Puns in Japanese Computer Mediated Communication: Observations from Misconversion Phenomena

Yukiko Nishimura
Toyo Gakuen University, 1-26-3 Hongo, Bunkyo-ku Tokyo 113-0033 Japan
yukiko.nishimura@tyg.jp

Abstract
This study extends humor theory to explain puns originating from orthographic conversion in Japanese computer-mediated communication (CMC). Standard word-processing software converts Romanized input to appropriate orthographic output consisting of phono-graphic kana and ideographic kanji. Such software may produce an output often semantically incongruent with the intended output, which can be humorous. The dataset analyzed here consists of 492 online submissions to the “Humorous Misconversion Contest” held by the Japan Kanji Aptitude Testing Foundation. Since not all misconversions are funny, the study accounts for how misconversions satisfy funniness conditions of the Semantic Script Theory of Humor. The study finds that script interpretability, as the basis of script compatibility, and script opposition are of most importance in humor perception. It also finds that script oppositeness resides not only within texts but also in outer contexts. As yet, very few academic studies have discussed humor in Japanese CMC. Since a majority of verbal humor is researched on alphabet-based languages, the observations here are expected to enrich and broaden our knowledge of humor.

1. Introduction
This study discusses puns that originate from ortho-graphic conversion in Japanese computer-mediated communication (CMC). I first describe the phenomena, in which puns can be created by standard word-processing technology. By applying the Semantic Script Theory of Humor (SSTH) (Raskin 1985) I account for instances of misconversions resulting in puns, in languages that have not heavily been investigated within this theory (Attardo 1994: 209).

The production of puns involves kanji and is realized by word-processing software available to any Japanese writer on the computer. Here more focus is placed on user interpretations in/out of contexts and structural characterization of such puns rather than the generation.

The kinds of puns to be described here can be a result of word conversion software’s shortcomings, in that such technology is yet slightly short of user expectations for producing the right output. Though every effort is made by natural language processing researchers to reduce misconversions, such as improving dictionary entries and predictive functions, there is room for the phenomena to occur, as word conversion is inevitable in computerized writing of standard Japanese orthography.

The phenomena can also be viewed as unintentional errors or intentional pun/fun making of text writers who have not corrected to “normal” output before making it available to others. When recipients encounter and identify misconversions, the output can evoke humorous reactions or laughter/smile, in view of the gap between the meanings in misconversions and those in writers’ intended output. Books collecting humorous misconversions are published (Yoshinaga 2005, 2006). A number of websites offer humorous misconversions, including Humorous Misconversion Contest, though it is suspended temporarily for achieving the contest organizer’s initial purposes of raising correct kanji recognition.

While the General Theory of Verbal Humor (GTVH) developed from the Semantic Script Theory of Humor will explain the misconversion phenomena, however, this study mostly employs the Semantic Script Theory of Humor for its detailed account on the types of script oppositions in the SSTH (Raskin 1985: 107-114).

Some misconversions seem funnier than others, as they attract more votes than others in the Misconversion Contest. When instances of misconversions are not felt to be very funny, attempts will be made to explain why, paying attention to the conditions for puns to be funny. The nature of script oppositions seems to be among most important factors in humor perceptions. Since there would hypothetically be innumerable misconversions, analyses of
these misconversions could clarify what does and does not constitute Japanese verbal humor. As yet very few academic studies have discussed humor when Japanese texts are created on the computer in users’ on- and off-line communication. The insight gained from this study will fill a research gap in intersecting areas of CMC and humor.

The plan of the paper is as follows. In the next section, I will briefly present previous research on Japanese verbal humor, and provide backgrounds necessary to understand misconversion phenomena, namely Japanese orthography and word processing. Section 3 will introduce the dataset and structurally characterize misconversions, classifying into two types, lexical and morpheme-boundary shifting. Section 4 presents how the funniness conditions of the SSTH account for misconversions, including cases of non-interpretation. Section 5 extends analysis to include user interpretation and reactions in contexts. Section 6 will discuss the findings, focusing on interpretability and script opposition and Section 7 summarizes the discussion and concluding remarks will be given.

2. Background

2.1. Previous Research on Japanese Humor

Humor has attracted people for centuries, and Japanese speakers are no exception. Wells (1997) explains how Japanese speakers have conceptualized humor and enjoyed it in various forms of art such as literature and theatre and in everyday life over hundreds of years, with more emphasis on historical expositions. An edited volume by Davis (2006) presents a balanced picture of contemporary practices of humor in a number of genres such as comic stage performances, manzai and rakugo. Among the articles included, Nagashima (2006) describes sha-re, or punning, as widely accepted form of wordplay in Japanese culture. Punning in advertisements is studied by Tanaka (1992) within relevance theory. Maynard (2007) discusses puns as part of creativity among Japanese speakers, using major humor theories.

Takanashi (2007) focuses on visual aspects of puns found in the 16th to 17th century playful poetry, kyoka, paying attention to the roles of orthography. The visual aspects of puns, which have not been discussed by most predecessors, are examined in her study. The playful verbal art of her focus, however, is not enjoyed very much in modern Japan, as it was popular about 200 to 300 years ago. This present study deals with current Japanese writers’ everyday practices on the computer, and hence covers wider and more contemporary areas of interest in humor identified by orthography. Nishimura (2003a, 2008) discusses humorous interactions on an entertainment-oriented discussion board, Channel 2, in Japanese CMC, and reports specific kinds of misconversions are lexicalized and function as group identity markers in users’ online communities. Though there are other studies on Japanese puns (e.g. Kawahara and Shinohara 2009) from psychoacoustic approach, they are not discussed here due to their focus on production rather than interpretation.

2.2. Japanese Orthography

The Japanese language employs an orthographic system, in which words are not separated by a space, but appear normally in uninterrupted strings. The main graphs used in the Japanese orthography are phonographs kana, namely hiragana and katakana, logographs kanji originally borrowed from Chinese, and Roman alphabet, romaji. Hiragana is used for native words that are normally written in hiragana, inflectional endings and function words such as particles; katakana is mainly used to represent loan words from Western languages and for special effect in a similar way to Italic font in English. Romaji is for transliteration of kana and kanji, and also for economy of writing, as in acronyms like “CD.” For more details, see Nishimura (2003b).

When kanji is used along with kana, precise meanings can be expressed. Approximately 6000-7000 kanji are in use in modern Japanese. Different kanji with distinct meanings are very often pronounced the same; there are over fifty different kanji that are read as sen (Nishimura 2003b). This means there are a large number of homophonous vocabularies, especially when more than two kanji are combined in a word. A two-kanji word consisting of kou and en, for instance, can result in thirteen different kanji representations, some of which mean ‘park,’ ‘lecture,’ ‘performance,’ ‘support,’ and so forth, and all are pronounced as kouen. Upon encountering the sound of a word in speech or words in kana, Japanese speakers consciously or unconsciously retrieve the appropriate kanji. The meaning of the sounds, or kana phonographs can be fixed by kanji (and by context as well). Confusions, though can happen on certain limited occasions, rarely occurs among Japanese speakers, as right kanji are usually in the mind of average Japanese speakers (Takashima 2001) in everyday communication.

2.3. Word Processing in Japanese

To write Japanese in standard orthography using a common computer keyboard, writers need romaji-kana-kanji conversion software such as Microsoft IME or Jusysys’ s ATOK. (Note also that the input method is different when entering words on mobile phones, where there is no full keyboard.) First, the user enters Japanese words, phrases or a whole sentence based on their pronunciation, in romaji in the Japanese input mode, without intervening spaces, and presses the conversion key.
(often the space key) to have the software convert the input.

The conversion software then conducts syntactic parsing of the input based on morphological information, such as parts of speech and conjugation form, searches the dictionary, or kana-kanji correspondence table, for the input’s possible output, and produces an output normally consisting of kanji and kana. Recent software is capable of predicting user input based on his/her writing habits of most often or recently chosen output and gives such options. If the given output is not the desired one, the user presses the conversion key again to get other choices until the desired kana-kanji appears, and then, the user presses enter to finalize.

3. Misconversion Data

In this section I explain the dataset, consisting of the entries submitted to the Humorous Misconversion Contest sponsored by The Japan Kanji Aptitude Testing Foundation. The contest, which began in 2004, aims to raise kanji consciousness by humorous kanji uses, so that it can eventually contribute to improving kanji literacy among Japanese writers.

The contest was carried out and the entries collected and selected in the following two steps. First, the Foundation called for online submissions of humorous misconversions from users in general. Out of the total entries for the month, the Foundation selected ten to twenty promising ones and uploaded the pre-selected entries on their site. Participants then voted for what they considered funniest out of the listed entries. Every month, participants’ votes determined one or two as best for the month. In the second step, in order to determine the year’s best, all the monthly voted ones were listed together online again, and participants’ votes decided the year’s best.

Both intended and misconverted texts were submitted to the contest, along with participants’ comments on the circumstances in which particular misconversion occurred or readers’ reactions of the texts. Currently the Foundation gives online 492 misconversions preselected by the Foundation, out of the total of 13,998 submissions from 2004 to 2009 (see http://www.kanken.or.jp/henkan/index.html). These 492 entries constitute the dataset in the current study, from which relevant examples are given as illustrations and analysis for further discussions.

As to the structural properties, these misconversions can roughly be grouped into two, lexical and morpheme-boundary shifting. The former occurs among homophonous vocabularies and does not change morpheme boundaries between the right conversion (with the intended meaning) and misconversions. The latter does change the morpheme boundaries. This classification is not mutually exclusive. Instead, it meant to provide structural characterizations of misconversions.

Approximately 76 per cent of misconversions are of the latter type, while 26 per cent are of the lexical type and 11 entries contain both. Reasons for morpheme-boundary shifting misconversions occupying such a large percentage seem to involve, among others, short vocabulary items that can easily be confused with part of other words, including monosyllabic vocabularies, particles and colloquialism such as dialects and interjections. Although not every kind of this type of misconversions is explained, examples below illustrate monosyllabic vocabulary and particles resulting in misconversion.

Following is an example of lexical misconversions, in which homophonous vocabularies can be chosen by the conversion software. When “kiseichuudejutaida” is entered, the intended output, which means (3-1-a):

(3-1-a) Because of the control, (the streets) are jammed, can result in the misconversion, which means (3-1-b):

(3-1-b) Because of parasites, (someone) is serious.

Here, “parasites” and “under control” are homophonous with each other, expressed by the same romaji input kiseichu and so are “serious” and “traffic congestion.” by jutai. A standard Japanese language dictionary lists 7 different words that are pronounced jiutai and 21 words for kisei. (Koujien 1991)

Similarly, when “kengakunadoshinaikankoutsuki” is entered in explaining a tour, the intended meaning is given in (3-2-a), and (3-2-b) shows the misconverted meaning:

(3-2-a) including the tours such as inner city tour

(3-2-b) including the tours, which have no sightseeing

Here shinai in the intended output is a noun, meaning “inside of city” while shinai in misconversion is a negative form of a verb suru ‘do,’ meaning “won’t do.” Lexical misconversions can occur also across different word classes; yet the boundary remains the same.

Next misconversions, in which original morpheme boundaries are shifted, are explained. In (3-3-a) and (3-3-b), the Romanized input entered is “kotoshikarakaitaimishajimetadotowa.” The intended output means (3-3-a), while the misconversion means (3-3-b):

(3-3-a) (From) this year I/we started living abroad

(3-3-b) (From) this year shellfish started living in my stomach

Here, the sequence, kaigai is a noun meaning “abroad” in (3-3-a), while this sequence is chopped into three separate morphemes: kai, a noun meaning ’shellfish’, ga grammatical particle indicating the subject, and i, a monosyllabic noun meaning ‘stomach.’ Note also two distinct kanji are used for sumi, ‘live’; the kanji (3-3-a) is for a human subject and that in (3-3-b) for non-human subject.
In (3-4-a) and (3-4-b) below, a misconversion based on different morpheme boundaries, with case particles dropped is explained. The romaji input is, “minikitekuretearigatou,” a thank-you note. Compare the intended meaning in (3-4-a) with misconverted meaning in (3-4-b).

(3-4-a) Thank you for coming to see it for me.
(3-4-b) Thank you for wearing a mini (skirt) for me

“mini” in (3-4-a) consists of “mi,” a verb, ‘to look at’ and “ni” an adverbial particle indicating purpose, while in (3-4-a) it is a noun, meaning a mini (skirt). This example includes a lexical misconversion of “kite” “wearing” and “coming” as well. (3-4-b) involves an omission of case particle, object marker, wo, and if this had been the intended and fully expressed sentence, it would have been “miniwokite…” In casual writing as well as conversation, it is quite common to drop case particles, as the circumstances clarify the meaning. The common tendency to drop case particles might have contributed to the misconverted reading of the input.

There are other kinds of morpheme-boundary shifting misconversions that involve a particular hiragana graph. This graph is pronounced as [wa] when used as a grammatical particle indicating topic, but [ha] in other contexts. Yet the romaji, “ha” is used for both cases. (3-5-a) and (3-5-b) illustrate this, and shows the intended and misconverted meanings respectively. The sequence entered is “oosankanokeizaihakyuukouka.”

(3-5-a) spreading effect of Osaka economy
(3-5-b) Osaka economy plunges into a dive

There is a morpheme boundary between “hakyuu” and “kouka” in (3-5-a), which means “spreading” and “effect” respectively. But in misconversion, “ha” in “hakyuu” is taken as topic marker, and “kyuu” and “kouka” altogether is taken as “sharp decline” by the software. Thus, the morpheme boundary shifts from “hakyuu/*kouka” to “ha/kyuukouka,” resulting in semantic incongruity [*hereafter / indicates a morpheme boundary].

So far we have seen structural characterizations of intended and misconverted output pairs in (a) and (b) of (3-1) through (3-5) above. In all these pairs both rightly converted and misconverted expressions share the same romaji input, yet exhibit wildly different meanings. The next section discusses how the humor theory accounts for these kinds of misconversions.

4. How SSTH Explains Misconversions

Now let us clarify what the SSTH claims about humor. Raskin (1985) says:

(107) A text can be characterized as a single-joke-carrying text if both of the conditions in (108) are satisfied.

(108)(i) The text is compatible, fully or in part, with two different scripts
(ii) The two scripts with which the text is compatible are opposite…(1985: 99)

The above claims can be interpreted to be separated into the following when considering misconversions:

In order for a misconversion to be funny,
1) there must be two distinct scripts
2) the two scripts must overlap
3) both scripts must be opposite
4) both scripts must be interpretable

When any of these requirements is not met, misconversions are not interpreted as funny or humorous. In the following each of these requirements is examined in more detail.

1) There are two distinct scripts in misconversions; one shows the intended script, S1 and the other is the script given by misconversion, S2. In S2, different vocabularies appear and even syntactically different structures emerge as a result of misconversion. They mostly form a script, but not always. This point is concerned with the last requirement, and will be explored in Section 6.

2) Regarding script overlap between intended and misconverted outputs, this requirement is considered to be achieved by sharing the same Romanized input. In most examples parts of the output have the same kana-kanji, and in this sense, there is partial overlap.

3) As to the script opposition requirement, intended and misconverted outputs are mostly opposite in meaning, though they may not be strictly so. They are different in various ways.

The examples given so far all meet this requirement. The kinds of script oppositions in these examples are explained below. Example (3-1) involves often vs. rare script opposition (traffic control causing traffic jam happens often vs. parasites causing illness are rare). Example (3-2) gives a clear case of script opposition in which there is a city tour vs. there is none. The script opposition in Example (3-3) is real vs. unreal (Raskin 1985: 111), as living overseas is a real situation, while shellfish does not live in one’s stomach in reality. (3-4) can show another type of opposition that concerns with possible or plausible situations. The reason for thanking someone could be various. The particular reason in the misconversion, “wearing a mini skirt” can happen in reality, but this may not be a very likely, usual reason. The person who receives this thank-you message might have very beautiful legs, and by wearing a mini skirt, they can be appreciated by people including the message writer, if this had been the intended output. The script oppositions in (3-5) are concerned with good vs. bad regarding the Osaka economy. It’s good for the Osaka economy to be spreading, but not good if it goes down.
4) On interpretability of scripts, correctly converted inputs always have interpretable scripts, with the writer’s intention behind. Misconverted outputs do not always show interpretable scripts. An example for this will be given later in (5-8-a) and (5-8-b) in Section 5.

As explained above the misconversions in (b) sentences/phrases in (3-1) through (3-5), all make sense, or are interpretable, and hence constitute humor. However, in the process of attempting to translate into English the dataset of 492 misconversions, I encountered those that were not translatable or very strange, if not untranslatable. For example, there is an entry in which correct conversion can be translated as, “Local historian” from the input, kyoudo / shi / kenkyuu / ka, in which each morpheme means ‘hometown/ history / research / person’ respectively. In the misconversion, morpheme boundaries are shifted to kyoudo / shiken / kyuuka, meaning ‘Strength / examination / holidays,’ which is simply a list of words from which coherent script is difficult to find. This is semantically ill formed and does not form a script. If studying only well-formed humor, this requirement of interpretability could be overlooked, and studying misconversions or output given by computer can remind the rationale of this requirement.

There is another instance of misconversion that does not seem to meet the script opposition requirement, just by looking at texts alone. The input is “jishin / ha / toukai / ga / shinpai / da,” which is a lexical misconversion, in which toukai is ambiguous. The intended output means ‘collapses’ as in (4-1-a), while in misconception it is a region name, Tokai area as in (4-1-b). Both are concerned with an earthquake script, and the difference is on the area of concern or the source of worry. This difference seems difficult to regard as opposite.

(4-1-a) As for earthquakes, I’m worried about collapses.
(4-1-b) As for earthquakes, the Tokai is a region of concern.

However, if they are placed in contexts where these texts are created, script oppositions emerge. The contributor’s contextual note says, “I’m wondering if my PC [like humans] is also worried about the Tokai Earthquake.” Script opposition is found not in the linguistic/semantic differences between the two outputs, but in the conceptual gap between the contributor’s perception that his/her PC as non-human and the misconception result that makes the PC human-like.

The “local historian” example, too, can be considered to have opposite scripts, if contextual information is supplied. This was submitted to the contest as a case of a conversion failure, so that participants can laugh at the submitter’s misery using the PC. The opposition could be odd or troubled vs. normal or trouble-free, though there may be other possibilities.

Thus in order to discern how misconversions form scripts and whether interpretable or not, misconversions need to be examined in contexts. This also enables us to see how misconversions are perceived and what reactions users may have toward them in real communicative situations. Section 5 will examine these aspects of misconversions.

5. Misconversions in Contexts

From the above discussion, incorporating user comments as contextual information is needed for interpreting examples of misconversions, including non-recognition of humor. Here writers’ and readers’ reactions to misconversions are explained on three phases, and each will present the following:

Phase 1: Writer’s reaction to misconversions

When a misconversion appears on PC display, the writer does not always recognize this. When s/he catches this, there will be various reactions on the part of the writer.

Phase 2: Reader’s interpretations of misconversions

Writers send out texts that have misconversions without recognizing them. When these texts reach readers, they may identify misconversions. These cases of misconversions not recognized by the writer yet spotted by the recipient are described on Phase 2.

Phase 3: Reader’s reactions, when messages are sent from a writer who has not realized the misconception

Readers will show various reactions in their attempt to interpret misconversions. They may take the texts literally or with doubt. Depending on the content of misconception, there are three cases of this on Phase 3. Now each phase will be explained with examples.

Phase 1: Writer’s reaction to misconversions

The most typical or normal reaction upon finding misconversions will be to edit the text to correct the error, so that the output expresses the right intention. In so doing, the writer may feel relieved for not having others see the mistake (5-1), or enjoy the semantic gap momentarily before editing (5-2), or finds some truth in the misconception (5-3) and even prefers the misconception to the originally intended meaning, and take it as his/her intention (5-4).

In (5-1) “go / kinyuu” is the cause of misconception, in preparing a business document. “Go” in the correct conversion is a beautifying prefix to make the text sound more polite, as the translation in (5-1-a) shows. This romaji, “go” is misconverted to the kanji that means ‘mistake,’ resulting in the meaning given in (5-1-b).

(5-1-a) Please enter your correct name
(5-1-b) Please mis-enter your correct name

The contextual note says the writer was glad because s/he realized the machine’s error before printing.

In (5-2) “hyouka / kaiseki” in the meaning of (5-2-a) was misconverted to that in (5-2-b)
(5-2-a) evaluation and analysis
(5-2-b) icy desert and ceremonial Japanese lunch

The writer, while working on an academic paper dealing with complex tasks of evaluation and analysis, was suddenly taken to a completely different, easy and relaxing world, which is in opposition to the real situation.

Next, the morpheme boundaries of “tadashii / you / dues,” which means (5-3-a) is shifted to “tadashi / iyou / desu,” which means (5-3-b)
(5-3-a) (company’s policy) looks correct.
(5-3-b) but (company’s policy) is strange.

The writer, preparing minutes of a meeting at work, feels the misconversion tells a more accurate story.

There are other examples of this kind, in which the writer feels the misconversion or an alternative given by the computer is even better, though in normal circumstances as in (5-3) these documents cannot be produced. (5-4) is an instance in which the writer took the misconversion as his/her own intention. The morpheme boundaries were shifted from “takakuka / shi / sugi” (5-4-a) to “takaku / kashi / sugi” (5-4-a), which mean respectively:
(5-4-a) (You are doing) excessive diversification
(5-4-b) the rental fee is too expensive
This was a comment to a video rental store, and the contributor reported that the respondent also agreed with the misconverted meaning. The writer did not bother to change to the originally intended output.

Phase 2: Reader’s interpretations of misconversions

In the case when writers send out texts with misconversion without noticing it, recipients encounter misconversions, and there are also various reactions. Upon encountering misconversions, when the text is too wildly odd and cannot be true, readers are able to recover the original, intended meaning. In the romaji input, “okayu / sama / you / toire,” with the correct output meaning (5-5-a), the morpheme boundary is shifted to “okayu / samayou / toire,” which means (5-5-b)
(5-5-a) bathroom for guests
(5-5-b) bathroom where guests roam
Because it is obvious that people do not normally roam or wonder in the bathroom, such an output is clearly not the correct one. There are many examples of this kind, in which the mistake in the output is evidently wrong, and such interactions often result in laughter.

Phase 3: Reader’s reactions when receiving texts with misconversions

When readers encounter a text, regardless of the text involving misconversions or not, they normally interpret it literally. When a text with misconversion that has not been recognized by writers reaches readers, they also follow normal practice of interpreting it literally. Then upon encountering such a text there are three possible reactions.

First, readers have doubt in the text and ask writers for clarification, second, they have no doubt, and readers believe the text with misconversion is the writer’s intention, and third, readers are unable to interpret the text. Each will be described with example.

Now the input for (5-6) is “kami / kitta” and the intended and misconverted meanings are in (5-6-a), and (5-6-b) respectively:
(5-6-a) I had my hair cut
(5-6-b) I cut it off with my teeth
The writer was creating the message to her sister, half asleep late at night. The next morning the writer was surprised to find her sister’s response email: “What in the world did you cut with your teeth?” She then realized that a misconversion had occurred. Here the reader encountered the misconverted text, and in her attempt to interpret it she was unsure about the message, due to the odd content, which resulted in the clarification. Consequently they shared laughter.

In the next example, the romaji input for “detailed plan” is “shousai / zu,” (5-7-a) and that for “small size” is “shou / saizu,” (5-7-b) a morpheme-boundary shifting misconversion. Here the writer sent an email from a construction site, asking an office person to send him a detailed plan for the construction immediately. Half an hour later, the writer received a fax of the plan that had been shrunken so much that it was impossible to identify the details – the opposite of the original request. He then found that a misconversion had occurred. The recipient had no doubt about the content of the email, and responded exactly as requested.

The next final example shows a misconversion resulting in non-comprehension. Here readers were unable to interpret the misconversion, as the text did not form a full, coherent script. The romaji input for the intended script was “asu / hanami / da” (5-8-a), while in the misconversion, the morpheme boundaries were shifted to “asu / ha / namida” (5-8-b), each of which means:
(5-8-a) Tomorrow we’ll go cherry blossom viewing
(5-8-b) ?? Tomorrow (will be) tears
The submitter’s contextual note says the message was not understood in a chat session with friends. The writer made others worry about what bad, unfortunate happening might occur, by association with “tears.”

So far we have seen various cases of misconversions and reactions of people involved, including non-recognition. The next section will discuss how the theory accounts for these cases in light of the funniness requirements and the phenomena of misconversions in broader contexts are also explored.
6. Discussion

Now in considering how misconversions constitute humor based on the STH, “script interpretability” and “script opposition” are found to be of importance. The misconversion examples analysed so far satisfy the requirement of interpretability except for “tomorrow tears” in (5-8-b). This particular example may indicate that though users attempt to interpret machine-produced outputs somehow, there are cases, in which no coherent script can be thought of. Such un-interpretable outputs, however, give a perspective that may have been taken for granted by the theory, and misconversion data can shed light on the importance of interpretability, which may presuppose other requirements.

Now, considering why some misconversions may seem funnier than others, the answer might be related to the nature of script opposition. The examples include cases of clear oppositeness, such as real vs. non-real scripts, which is given special mention in Raskin (1985: 113-114). These typical ones include those that cannot be true or clearly odd, as can be seen in the “shellfish in stomach” example. Those that come next will involve some oddity yet considered as likely to happen, as in the example of “thank-you note for wearing a mini skirt”.

Yet out of context, some misconversions do not seem to be in contrast to the intended meaning and thus do not sound humorous, such as “concern about or area of earthquake” example. However, when placed in context, script oppositions emerge, and the text subsequently becomes humorous. From this, script opposition lies not only in a closed linguistic/semantic world, but also in outer contexts, which allow communication participants to perceive humor.

Some texts with misconversions allow normal interpretations, though the meaning is not what the writer meant, and the text itself may not be humorous. However, also placed in contexts, misconversion is identified on later stages of interactions, the misconverted text still produce laughter.

Also it may be possible to argue that misconversions are simply accidentally created outputs, and no user intention is involved. However, taking the whole context of submitting misconversions to a humor contest, they involve user intentions. As I described earlier, misconversions, in general, can be a nuisance to writers as the intended output is not produced. Yet these misconversions under analysis are submitted to a humor contest, and in this sense they constitute humor, as if telling a joke, even though some texts locally may not exhibit features of humor.

Looking at such computer-induced humor, one question may arise whether this kind of phenomenon happens only in Japanese. It seems similar situations may occur in English, where technology intervenes between communicators. Auto-correction features recently may change non-English words to existing standard words, such as “cosplay” to “costly.” (See, for example, http://damnyouautocorrect.com/) Yet even though similar phenomena occur in English, the scale and frequency is far greater in Japanese, and this can be accounted for by three factors:

1) The Japanese orthographic system has four kinds of graphs and all four can appear in the same sentence.
2) The Japanese language possesses a huge number of homophonous vocabularies, partly due to a relatively small number of phoneme inventories, and the meaning is ultimately distinguished by kanji or context.
3) Romaji input alone cannot determine where morpheme boundaries are located in an unseparated string of morphemes, as there are multiple possibilities for their positions. Conversion software can make mistakes, creating and compounding problems of homophones.

Now when technology intervenes between interactants, the situation is similar to having an interpreter. Interpreters mostly do a good job and convey what the original writer/speaker intends, but they are not perfect. When writing on the computer in Japanese, the process of having the intervening software is indispensable, unlike transparent English word-processing. Japanese writers on PC are luckily or unluckily not yet free from misconversions.

How is misconversion, then, viewed in Japanese society and culture? Basically, mistakes/errors are not perceived favorably. Punning in general is not regarded as highbrow humor (Tanaka 1972). Misconversion can be a type of punning caused by personal carelessness (not checking before sending) and technological error. Not very many people consider this topic worthy of study, as this does not require elaborate wit to produce/comprehend this type of joke, though humor in other fields such as literature and theater is given consideration. There is a cultural attitude towards humor; on the surface, in official situations, laughter is discouraged, but in private situations, this is not the case (Davis ed. 2006; Wells 1997; Nagashima 2006). Also an effort is made to incorporate this phenomenon among school teachers to improve children’s kanji literacy, while enjoying humor (Kitagawa 2011).

7. Summary and Conclusion

This study has shown that script interpretability and script oppositions are two most important factors for texts to be humorous, and it finds that these requirements are applicable to misconversions in digital interactions. This study is an application of the theory to Japanese, a language not previously been studied within this
theoretical framework, taking into consideration the language-specific characteristics resulting from orthography and *kanji* vocabulary. It also reveals that misconversions can be characterized by linguistic/semantic terms, but can be described more appropriately when taking context into account.

Very few academic studies have discussed humor among Japanese writers in their digital communication/interaction, and this study will be an addition to humor research in a contemporary setting. Since much of humor research has been conducted in Western academic traditions, the insights gained from this study are expected to enrich and broaden our understanding of technology, communication and humor beyond culture.

**References**


**Acknowledgement**

Funding from the Japan Society for the Promotion of Science, Category (c) No. 24520479 is gratefully acknowledged.