A SOCIOLINGUISTIC ANALYSIS OF EMOTICON USAGE IN JAPANESE BLOGS: VARIATION BY AGE, GENDER, AND TOPIC[1]

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Introduction

This study explores how older men and women express themselves through blogging (Curtain 2004) in Japan, where the elderly population (aged 65 years and up) will comprise an estimated 40 percent of the country's total population by 2050 (Statistics Bureau 2014), the greatest proportion of any nation in the world.
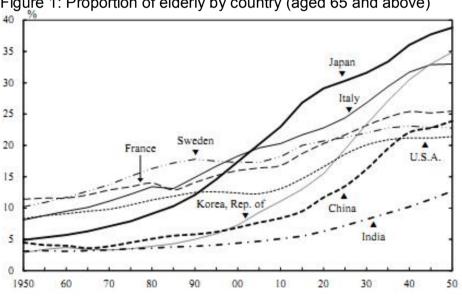
Figure 1: Proportion of elderly by country (aged 65 and above)

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

Internet usage among seniors in Japan has also been increasing in recent years, particularly since 2009 (Ministry of Internal Affairs and Communication 2014). One survey on PC penetration rate among elderly household reports that 78% of people surveyed (N=800 by random telephone number dialing) in their 60's, 54.5 % in their 70's, and 30.5 % in their 80's possess PCs (GF Senior Marketing 2012).

In contrast to the robust body of literature on younger people's online behavior, much of the online activity of the elderly has yet to be researched (Smith 2014). Though Fullwood et al. (2009) examined age and gender differences in Myspace blogs, seniors were outside of their target age groups, and no earlier studies specifically investigating elderly people have been conducted. Addressing this gap in the literature, this study examines senior users' linguistic behavior on blogs from a sociolinguistic perspective (Coupland 2004), in comparison with younger users.

The present study focuses on a medium-specific feature: emoticons. Recently, some senior users have taken up the practice of writing digitally, and using emoticons may be a new experience for them. Certain linguistic and stylistic features of text creation may originate in and transfer from previous paper-based writing experiences; however, linguistic differences among bloggers, such as they are, cannot be attributed solely to their prior experiences using this medium. The adoption of emoticons, a feature unique to digital media, reveals differences depending not only on the blogger's prior experience with digital communication, but also on the type of content and the style in which the message the author expects to communicate.

An emoticon is a visual element embedded in text in digital communication, most typically faces created by combining punctuation and typographic symbols to express a notion, for example, happy :-) , sad : -(, laughter :-D , and so on. Previous research has treated emoticons as replacements for paralinguistic and nonverbal cues that are absent in computer-mediated communication (Rezabek & Cochenour 1998; Wolf 2000; Walther & D'Addario 2001; Derks et al. 2007). Dresner & Herring (2010) discuss emoticons as indicators of emotion and nonemotional meanings, and as "illocutionary force indicating devices" analogous to punctuation marks. Tossell et al. (2012) examine emoticons on smartphones, and more recently Skovholt et al. (2014) in workplace emails. These studies investigate emoticons in texts comprised of typographic symbols in English and other alphabet-based languages. This study builds on these works and extends it to include elements other than typographic emoticons in Japanese.

Four types of emoticons will be considered in this study:
(1) *Kaomoji*, or typographic face marks, for example (^_^) "smile" and (>_<) "embarrassment." *Kaomoji*, though horizontal, are similar to English-language emoticons in terms of formation and facial representations. Japanese *kaomoji*, however, are elaborate combinations of symbols that express emotions, actions, and greetings: *kaomoji* websites offer further subtle distinctions for users. One such site (http://kaomojiya.com/) lists 6,246 *kaomoji*.

(2) *Kigou*, or nonlinguistic symbols, for example, ☆ ♪ ♡. *Kigou* often appear at the end of a sentence and may function as punctuation, but with more visual impact and added meaning. The role of *kigou* as emoticons is to minimize the dry, businesslike atmosphere/tone of the message (Kato 2007).

(3) *Kanji* emoticons, or ideographic characters enclosed in parentheses, give additional information about the writer's feelings based on the meaning of the *kanji*, for example, (笑) "laughter" and (怒) "anger."[2]

(4) *Emoji*, or colorful graphics embedded in lines of text, represent not only faces but also objects, ideas, and more (Azuma & Ebner 2008). Some are animated, for example, a beating heart, blinking eyes, or shining stars. They are used mostly for decorative purposes, but also function indexically, and serve lexical purposes by replacing text, for example, the *emoji* for beer,　, instead of the word *beer*, as in the following example.

とっても美味しくって、じいの🍺がますます・・・すすんじゃったので
ございますよ🐢✨✨✨

It tasted so good Grandpa had a lot of 🍺.

[Image of turtle]=her husband, "Grandpa;"
[image of shining stars]=feeling good.

Source: Senior Female 04

Colorful and diverse emoticons in Japanese digital writing are resources for digital authors to express themselves.

In addition to analyzing how age impacts emoticon usage by comparing senior and youth blogs, this study also considers the impact of gender. While a number of previous studies have addressed gendered aspects of emoticons in newsgroup messages (Witmer & Kadzman 1997; Wolf 2000), chats (Kapidzic & Herring 2011), and text messaging (Tossell et al. 2012), few have examined *emoji,* which became popular among US users only when Apple made them available in 2011 on iPhones as a preinstalled library after each emoji was assigned a Unicode (Wortham 2011). In contrast, in Japan NTT Docomo has made *emoji* available since 1999. Other studies of gender differences in blogs include Pedersen & Macafee (2007) among British bloggers, Huffaker & Calvert (2005) on identity among teenagers, and Amir et al. (2012) among Malaysian teens. Herring et al. (2004) stress the necessity of "advancing [a] broader conception of weblogs that takes into account the activities of diverse blog authors," and the present study addresses this need with a focus on seniors in Japan. How might younger vs. older men and women use emoticons differently when blogging in Japanese?

This paper has two parts. Part I[3] is a discussion of quantitative, comparative differences in usage of four types of emoticons (*kaomoji, kigou, kanji*, and *emoji*) among four groups (older men, older women, younger men, and younger women), in order to reveal how factors of blog authors' age and gender affect emoticon usage.

In addition to these two factors, I have come to recognize a third factor, blog topic, which also seems to influence emoticon usage from my earlier observation of Japanese

blogs. Part 2 will therefore examine blogs that discuss the topic of moral harassment, which is expected to illuminate differences in emoticon usage as a clear example. The term, moral harassment originates from the French *harcèlement moral*, articulated by the psychiatrist, psychoanalyst, and psychotherapist Marie-France Hirigoyen MD, who specializes in mobbing (Wikipedia 2015) or "mental abuse[4]." It refers to repeated emotional abuse and domestic bullying in the present study, though another English translation, "mobbing," often refers to workplace bullying. Part 2 examines how the use of emoticons when blogging on this particular topic differs from their use when blogging about everyday topics.

The topic of moral harassment was brought to my attention by an email alert from a Japanese website for middle-aged and elderly users called Shumee-to Club (http://smcb.jp/). Operated by DeNA (http://dena.com/intl/company/overview/), a developer and distributor of mobile and online services, Shumee-to Club is a social networking website for users to share hobbies/interests/concerns and enjoy interaction through both online and offline activities organized by the site. Initial observations of the victims' blogs indicated less frequent use of emoticons, which inspired me to conduct qualitative analyses to explore possible connections between subject matter and emoticon use in digital communication.

For Part 1, regarding emoticon usage by older vs. younger men and women, this study proposes the following hypotheses and predictions:

Hypothesis 1: Gender
Female bloggers are more emotionally expressive than male bloggers.
Prediction: Female bloggers will use emoticons with a higher frequency than men.

Hypothesis 2: Age
Younger people are more experienced with blogging and have more developed abilities for informal communication online.
Prediction: Younger bloggers will use emoticons with a higher frequency than seniors.

Datasets and methodology
Compared with previous research on generational and/or gender differences in blogging (Nowson & Oberlander 2006; Schler et al. 2006; Schwartz et al. 2013), which assume that information concerning user demographics is unavailable and focus on detecting age and gender from linguistic choices, the present study adopts an established, standard methodology in sociolinguistic variation research, in which participants' age and gender are not to be detected but are already given as predictive variables. Currently, there are blog websites that categorize blogs by age and gender, which allows analysts to collect and analyze online data systematically for these variables.

The datasets for this study come from a huge blog ranking, linking, and aggregation site called Japan Blog Village (http://www.blogmura.com/). Established in 2004, this portal site offers users space to interact with other bloggers and opportunities to share

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[4] "Mental abuse" or "oral harassment" can be a closest equivalent to "moral harassment" in English (Clancy 2015).

interests within 121 major categories and some 7000 subcategories. Diary is one of the major categories, which have subcategories based on authors' age, gender, and blog topic, though not all subcategories have gender and age subdivisions. Within a subcategory, ranking takes place by user votes. From senior diary subcategory that further subcategorizes blogs by author's age and gender, blogs by the top 50 most highly ranked men and women over 60 years of age were collected. For the younger counterpart, from miscellaneous everyday diary subcategory blogs by men and women of 20-39 years of age were collected. Fifty bloggers in each of the four groups of users, for a total of 200 bloggers, are included for analysis.

Blogs in Part 2 come from a subcategory titled "moral harassment and domestic violence" in Japan Blog Village. Blogs within this subcategory are not further categorized by age or gender, though authors normally identify their gender and approximate age in their profiles. Most authors are women, though their age is more diverse, as inferred from the profile and blog content.

Data collection took place from April to early September 2014. A total of 20 days of blog texts from each blogger was collected. If bloggers ranked in the top 50 had fewer than 20 days of posting, they were disqualified and next highest ranking blogger was included instead. Blog texts including emoticons, but excluding advertisements and blog management notices, were collected. Photographs and captions were also excluded because graphic analysis in this study focuses on inline graphics embedded in texts in order to examine how they relate to the author's gender, age, or topic. The length of individual blog posts varied, from just a few lines to several hundred words. Blogger backgrounds are diverse with respect to geographical location, occupation, and level of education.

For Part 1 of this study, the four types of emoticons considered are typographic face marks (*kaomoji*), nonlinguistic symbols (*kigou*), ideographs (*kanji*) and colorful inline graphics (*emoji*). No distinction was made between animated and nonanimated graphics. Blog texts were copy-pasted from original blog sites into Word files to preserve graphic images, as well as to determine the word count of each post, and then copy-pasted into Excel files for analysis. Four groups are compared: Junior Female, Senior Female, Junior Male, and Senior Male bloggers.

For Part 2, blogs authored by moral harassment victims linked to and ranked in Japan Blog Village were collected. This topic was chosen to clarify the effect of subject matter on emoticon usage. For the quantitative analysis, the number of bloggers out of the top 50 most highly ranked bloggers in the category of moral harassment who used at least one type of emoticon was tabulated. For qualitative analysis, I selected representative blogs by female moral harassment victims who actually used emoticons, and compared and contrasted them with representative blogs by senior and junior women from Part 1. Though 4 out of 50 blogs are authored by men, they are not included in comparative analysis because the majority of authors in this subcategory are women.

Results: Part 1
Table 1 presents how many users in each group employ each type of emoticon at least once.

Table 1: Emoticon users in each group

Age and gender groups	Types of emoticons				Total bloggers
	Typographic face marks (*^_^*)	Nonlinguistic symbols ☆♪	Ideographs （笑）	Inline graphics	
Junior Female	42	45	38	26	50
Senior Female	32	31	18	30	50
Junior Male	26	31	24	6	50
Senior Male	6	3	5	10	50

Table 2 presents how many types of emoticons are used by bloggers.

Table 2: Number of emoticon types used

	None	One	Two	Three	All four	Total
Junior Female	1	1	9	21	18	50
Senior Female	6	10	10	17	7	50
Junior Male	11	12	8	17	2	50
Senior Male	33	11	5	1	0	50
Total	51	34	32	56	27	200

Table 3 presents the frequency of the four types of emoticons by age and gender.

Table 3: Frequency of four types of emoticons by blogger group

Types of emoticons	Age and gender groups	None (0)	Infrequent (1--49)	Moderate (50--99)	Frequent (100--299)	Very frequent (300 +)	Total
Typographic face marks (*^_^*)	Junior Female	7	33	5	5		50
	Senior Female	19	27	2	2		50
	Junior Male	24	21	2	3		50
	Senior Male	44	6				50
Nonlinguistic symbols ☆♪	Junior Female	4	37	5	3	1	50
	Senior Female	19	29	2			50
	Junior Male	20	26	3	1		50
	Senior Male	47	3				50
Ideographs （笑）	Junior Female	11	36	1	2		50
	Senior Female	33	16	1			50
	Junior Male	25	22	3			50
	Senior Male	45	5				50
Inline graphics	Junior Female	24	13	3	6	4	50
	Senior Female	20	19	3	5	3	50
	Junior Male	44	5		1		50
	Senior Male	40	5	2	2	1	50

In Tables 1 through 3, the usage of the four emoticons among the four blogger groups is not evenly distributed. There is a tremendous degree of individual variation among users within blogger groups.

The observed frequency of types of emoticon by group is given in Table 4 and normalized to number per 1,000 words in Table 5.

Table 4: Number of emoticons by blogger group

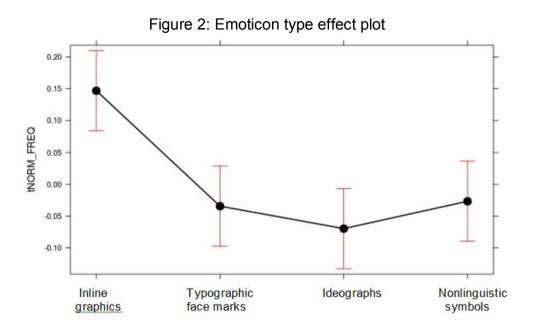| Age and gender groups	Typographic face marks (*^_^*)	Nonlinguistic symbols ☆ ♪	Ideographs （笑）	Inline graphics	Total number of emoticons	Total number of words
Junior Female	1695	1795	792	3222	7504	625064
Senior Female	809	480	242	3669	5200	622488
Junior Male	736	602	554	162	2054	628067
Senior Male	21	17	10	913	961	628731

Table 5: Average number of emoticons per 1,000 words

Age and gender groups	Typographic face marks (*^_^*)	Nonlinguistic symbols ☆ ♪	Ideographs （笑）	Inline graphics	Total number of emoticons
Junior Female	2.71	2.87	1.27	5.15	12.01
Senior Female	1.30	0.77	0.39	5.89	8.35
Junior Male	1.17	0.96	0.88	0.26	3.27
Senior Male	0.03	0.03	0.02	1.45	1.53

For statistical analysis, a linear mixed effects model is employed.[5] Emoticon frequency is the dependent variable, with frequencies log-transformed per thousand words. Fixed effects are age (senior and junior), gender (male and female), and emoticon type (typographic face marks, nonlinguistic symbols, ideographs, and inline graphics). Random intercepts for individual users are used to partial out the variance attributable to individual differences. I began with the maximal model, including the three-way interaction between age, gender, and emoticon type. Following a backwards selection process, I arrived at a minimal adequate model with two significant effects: a main effect of emoticon type ($p < .001$) and an interaction of age and gender ($p < .001$). The model has a good fit.

The results are examined below. First, there is a significant main effect of emoticon type: Inline graphics are by far the most frequently used type of emoticon, regardless of age and gender. The other three types of emoticon (typographic face marks, nonlinguistic symbols, and ideographs) are not significantly different from one another. These results are presented in Figure 2.

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[5] I am grateful to Nicholas Lester for his assistance with the statistical analyses.

Figure 2: Emoticon type effect plot

Second, there is a significant interaction between age and gender. Junior Females use emoticons significantly more frequently than the other three groups. Junior Males, Senior Females, and Senior Males do not differ significantly from one another in emoticon usage.

Though there is no statistically significant general effect of age, two non-significant trends with respect to age and gender are noteworthy, namely a tendency for Senior Males to use more emoticons than Junior Males and a tendency for Senior Females to use more emoticons than Junior Males. Since Junior Females also use more emoticons than Junior Males, this tendency provides tentative support for a general effect of gender on the frequency of emoticon usage. Thus Hypothesis 1 with respect to gender has been supported, but Hypothesis 2 with respect to age has not. The next section will discuss the overall results and explore the reasons for this surprising finding.

Discussion: Part 1
(1) Why are inline graphics the most frequently used type of emoticon?
Emoticons are resources for bloggers to present and express themselves to readers. Typographic face marks and inline graphics add both emotional tone and paralinguistic information, such as joking, smiling, happiness, embarrassment, and so on, but compared to other emoticons, inline graphics have the greatest expressive potential. They are colorful and have the strongest visual impact.

This finding may be rooted in the Japanese culture of brush writing common to rendering both words and pictures, which were used interchangeably in 17th century popular writing for entertainment (Shelton & Okayama 2006). This tradition has been passed down to Japanese manga culture (Schodt 1989), and then to digital adaptation in mobile phones, as explained by *emoji* creator, Shigetaka Kurita (2015).

(2) Why do women tend to use more emoticons than men?

Emoticons are a means of self-expression, and the cultural expectation is that women are more emotional and expressive than men. Women may be motivated by a desire to make their blogs more visually attractive, enacting identities that they expect readers to recognize and interpret. This interpretation relates to the following discussion.

(3) Why do younger women use more emoticons than any other group?
This group expects and is expected to have more expressivity than any other group. As with makeup and fashionable clothing, the desire of this group to be cute and attractive may be a factor. Behind this lies what can be considered the ideology of cuteness, in which being or looking cute (*kawaii*) among younger women in contemporary Japan is overwhelmingly important. The concept of *kawaii* has been explored by such scholars as Kinsella (1995), Hjorth (2003), and Miller (2004). Kinsella writes: "Kawaii or 'cute' essentially means childlike; it celebrates sweet, adorable, innocent, pure, simple, genuine, gentle, vulnerable, weak, and inexperienced social behaviour and physical appearance (220)." It has been a focus of scholarly attention (Cheok 2010; Nittono et al. 2012; Shearin 2011), but is also frequently found in popular discourse (Kageyama 2006; Lee 2005; Roach 2003; Drake 2001). Nowadays, "kawaii" is a prevailing expression of praise (Hirata 2012). Younger women's frequent use of emoticons, especially colorful inline graphics, can be explained in terms of this widespread ideology since they embody cuteness.

(4) Why do older men tend to use more emoticons than younger men?
Older men, especially retired men, may be able to spend more time creating posts, while younger men tend to live busier lives. Using emoticons requires a few additional steps, which they may want to avoid. Some younger men might also regard using emoticons, especially colorful inline graphics, as feminine, in accordance with gender stereotypes in Japan. Younger men may want to avoid this image, presenting themselves as strong and manly, while older men may have transcended this constraint (or conversely, may have already been "feminized" by age and vulnerability).

(5) Why are generational differences not more significant?
In Japan, older people of both genders may already have significant experience in digital communication. Retired people not only have information and technology skills from their former workplace, but so-called "digital seniors" (Nagao 2011) have been engaged in computer-mediated communication for much of their adult lives. The age factor in emoticon usage is likely to diminish and eventually disappear in the future. The digital divide within the senior generation, then, is between those who have previous IT experience and those who don't.

In sum, the results of Part I have established the following:
(1) Inline graphics (*emoji*) are by far the most frequently used type of emoticon, regardless of age or gender;
(2) younger women use emoticons significantly more frequently than other groups;
(3) older men tend to use more emoticons than younger men; and
(4) older women tend to use more emoticons than both younger and older men.

Part 1 has examined the frequency of emoticon use, but the various kinds of emoticons have been left unanalyzed. The types of emoticons used by young vs. old women and

men in general will be explored in a future study, along with blog content. In Part 2 of this study, content and emoticon types used by women are analyzed in comparison with blogs on a specific topic, moral harassment to reveal how blog topic may affect emoticon usage.

Part 2: Qualitative analysis of emoticon usage in moral harassment victims' blogs
While the bloggers in Part 1 use emoticons of various types in posts describing everyday experiences, family gatherings, seasonal events, and so on, moral harassment victims write about experiences that are far from happy and they tend not to use emoticons. Their experiences are unbearably difficult, taking a toll not only morally but also sometimes physically. Some write about their current misery and trouble, while others blog about what they underwent and how they escaped from their harassers, usually ex-husbands. Yet they are not entirely happy, because of their painful memories of hateful, unreasonable husbands. They describe in reserved tones the disparaging words and treatment they received, financial hardship, and life without peace of mind. All of this is generally conveyed without inline graphics, though occasionally there are typographic face marks and ideographs.

Part 2 reveals that there are far fewer emoticon users among bloggers writing on moral harassment, as compared to blogs on miscellaneous everyday topics. In the category of moral harassment, only seven out of the top 50 highly ranked bloggers employed at least one type of emoticon, and only one blogger used all four types of emotions. The particular emoticons that the bloggers employed are also obviously different from those observed in Part 1.

This might suggest that inline graphics in general, which were found to be the most frequent type of emoticon regardless of age and gender in Part 1, are not suitable for more serious blogs and topics. As many inline graphics serve decorative purposes, colorful, eye-catching additions to the text are at odds with the tone of victims' narratives.

Consider an example where a victim posted after withdrawing the divorce suit that she had filed out of consideration for her daughter:

離婚したくないわけじゃないんでね💧
rikon shitakunai wake ja nai n de ne💧
"It's not that I don't want to get divorce"

Here the inline graphics express stress-induced sweat. Bloggers carefully choose inline graphics that suit the content, for example, ※ "anger" 💧 "tears" and 💣 "bomb."

In contrast, another victim, who overcame the hardship of divorce and now lives a more peaceful life, posts a blog entry with the title "幸せって、こういう事" *shiawase tte, kouiu koto* "Happiness is something like this." There she ponders the happiness of her current life using 16 inline graphics plus five heart symbols and one typographic face mark. In this case of somewhat more positive content, the blogger chooses to include more emoticons than on other days that are less positive.

In terms of typographic face marks, a blogger who calls herself "Alice in Moral Harassment Land," details the words and shouts uttered by her husband, "Not my fault!" and her response to his arrogant attitude. She then writes:

私はそれを見て、怒りが湧きました。
∑(￣皿￣；；ﾑｯｶｰ!!
Watashi wa sore o mite, ikari ga wakimashita
"Seeing this, my blood boiled."
Typographic face marks for anger plus the shortened form of the verb *mukatsuku*, "feel sick, get angry" express her anger and displeasure.

No comparable use of an angry face was observed in the blogs of Part 1. Most of the typographic face marks in women's blogs on everyday topics are happy and smiling faces:

こちらも宜しくお願いしま〜〜す（*^_^*)
Kochira mo yoroshiku onegai shima〜〜su（*^_^*)
Please do me a favor on this too（*^_^*)

Somewhat negative faces may appear in cases of embarrassment, but the use is humorous:

久しぶりにトンカツが、食べたかったのに(>_<)
Hisashiburi ni tonkatsu ga tabetakatta no ni (>_<)
I'd have liked to eat breaded pork cutlet after so long (>_<)

The author found she did not have bread crumbs and her embarrassment was she was not able to cook or eat this food.

As for ideographs, (泣) "cry" and (怒) "anger" appear in victims' blogs, but hardly ever in everyday topic blogs. Conversely, victims' blogs employ far fewer uses of the ideograph (笑) "laughter," which is very common in blogs on everyday topics.

On the motivation for victims to produce blogs, the top-ranked victim writes in her profile:

日々旦那からのひどい言葉の嵐で精神的に参っていますが、今耐えればいつか幸せな日々が来ると信じて毎日過ごしています。それまでこのブログで心境を吐露させてください。
Every day I'm suffering from storms of my husband's cruel words, but hoping happy days will come someday, if I endure now. Until then, let me vent my feelings in this blog.

Another victim writes:
"My husband's harassment has escalated; not sure to what extent I can stand it, but am trying to see the situation calmly and objectively by writing this blog, to not react to his attacks."

One more victim states:
"In this blog I'll keep track of problems of big family, my husband's verbal DV (domestic violence), children, and so on, and convey to you readers. The moment it is discovered by my husband, this blog terminates.

As these quotes show, many of these bloggers utter and vent their sufferings, in order to be able to view the situation objectively with less emotional turmoil. The practice of writing in secret, where they cannot be discovered by their harassers, may help heal victims' wounds and balance their feelings about their ordeal. They may also be seeking support from other women in similar situations, and expecting that the description of their suffering can offer support to other women. Bloggers express gratitude when their readers leave encouraging comments and indicate that they are being supported by their writing.

The motivations for writing blogs about miscellaneous everyday topics are different. Women in peaceful situations may describe their happy daily lives so that they can show and perform their identities as attractive women in blog texts featuring colorful, cute inline graphics and elaborate typographic face marks.

Part 2 reveals how differently emoticons are used by moral harassment victims as compared with the bloggers in Part 1. Emoticons are used by women both young and old for not only decorative but also emphatic and lexical purposes in blogs that positively details their days with children, grandchildren, and friends. On the other hand, moral harassment victims write about their difficulties in a reserved tone and largely without emoticons. This may suggest that emoticons are not suitable for serious blogs expressing the hardships of life, or that emoticons are more appropriate for expressing the brighter, joyful aspects of life.

Overall, while the general findings from Part 1 indicate that inline graphics are by far the most frequently used type of emoticons, and that younger women use emoticons more frequently than any other group, Part 2 shows that there are content areas in which emoticon usage is limited. Perhaps the Japanese cultural dispreference for showing negative feelings in public is also a factor.

Concluding remarks
The study has found that inline graphics are the most common of the four types of emoticon in all blogger groups. Younger women use more emoticons than any other group, which may be rooted in the Japanese culture of cuteness. Topic can be a determining factor for emoticon usage. Inline graphics apparently are more appropriate for expressing the brighter aspects of life, as can be seen in women's peaceful blogs on everyday topics, which are in sharp contrast with blogs by moral harassment victims.

From the perspective of factors affecting emoticon usage, the study suggests that blog topic can be a factor for emoticon usage from qualitative discussions in Part 2, in addition to bloggers' gender and age as explored in Part 1. Topics other than moral harassment are yet to be investigated here, and how topics affect emoticon usage in blogging will be a future study, with more blogs discussing different topics.

In conclusion, in an aging and digital world, we need more research on seniors' use of language and emoticons online. In the future, we should investigate what senior users write about in order to understand their needs, desires, and concerns, which will require detailed analysis of the content of blogs.

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