasing, email, radio and music jukebox (Thuresson, J@pan.Inc 2001).

Keitai Culture in Japanese daily lives.

"The cell phone is quickly becoming as Japanese as the kimono. Japan seems to be experiencing what will in time come to other countries: the advent of the mobile phone as fashion accessory, and the rise of a phone culture."

—Daniel Scuka, (J@pan.Inc, 2000)

Significant discussion in this paper has been devoted to the surrounding circumstances and environment as well as the development of *keitai culture*, yet the social phenomenon on the 'street-level' has been largely neglected. The greater social interplay between social institutions such as government and big business having been considered, an examination of behavioral patterns and attitudes by keitai end-users may help further define how this 'culture' manifests for the individual on a daily basis as well as help further clarify the overall nature of the phenomenon. As of February 2003, the estimated market penetration of keitai users in Japan totals 79.3 million (www.cellular.co.za, 2003) of the country's total population of 126.9 million (www.geohive.com, July 1st, 2002). The fact that approximately 62 percent, or almost two-thirds, of all Japanese use mobile phones in their daily lives since *keitai's* widespread introduction on the market in 1996 indicates not only a high level of commercial success on the part of *keitai* manufactures and cellular networks but a notable social penetration into the daily routines and rituals of the Japanese citizen. The demographic of 79.3 million *keitai* users deserves further breakdown for a better indication what segments of Japanese society are actually utilizing cell phones to the fullest. NTT's DoCoMo Corporation undertook two surveys of keitai users, one in 2000, and the other in 2001, to determine who the corporation's target *keitai* customers were and what role mobile telephones played in their lives. In the 2000 survey, the sampling was of 1000

residents in 16 sites in Tokyo and surrounding regions over the course of three days (DoCoMo Net 2000). Despite the fact that the survey was performed in 2000 and an urban sampling, DoCoMo's survey results indicate that 70 percent of the participants in the survey had mobile phones (ibid), a statistic which closely reflects the majority of the population as keitai users in 2003 statistics. Though the margin of error is unknown, even a 10 percent margin of error presents the picture of two-thirds of the Japanese public as *keitai* users and similar to 2003 usage levels. Further, within the survey sampling, statistics seem to indicate that in the 15-29 age bracket which encompasses high school and college age students, usage approaches 90 percent on average (ibid). Adoption by 15-19 year olds is 94 percent for females and 92.9 for males, while the 20-29 age bracket is close behind with 84.5 percent for females and 90.5 for males (ibid).

The 2000 DoCoMo survey also indicates that cell phone usage drops off steadily with increasing age. This *age-versus-use* factor is further highlighted in another age breakdown of the survey in which the participants were asked how many functions of a *keitai* handset they used. This question revealed that respondents of high school and college age were familiar with all the *keitai's* functions such as text mail, alarm clock, email, downloaded ring tones, news services, GPS navigation maps, ticket reservations, net banking and web browsing. The survey also revealed that older *keitai* owners in their 50s to 60s only use the mobile phone's voice feature (ibid). This age adoption trend might indicate the readiness that a new item is accepted into daily life as a factor of how long that person has functioned in their life before its arrival without it, hence the slow acceptance of the 'bells and whistles' on the keitai handset except voice communications already familiar to the older age set in the form of land phone lines.

Other figures provide evidence that young *keitai* users are the principle force behind the *keitai* phenomenon: J-Phone reports that *keitai* revenue per person is 60 dollars per month on average with much heavier usage and higher bills incurred by younger age groups (Sahdev 2002). One question in the 2000 DoCoMo survey with 700 respondents found that the greater the *keitai* usage, the more items the individual carried along with the handset such as a 500ml PET bottle

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(39%), portable audio (32.6%), cosmetics (30.3%), backpack (28.4%), camera (27.1). This would also indicate that the principle usage of the *keitai* as a daily accessory; a habit highly likely with the majority of *keitai* users are in the 15-29 age bracket. In other words, the primary creators and participants of *keitai culture* as a physically observable phenomenon in daily Japanese life are Japan's youth. Ito Mizuko states that,

" . . . the mobile phone appears as fetishized object, highly personalized, decorated with stickers, special hand straps and antennas. It is also the embodiment of relational connectivity."

— Ito Mizuko, (Society for the Social Studies of Science, November 2001)

According to Tsuchiyama, the *keitai* can also be seen as an extension of the convenience store, a perspective which the DoCoMo survey provides linkage with: 71 percent of the *keitai* users also go to convenience stores at least twice a week in comparison to 41 percent by non-*keitai* users (Tsuchiyama 2000, DoCoMo Net 2000). The convenience store-*keitai* linkage could indicate a corporate-customer symbiosis often seen in youth raised in a society steeped in consumer culture; the institutionalized status of youth in highly developed countries with disposable incomes as in Japan and the United States that allows the fostering of instant gratification or 'me-too' consumer mentality in developing young people (Ito 2001).

The second DoCoMo survey examines the upcoming generation of *keitai* users 15 years and younger (DoCoMo Net 2001). Conducted in 2000, the survey consisted of a sampling of 600 males and females from 5th year elementary school to 2nd year junior high school, or approximately ages 9 to 12. The *keitai* usage was much lower with only 147 students actually having a *keitai*; this statistic was further broken down with pre-adolescent *keitai* users being 21 percent male and 28 percent female (ibid). The low proportion of *keitai* users, 147 out of 600, might be attributed to an active policy to prohibit *keitai* usage in the classroom and school grounds by education officials who view *keitai* as an unacceptable intrusion into the structure of school curriculum (Ito, Japan Times, December 1, 2002). Despite this school ban, 44.9 percent of the 147 *keitai*-using students found the "mobile phone essential in my life". Within the age

bracket of first and second year junior high school students, this 'need for *keitai*' rose to 59.2 percent among females in comparison to 42.8 males (DoCoMo Net 2001). DoCoMo's interest in this 15-and-younger demographic, the next group of potential customers, is obvious: the survey results indicate that DoCoMo need not fear a drop-off in subscribers in the future as the increasing adoption of *keitai*, especially by young females as they approach their teen years appears to increase to percentages approaching those of the 15-19 age group in the first survey. Clearly, indications are that *keitai culture* is not going diminish any time in the near future, for as Ito points out,

" . . . in contrast to the image of the mobile-phone toting executive, in Japan, the poster person for the mobile phone is the teenage girl, particularly the street-roving fashion victims called *ko-gyaru* (little gals) . . . "

—Ito Mizuko, (Society for the Social Studies of Science, November 2001)

The new social lifestyle of Keitai Culture

"This is lifestyle. It's an aesthetic thing. If I own a PC, it's just kind of there at home or at the office. I can use anyone's PC to logon. But my phone becomes part of me."

—Ray Tsuchiyama, director of business development for Japan at Tegic

With the advent of *keitai*, Japan has become what more than one observer has characterized as a developing 'thumb-culture', *oyayubizoku* or 'thumb tribe', in reference the method of text input into the numeric keypad of a *keitai* handset. Typically, handsets provide 125 standard symbols to insert in emails thus providing a "base for a kind of Morse code signal-service for Japanese cell-phone fanatics" (Schmetzer 2000). In addition, *keitai* owners also use *kaomoji*, or emoticons, formed with alphanumeric characters to form 'smiley faces'. These are notably different from the sideways emoticons in English, :), but rather are oriented right side up, ^_^, and can express a whole range of emotions from joy, *^o^* to apology, m(_ _)m (Tanikawa 2000). As 16-year old Miri Takahashi states, "It's easy to send a picture rather than writing a long sentence. A picture also conveys my feelings very well" (Kakuchi 2002). Accompanying symbols and *kaomoji* on *keitai* email is a trend towards a new shorthand of abbreviations such as '*oha*' in place of '*ohayo gozaimasu*' which is 'good morning' in Japanese; a trend away from 2000 years of national language culture that is of great concern to older Japanese and social analysts

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(Kakuchi 2000). Critics suggest that the "medium of mobile communications" has created "digitally dependent keitai addicts . . . kids who can only communicate via cutesy pictograms and substanceless shorthand" (Ito, Japan Times, December 1, 2002). The current high cost of a PC and a landline based Internet service provider in comparison to the convenience of mobile Internet access such as I-mode is creating a segment of Japanese youth with atrophying keyboard typing skills and sometimes outright aversion to PCs (Schmetzer 2000). However, those Japanese who are part of the new *keitai* thumb-culture show impressive 'thumb-typing' speed: with only their two thumbs, some are able to input characters up to 100 characters per minute, "equal to the speed required on a top-level Japanese-language word processing exam". Those with this level of 'thumb-proficiency' are believed to number at least 1.5 million *keitai* users (JIN 2003).

Beyond functional use of the *keitai* handset through cellular communication, there is also the dual function of the *keitai* as a statement of individuality, a fashion statement, through the pervasive number of accessories available on the open market that can be added to the phone for a personal touch. One common form of customization to *keitai* handsets is the addition of stickers in various shapes such as stars or *puri kurabu*, stamp sized photo stickers taken at special booths— a fashion statement of this kind on a *keitai* could include a sticker of the user's latest boyfriend (Sahdev 2002). As the article 'An Emerging "Thumb Culture"' posits,

"For today's young people, the cell phone is an alter ego with which they can connect with friends and society 24 hours a day. And it is precisely because the phone is virtually a part of themselves that they spend so much time and money customizing it, by downloading their favorite songs for ring tones, by attaching straps, stickers, and other ornaments, and in other novel ways."

—(JIN 2003)

One of the most prevalent forms of individualization is the strap attached to the phone, '*keitai strapu*', which range from "'Snoopy, little Santas, product logos, tiny photo frames', charms, chains, stones, to hand-made straps of beads or mementoes (Sahdev 2002). These adornments border on the kitschy with attachments to the cell strap often weighing more than *twice* that of the

keitai handset itself and range in cost from 100 Yen for a braid to 10,000 Yen for a Gucci branded leather strap (Wired 10.18). In addition to physical alteration of the handset, users can also download ring tones or melodies, *chaku-mero* shortened from *chakushin merodi*, with a range of 64 notes and 16 harmonies that are often renditions of Japanese pop music hits. *Chaku-mero* can be downloaded from Internet providers for 10 yen per song. Some *chaku-mero* can be performed as 'Mobile Karaoke': while the song emanates from the tiny *keitai* speaker, lyrics scroll up the screen and the screen background, *kabe-gami*, changes pictures akin to a *karaoke* video.

While relatively benign social aspects surrounding *keitai* use have been touched upon, there are also dangerously negative aspects to *keitai culture* that adversely affect an entire breadth of cultural issues and conflicts in Japanese society as well as questionable practices arising out of the convenience and mobility that *keitai* use provides.

On milder end of the scale is negative social criticism on a lack of social etiquette practiced by *keitai* users in public spaces. One criticism leveled at *keitai* use is on the practical point of individual safety: operating a vehicle while using a *keitai* is a dangerous endeavor and was effectively outlawed in Japan in 1999 unless the *keitai* user has a 'hands-free' headset (Cash 2001). At first, people obeyed the new law, but then strange behaviors ensued as people became enthralled once again with their *keitai* conversations; examples include stopping in the middle of the road while talking on a *keitai*, or pulling to the curb to chat on a *keitai*—still blocking on coming traffic—while a parking lot entrance was only yards away (Ibid). Another interesting phenomenon is people observed standing or walking around aimlessly in urban areas staring at *keitai* screens while reading their email messages or playing games (Ibid). Going from streets and sidewalks and moving into buses, trains, theaters, auditoriums, restaurants, schools and other public spaces, *keitai* etiquette becomes more problematic. Issues of social conflict begin when *keitai* ring at inappropriate times such as in the middle of a movie or speech often accompanied by one-sided conversations—sometimes in 'irritatingly' loud voices to compensate for background noise and poor *keitai* reception (Struck 2000, Luker 2000). Yoshitaka Yano, an

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official of the Consumer Awareness Office of the Ministry of Posts and Telecommunications (MPT), states: "Complaints come from inside trains, movie houses, hospitals—in all these places it is supposed to be quiet". Accounting manager Rei Iwase adds, "some young people seem proud of talking loudly. It's as if they want to show they have friends" (Struck 2000). In the same article by Struck, a MPT mail survey to 1000 people revealed that 900 of the respondents 'deemed cell phones offensive' (Ibid.). Ito adds to the discussion that,

" . . . the older generation complains that keitai are linked to bad manners, particularly when people use them on public transportation or during meals", but counters, "Yet even those who complain about keitai are usually keitai users themselves, and are participating in social negotiations defining and regulating their use."

—Ito, (2003).

Members of Japanese society are responding to *keitai* rudeness by breaking normative cultural behaviors of social tolerance to avoid social friction and actively confronting *keitai* offenders to ask them to curb their unacceptable displays (Struck 2000). Restaurants are posting signs banning cell phone use and some trains companies are now designating even-numbered cars as 'keitai-free zones' and installing lights in passenger cars that accusingly flash when a cellular signal is detected inside the car (ibid).

A much more serious problem with *keitai* are the ease with which certain criminal activities can be done as well as creating new illegal activities unique to *keitai*. With the new digital cameras integrated into keitai handsets, all manner of questionable activities have been initiated by keitai users unintended by the mobile telecoms companies such as J-Phone. The Mainichi Shimbun reports that the keitai cameras have become 'a favorite of perverts who like taking snapshots up women's dresses (Mainichi, November 3, 2002). Another unintended use of the digital camera equipped keitai by the manufacturers are by schoolgirl prostitutes, called *enjo-kosai*, who use the camera feature to 'advertise their services', see if they like the looks of potential 'johns' through digital photos and probably,

*' . . . influenced last year's nearly **ninefold** [emphasis mine] increase in the rate of crimes related to online personal sites, with 70 percent of these cases involving sex crimes such as violations of the law forbidding child pornography and child prostitution'*

—(Connell 2002)

Hosei University Professor Tatsuo Inazo predicts that phones with cameras will be the norm five years from now and it will turn 'Japan into a nation of 100 million paparazzi . . . if you consider their [camera-phones] threat against personal privacy, there really should be some sort of legislation or regulation against them [camera phones]'(Connell 2002). Abused by *enjo-kosai* seeking 'dates' are new matchmaking websites online called '*de-aikei saito*'. Popular since the introduction of mobile communication, men sign up and list personal information along with a self-introduction and then women can search for a match with search parameters such as age or location (Ito, Japan Times, December 1, 2002). However, in addition to *enjo-kosai*, *de-aikei* sites have been "recently linked to various crimes, including extortion, robbery, rape and murder" with 888 *de-aikei* related crimes in 2001 (Ibid).

Conclusion: *the new modes of social 'kei-munication'*.

With the environment and social saturation of *keitai* in Japanese daily lives, *keitai culture* has altered interpersonal communication and attitudes about individual socialization. Mizuko Ito provides a snapshot of life as a Japanese teenager before the advent of *keitai culture*:

"When I was a teenager growing up in Tokyo in the '80s, telephone cards, pay phones, and urban landmarks were the technologies that coordinated our action on the street. We would begin with a set time and place, usually a major landmark like Hachiko Square in Shibuya crossing, or the Almond Café at Roppongi crossing. I remember hours spent at these teeming street corners, sweating in the heat, shivering in the cold, making forays to a pay phone to check on latecomers or for messages at home."

— Mizuko Ito, (Japan Media Review 2003)

Ito observes that today she rarely carries phone cards anymore and sees "fewer and fewer pay phones in the urban landscape" (Ibid). In contrast to 'meeting-making' in the 1980's, *keitai* changes the methods of coordination, communication, and information sharing (Ibid). As Curtis proposes,

"Japanese society—in both business culture and personal relationships—demands frequent communication, not just to convey essential information, but often just to reaffirm that communication channels are open."

—Curtis, (Electronic News 2001)

This perceived social necessity of 'open channels' of communication helps explain in some part the rapid adoption of *keitai* technology by 62 percent of Japanese society. A college student of Ito's comments that it is a 'new taboo' to leave a *keitai* at home or to let the cell phone battery die as *keitai* users "are expected to be available unless they are sleeping or working" (Ito 2003). Ito asserts that the *keitai* has "become a social necessity in Japan, particularly among the younger set" and that wireless Internet is a key to this need with *keitai* e-mail usage approaching 100% among middle school and high school *keitai* owners (Ibid). One reason may be because text messaging costs *keitai* subscribers one-third the price of voice calls and so "i-mail has become a link between families and lovers, an essential tool for those seeking spouses, a must for students and young people" (Schmetzer 2000). While text-mail is replacing everyday voice telecommunications, it is also becoming a means of 'pre-communication negotiation' between Japanese youth:

"Before initiating a call to a keitai, they will, almost without exception, begin with a text message to determine availability; the new social norm is that you should "knock before entering". By sending messages like 'Can you talk on the phone now?' or 'Are you awake?' text messagers spare each other the rude awakening and disruption of a sudden phone call. "

"One teenage couple that participated in our study exchanged 30 text messages over the course of three hours as they watched television, ate dinner and did their homework, before engaging in a one-hour phone conversation. This voice contact was followed by another trail of 22 messages that kept them in contact until bedtime."

—Mizuko Ito, (Japan Media Review 2003)

There is even a new term for friends made via email who never meet face-to-face: *meru-tomo*, email friend, some of these relationships become romances but others can take a dangerous turn and end in stalking offenses (Japan Forum 2002). However, some "people think that relationships in general have become weaker because they interact through *keitai* instead of actually meeting" (Ito, Japan Times, December 1, 2002). Recently, a whole new spin has been put on *meru tomo* with the integration of CCD digital cameras into the newer models of *keitai* through which users can send photos to each other (Mainichi Online 2002). *Keitai* has also changed how people spend their time commuting or waiting for trains. In the 1980s, people

would fill their commute time reading newspapers, books or *manga* while today many people can be seen on trains entertaining themselves with their *keitai* (JIN 2003). The importance of possessing a *keitai* to keep busy while waiting in line or commuting has become so embedded in daily life that forgetting a *keitai* at home is something unbearable; a faux pas meriting a backtrack to home in order to fetch the mislaid handset (JIN 2003, Katsuno 2002, Ito 2003).

Finally, one unique social factor with a basis in the technology of how cellular telephones function may best answer the question '*What is keitai culture?*', a dilemma that is the central question of this paper and one which may also apply to developing mobile phone 'cultures' in other information-age countries such as the U.S. and Europe. A suitable explanation as to why mobile phones in Japan have formed many accoutrements and social behaviors akin to a distinct 'culture' or more appropriately, subculture is that the mobile phone is a technology that compresses the experiential relationship between spatial distances; the time it takes to communicate across distances is near instantaneous for the individual user. The *keitai* empowers the user to be available for communication *anywhere* or *anytime* thus freeing the *keitai* owner to undertake constructive communication even when not physically in one place (Ito 2001). The inverse of this advantage is that the *keitai* user is also *available* anytime or anywhere; meaning privacy and anonymity becomes nearly impossible and desire for it is frowned upon due to the need for 'open lines of communication'—hence the 'new taboo' of leaving a *keitai* at home or letting the battery die. To be inaccessible or out of contact in *keitai culture* is seen as '*antisocial*' to this mobile culture. Further, this constant availability for communication can have the opposite effect of communication 'freedom', as some social groups have greater control in relation to the flow communication and movement,

" . . . some are more in charge of it than others; some initiate flows and movement, others don't; some are more on the receiving end of it than others; some are effectively imprisoned by it."

—Massey, (1993:61)

In the case of Japanese youth, "communications and connections to peers are regulated by themselves or others depending on place and time of day, and that access to mobile media takes a central role in managing and inflecting that control" (Ito 2001). In addition to peers, *keitai* communication also alters interpersonal relationships and power-dynamics in the home as usage by youthful *keitai* users take on a pattern of 'hyper-coordination' that entails the continual use of *keitai* throughout the day for emotional and social communications to strengthen the bonds between peers (ibid). This 'hyper-coordination' pattern maintains peer social networks but also serves to create a sense of separateness from adults and in particular parents; in fast paced information societies like Japan, Europe and the Unites States, mobile phones play an important role in allowing youth to establish an independent social identity and niche (Ibid). In Japan *keitai* has become the tool of choice in which youth rebel against adults; the enthusiastic intercommunication within *keitai culture* allows them to have something uniquely their own. For as Katsuno (2002) states, "the cellular phone is embedded into the construction and maintenance of human relationships among Japanese youth".

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