# Constructing Intimacy: Technology, Family and Gender in East Asia

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After the separation of death one can eventually swallow back one's grief; but the separation of the living is an endless, unappeasable anxiety.[1]

(Du Fu, 'Dreaming of Li Bo')

Sometimes there are situations where [my husband and I] don't say anything face-to-face, but which we communicate through SMS. Like if it's my birthday, neither of us will mention it face-to-face but later, he'll SMS me. Sometimes we'll argue and he'll apologise to me via SMS. I find this function of mobile phones really useful—what you can't say face-to-face, you can say via SMS.

(32-year old teacher, Shanghai, quoted by Sun Sun Lim)

 How do expectations of intimacy with family, peers or friends relate to the technologies available to express them, and to the political economy in which they are embedded? Such questions fascinate theorists of the Internet Society, for digital technologies have opened up seemingly infinite new possibilities for creating human bonds where none existed before. Yet the same question can also be profitably applied to almost any human community, present or past, whether their technologies are "advanced", "traditional" or "mixed". Intimacy denotes closeness or interdependence, an intertwining of human lives and experiences, replete with the tensions, contradictions and imbalances of power typical of any form of reciprocity. The relations between mother and son, doctor and patient, lovers, and members of a basket-ball team are all intimate in varying ways. Intimacy can usefully be defined

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[1] 死別已吞聲　生別常惻惻　Translation Stafford 2000: 125.

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as 'a form of relatedness entailing material or virtual proximity, implying the sharing of spaces, things, or experiences and resulting in bonding between individuals' (Santos and Donzelli forthcoming).[2] The role of technology in constructing such bonds of perceived proximity and sharing deserves more imaginative attention. The technologies of virtual communication which currently feature so prominently in social theory and STS are certainly one key element in the construction of intimacy in our own society. But we build human closeness from many materials and in many styles. Throughout our history, and still today, communications are just one among many technological domains of sheltering, provisioning, caring, connection and exclusion that we devise to construct the building blocks of intimacy, combining them into complex material and emotional architectures of solidarity and antagonism, tension and comfort, cooperation and control, misery and pleasure.

The five articles in this special issue offer a spectrum of insights into how families in East Asia today, including not only sophisticated urbanites but also struggling villagers, use technology to create or enhance networks of intimacy that can help them to survive and thrive in a rapidly changing world. Whether it be the tender thoughts that an urban Chinese couple only feel free to convey in an SMS (Lim); a middle-class Japanese mother's hesitations over buying a cell-phone for her nine-year old (Matsuda); a Chinese peasant purchasing a washing-machine to protect his wife's health after giving birth (Wu); an old lady teaching a child a finger-game that has lost its practical meaning (Flitsch); or a website representative helping the owners of a village guest-house to design a page that shows them receiving guests "as family" (Park)—in each of these cases the lens of intimacy reveals how technological choices and practices mediate between the emotional and material micro-dynamics of family life and the broader imperatives of livelihood, political economy or citizenship.

When I initially invited the authors to present their papers at an EASTS workshop in 2007, intimacy had not yet occurred to me as the focus; instead I proposed the relations between technology, family and/or gender as a common theme that would address a recognised gap in the STS literature. While family and gender figure prominently in studies of East Asia, until recently few scholars in those fields had incorporated technology into their analysis.[3] In contrast, not only have feminist STS scholars transformed research on technology in Western societies, but also, through the process of what we might call "humanising" technology, they have made it available as a component of family or gender studies in other disciplines. By challenging common assumptions about where technology is located and who is involved in technological practices; by elaborating such concepts as *domestication*

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[2] *Intimacy* thus defined corresponds closely to the concept of *social network*, developed by social anthropologists in Britain in the 1950s and 1960s to explore the mutual shaping, articulations and tensions of forms of interdependence within and beyond the family. The classic study of social network theory and methodology by Elizabeth Bott was first published in 1957. The place of communications technologies in building and mobilising social networks was highlighted in Douglas and Isherwood's pioneering study *The World of Goods* (1980).

[3] With the obvious exception of reproductive technologies; see the next issue of *EASTS*. Among scholars working on gender and the family in Taiwan, technologies of everyday life (TEL) such as motor scooters, washing machines, or breast vs bottle feeding are now attracting increasing attention (Daiwie Fu, personal communication, September 2008).

and *user* that transcend the boundaries between laboratory or factory and laundry or living-room; and by insisting upon examining how technologies create meaning, values and identities as well as material artefacts; the feminist perspective in technology studies has overturned grand narratives, developed new analytical models, and fundamentally destabilised modernist assumptions about what technology is and does and how it should be studied. But it has yet to de-centre the West.

The vast majority of STS research on gender or the family still looks at modern Western cases, and feminist scholars have called for more studies outside North America and Europe that might challenge theoretical or methodological assumptions rooted in the normalisation of the modern industrial West (e.g. Harding 1991; Cockburn 2004; Lohan and Faulkner 2004). They have perhaps been less attuned to the disciplinary roots of such assumptions, and I would argue that another desirable step towards a more self-critical and encompassing technology studies involves incorporating insights from other disciplines, including the anthropology of technology (Bray 2007).[4] I therefore invited three anthropologists (Flitsch, Park and Wu) to present papers, as well as two scholars from more obviously STS-related disciplines (Lim in communications and media studies, and Matsuda in media and society studies). All the papers address the domestication of new technologies, but unusually perhaps for an STS journal, the technological transitions considered span the full range from low-tech to high-tech; furthermore we are introduced to some thought-provoking contrasts between the "domestication" of new technologies in middle-class urban settings and in poor villages. My goals in convening our interdisciplinary workshop were thus to respond to feminist STS calls to de-centre the West, and also, I hoped, to provide some new insights into trajectories of modernity in East Asian societies.

Several earlier essays in this journal have debated the analytical gains and pitfalls of taking East Asia as an analytical category (for example Fu 2007; Fan 2008). Comparison is inherent in such an enterprise, but at what level? Certainly, one part of the game is to use "East Asia" to uncover culturally or politically specific assumptions embedded in the currently Western-centred enterprise of STS. But what analytical frameworks can we develop that will successfully engage with Western categories while adequately encompassing the heterogeneity, multiplicity and historical depth of East Asian experiences? Which concepts might help develop illuminating comparisons both *within* and *beyond* East Asia? On re-reading the papers in this issue and reflecting upon the connections and contrasts between them, I noted some interesting challenges they individually or collectively present to Western assumptions about how to study family and gender, or where to look for significant instances of the domestication of new technologies (I shall return to these questions below). It also struck me that the papers collectively addressed a stronger unifying theme than the loose nexus of family and/or gender that I had originally proposed. Although the term itself features explicitly only in Park's article, intimacy stands out as a common goal suffusing all the practices and decisions described in these case studies, from high-tech purchases by education-obsessed nuclear families

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[4] Fa-ti Fan also suggests the unusually broad cross-disciplinary span of the current East Asian STS community is a resource that should be imaginatively exploited in developing an East Asian STS (Fan 2008: 246).

in cities across the macro-region of East Asia, to the puzzles of heating, lighting and boiling water in rural backwaters of northern China, where mud and kerosene have only recently given way to cement and electricity. Reflecting upon the contrasts and commonalities across the papers, I realised that intimacy as an analytical lens offers several advantages for broadening the historical and geographical scope of STS and for re-examining some of its assumptions about which technologies count.

## 1 From Structures of Feeling to Political Economy

In Western social theory, intimacy as a concept and concern has generally designated the nature and dynamics of emotional relations between individuals within the private sphere.[5] But how private is private? Where do the boundaries of intimacy lie? Sociologists of modernity have theorised how relations of intimacy between family members or partners are framed by broader structural inequalities or differences, in particular by evolving régimes of gender and sexuality (e.g. Giddens 1992; Stoler 2002). The boom in communications technologies and virtual communities has generated a new set of approaches to intimacy in social theory, looking at intimacies formed between people who may have no conventional social bond, indeed may never have met, yet see themselves as sharing identities or interests, pleasures or causes (e.g. Turkle 1996; Castells 1997; Rafael 2003). These new forms of intimacy involve the use of advanced technology; consequently both the material tools and practices of intimacy, and the macro-configurations of society, economy and geo-politics that make such technologies available to some but not to others, or that might allow the technologies to catalyse social change, figure more prominently in such studies than in the more classical studies of family intimacy (Castells 1997; Lie 2003; Donner and Tellez 2008). It is noteworthy, however, that this body of literature singles out a very narrow spectrum of advanced technologies (predominantly ICTs, or information and communications technologies). As Flitsch remarks analogous studies of domesticity or gender in STS, though they consider a rather wider range of apparatus, similarly pay little attention to non-industrial technologies—even to those that have survived, or revived, within the modern home.

All these approaches to intimacy necessarily recognise that in the modern, industrial era of nation-states inter-personal intimacies, and likewise styles of domesticity, are structured by local, national and transnational frameworks of regulation, of ideology and legitimation[6]—and also, crucially for the STS perspective, of material infrastructure and technological resources. The project *Tensions of Europe*, for example, aims to show the place of technological development in building up a shared, if always ambivalent, 'European' identity

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[5] Ariès and Duby (1987–1991) trace the emergence of privacy and its material, emotional, legal and cultural expressions as part of the modernising process of Europe. This influential work has inspired similar studies of other regions, for instance Yunxiang Yan's study of the emergence of privacy in rural Northeast China (Yan 2003).

[6] United Nations international policies on breast-feeding (Gottschang 2000) and on the rights of the school-child (Naftali in press), for example, have played a prominent role in reshaping practices of family intimacy in urban China.

through the twentieth century—in this case, an identity of supposedly European characteristics constructed not just through regional integration but also through a dialectic with 'America'.[7] The project recognises domesticity as a key domain for observing the mediations between technological advance, national imperatives, corporate growth, standardisation, and cultural norms and expectations, with consumer groups as increasingly important players shaping new forms of European identity (Oldenziel and Zachmann 2009). Considered from this angle, the domestication of new technologies constitutes a revealing interface between patterns of familial intimacy and the political economy, as Matsuda and Lim's articles both clearly demonstrate.

Although Western theorists have tended to locate intimacy in the spheres of domesticity, eroticism or friendship, as suggested earlier intimacy is also an element of almost any functional relationship between people who regularly work together or exchange resources, whether in equal or hierarchical relations. Yet theorists of modern social formations, including the 'Internet society' and globalisation, like to present intimacy as the antithesis of the state, working with a dichotomy of Big and Impersonal bureaucracies or organisations versus Small and Intimate groups of private persons (*Gesellschaft* versus *Gemeinschaft*). They may identify intimacy as a key element in effective citizen activism, or even sometimes as the social grease that keeps the wheels of bureaucracy turning, but on the whole they have not paid much attention to the essential intimacies between non-equals that make society function.[8] Scholars of East Asian societies, however, cannot ignore the pervasive institutions of intimacy between non-equals, which are so often construed by Westerners as crassly instrumental or inherently corrupt, but which are actually far more interesting and subtle in their intentions and in their effects. East Asian forms of intimacy such as *guanxi* by definition go *beyond* the family circle, and are recognised by all involved as practices of communication and exchange that serve to personalise impersonal connections and to forge long-term working relationships between people with different status and resources. These relationships can be mobilised in pursuit of livelihood, and to press for entitlements in the name of solidarity or patronage. Such practices of intimacy are fundamental techniques for "private" individuals or families to create bonds with local or national representatives of the state, as well as knitting them into local networks of power and resources (Yang 1994; Yan 1996; Kipnis 1997).

ICTs are technologies that clearly facilitate such forms of bonding. Matsuda's article underlines how *keitai* (cell-phones) serve not only to keep communications open between school-children and their parents and friends, but also to facilitate their obedience to the demands of their teachers. Although she does not pursue such cross-status bonding here, Lim's article alludes to the importance cell-phones have now acquired both in Korea and in the PRC for maintaining good relations between employees and their bosses. Park's study of rural tourism shows that the Internet is perceived by peasant entrepreneurs not only as a medium for exposure to potential

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[7] See http://www.tensionsofeurope.eu/, accessed 28 August 2008.

[8] An acknowledgement, largely implicit however, of the importance of such relationships of intimacy surfaces in the current academic obsession with trust ("good" intimacy) and corruption ("bad" intimacy).

customers, but also as a sign of modern status that will help them in the quest for official certification for their guest-houses.

Yet when it comes to the role of technologies in shaping or facilitating what we might call cross-class intimacy, once again it seems that there is plenty of scope to broaden our vision beyond ICTs. Comparing rice-growing villages in Guangdong (South China) and Toraja (Indonesia), the anthropologists Santos and Donzelli focus on two technologies, agriculture and architecture, that interweave to construct interdependence and intimacy across classes. Farming society in Guangdong as in Toraja is marked by a vital tension between the needs and interests of family and of community characteristic of economies dependent upon irrigated rice (Bray 1986). A focus on the 'intimacies' necessary to keep rice-farming going allows Santos and Donzelli to trace in Toraja and in Guangdong a common historical trajectory 'of equality and difference, attachment and distance, attraction and repulsion underlying the production, consumption and redistribution of rice', and to show how two key "traditional" technologies that served to forge intimacy within and between classes have been adapted to the new demands of participation in a modern economy. This enables them to connect changes in relations of power, structures of feeling, and technological practices. It also suggests one strategy for intra-regional comparison that might generate other "middle-range theories" of the kind which Fa-ti Fan argues are needed for East Asian STS, 'grounded in particular historical and social contexts and that tackle historical and/or contemporary problems in East Asian societies' (Fan 2008: 246).

## 2 Bringing Low-tech into STS

Technologies of building and farming in Guangdong and Toraja have changed with the introduction of concrete, hybrid seeds, and alternative employment opportunities. One might say that the villagers now operate within an assemblage of low-tech and high-tech resources. This is an important point for STS: the co-existence of (and *bricolage* between) low-tech and high-tech is typical not only of much of the developing world (Edgerton 2006). Similar mosaics of what Flitsch terms *non-synchronicity* in material culture are characteristic even of predominantly high-tech environments in the wealthy economies, where it is usually left to the anthropologist or the cultural historian to observe embodied memories of earlier challenges or sensibilities, or preferences for "old-fashioned" techniques in certain contexts. Yet, as Mareile Flitsch notes, Ruth Schwarz Cowan's criticism of STS's obsession with high-tech innovations, although made 25 years ago, still holds largely true today: `persistent everyday technologies have been assigned to "traditional material culture" and "pre-industrial household technologies"', writes Flitsch, and so largely ignored.

The three anthropologists contributing to this issue, Flitsch, Wu and Park, all discuss cases of non-synchronity in the PRC. Flitsch and Wu discuss the impact of technological modernisation within village society; both studies highlight the legacy of embodied skills and of the values placed on specific skills or resources in shaping the uptake and gendering of new technologies. Wu's discussion of the fraught transition from kerosene lamps to electric light-bulbs echoes Gooday's argument, which he illustrates by the often reluctant switch from gas to electricity in British households, that we should never presume that any technological transformation was

inevitable. In North China as in the UK electricity was initially mistrusted as physically dangerous; the threats to gendered identities and practices of intimacy were construed in interestingly different fashion, however. Peasant women in North China disliked electric light because it literally came with strings attached, making it inconvenient to move the source of light as they themselves moved from one task to another. In Britain one concern of middle-class ladies was that the glaring light of incandescent bulbs would be neither flattering to their complexions, nor conducive to successful dinner parties: `the incandescent lamp was the subject of much gendered contestation: while male householders seemed to prefer getting the maximum illumination possible from incandescent lighting, their female kin were often reported as strongly disliking the effect of this, especially when such lights were used directly overhead or shining straight into the face. Their dislike of this illuminant was so deeply ingrained that some vowed never to allow it into their houses' (Gooday 2008: 24).

Park's study of rural tourism in China shows us an interface between two distinct technological and material cultures, urban and rural, where hosts and clients negotiate mutually compatible visions and materialisations of "home" and "family" atmosphere, both sides aiming for a marriage of "traditional", "authentic" emotional and aesthetic comfort with "modern" hygiene and convenience. Both sides are seeking forms of intimacy with the other. The urbanites seek a cosy family-like setting where they can relax and make friends with their hosts. The hosts design their facilities to provide this kind of atmosphere, hoping to make regulars of all their best clients. Yet there are frequent mis-understandings between the two cultures, for example over such technological infrastructure as modern bathrooms, where rural hosts project onto their clients mistakenly high technological expectations.

One striking point that emerges in comparing the articles in this issue is the difference in technological expectations between urban and/or middle-class populations in today's East Asia, and poor(er) villagers. In North America as in Western Europe, at least in the urban sectors, the transition to a reliable, integrated industrial infrastructure and to high-level uptake of modern technologies in the home, the office, the factory and the school, has normalised the consumption of industrial goods and largely eradicated memories of earlier challenges and sensibilities, especially among the young. The pace of change in nations like China, as Flitsch remarks, has far outstripped even the remorseless rhythm of innovation and obsolescence in the USA. Convenience has been normalised. We all now take it for granted that when we flick a switch the light comes on, when we turn the tap water comes out. Brown-outs in Los Angeles make headlines, as they do in Tokyo. The rural regions of Japan were integrated into the modern urban-centred landscape and into high-tech dependence in the 1960s and 1970s; rural integration into industrial technological cultures in the Republic of Korea and Taiwan followed two or three decades later. In the PRC the cities have caught up almost overnight since the economic reforms of the 1980s. But much of the countryside, home to hundreds of millions, remains far behind. Even in regions where infrastructure and incomes have improved, villagers often find themselves caught in the toils of complex transitions of the kinds described by Flitsch, Wu and Park. The infrastructure, skills and expectations that city-dwellers take for granted are still emergent and uncertain. Wu, for instance, traces three phases of development of the electric grid, and three

corresponding phases of domestication of electricity use into village life. During the first phase, the current was unstable, the supply limited, and the dangers of electrocution loomed large. Today the supply is reliable and most villagers own a range of electrical appliances—yet many still use a single bulb of 40 W or less for lighting. What is going on? Wu traces this ethos of frugality back through the initial production-centred phase of communal electrification to the days when kerosene for lamps was a heavy financial burden for most peasant families. Water, on the other hand, was formerly free, even though it took hard labour to raise it from the well, and peasant families still treat it as a free resource even though electrical pumps are not particularly cheap to run.

## 3 Brave New Families

As Wu and Flitsch's articles demonstrate, many expressions of familial intimacy have changed significantly in the villages of North China as a result of technological innovation. Wu shows how traditional moments of family (or female) intimacy, gathering around the lamp to work or to relax, have been transformed. Although women still like to keep the living-room lightbulb on a long flex so that it can be moved to wherever is most convenient for the task at hand, now family members of both sexes get together in the evening, not around the single lamp, but around the table in front of the TV, and a husband can demonstrate his concern for his wife by purchasing electrical gadgets which she may appreciate, but often doesn't use. Flitsch describes the spatial intimacies of the heated mud-brick platform, the *kang*, which served for centuries to warm the houses and provide the cooking facilities and communal sleeping spaces of Northeastern China, but which are now starting to disappear. She discusses the embodied female skills of heat regulation that translated into the wifely arts of keeping the family warm and fed, raising silkworms or poultry for sale, entertaining guests, and caring for the sick. In recent years families have switched to new, modern styles of house. Heating, cooking, sleeping and working have been separated into spatially and technically distinct domains. The family no longer sleep together on a single *kang*: the married couple, children and grandparents occupy separate bedrooms. The electricity bills are bigger, and women have lost forms of agency associated with the technical expertise of *kang* management. From another perspective, however, these changes may well allow the family to feel closer to being modern citizens with a proper sense of individual privacy (Yan 2003).

   The three examples of rural Chinese families grappling with new technologies bring to our attention not just the uncertainties inherent in switching to a new technology, but also the formidable challenges and risks of switching from skills that are second-nature in order to learn new styles of interaction with the material world. The studies by Lim and Matsuda, in contrast, show us urban societies that take modern infrastructure for granted. The risks these middle-class families are concerned with are not those of electrocution or hypothermia, but of failing to protect their children from real or virtual strangers, and of giving up too much control. This is not purely an urban problem, however. Looking like Flitsch at the switch from *kang* to modern houses in North China, Yan (2003) has analysed the impact of this new spatialisation of family life on inter-generational relations.

The rural parents he interviewed vaccilated between the desire to maintain a degree of authority and protective control over their children, and wanting to encourage them to be modern and independent. Giving a child her privacy is risky, but helps her to develop the independence and initiative required for success as a modern citizen.

We see a similar tension in the urban families studied by Matsuda and Lim. Lim provides examples of mothers in Korea and in China worrying about the risk of allowing their children unsupervised access to the Internet, and solving the problem by keeping the computer in a room (the living-room or their own bedroom) where they can keep an eye on the screen. Matsuda's Japanese mothers are likewise ambivalent about the freedom of movement, and the attendant risks, that a *keitai* (cell-phone) offers their children—particularly their daughters. Matsuda's article offers serious food for thought in its discussion of suitability (which technologies are deemed appropriate for whom), and how the assignation of suitability (in this case, to progressively younger cohorts of college students and school-children) shifts as technologies are progressively integrated into social life-support systems. However much they may worry about the risks for their younger children of giving them cell-phones or computers, the parents cannot refuse these communications technologies for they have become an integral component of a notoriously demanding and competitive education system. These items are now, as Matsuda and Lim both demonstrate, a *necessity*. Whether in Tokyo or Shanghai, Seoul or Beijing, although (as Lim's article shows) the exact components and uses of the ICT repertoires differ, the competitive imperatives of educational success are the same. If she is not in the communications loop of homework assignments, cram-school lessons and dialogue with her teacher, a child cannot hope to do well in school and succeed in life.

As their bibliographies suggest, Matsuda and Lin's examples evoke parallel analyses of the domestication of ICTs into families in Europe or North America. At first sight this suggests that STS models and assumptions translate fairly smoothly to urban East Asia; it might even seem to support theories of convergence. Yet Matsuda and Lin's data also indicate significant differences from Western norms that are common to East Asian societies. These are visible, for instance, in conceptions of parental responsibility, responsible citizenship and modernity: here we may glimpse, perhaps, features of the common historical heritage that Fu Daiwie notes as significant in his discussion of the potential for an East Asian STS (Fu 2007). Certainly the importance placed on educational success across the nations of East Asia is unmatched in any country in the West. Likewise the formality of relations between father and child, or husband and wife, which Lim documents is still common in much of East Asia but has long disappeared from Western life, at least among the middle classes—although the glee with which Lim's informants seized upon the opportunities SMS offers to subvert such formalities, to express sentiments which would be embarrassing in a face-to-face encounter, or to signal tenderness or humour between the lines of verbal communication, suggest that the rigidities of Confucian family etiquette may not survive much longer.

Taken together, the articles in this issue suggest that interesting new lines of gender analysis might be developed within the framework of an East Asian STS. As Wu remarks, much research in the West, including in STS, is dualistic in its approach, generally focusing on gender distinctions and on the antagonistic or

exclusive features of gender relations. The STS critique of gender attributions and of the unequal distribution of power instantiated in technological cultures has transformed our understanding of male–female inequalities. Its emancipatory potential means that no East Asian STS can afford to neglect it. Yet the gendered attributions both within and beyond the family that we have come to think of as universal may differ significantly in Asian contexts (Lagesen 2005). So too may the nature of conjugality, or of inter-generational relations—and it might be wise to set aside the hermeneutics of suspicion at least temporarily, in order to open the way for new (or perhaps renewed) comparative explorations of gender regimes.[9] All the papers in this collection, I feel, suggest that a focus on technologies of intimacy would be worth pursuing further in this respect.

One notable difference between the articles is the relative salience of the state: inescapable in Wu and Park's analyses, it passes unmentioned by Matsuda and Lim. This, I think, does not imply more effective penetration of the state into rural peasant lives than into urban middle-class culture, or its relative absence in the advanced economies and democratic political regimes of Japan and Korea. It rather seems to me a difference in disciplinary perspective. Anthropologists are centrally concerned with tracing relations of power through the whole fabric of society, and for them the identity of a peasant, like that of an urban teacher, cannot be separated from the networks of governmentality within which their lives are embedded. Matsuda lays out the infrastructural developments and the commercial and regulatory landscape within which the *keitai* became a necessity even for school-children in Japan, so that although neither she nor Lim bring the state as such into their analysis, it is not difficult to read it in between the lines. In the articles by Wu and Park the state looms large. In the case of rural electrification and the adoption by villagers of electrical domestic goods, not only did the state build up the grid and control either the supply, initially, or later, the companies supplying current. In controlling and regulating supplies of energy and consumer goods, and dictating the organisation of livelihood, the state often left farmer families in China with what Wu, evoking Bourdieu (1984), calls 'the choice of no choice'. The state also elaborated successive ideologies of technology, from the early phases when technology served production and the peasants were identified as workers in a collective rather than as consumers, to current policies that encourage the consumption of technology as the mark of the responsible modern citizen.[10] Park's peasant guest-house owners have clearly absorbed the state's current over-arching commitment to progress through high-tech, not least in its specific message that progressive entrepreneurs use the Internet. Paradoxically, however, although the guest-house owners invest in having web-pages made for them, and updated, they do not use the Internet themselves. They do not take bookings and communicate with customers by Internet as their Western counterparts do, in fact most of them are computer-illiterate and neither own nor

[9] Here again, network analysts in the 1950s and 1960s paid careful attention to the social matrices in which norms for gender and generational roles emerged; Bott (1957) noted that norms and practices of conjugality, for instance, spanned a spectrum between *segregated* and *joint conjugality*.

[10] Joy Parr's study of shifts in state priorities in Canada and their impact on consumption and domesticity offers an interesting comparison (Parr 1999).

have access to a computer. Furthermore, almost none of their much more technically sophisticated clients come because they have been attracted by the web-page; either they have been recommended by friends, or they simply arrived by chance, following the old-fashioned signs painted on stones or boards on the main road. For the peasant entrepreneurs the value of a web-page is thus primarily symbolic, signalling their ability to participate as up-to-date actors in China's newest and most thriving industry, tourism.

## 4 Skilled Users

So are the guest-house owners "users" or "non-users" of the Internet? Are Wu's village housewives "users" or "refusers" of the water-boiler-coolers which their husbands proudly set up in the living-room but which get used only once or twice a year? Both Wu and Park argue that in these cases the sign-value or symbolic value of these new technologies overrides their (minimal) use-value. The water-boiler-coolers require few technical skills to operate although if used regularly they require quite a lot of maintenance work; however, it is the social skills set to work around them that are intriguing. Knowing how to talk about the water-cooler and to whom, or equally important, how to include it into family living-space prominently yet without inconveniencing everyday tasks, are among the skills through which women demonstrate their appreciation of the conjugal concern (or as a cynical reader of Wu's paper might put it, the *display* of conjugal concern) that their husbands have expressed through the purchase of the gadget. Only a couple of Park's guest-house owners have any computer skills, or indeed access to a computer. The rest lack technical skills to use these devices directly, but deploy social skills to put them to effective symbolic work within a "community of practice" for whom the ideological value of web-pages is extremely high.

Let us not conclude from the salience of their symbolic skills in manipulating high-technology devices, however, that the inhabitants of predominantly low-tech environments lack technical skills. Curiously, the concrete analysis of technical skills seldom features in STS, and this is a gap which comparative studies could help to bridge. User or even maker skills slip through the cracks of most STS; even the technical skills of designers are taken for granted and analytically neglected in favour of the unpacking of "user scripts". The STS concept of users has proved its worth as a powerful tool for opening up new understandings of technology. Yet, because STS studies usually focus on the uptake or use of industrial technologies which consumers encounter pretty much as ready-mades or black-boxes—an "externalisation" of human skills and knowledge (Ingold 2000: 298)—STS studies of users pay limited attention to the often significant switches in technical and physical skills, as well as in skills of perception and specific bundlings of processes, that becoming a "user" of a new technology (and a non-user of its predecessor) requires. But the modern industrial perspective of STS effectively exaggerates the epistemological chasm and divide of competence between engineer, assembly-line worker and housewife or school-child. Today, for example, engineers and young people share a finger-tip understanding of how a plastic-framed technical world works. This represents a significant epistemic and embodied rupture from the

operational principles of the metal-framed culture in which I myself grew up, or from the culture of wood and clay in which *kang* skills evolved. As Edgerton (2006) remarks, STS has paid insufficient attention to "technologies in use", and still less, we might add, to the skills and assumptions inherent in low-tech use, where making is often part and parcel of skilled use. Arguing for the need to develop our analyses of body–artefact relations, and for greater attention to the "skilled user", Flitsch's article unpacks a series of embodied and largely tacit skills necessary for the successful management of the *kang*. She also emphasises how girls "grew into" these womanly skills, partly through participating in daily tasks, but also by learning abstract renderings of the material principles and social attributions of *kang* management through songs, proverbs or string games passed down from old women to girls.

One important feature of skill acquisition in low-tech societies, signalled in Flitsch's article, is that much of it is transmitted between generations: apprentices learn from their master, girls from their mother or grandmother. In today's high-tech societies, given the speed of technological change and the rapidity with which technical skills become obsolete, older people often rely on the young to initiate them into new skills. In either case, learning to use tools or perform techniques in itself builds or enhances relations of intimacy, as several of Lim and Matsuda's mothers note when they refer to learning from their children how to handle ICTs. Lim and Matsuda's informants highlight the transmission of technical skills, but also their apprenticeship in modes of perception and norms of communicative etiquette. STS scholars have begun to examine these processes of skill transmission in research on apprenticeship or on masculinities (Horowitz 2001; Mellström 2002), and in both cases intimacy and the concrete details of skill acquisition go hand in hand. Rich as these new studies are, they would benefit by engaging more closely with insights and methods developed by anthropologists of technology such as Lemonnier (1992), Pfaffenberger (2001) or Ingold (2000).

## 5 Comparisons Across Space and Time

One of the chief challenges of an East Asian STS is to devise analytical frameworks which can encompass rural backwaters, historical legacies, and urban–rural interfaces as well as the developed industrial–technological cultures of the cities (Fan 2008). One way which the anthropology of technology suggests to bridge the analytical gap between "traditional" and "modern", and to structure useful comparisons, is to begin not with a specific technology or technological artefact, but with a much more general human task or activity, which bundles one particular set of technologies in one historical, geographic or social context, and another set in a different context. The concept of intimacy offers one framework through which to organise the tracking of this kind of shift. Thus Flitsch shows us the high-point and decline of a technological régime of wifeliness and motherhood typical of the *kang* household, where cooking, heating, earning money, raising infants, entertaining guests and caring for the old and sick all converged in one core technology of heat-regulation and its associated skills embodied in the person of the housewife. Now the same physical and social maintenance tasks are dispersed through space and

across more specialised items of technological apparatus in the Western-style housing which has now become popular in the villages of North-East China.

Another possibility that the well-documented history of East Asian societies offers is to extend an analysis of intimacy back through history. Wu and Flitsch both offer us studies of technological cultures that stretch back to the early twentieth century or even earlier. But one might attempt to extend the study of technologies of intimacy and their embedding in political economy still further back in time. This introduction begins with two quotations about yearnings for intimacy, one from a Shanghai teacher interviewed by Lim, another from a poem by the eighth-century poet-official Du Fu. As Du Fu moved between distant postings far from the imperial capital, he lamented his separation from friends like Li Bo, a fellow poet entering the vulnerable years of old age, and his absence from the lives of his wife and his small children, too young even to remember their father. The poets of imperial China understood intimacy through a dialectic of separation and reunion (Stafford 2000); they exalted the anguish of separation through a thousand eloquent metaphors. Unique as they might be in their poetic expression, both the desires and the techniques of personal intimacy of the Tang-dynasty poets were shaped by the political economy of the state, just like those of Lim's Shanghai mothers or Wu's peasant husbands. The imperial government imposed Du Fu's absences through its system of official postings. Letters were the technology upon which Du Fu and his colleagues depended to assuage their anxieties and bridge the distance from friends and family. Their letters travelled via the network of communications that the government maintained across the empire, a network which in times of peace was quite efficient—the volume of official and private correspondence that has survived from pre-modern China is handsome testimony to the relative reliability of imperial postal services. If Du Fu were an official in the PRC today his department would still not hesitate to post him away from his family for long periods. But he would own a mobile phone and could connect instantly to his friends and family even from the remote mountains of Sichuan; he would also expect to fly or take the train home two or three times a year on national holidays. If Du Fu were writing today, would his poems on intimacy still grapple with the anguish of separation, or would they playfully explore the tensions between the protocols of kitchen-table conversation and the freedom of SMS?

To conclude, as one avenue towards developing an East Asian STS the attractions of a focus on intimacy are four-fold. Firstly, because technologies of intimacy mediate between structures of feeling and political economy, such a focus encourages us to link the micro- and macro-politics of technology. Secondly, rather than taking a specific technological innovation as its starting point—as STS studies of domestication typically do, for example—a focus on intimacy presents us with a universal human endeavour, achieved in myriad ways. It thus invites us to look not at individual technologies but rather at the technological assemblages mobilised to construct relations of intimacy within a specific context—and to reflect upon the complex systemic impact of technological innovations that radically reconfigure such assemblages, as Cowan does in her magnificent *More work for mother* (Cowan 1983). Within an East Asian STS the analytical framework of intimacy offers ample scope to develop Flitsch's point about how technologies cluster into socially significant bundles (see also Bray 1997): cooking and heating for Manchurian

motherhood, for example, compared to cell-phone literacy and car driving for Japanese mothers; or irrigation, architecture and cooking for the maintenance of social bonds between landowners and farm-workers in Toraja, compared with the Internet as an essential—yet paradoxically non-functional—tool for bonding between Chinese peasant guest-house owners and their urban customers. Thirdly, since intimacy is not confined to modern industrial societies, and because it is constructed through a combination of material, social and symbolic practices, the concept can be used to investigate a wider range of socio-technical skills, modes of transmission and interfaces between technological cultures than STS conventionally addresses. Fourthly, it can thus be developed to address the uneven topographies of East Asian modernity, including the non-synchronicities which mark even high-tech sectors of society. In providing an analytical framework that is inherently comparative, as my final example of Du Fu suggests, it might even be extended to open new perspectives, illuminated by STS, into a deeper historical past.

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