Interpersonal communications, communities, and ICT in Japan

Taku Sugimoto
Chiba Institute of Technology, Japan
Internet Users in Japan

Graph 1-62 Transition in the Number and Percentage of Internet Users in the Population

(Japanese population is about 125 millions)

(Source) “2006 Survey on the Use of Communications (Household),” Ministry of Internal Affairs and Communications
ICT Terminals

Graph 1-64 Changes in the Number of Internet Users by ICT Terminal

(Source) "2006 Survey on the Use of Communications (Household),” Ministry of Internal Affairs and Communications
Internet connection

Personal Computer: 16.27 (18.6%)
Cellular Phone and Mobile Device: 6.88 (7.9%)
Game and TV: 60.99 (69.7%)

2.92 (3.3%) and 0.06 (0.1%) overlap
0.36 (0.4%)
Broadband connections

Graph 1-63 Changes in the Number of Broadband Contracts

(10,000 contracts)

Compiled from Ministry of Internal Affairs and Communications materials
Internet use and income

Graph 1-69 Status of Use of Internet and Broadband (by household annual income)

(Source) “2006 Survey on the Use of Communications (Household),” Ministry of Internal Affairs and Communications
Distribution of annual household income

- Below Average (60.7%)
- Average Annual Income: 5,638
- Median: 4,580

(10 thousands yen)
Cellular phone monthly payment

<table>
<thead>
<tr>
<th>Age</th>
<th>Contents</th>
<th>Packets</th>
<th>Phone</th>
<th>Yen / Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 19</td>
<td>15,798</td>
<td>391</td>
<td></td>
<td>18,189</td>
</tr>
<tr>
<td>20 - 29</td>
<td>13,767</td>
<td>364</td>
<td>9,228</td>
<td>26,359</td>
</tr>
<tr>
<td>30 - 39</td>
<td>11,640</td>
<td>261</td>
<td>2,637</td>
<td>16,538</td>
</tr>
<tr>
<td>40 - 49</td>
<td>8,058</td>
<td>283</td>
<td>1,959</td>
<td>10,290</td>
</tr>
<tr>
<td>Over 50</td>
<td>5,329</td>
<td>269</td>
<td>1,406</td>
<td>7,104</td>
</tr>
</tbody>
</table>

## Bar Chart

- **Total**: 8,058, 9,679, 13,767, 5,960, 9,228, 4,602, 4,629
- **Male**: 2,446, 6,490, 13,767, 2,985, 6,336, 2,412, 1,406
- **Female**: 2,840, 7,293, 364, 2,611, 2,637, 231, 166
- **Under 19**: 2,446, 6,490, 13,767, 2,985, 6,336, 2,412, 1,406
- **Over 19**: 2,840, 7,293, 364, 2,611, 2,637, 231, 166
Functions of cellular phones

- Camera
- Applications (games, etc)
- 2-dimensional barcode reader
- Playing movies/animations
- Playing music
- Television telephone
- GPS / Navigation
- PC sites browser
- Television receiver
- Purse
- FM radio receiver
- E-book reader
- Distant controller of appliance
- Document viewer
- Overseas use
- Noisemaker
- None
- Current use
- Future use

Bar chart showing the percentage of current and future use of various functions of cellular phones.
Changes in daily activities

Graph 1-67  Changes in Daily Activities in the Past 1~2 Years and Internet’s Impact

- Sleep: 50.7% Has changed, 15.1% Has changed (don’t know if influenced or not), 17.1% Has changed (influenced by the Internet), 3.6% Has not changed
- Meal: 47.4% Has changed, 6.1% Has changed (don’t know if influenced or not), 22.9% Has changed (influenced by the Internet), 5.3% Has not changed
- Personal care: 53.7% Has changed, 6.5% Has changed (don’t know if influenced or not), 15.5% Has changed (influenced by the Internet), 4.9% Has not changed
- Job/academic work: 50.4% Has changed, 9.2% Has changed (don’t know if influenced or not), 14.7% Has changed (influenced by the Internet), 4.3% Has not changed
- Domestic cares/child-rearing: 54.6% Has changed, 6.2% Has changed (don’t know if influenced or not), 13.9% Has changed (influenced by the Internet), 4.5% Has not changed
- Purchase: 36.7% Has changed, 24.3% Has changed (don’t know if influenced or not), 14.6% Has changed (influenced by the Internet), 6.3% Has not changed
- Hobby/amusement: 37.2% Has changed, 25.0% Has changed (don’t know if influenced or not), 11.6% Has changed (influenced by the Internet), 4.8% Has not changed
- Socialization: 47.0% Has changed, 10.0% Has changed (don’t know if influenced or not), 14.4% Has changed (influenced by the Internet), 5.4% Has not changed
- Service/social participation: 61.2% Has changed, 4.6% Has changed (don’t know if influenced or not), 6.7% Has changed (influenced by the Internet), 2.9% Has not changed

Misprint!!!
Changes in daily activities

Graph 1-67 Changes in Daily Activities in the Past 1~2 Years and Internet’s Impact

- Sleep
  - Has not changed: 50.7%
  - Has changed (influenced by the Internet): 15.1%
  - Has changed (not influenced by the Internet): 17.1%
  - Has not changed (don’t know if influenced or not): 3.6%

- Meal
  - Has not changed: 47.4%
  - Has changed: 6.1%
  - Has changed (influenced by the Internet): 22.9%
  - Has changed (not influenced by the Internet): 5.3%

- Personal care
  - Has not changed: 53.7%
  - Has changed: 6.5%
  - Has changed (influenced by the Internet): 15.5%
  - Has changed (not influenced by the Internet): 4.9%

- Job/academic work
  - Has not changed: 50.4%
  - Has changed: 9.2%
  - Has changed (influenced by the Internet): 14.7%
  - Has changed (not influenced by the Internet): 4.3%

- Domestic cares/child-rearing
  - Has not changed: 54.6%
  - Has changed: 6.2%
  - Has changed (influenced by the Internet): 13.9%
  - Has changed (not influenced by the Internet): 4.5%

- Purchase
  - Has not changed: 36.7%
  - Has changed: 24.3%
  - Has changed (influenced by the Internet): 14.6%
  - Has changed (not influenced by the Internet): 6.3%

- Hobby/amusement
  - Has not changed: 37.2%
  - Has changed: 25.0%
  - Has changed (influenced by the Internet): 11.6%
  - Has changed (not influenced by the Internet): 4.8%

- Socialization
  - Has not changed: 47.0%
  - Has changed: 10.0%
  - Has changed (influenced by the Internet): 14.4%
  - Has changed (not influenced by the Internet): 5.4%

- Service/social participation
  - Has not changed: 61.2%
  - Has changed: 4.6%
  - Has changed (influenced by the Internet): 6.7%
  - Has changed (not influenced by the Internet): 2.9%
Directions of changes

- Purchase
  - Positive: 21.5%
  - Negative: 54.4%

- Hoby/Amusement
  - Positive: 9.4%
  - Negative: 74.1%

- Sleep
  - Positive: 56.5%
  - Negative: 29.9%
Changes in communication during past 1-2 years

- Communicating more actively
- More communication with old friends
- More communication with strangers
- Deepening my thoughts by others’ opinions
- Obtaining new perspectives from others
- Sharing interests with others and enjoying them more
- Finding new interests
- Searching more actively about my interests
- Getting hurt and misunderstood more frequently
- Feeling uneasy without any contacts
- Feeling my behaviors more strained
Changes in communication during past 1-2 years

- Communicating more actively
- More communication with old friends
- More communication with strangers
- Deepening my thoughts by others’ opinions
- Obtaining new perspectives from others
- Sharing interests with others and enjoying them more
- Finding new interests
- Searching more actively about my interests
- Getting hurt and misunderstood more frequently
- Feeling uneasy without any contacts
- Feeling my behaviors more strained
Communication

- Communication is not just an exchange of "information"
- Text-based online communication is not just "poor record of speech by alphabets"
Communication without linguistic information

- “Family Planter” by NTT for “communication for feeling connected”
Communication without linguistic information

- i-Pot and “mimamori-hotline” by Zojirushi
  - “Keeping eyes and feeling relieved” line
Communication without linguistic information via cell phone

- “Wan-giri” - One-ring and hang-up
  - Someone calls a friend by a cellular phone
  - The caller hangs it up before the receiver answers, i.e. within a very short period of time like just one ring.
  - From the display of caller information, the receiver acknowledges that the friend calls in and feels the caller cares for the receiver.
  - “Wan-giri Gaeshi (One-ring Return)”: The receiver gives back the original caller a “one-ring and hang-up.”
  - The two can feel that they are “together” without speaking or exchanging any information!
“Yagi-san Yubin” (Goat mail)  
A Japanese child song

- A black goat got a letter from a white goat.
- The black goat ate it without reading it.
- He wrote a letter back to her,
- Asking what she wrote in the letter.

- The white goat got the letter from the black goat.
- The white goat ate it without reading it.
- She wrote a letter back to him,
- Asking what he wrote in the letter
Interesting features of Japanese text-based online communication

- Using emoticons frequently
- “Typing” Japanese characters with other characters (including non-Japanese characters) on screen
Origin of emoticon

- Created by Scott E. Falman at CMU on Sep 19th, 1982.

19-Sep-82 11:44 Scott E Fahlman :-)
From: Scott E Fahlman <Fahlman at Cmu-20c>

I propose that the following character sequence for joke markers:

:-)

Read it sideways. Actually, it is probably more economical to mark things that are NOT jokes, given current trends. For this, use

:-(
Background of the birth of emoticon

Given the nature of the community, a good many of the posts were humorous (or attempted humor). The problem was that if someone made a sarcastic remark, a few readers would fail to get the joke, and each of them would post a lengthy diatribe in response. That would stir up more people with more responses, and soon the original thread of the discussion was buried. In at least one case, a humorous remark was interpreted by someone as a serious safety warning. This problem caused some of us to suggest (only half seriously) that maybe it would be a good idea to explicitly mark posts that were not to be taken seriously. After all, when using text-based online communication, we lack the body language or tone-of-voice cues that convey this information when we talk in person or on the phone. Various “joke markers” were suggested, and in the midst of that discussion it occurred to me that the character sequence :-) would be an elegant solution - one that could be handled by the ASCII-based computer terminals of the day. So I suggested that. In the same post, I also suggested the use of :-( to indicate that a message was meant to be taken seriously, though that symbol quickly evolved into a marker for displeasure, frustration, or anger.
Background of the birth of emoticon

- Given the nature of the community, a good many of the posts were humorous (or attempted humor). The problem was that if someone made a sarcastic remark, a few readers would fail to get the joke, and each of them would post a lengthy diatribe in response. That would stir up more people with more responses, and soon the original thread of the discussion was buried. In at least one case, a humorous remark was interpreted by someone as a serious safety warning. This problem caused some of us to suggest (only half seriously) that maybe it would be a good idea to explicitly mark posts that were not to be taken seriously. After all, when using text-based online communication, we lack the body language or tone-of-voice cues that convey this information when we talk in person or on the phone. Various “joke markers” were suggested, and in the midst of that discussion it occurred to me that the character sequence :-) would be an elegant solution - one that could be handled by the ASCII-based computer terminals of the day. So I suggested that. In the same post, I also suggested the use of :-) to indicate that a message was meant to be taken seriously, though that symbol quickly evolved into a marker for displeasure, frustration, or anger.
Origin of Japanese emoticons

- About 1986
- (^_^) and (~_~) created at almost the same time by two separate persons, independently of U.S. emoticons
- At first, used mostly in signatures
- Becoming widely used on Usenet, mailing lists, chats, etc.
Japanese emoticons

- (^_^) (^_^;) m( . .)m (^^)/ ( . .)φ
  (- -)zzz (≈o≈)/

- Rich variety and frequent use - why?
  - Easy to comprehend
    - “Upright”
    - Influence of Manga
  - Easy to “type”
    - Role of Kana-Kanji conversion system
  - Match the needs of Japanese communication
Functions of emoticons

- Help express emotions in written text
  - Supplement “low social cues” including facial expressions, social status, etc. (Kiesler etc)
- A biased view based on alphabet-oriented typewriter-like message typing
  - “Information/message is a “secondary” representation of speech.
  - “Face-to-face talk” minus “facial expressions, tone of voice, etc” is “typed text” ???
What is “writing” and “letters”? 

- Natures of non-alphabetic letters/characters
  - Complicated mixture of sound, concepts, ideas, etc.

- Writing and body
  - Writing and drawing are bodily actions

- Writing and technology
  - Writing is constrained by technology used

- Writing and speech
  - Writing is not a linear record of speech
  - Writing is a two-dimensional representation on paper or screen or whatever
Writing as drawing

- Gal-moji among Japanese teen girls
  e.g. University of Illinois
  Normal hiragana - いりのいだいがく
  Gal-moji - ににσれT=ノれカづく
  Library and Information Science
  Normal - としょかんじょうほうがく
  Gal-moji -
    ¯งึยะ卡＜ωุว้ょうんまうカづく
Features of Gal-moji

- Combination of different symbols
  - Japanese characters - よ カ レ
  - Japanese signs - カ レ
  - Punctuation marks - )
  - Mathematical symbols - \( < \leq \)
  - Roman alphabets - T \( \cup \)
  - Greek letters - \( \sigma \omega \)

- One Japanese character consists of one or more symbols
How and Why Gal-moji?

- How to “type” these characters?
  - Select from the list of characters and symbols
- Why to use such strange characters?
  - “Drawing” characters like hand-written letters
    - Appreciate extra efforts to make such characters
  - Feeling togetherness by using the same “code”
Some features of Japanese emoticons and gal-moji

- Relations between technology and writing
  - Writing is always constrained by technology
- Writing is different from typing speech
- Two-dimensional visual and bodily "writing"
- Tools to feel togetherness
Changes in communication during past 1-2 years

- Communicating more actively
- More communication with old friends
- More communication with strangers
- Deepening my thoughts by others’ opinions
- Obtaining new perspectives from others
- Sharing interests with others and enjoying them more
- Finding new interests
- Searching more actively about my interests
- Getting hurt and misunderstood more frequently
- Feeling uneasy without any contacts
- Feeling my behaviors more strained
Conclusions

- Communication is not just “exchanging information”
- Importance of “feeling connected” and “having community-awareness”
- Needs for various tools of feeling connected
Reference

- Ministry of Internal Affairs and Communication “White Paper: Information and Communications in Japan.”