

Envisioning Better Inter-Generational Dynamics in *Ubiquitous Japan*: Contributions of New Media for Active Ageing Society

オン・クオック・ライ

On-Kwok Lai

Mobile communicative gadgets become social necessity for most Japanese and they are used for intensive social networking; for instance, the mobile phone's role in friendship-building among younger generations – but what about the senior adults for the place anchorage for active ageing? This paper examines the coping strategies of Japanese society, in the shortage of caring services, with socio-techno innovations derived from information and communication technologies (ICT), towards ageing-in-place.

Mobile phone and e-communications promise for borderless, flexible and ubiquitous contacts: real time, round-the-clock, anytime and anywhere, making the geo-spatial conditions irrelevant and for all age groups, but are these offerings for the beneficiaries of an ageing society? This paper examines the socio-familial-spatial (social networking, location and place) relevance of mobile communication, emphasizing the use of ICT and mobile communication by/with/for ageing population, for realizing the benefits of ageing-in-place. It especially considers elderly and their families, in the need for socially and geo-spatially fixed anchors (the essence of ageing-in-place), despite (or perhaps because of) the 'mobility' through ICT. As the trend towards the intensification of ICT use, though affecting differential inter-personal relationships, our study evidently points to the feasibility of the practice for ageing-in-place in the information age.

Key Words : Active Ageing, Communication, Filial Piety, Information Society, Inter-Generational Dynamics

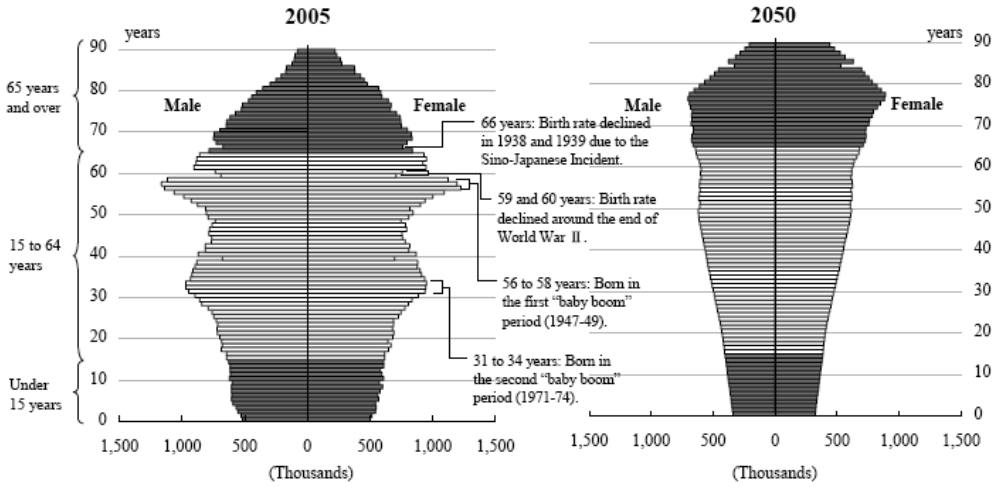
1. The Evolutionary Japanese Ageing Society: Challenges for All

In Japan, the new demographic challenge of fewer children and further greying population, plus the beginning of the shrinking population since 2006, are certain to cause socio-economic adjustment problem in the decades to come. For instance, the world's second-largest economy will have a labour

shortage, particularly for those jobs for caring the aged, the likely erosion of the tax base, the burden on the pay-as-you-go pension system, and increasing demand for support for the expanding elderly population... (Aspalter and Lai 2003; Goodman, Ed. 2002; Lai 2001, 2007; MHLW 2005a, 2006). Here, the population pyramid has become a 'jar' like shape (see Fig.1, Fig.2)

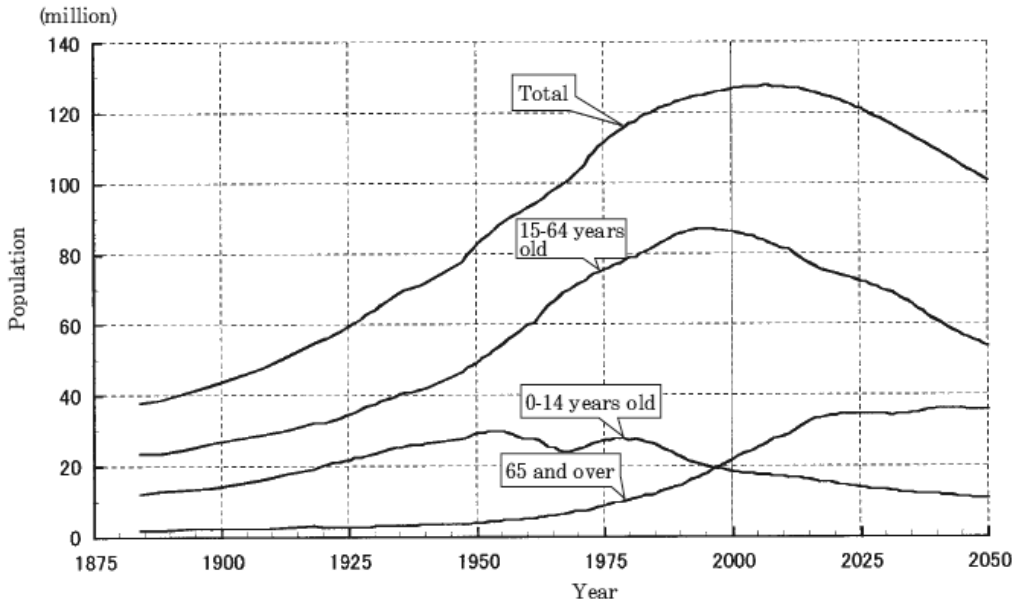
Fig.1: Japan Population Pyramid (2005, 2050)

Population Pyramid (As of October 1)



Source: Statistics Bureau, MIC; Ministry of Health, Labour and Welfare.

Fig.2: Demographic Challenge



(Source: NIPSSR 2006)

As baby boomers turned 60 in 2007, for the first time in Japanese history, in December 2007, the number of people aged 90 or over topped 1.2 million, over 27 million of the population aged 65 or above (22% of total population of 127.77 million), including about 25,000 centenarians, and a very low birth rate (1.29 in terms of Total Fertility Rate) – this also marked the beginning of the shrinking of its population. All these happen with the economic dynamism of the hyper-mobility of younger population, juxtaposing a community-locality fixed aged population (sons and daughters no longer live with their aged parents for instance); the question for enabling contacts and to enhance inter-generational dynamics (e.g., filial piety) in the family and beyond becomes the challenge for Japan.

The historical challenge for Japanese society at large, government, business organizations and NGOs in particular, is to enable the experience, skills and the capability of the elderly actively engaging, with population at large, for better quality of life; hence the demographic transitions (time-bomb?) have to be dealt with by all stakeholders. Our study illustrated below highlights such initiatives, with specific reference to the prospects of ageing-in-place in the information age.

As society has grown increasingly oriented toward nuclear families, the percentage of households where children and the elderly live under the same roof has been decreasing. In 1960, over 85% of the elderly lived with children, but this figure is now (2008) just over half; conversely, single person elderly households which accounted for only 5.4% in 1960 have increased to 29%, and another 35% were couple only households in 2007, compared to 7% in 1960 (NIPSSR 2008). A nation-wide survey by the Ministry of Health and Welfare in 1994 found that 60% of the care-givers thought their burden was too much. In short, it is becoming increasingly difficult to expect that families will provide full support for their elderly, and the problems of illness and long-term care have been identified as the greatest concern of the elderly (Campbell and Ikegami 2003; Goodman, Ed. 2002; Maeda & Ishikawa 2000; Thang 2002; Watanabe and Lai 2001).

The new policy initiatives to cope with the challenge are more focused on restructuring of the financing of caring the aged, as well as the liberalization of caring services, which both enabled by the Long Term Care Insurance (*LTCI*), since April 2000. To enabling inter-generation dynamics to cope with ageing society, the half-smooth introduction of *LTCI* system in Japan, within its first eight years of implementation, has been full of changes, including

the increase of both demand and supply for *LTC*, as well as the cost/price for the services, not least the premium has gone up more than 15% since April 2003. On the whole, people are satisfied with the reform (Lai 2007).

Learnt from the first five years of experience, the *Review of LTCI* in 2005 makes policy change in elderly care, with the main objective for the self-reliance of the elderly, by encouraging and training them to be active in self-care, including house cleaning and preparing meals – with the help of caregivers (MHLW 2005a/b, 2006); for instance, the new form of assistance limits the use of wheelchairs and instead, offers “resistance training” to increase muscle strength. The new, immediate, initiatives are focused on (the more fundamental shift from service to) self-help for those who can (re-train to) manage their daily tasks and keep health in good shape: elderly are ‘required’ to attend preventive care services: oral care, training to prevent health deteriorations and accidents, diet advice and preventive nursing care visit (Lai 2007).

The new policy initiatives emphasize the better use, or the enhancement, of community resources, as well as the networking-cum-matching of nursing caring with both professional and voluntary (NGOs) services, within and beyond the *LTCI* coverage. More importantly, it emphasizes the preventive elderly health services, health promotion, community engagement of, as well as reinforcing socio-familial inter-generation communications with, the senior adults on the one hand; and the maximal use of technologies, ICT in particular, to achieving active ageing-in-place (Cabinet Office, 2008; MHLW 2008). Some initiatives include social alarms and notifications (a service that enables help to be called by an older person), tele-care (an extension of alarm service, including caring-routine check-up and the related logistics), tele-health... all these have been developing for smart home and community care for the ageing-in-place (MHLW 2008; MIC 2008a/b).

2. Energizing the Project for Active Ageing in Japan

In 2005, people aged 65 or above who were currently working or looking for jobs were in total 4.9M, representing 7.4% of the nation’s total labour force; it was estimated that the figure will rise to 7.24M, or 11% of the total, in 2015. Given the modesty of policy achievement, the *2005 White Paper on Elderly* is still ‘urging’ (rather than put it into policy program and budgetary terms that) the private sector and NGOs alike to increase working

and/or meaningful employment opportunities for senior citizens by helping them to find jobs, establishing business, or volunteer work – various ways and modes for senior citizens to actively participate in society. The use of ICT to facilitate this re-engagement of the senior adults in communities is becoming a major policy initiative (MIC 2008a/b, MHLW 2008).

Moreover, the further liberalization of nursing care services by LTCI Review (since 2005) has been enabling the two-pronged approach (enhancing the inter-generational dynamics for family and in society, as well as the maximal use of technologies) of development, which is instrumental for better active ageing-in-place, this is particularly emphasized by policy papers on the *Ageing Japan* (MHLW 2008) and the *Ubiquitous-Japan*, information society for Japan (MIC 2007, MIC 2008a/b).

In spite of active policy initiatives for ageing population, Japan's performance in achieving the targets for active ageing: self reliance in general and ageing-in-place in particular, is just modest, despite the timely (though still belatedly) development of LTCI, if we use the *2005 White Paper on Elderly* (MHLW 2005a) as a base for assessment. By specifying the Japanese experience (experiment), we hope that there is policy learning for other ageing societies, especially in ageing Asia.

2.1 Socio-Familial Dynamics: Re-Negotiating Inter-Generational Contract

The inter-generational dynamics, as well as the re-negotiation of familial contractual responsibilities and duties, are the most important aspect for ageing society: for this, people's attitudes toward the aged are the necessary conditions for better active ageing-in-place. In a recent nationwide survey on inter-generational issues and ageing (DG-PCS 2004a),¹ over half of the respondents considered the 'aged' as those over 70 (instead of 65) years of age. For the social image of the elderly, majority of the respondents (72%) viewed the aged as those having weak health conditions and 33% viewed the aged as having economic insecurity. Yet, the positive aspects of the elderly were not forgotten: 44% of the respondents opined that the aged were having experience and intelligence; the figures were higher (over 50%) for the younger generations of the

20s-40s age group.

Culturally, ageing was considered positively in terms of social image: it was considered by a slight majority (54% of the respondents in a survey) that elderly people were favourably treated in society (DG-PCS 2004a). For inter-generation exchange and communication, only 44% of all the respondents showed willingness to make the effort (contrasting to 7% not willing to do it); but nearly half of the respondents had no particular preference for inter-generation exchange. Yet, it should be pointed out, as shown in the survey, that there was a stronger willingness for inter-generational exchange for the over 50s generation (over 50%).

For the inter-generation exchange, engaging in hobby, sports and life-long education was topped (49%), followed by volunteers work (44%) and the normal daily life activities (39%). It is interesting to note that nearly 50% of the respondents did not like to make inter-generational exchange, mainly because of the expected incompatibility between generations in terms of differential life experience, outlook and theme for exchanges (over 40%). And for the younger generations (20s to 30s age group), no spare time was the main obstacle to make inter-generational exchanges (details, see DG-PCS 2004a for discussion).

For the ageing population as a whole, majority (27%) of the opinions were in favour of improvement in the quality of life, or keeping the status quo; but there was a significant minority (20% on average, particularly among 30s, 50-70 generations) of the opinions would like to refocus on the present younger generation (DG-PCS 2004a).

2.2 Senior Citizens' Participation in Community

For active and healthy ageing, community participation of the elderly is instrumental, but the sense of security is also important, as the key findings of the *2004 Survey on Community Participation of the Elderly*, (DG-PCS 2004b) indicate.²

Senior adults in Japan are actively involving in community activities: in the same survey over 54% of the aged had such participation, a big jump of 11% increase if compared with survey 5 years ago. The predominant mode of activities is health and sport related (25.3%), followed by hobbies (24.8%) and community festival alike (19.6%). All types of major

1 This is a nationwide interview-questionnaire survey commissioned by Japanese government, with sample size of 6,000 (response rate: 65.7%), by stratified random sampling of 1,000 samples for each 10-year cohort from age 20 or above to age 59, plus to 2,000 samples for age 60 or above, conducted during 27.February to 14.March 2004.Details refer to DG-PCS 2004a.

2 This is a nationwide interview-questionnaire survey commissioned by Japanese government, with sample size of 4,000 (response rate: 71.5%), by stratified random sampling for age 60, conducted during 4.December to 23.December 2003.Details refer to DG-PCS 2004b.

participatory activities showed an upward growth.

For one's ageing process: in Japan, there is a sense of insecurity among the people regarding ageing in future. For instance, in the nationwide survey, 80% of the respondents reportedly saying they felt insecure and uneasy about their future, particularly for those mature adults at the age of 40s (85%) and 50s (87%). Among those who expressed insecurity about ageing, 76% of the respondents viewed that the reducing social benefits (pension, nursing and health care) and the sense of insecurity was overwhelming (over 80%) among the younger generations of 20s to 40s age group (DG-PCS 2004a).

Overall speaking, older generation of Japanese is not just having positive participation in community activities, but also having a strong demand for, and expectation towards, healthy and active ageing in community. All these indicate the ageing population is more than ready to critically engage themselves in community activities – this will pose a policy challenge for the state, market and society to respond. For instance, on the issue of the financing of senior citizens' participation in community activities, it was overwhelmingly (64.3%) supportive for public financing, followed by participant charges (19.6%). This is similar for the public bodies' role in enabling community facilities (42.9%), the information network (38.2%) and manpower (24.8%).

3. Embracing New Media by Ageing Population?

We are in the information age of 21st century, with the maximal use of ICT, (ITU 2008, Katz, Ed. 2008). Policy initiatives have been taking the advantageous offerings of ICT for social development at large. For instance, the European Union's *Action Plan (2007-2015) for Ageing Well in the Information Society*, accompanied by a new joint European research programme raising to over €1bn the research investment on ICT, targets at improving the life of older people at home, in the workplace and in society at large. These initiatives will likely contribute to allowing older Europeans to stay active for longer and live independently. Likely, it will be a triple win for stakeholders: improved quality of life and social participation for older people, new business opportunities for industries and more efficient and more personalised health and social services (European Commission 2007).

With the similar policy learning, Japanese government's goal is to build up a so-called *u-Japan (ubiquitous Japan)*. This is very much in

line with the policy initiative in most of the East Asian industrialized economies which have already been developing their portals for an e-government and e-commerce, and the development is always making mobile communication ubiquitous and omnipotent (Castells 1996; Lai 2004, 2005; MPHPT 2004a; MIC 2007, 2008a/b; MHLW 2008). This mega-project initiative will be instrumental for enabling better quality of ageing life. Information and communication technologies (ICT) promise borderless, flexible and ubiquitous contacts: real time, round-the-clock and anywhere...making geo-spatial conditions all but irrelevant. The ICT empowered digital gadgets, like mobile phone, PDA, iPod, have been constituting and facilitating various communicative encounters in both real and virtual worlds, as well as their differential form(s) of, mobile, mediated networking in new social life; obviously all these are well embraced by Japanese at large.

As highlighted in many communication studies that mobile phone can definitely extend one's personal networking and social space, at the very least extending the communicator's horizon of information; this is juxtaposing the reinforcement of the existing socio-familial contacts as well, say, the inter-generation communication between parents and kids, senior adults to their younger family members (Ito, *et al.* 2005; Katz, Ed. 2008; Lai 2008; Ling 2004). Yet, the diffusion of mobile communication is socially differentiated, so do the beneficiaries for mobile digital gadgets (phone and PDA) users.

In spite of the increasingly taking up of mobile communication by Japanese society, there is an age-specific digital divide in terms of the usage of mobile communication, as shown in the nationwide *Communications Usage Trend Surveys 2006* (MIC 2007, Fig.3, 4, 5): contrasting a very high usage rate of the mobile Internet (79%) by the younger generations (age group 20-39), only 30% of those aged above 65 used mobile phone. Similar digital divides are evident in terms of household income and the mode of access. This is in line with other related studies on the Internet usage; it also confirms such a discrepancy, along the (fault-) lines of socio-economic status in contemporary Japanese society (Lai 2008).

3.1 Senior Adults' Use of New Media for Better Life

Despite low penetration rates and belated development, mobile communication technologies have been beneficial to Japan's elderly population, and show even greater promise for the future. Two

obvious case illustrations, with strong relevance for ageing-in-place, stand out in the *u-Japan* project. First, it is the advanced application of the global-positioning-system (GPS) with the cellular mobile communication network. For example, the monthly Yen 210 “ima-doco” service, to track the where about of the mobile phone user, with a GPS location-based device embedded on the specific subscriber’s mobile phone, connecting to the cellular mobile communication networks, developed by NTT-DoCoMo, to find and locate children and senile elderly) has been well received by customers, who want to know where their aged and younger (children) member real time location is.

Similar services are well sought of, and subsequently provided by other mobile phone operating agencies, like au-KDDI and the Softbank.

Despite their differential pricing by different mobile service operating agencies, they are somewhat in common to address the ‘monitoring’ or ‘surveillance’ and online-real time contacting aspects for the younger and elders in the family: children and elderly in particular. In addition, there is also alarm forwarding functions to the family members, via the security agency. In emergency mobile phone user can press the alarm which forwards helping message to the control centre. Or if the mobile phone user is unable to respond, due to dangerous conditions, to the pre-set contact time period (say, beyond 1 hour non-response) or outside the signal catchment area, (say, route to and back from school/shopping) the mobile phone’s last known or real time locational signal will be automatically transmitted to the concerned parties for follow up action, (NTT, 2008).

Fig.3: Internet Use by Age

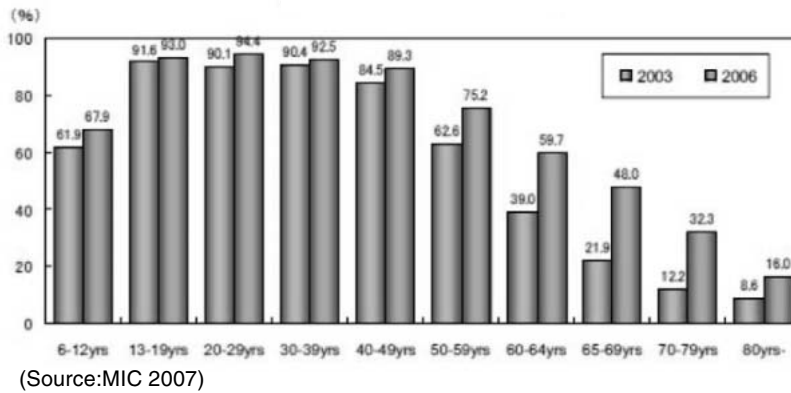


Fig.4: Mobile Internet Use by Age

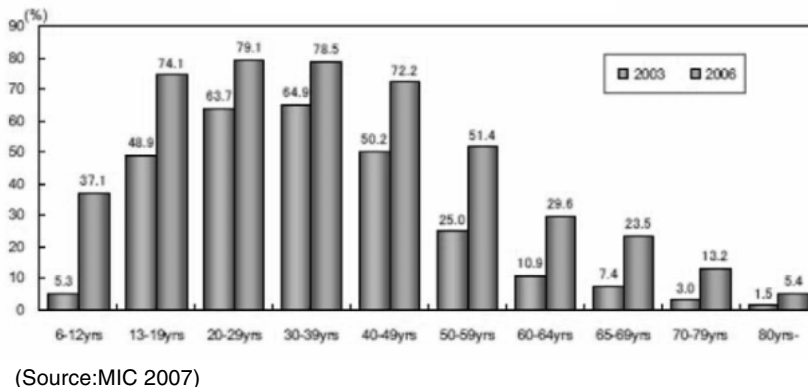
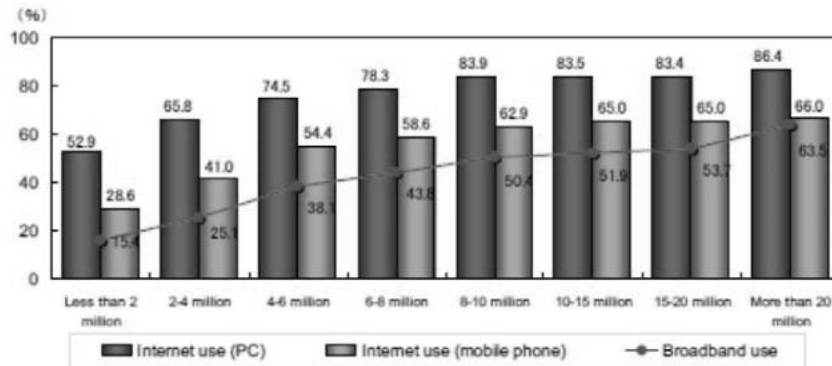


Fig.5: Internet / Broadband Use of Household Income

(Source: MIC 2007)

Mobile communication service oriented toward elderly health needs is also reflected in au-KDDI's Helpnet and NTT's Life Support. The former is a one-button push emergency service to signal the location of the caller, the latter connects volunteers with elderly people living alone (Srivastava, 2004, p.249; 2005; See Figure 6).

The second example is e-health and/or tele-health service initiatives. Maintaining good health conditions is an integral part for active ageing-in-place (at home and living in the community), some municipal government and health organizations have been experimenting the e-health or tele-health initiatives, by transferring medical

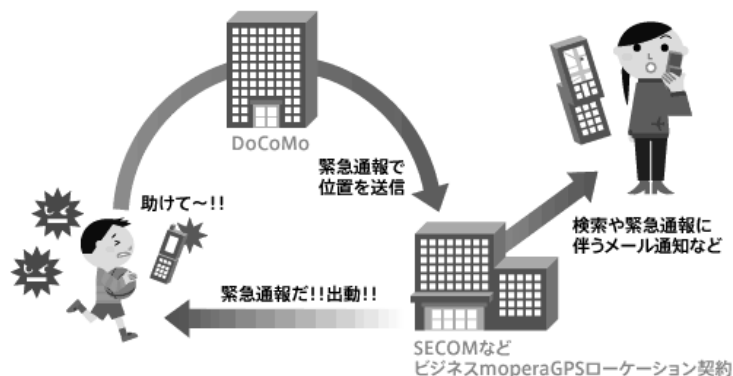
information and advice through broadband network (MIC 2005, 2007). These initiatives enable a close and real time monitoring of seniors adults' health conditions, and offering timely medical advice and referrals. Undoubtedly these sorts of the pro-ageing-in-place initiatives are only feasible when *u-Japan* project proceeds to a maturing stage. It is obvious that the promise of ageing-in-place, with an electronic-digitally integrated health service regime, is beginning to fulfil.

In other words, frequent users of mobile phone are mostly the younger generations. But the beneficiary for the less frequent users should not be underestimated (cf., Oksman and Turtiainen 2004;

Fig.6: GPS-Location based "Ima-Doco" Service to keep Track about the Location of Family Member

Mobile Phone User can either Alarm to the Cellular Network, or the Network check the Location of the User (is he/she within the defined catchment-boundaries?)

Alarm Messages or Signals forward to Service Subscriber's designated Helping Agencies.



(Source: NTT DoCoMo <http://www.nttdocomo.co.jp/service/location/report/>)

Wang 2005). For instance, mobile communication can extend the sense of networking (and hence social space extension) for vulnerable groups, like the elderly and children. For the elderly, more initiatives from government and business sectors are recently attempting to bring them onto mobile communicative accessible.

In 2007, there are increasing senior adults taking up mobile communication with their family members and friends (MIC 2007); this is following the momentum for mobile communication at the turn of this Century – the trend that senior adults in Japan were actively involving in community activities. One new and important aspect of their community activism is their high utilization of ICT and mobile communication. The study found that 17.9% of the surveyed elderly were frequent users of mobile phone, followed by fax (10.3%), and the internet and e-mailing (4.7%). Though the senior adults' use of ICT is comparatively lower than the younger generations, it is already an encouraging sign, for future developmental potential.

For comparison, computer and Internet usage in Hong Kong, one of the newly industrializing economies in Asia, have grown rapidly since mid-1990s: the computer penetration rate has had more than doubled (from 34.5% to 71.1%). The growth of internet penetration has even surged from 11.8% in 1998 to 64.9% in 2004. However the computer and Internet usage are still lower among the older persons and the less educated. In particular, older persons aged 55–64 have a computer usage rate of 20.6% whereas those aged 65 and above has only 4% meanwhile the overall average of all persons aged 10 and above is 59.5% (Wong, et. al. 2005).

3.2 Envisioning Mobile Communication for Active Ageing!

Compared with other Asian societies, Japanese ageing population is active in terms of both community participation and mobile communication (Chi, et al. 2001; Lai 2001, 2007; MHLW 2008; MIC 2008a/b; Suzuki 2000; Wu 2004). And because of the activeness of the elderly, their needs for further mobile communication in information society translate into actual new demand for new services and products in telecommunication market. For instance, mobile phone service providers are re-discovering the new market for the golden age!

From our field observation, senior adults in Japan also have an open attitude to embrace ICT in general and mobile communication in particular. Our recent fieldwork, with in-depth interviews and focus group,

also reveals the following characteristics of senior adults' adaptation to mobile communication (Lai 2008). First, there is a differential adaptation path between the 'young-old' (60-70) and the 'old-old' (75 or above). As for men, the former group has had prior hand-on experience of using ICT in their working setting. As for women, they learned from peers and friends about using ICT or mobile phone to coordinate their domestic household tasks like shopping and the maintenance of socio-familial networks. While for the senior aged one, they simply have not been fully aware of the availability of ICT gadgets and mobile communication – for them, learning mobile communication therefore needs the more tailor-made handset and the simplified telephony protocol (like single-button call). The 'young-old' are frequent and active users of mobile phone, in terms of the number/duration of calls and the communication services they engage in, respectively; for instance, they use both paid and free mobile services beyond the normal verbal communication.

Despite their differences in terms of learning experience and usage of mobile communication, both groups of elderly have been discovering, with positive experience and view of the benefits and offerings of the new way of multi-media communication for their socio-familial networking.

In Japan, accessibility, popularity and affordability of mobile phone in the market place, coupled with the concern for personal safety against accidents and risks, are the key factors for the aged people adoption of the Internet and mobile communications. Like other developed economies, in spite of the intrusiveness of mobile telephony which challenges social norm, elderly people are increasingly accepting that mobile phone can be a life saving device, a call for assistance, in emergency situation (Katz, Ed. 2008; Lai 2008; MIC 2005, 2008a/b; MHLW 2008; Ling 2004).

The emerging trend for more senior adults to take up mobile communication can also be seen in, and reinforced by, the initiatives from the government's *u-Japan* project and the market driven promotion for senior-adults friendly mobile phone. The re-designing process for elderly-friendly mobile phone is underway too: simple and functional for the ageing users are the key concepts. For instance, mobile phone is redesigned for senior adults with bigger character-size(ing) for key-pad and display, louder volume control, and pre-set phone number for their frequent calls.

To recapitulate, mobile communication can enable beneficiaries that the reinforcement of social

relationship and the extension of socio-spatial network go hand-in-hand, for the elderly as well as for the younger generations. With mobile phone and/or the Internet connectivity available, offering the real time audio sound bits and/or video images, there is likelihood for an enhanced inter-generational communication between the senior and younger members of the family / society in future.

3.3 Communicative Networking' Confronting Discrimination

Discriminations against senior adults, not least the problem of elderly abuse (estimated 11% of the total elderly population), are becoming social problem in Japan (*The Japan Times*, 6 January 2005; Lai 2007). For instance, a nationwide survey (DG-PCS 2004a) reported that over half of the survey respondents viewed that elderly people were somewhat discriminated (or the society has prejudice over the elderly): the younger generations (20s to 30s, over 66%) have more concern about the societal prejudice over the elderly. For the actual experience, the survey revealed that 18% experienced discriminative ageism in work place and employment; particularly for 25% of those in the age group 50-64.

To cope with the emerging discriminations against elderly (abuse), a better communication networking effort should be pursued, to enable more supportive communicative network among elderly groups, as well as making elderly communication beyond their cohorts. Here, the offerings from ICT (mobile phones, the Internet and other digital gadgets), as shown in our previous discussion, should have a positive contribution. Hence, the essence of ageing-in-place can be realized with appropriate ICT.

4. Communicative Actions in *u-Japan*: Essence of Socio-Cultural Regime

Characterized by its production-driven regime for both export and domestic demand derived from mass consumerism on high tech gadgets at the earlier stage, with the rapid development of Japanese information society, the communication market has been more liberalizing recently (Srivastava 2004, 2005; MIC 2007; MPHT 2004a/b; TCA 2005). The rapid adoption of mobile communication and the Internet is phenomenal, from less than 10% in the early 1990s to over 85% of the people use mobile phone and the Internet in 2007 (Lai 2008; MIC 2007). Yet, the development of mobile communication is not freely evolving and in fact, a path-dependent one following

not just the network development logics as shaped by market force and the state project for modernization (Mackenzie 2005), but also the fulfilment of social needs as circumstances arise (cf. Agar 2003; Benedict 1959; Hutchby and Barnett 2005, Licoppe and Inada 2005; Monk, *et al.* 2004; Okabe and Ito 2005; Okada 2005).

4.1 The Quest for New Media for Quality of Life

The social consequences of the *u-Japan* are more than obvious, as represented by the momentum and dynamics of the mode(s), patterns and of *keitai* (mobile) communication in Japan, which emerge, or have been emerging, from "a historically specific series of negotiations and contestations within and outside Japanese society" –half rightly mooted by Mizuko Ito (*et al.* 2005, p.15). Such characterization of Japanese experience and processes of mobile communication is insightful yet contestable, as their path-breaking collective work (Ito, *et al.* 2005) in fact is the testament of the idiosyncrasies of Japanese mobile communication that are made and consumed in Japan, by and for Japanese. The maximal experimentation of high tech gadgets in mitigating social uncertainty and risk highlight the socio-cultural path dependent case, in the case studies on the parental-children use of mobile phone for reassuring personal safety and the senior adults' social engagement (Japan Times 2005a/b; Lai 2008), teenagers using mobile phone for communication and games (Kamibeppu, *et al.* 2005; Miyaki 2005). Here, Japanese using mobile phone for socio-familial relationship and the protection of both children and the elderly underscore such adaptation process for socio-familial needs. In actuality, it is the reinforcement of the existing social norm for searching harmony and consensus (*wa*) and sense of humane security.

More specific, the instrumentality of Japanese mobile communication within the broader policy context of *u-Japan* reflects the logics of Japanese modernization project, namely (Western) technologies are using for the fulfilment of socio-familial needs, and socio-cultural norms at large (Benedict 1959; Bauman 2000; Dirlick 2003; Feldman 2000; Goodman, Ed. 2002; Kingston, 2004; Therborn 2003; White 2002). Obviously, this resembles the idiosyncrasy of Japanese modernization, an important yet sometimes forgotten aspect of the modernity project; hence the process of adaptive mobile communication is a negotiating one (Ito, *et al.* 2005). In other words, for mobile communicator in particular, what, where and how

he/she can communicate (with whom) though is much shaped by the network conditions of pricing and technology as defined by the limited mobile service providers, it is equally conditioned by the expected and perceived beneficiaries, adapting to socio-familial logics and norms. In short, the recent maximal use of mobile phone for ensuring human security at large, attempting to strengthen socio-familial ties, redefines the landscape of mobile communication – we refer this as the bounded mobile communication (Lai 2008).

Likewise, as shown in studies of the use of mobile communication for children safety (*Asahi Shimbun* 2005), the logics of the mitigation of social risk (strangers) in modern city are socio-cultural, familial and inter-personally embedded. It is Japanese specific socio-cultural processes of identity building, and the distinction between someone known and the stranger.

Socio-cultural change, though not determined by ICT development per se, ICT in general and the inter-personalized mobile communications in particular will interface, intertwine and synergize with socio-cultural domains (cf. Bauman 2000; Haddon 2004). Our previous discourse on the interfacing, repercussions, and synergetic effects of mobile communication in general, the mobile phone in particular, though positively oriented towards a better future, but it might reproduce the problems of media-centrism, namely, missing out the non-participants, the digital exclusion and divides (Murdock and Golding 2005; Wong, *et al.* 2005).

4.2 Spinning New Technology for (unknown) Social Destiny?

For senior adults' usage of the Internet, for information acquisition and learning purposes, it is growing with strong momentum (Nahm and Resnick 2008). Yet, it should be pointed out that senior adults are increasing yet differentially drawn into the ICT mediated communication (the Internet and mobile phone for instance) because of various reasons: their self-interest to be more self-reliant in the information age, or the reverse of the logics that they have no choice but being forced into the digital way(s) of communicative living as the policy result of government-sponsored, business led, ICT projects, like the *u-Japan*.

In actuality, the experience of senior adults in ICT mediated communication is highly differential. As we note earlier that it is the experience of the adults with ICT that shapes the readiness, and subsequent participation of them in learning new

knowledge from the Internet. And it is more obvious that, many senior adults have not been familiar, and have difficulties to cope with (the ever-revolutionary) ICT; they are always behind the ever-upgrading and new innovation of both soft and hard ware. To enable senior adults to actively engage in ICT learning activities, various supportive measures, like the step-by-step simple and concise learning protocols with physical or online helpers to assist them, should be contributory (EU 2007, Nahm and Resnick 2008; Wong, *et al.* 2005).

The offerings and potentials of ICT, for the betterment for active ageing and ageing-in-place have been rightly mooted in academic discussion (cf. Mellor, *et al.* 2008; McGovern, *et al.* 2008; Weitzman, *et al.* 2008), put into policy initiatives not just at national level but also at supra-regional governmental bodies, like the EU – the one-billion Euro *Ageing Well in the Information Society* program of the European Commission (2007), and very good response by the private sector (interest) to foster growth for informational-knowledge society.

In line with the global development of ICT and mobile communication, it is an irreversible trend that, in Japan, mobile phone will replace fixed line communication, stronger competition among the existing and new service providers, the new technologies from 3G to 3.5G and to 4G (Wieser 2005). The further integration and consolidation of ICT in wired and wireless communication is likely the dominant force, moving towards a mobile communication regime, to shape the bounded communication. In short, mobile communication technology is known in terms of technology development road map.

For instance, by combining a fixed-line service with a wireless local area network (LAN) communications system, NTT DoCoMo Inc. and other phone service providers have been enabling subscribers to use their handsets as fixed-line phones at home since 2006: usage of cell phones at home are charged at the same rates as fixed-line phones, which are cheaper than those for cell phones. Other mobile phone service providers follow similar service now. The implication for the integration of fixed line and mobile communications, making communication more location-less, is that communication will resemble more like the mobile one – yet the question of “Where are you now?” is still, and will be, embedded in every mediated communication.

Likewise, the competitive market force will likely shape the emergence of more mobile network providers, from the present major three to five providers in 2008. Their differential logics of

operation, business models, integrating fixed line and mobile network with the Internet, the (users-) content-and-social relationship (social network service) providing agencies (like Facebook, MySpace and Youtube) and the techno-specificity (e.g., telephony of IP phone, VoIP and the Skype-in/out) will likely determine the actual way of mobile communication for people: how, under what socio-spatial conditions and with what pricing (Fortunati 2005). Hence mobile communication will be still much a bounded one, though with more (re-)discovery of new socio-spatial sense beyond the question of “Where are You Now?”.

But for social consequences of mobile communication, the social destiny at large, are highly uncertain, if not unknown, as many mobile communication studies note that the inter-personal mobile communication is reinforcing and redefining the existing social relationship, sometimes creating the new (intimate) one (Tomita 2005). Yet, the contrary might be also true that, mobile communication is to guard against the unwelcoming encounters as well as nurturing one’s narcissism. To make an interim remark here, mobile communication is more technologically known but the destiny for human(ity) - mobile communication interfacing is definitely uncertain!

5. Envisioning Active Age in Informational Society

Our Japanese case studies illustrated above highlight some experimental success of taking the advantages of the ICT offerings in the information age, enabling inter-generational socio-familial communication, to cope with ageing population challenge. To what extent can similar social innovations with ICT for the benefits of ageing population at regional and global scale? We provide a brief answer to end this paper.

Global ageing is a challenge for us (see Figure 7), particularly with its high speed of ageing process in recent decades, problematically juxtaposing the economic liberalization of the globalization project in the information age. According to the United Nations estimates (UNPD 2007), in the developing countries, the elderly ratio is a low 6% at present, but is forecast to rise to 7.5% in 2020 and 14.6% in 2050. Hence, their elderly ratio is forecast to double in around 30 years. Perhaps the most dramatic Asian demographic transition is underway in China, where the consequences of one-child policy reinforce the rapid economic growth driven decline of the fertility rate, resulting the speeding up of ageing process.

Historically, the doubling of the elderly ratio (from 7% of the total population age 65 or above) used to occur at a steady pace. In the developed countries, it took 105 years in France, 85 years in Sweden, but in Japan, only 24 years. The Japanese case is in fact the fore-runner for Asian newly industrializing economies, like South Korea (Eu 2003), Taiwan, Hong Kong and Singapore, as well as the rapidly ageing China (after 2030). In all cases of ageing population, they are structurally linked to the rapid industrialization, hyper-modernization and urbanization, at a time of high and sustained economic development – the ideal case for the globalization project, championed by neo-liberal agencies like the IMF, WTO and the World Bank!

Fig.7: Global Ageing in mid-2008

Japan	22%
Italy	20%
Sweden	19%
Germany	18%
Norway	17%
Spain	17%
Austria	16%
France	16%
Swiss	16%
U.K.	15%
Netherlands	14%
USA	13%
Australia	13%
Canada	13%
Hong Kong	12%
Taiwan	11%
South Korea	10%
Singapore	9%
China	8%

(Source: OECD, Japanese Newspapers and the Author)

All these result in the geo-spatial relocation (or dislocation) of socio-familial inter-generational reciprocities that younger generation can no longer living with their ageing or aged parents, even if they wish to do so – this shapes the forms of inter-generational communication, hence challenging the practice for the virtue of filial piety.

Conversely, the direction of any country’s economy depends on longevity: the demography driven demands to shape community and service market. Both ageing and globalization processes, particularly in the information age, are problematic,

and the latter forces reinforce the former processes (Beck 2000; Milanovic 2003, Lai 2004, 2005, 2007).

Exposed to the globalizing 'external' forces, capitals, goods, labour (and jobs) are more mobile than the previous regime of global order. Obvious impacts of globalization are on social and familial restructuring, affecting all people at large (WCSDG 2004). For individuals, the living chance of local communities is contingent upon the ups-and-downs of global business cycle, with a flexible regime of labour productivity and mobility... Here, younger people are more nomadic and mobile for paid occupation, whilst the aged one is mostly community and locality-fixated. All these are likely shaping social-familial changes, challenging the very basic ideas of good virtue and customs (say, filial piety) of familial and inter-generational reciprocity (Hwang 1999, Meyer 2000).

Seemingly global ageing is a challenge for every developed economy. Studies have shown that the cultural virtues, say, filial piety, might produce the burnt-out of caregivers (Sung 2003), which is prompting to elderly abuse (Yan and Tang 2003; Lai 2007). Japan is no exception to other societies, particularly in Asia. The functional necessity requires young labour mobility, which in turns threatens the social fabrics, withering inter-generational physical contacts and communication at the worst. Yet, mobile digital gadgets with the ICT empowered networking could have the positive contribution to re-engaging socio-familial ties, though they might be geo-physically separated or divided.

In spite of the fact that the ideal for filial piety is not practical in a turbulent reality of flexible production regime, compressing work-and-family life, as well as the nomadic life experience for (most of us are some form of) migrant workers, various studies on the so-called sojourns' mobile communication, using mobile phone for cross-border yet intra-familial communication highlight the liberating aspect of the benefits of being in the information age: in what Pei- Chia Lan (2006) describes as the global *Cinderella* with a mobile phone. The icon of the nomadic Cinderella represents migrant workers' mobile communication with their distant family members in the information age. Through mobile phone, migrant workers can enjoy not just inter-generational communication, but also the encrypted informative instruction texting for managing family wealth; the (instruction and the digital proof for) remittance of fund back to the home becomes a way of life (*Migrant Remittances* 2005). As world remittance market is having exponentially growth with flexible global workforces

recently, coupled with the ever-increasing mobile phone user by migrant workers, Vodafone and Citigroup launch a Vodafone-branded mobile-based international money transfer service targeting the global remittance market worldwide. (Citigroup, 2007). The new (sojourns-targeted) service provides senders and receivers of money with a simple, easy to use, secure, transparent and convenient method for sending money home with mobile phone or via the internet. Hence this new sojourn experience and mobile communication practice can, and will, enable their elders or parents to be readily ageing-in-place, with both communicative and financial supports from remote distance relatives.

After much deliberation on the good practices for ageing-in-place in the information age, it is more than evident that the enhancement of the quality of (24-hour ubiquitous, borderless) inter-generational communication and care, empowered by ICT, can be a way to continue the virtue of, and practice for, filial piety for global ageing population at large in the information age.

Correspondence

Prof.Dr. On-Kwok Lai, School of Policy Studies, Kwansai Gakuin University, Japan.
2-1 Gakuen, Sanda, Hyogo, 669-1337, Japan
E-mail: oklai@kwansai.ac.jp

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