
Tokyo Youth at Leisure: Towards the Design of New Media to Support Leisure Planning and Practice

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Abstract

An extensive research project was performed to characterize leisure planning and practice for Tokyo youth. Findings will aid in the design of new media to support leisure outings.

Keywords

Ethnography, mobile phones, privacy, leisure, coordination.

ACM Classification Keywords

H5.2 [Information Interfaces and Presentation]: User Interfaces---user-centered design.

Introduction

An extensive research project was performed to characterize leisure planning and practices of young adults in Tokyo. Our primary interest was in identifying issues and opportunities for designing new media to support leisure outings. Tokyo youth are of special interest, for several reasons. First, while Japanese youth have more free time than mid-career adults or school children, coordination of leisure outings in Tokyo is quite complex, with tight schedules and friends who might live over an hour's train ride away. Secondly, mobile phone (or *keitai*) ownership is almost ubiquitous in Japan (>70% of the population, >90% of young adults [6]), and social practices around their use have solidified. Finally, mobile design is highly advanced in Japan, and keitai are rapidly acquiring advanced features and functionality of multipurpose PCs; 72% of keitai users

subscribed to Internet services in 2002 [7]. Given limited space, we focus here on major findings. A more complete report, including a discussion of design implications and emerging issues, is available upon request.

Methods

Background research included: extensive reading of leisure guide content on and offline, observing popular youth “hangouts” in Tokyo, interviews with editors of major leisure publications, informal discussions with technically savvy university students.

Two surveys were administered, a pre-Questionnaire (or “preQ”) prior to the first interview study, and a large online survey prior to the remaining studies. The “preQ” was given in paper form to 20 participants; it comprised ~30 open-ended and multiple-choice questions on typical schedules, leisure planning resources, leisure activities and technology use. The online survey was similar, with ~40 numerical response and multiple-choice items; additional items largely concerned keitai use. A popular online club that rewards survey participants with shopping “points” made the online survey available to members for 3 days in April 2005. 697 people responded to the online survey.

Two in-depth interview studies were performed, each lasting 2 hrs. Twenty participants aged 16-33 were in the first study; twelve 19-25 yr olds (our revised target population) were in the second. In each study, the first hour was spent discussing leisure planning and practices. The second hour was spent exploring early design concepts for leisure support technology. The first study took place in a classic market research office, but the second used the more naturalistic context of a local café or restaurant. For each study, translators were required, and strenuous efforts were made to protect privacy.

Interview Follow-Up Focus Groups (IFFG)

All participants in the second interview study met in one of two follow-up focus group sessions. Sessions were spent clarifying issues and extending our initial impressions from the individual interviews on leisure priorities and practices. We also obtained feedback on early technology design concepts for supporting leisure planning and practice.

Mobile Phone Focus Groups (MPFG): Two focus group sessions explored the relation between keitai use and leisure practices. Eleven people aged 19-25 participated in total. Sessions were semi-structured to promote discussion. Participants brought their keitai and began by describing their phone, why they bought it and its best and worst features. Then they chose 3 general concepts that best related to their phone use (e.g., Dating, Style, Convenience) use and explained how this was so.

Mobile Phone Photo Diaries (MPPD): Ten MPFG participants sent us an email via keitai every hour of one Sunday in May, documenting where they were, who they were with and what they were doing, adding an illustrative photo. Hourly email reminders promoted compliance.

Findings on Leisure Practices

Top qualities of leisure activities

Survey data include mean importance ratings [0 – 10] for various leisure qualities (see Table 1). An age analysis of the preQ data showed “Companionship” (followed by “Relaxation”) as the top priority for those 19-25, “Communication” for those 16-18, and “Relaxation” for those 26-33. “Relaxation” and “Companionship” were the top priorities in the survey results for 19-25 yr olds. Gender analyses show a surprisingly similar pattern in terms of top leisure priorities, although the ordering of the priorities differed slightly.

| Ratings [0-10]: | Relax-ation | Compan-ionship | Doing What I Know I Enjoy | Finding "The Best" | Communi-cation | Trying Something New |
|------------------------|--------------------|-----------------------|----------------------------------|---------------------------|-----------------------|-----------------------------|
| PreQ | 8.1 | 7.9 | 8.15 | 7.25 | 7.95 | 7.95 |
| Survey | 7.13 | 7.12 | 6.9 | 6.01 | 5.95 | 5.91 |

Table 1. Top leisure qualities [0 – 10 importance ratings].

Interviews and focus group findings also indicated relaxation as a top leisure priority for Tokyo youth. The MPPD study shows most people spent most of their free time at home, often “sleeping in”, “puttering”, watching TV, surfing the Web. Yet everyone also made some time for communication (especially email) and/or companionship (going out with friends for a few hours, perhaps at a café).

Limited Leisure Time

Young people in Tokyo have very full schedules. Most interviewees attended school (and sometimes also “cram school, after-school classes) or worked—or, most often, both. Commutes are substantial; survey median was 41-50 minutes each way; multiple activities require multiple trips. Getting 8 hrs sleep per night is rare. Still, preQ estimates of time in leisure activities totaled to 40.4 hrs a week overall: 10.3 hrs on weekdays (combined), 14.7 hrs on Saturday and 15.5 hrs on Sunday. Age analyses showed 19-25 yr olds spend more time in leisure activities (43.1% overall) than 16-19 yr olds (28.2%) and 26-33 yr olds (28.7%). This is the “golden age” of the university years—between cram-school and career—when leisure time is greatest. Our target age was revised to 19-25 for the remaining studies.

Typical Leisure Activities

In response to an open-ended preQ question on typical leisure activities, most frequent responses were: “TV” (28%), “Friends” (23%), “Email” (10%), “Internet” (7%) and “Shopping” (5%). Note that using email and the Internet were top leisure activities! An age analysis showed 19-25 yr olds most likely to mention outings. In the online

survey, 19-25 yr olds rated how often they engaged in a variety of activities for leisure per week (see Table 2). Activities not requiring outings were more frequent, with top ratings for “WWW/PC” and “Email/Mobile” and “Email/PC.” This is consistent with interview and MPPD findings that much leisure time is spent indoors, often at home and often alone. It also converges well with “Relaxation” as a top leisure priority.

Outings

| Ratings [0-5]: | Shop-ping | Out w/ Friends | Rest-aurant | Dating | Sport |
|-----------------------|------------------|-----------------------|--------------------|---------------|--------------|
| Survey | 2.57 | 2.02 | 1.96 | 1.53 | 1.43 |

Non-Outings

| Ratings [0-5]: | WWW/ PC | Email/ Mobile | Email/ PC | Live TV @ home | Music @ home |
|-----------------------|----------------|----------------------|------------------|-----------------------|---------------------|
| Survey | 4.55 | 4.53 | 4.36 | 4.21 | 3.43 |

Table 2. Top leisure activities: Outings and Non-outings [0 – 5 frequency ratings in online survey]

For leisure outings, “Shopping” ranked highest, followed by “Going Out with Friends.” Interviewees’ descriptions of specific recent leisure activities suggest typical outings (typically done with friends): shopping, window-shopping, café/restaurant, movies, karaoke, bowling, sports events, concerts and hobby or club-related activities. Special activities might include: visiting “back home,” going to a hot spring, going to an amusement park, ski trips, music festivals (or special concerts), school or club field trips and tourism (mostly within Japan). Discussions suggest that companionship is the most important factor in leisure outings, with exactly where to go or what to do secondary.

Resources for Leisure Discovery and Planning

The preQ included an open-ended question about the top 3 resources used to learn about and plan leisure activities. Table 3 shows the results in terms of frequency of mention.

| Resources | Frequency of Mention in PreQ | |
|-------------------|------------------------------|---------|
| Friends/Family | 27% | [16/60] |
| TV | 18% | [11/60] |
| Search Engine | 17% | [10/60] |
| Internet | 12% | [07/60] |
| "Other" Magazines | 8% | [05/60] |
| Ads/Promotions | 8% | [05/60] |
| Leisure Magazines | 3% | [02/60] |
| Free Papers | 3% | [02/60] |
| Internet/Mobile | 2% | [01/60] |
| Newspapers | 2% | [01/60] |

Table 3. Top leisure planning resources [preQ mention frequency].

In the online survey, respondents ranked their top 3 planning resources from an existing list. Results (weighted by ranks) are shown in **Table 4**. Since the survey was performed online, a bias toward online resources would be expected. Still, "Friends/Family" and "TV" were within the top 5 results in the online survey as well.

| Weighted Rankings: | WWW/PC | TV | Search/PC | Friends/Family | Leisure Magazines |
|--------------------|--------|----|-----------|----------------|-------------------|
| Survey | 1 | 4 | 2 | 3 | 5 |

Table 4. Top leisure planning resources [survey weighted ranks].

Serendipitous Discovery & Focused Research

The findings above and our interview discussions suggest that people initially encounter information about potential leisure activities in a fairly effortless, even serendipitous way. Leisure topics tend to "come up naturally" in conversations with "Friends/Family," or while TV is playing in the "background". Such recommendations are seen as "reliable," "likely to match one's tastes." TV shows and ads may also provide timely information on the newest trends that friends and family may not be aware of yet.

Once an interesting option is encountered, engaging in research to plan a specific outing is common and can be a very active, effortful task, often involving online resources. The Internet—and especially search engines—is a familiar tool for Tokyo youth, and is especially well-suited to this

research task. In preQ results on top leisure planning resources, "Search Engine" was ranked third followed by "Internet/WWW" (see Table 3). In the online survey, "WWW/PC" ranked first, followed by "Search Engine/PC". Online research can be used to find a particular place on a given theme or in a given area (e.g., a French restaurant nearby), or for specific information on a known place (e.g., maps, train schedules). We note that while many keitai support Internet access, they are not commonly used for detailed research of leisure activities. They are poor browsing tools compared to the PC with its larger screen and keyboard, and research tends to take place prior to outings, perhaps at home or school. But there are at least three further factors: First, the cost of wireless Internet access favors intermittent short connections for email message transfer over constantly connected web-page data access. Second, there is limited Internet access between stops on the subway, where people might otherwise spend time browsing web pages. And third, phone carriers make anything other than proprietary-network-specific content access difficult. Mobile Internet train timetables seem to be the killer web application on the keitai for this population (they were mentioned more often than any other service).

Structure of Leisure Outings

Close analysis of clear descriptions of specific recent leisure outings was performed on the transcripts of the first interview study (16-33 yr olds). Most outings were undertaken by groups of friends [6/9 relevant cases¹], with 4-6 persons on average, typically mixed gender. A few involved romantic couples or same-gender pairs [3/9]. Issues around coordination of schedules were explicitly

¹ We use the convention of counting responses in proportion to definitive "relevant cases" to counteract ambiguity in the transcripts.

mentioned in each case of group outings provided [6/6]. Coordinating is done face-to-face [3/3] or in email (often mobile) when remote [3/3]. One person typically took the role of planner and coordinator [8/8]. Most outings involved at least one planned activity [8/9], but also allowed for spontaneous follow-up activities [7/8]. For example, the primary activity might be to see a specific movie at a specific time, followed by more a spontaneous stop at a café or bar afterwards. Since most people live far from one another, it is common to plan to meet in a specific location [4/4], often in or near a train station or shopping center. This helps distribute the commute, but also provides many options for browsing and discovery in a spontaneous, non-effortful manner.

This general pattern of results meshes well with discussions of outings in the second interview study (19-25 yr olds) and with further patterns of survey results. For example, rated agreement [on a 0-10 scale] with the statement, "For most of my social activities, my friends and I plan when and where to meet in advance" was fairly high, 6.51/10. "When I go out, it is more often than not a pre-planned activity" was rated 6.19/10, although "For most of my social activities, my friends and I plan what to do in advance" was rather lower, at 5.63/10. "My friends and I have very busy schedules and it is difficult to co-ordinate leisure activities" was rated 5.91/10.

Findings on Leisure Uses of Mobile Phones

Keitai are ubiquitous among Japanese youth (97.3% of the online survey respondents currently owned one). While many studies have explored keitai use, the present project is more concerned with the keitai's role in leisure practice. Focus group findings show that keitai are often used to "kill time", especially during commutes. Entertainment content can include games, music and even video. Young men were much more likely to use games and other advanced

features on the keitai. Our survey and focus results also suggest that communication (the core keitai functionality) can serve as a leisure activity in itself; that is, communication can be entertaining. This may be especially true for young women. Gender differences were discussed in both MPFG sessions; the consensus was that young women focus more on communication, sending more, longer and more "emotive" messages. While men also primarily use the keitai for communication, they are more interested than women in features such as gaming.

With regard to communication, a striking finding from the focus groups is the sense that the keitai is now considered a social "necessity": "...if you want to live in today's life—today's society, you are expected to have a mobile phone" [see also 4,5]. Survey results show communication functionality ("Email" followed by "Voice"), as the top rated keitai features. In the focus groups, email and voice were the primary features used, and some people—notably women—said they used nothing else. Survey estimates of mobile use "outside of work or school" averaged 6.5 hrs/week; use of email (3.1 hrs) was double that of voice (1.5 hrs) functionality. Discussions suggest fairly short bursts of use, mostly exchanging messages among fairly close friends and family, with multitasking common.

The keitai (with email) makes communication cheap, fast and easy. Carried on one's person (typically in a pocket or purse) and "always on", it is a continuously available personal technology, in contrast to the PC in Japan, which is more likely to be a family resource [1]. Ling [5] has described "hypercoordination" among mobile phone users, and we certainly found that keitai are used to coordinate leisure outings (through Internet content and email). However, above and beyond mere coordination functionality, we found a strong desire for "hyper-connectivity", a sense of continual real-time connection.

This is best illustrated by a young man who contacts his girlfriend over 20 times per day. While this was far more than typical use, the notion of constant connection came up fairly often in our discussions. Typical use was estimated at 5-10 messages a day, mostly to a small number of intimates. Similar findings have been observed across cultural contexts [2,3,5].

Hyperconnectivity is clearly something that people choose to pursue, yet it also has negative consequences. These include: 1) "shallow" friendships conducted more by mobile email than in person, 2) new forms of "rudeness" (e.g., abusing constant connection as permission to be indecisive or late, using the phone while ignoring those around you) and social faux pas (e.g., inadvertently sending casual messages to work superiors), and 3) new conventions to avoid rudeness (e.g., using the silent mode in public, not using the phone with others present). Keitai use can assuage loneliness but can also engender new forms of it (e.g., when no messages are received on a given day, when someone waits too long to respond, or when a friend chooses to use the phone rather than talk to you in person. "That's really lonely!").

Design-Related Issues

Space limitations prevent detailed discussion of all our findings and their implications, but we note here two especially striking sets of design-related issues. First, despite great interest in using technology to support companionship as a key component of leisure activities, we found a strong reticence to share information about oneself online. Major concerns included: 1) maintaining privacy (not wanting others to be able to see everything that one is doing), 2) keeping up appearances (the desire to maintain an image of being socially active, even if one's calendar is empty), and 3) plausible deniability (the desire to avoid causing offense by turning down an invitation, even when

one is not busy). Secondly, certain tensions emerged that may be useful for designers of new leisure-support media to consider: 1) competitive turmoil in the leisure information guide industry, 2) overloading of the keitai with every conceivable function, and 3) the trade-off between the craving for connection and the desire for privacy that Tokyo youth seem to experience. Again, a more complete report, which includes some discussion of these issues, is available upon request.

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References

- [1] Dobashi, S. The gendered use of *keitai* in domestic contexts. In Ito, M., Okabe, D. and Matsuda, M. (Eds) *Personal, Portable, Pedestrian: Mobile Phones in Japanese Life*. MIT Press (2005), 219-236.
- [2] Grinter, R.E. and Eldridge, M. A. y do tngrs luv 2 txt msg? In *Proc. of ECSCW 2001*, ACM Press (2001), 219-238.
- [3] Ito, M. and Okabe, D. Technosocial situations: Emergent structuring of mobile e-mail use. In Ito, M., Okabe, D. and Matsuda, M. (Eds) *Personal, Portable, Pedestrian: Mobile Phones in Japanese Life*. MIT Press (2005), 257-273.
- [4] Kato, H. Japanese youth and the imaging of *keitai*. In Ito, M., Okabe, D. and Matsuda, M. (Eds) *Personal, Portable, Pedestrian*. MIT Press (2005), 103-119.
- [5] Ling, R. *The Mobile Connection: The Cell Phone's Impact on Society*. Elseiver, 2004.
- [6] Matsuda, M. Discourses of *keitai* in Japan. In Ito, M., Okabe, D. and Matsuda, M. (Eds) *Personal, Portable, Pedestrian*. MIT Press (2005), 20-39.
- [7] Matsuda, M. Mobile community and selective sociality. In Ito, M., Okabe, D. and Matsuda, M. (Eds) *Personal, Portable, Pedestrian*. MIT Press (2005), 124-142.