Abstract
This paper shows that traditional language games are governed by linguistic principles and thus speakers avoid deviating too much from their linguistic knowledge. We also show that speakers can consciously challenge part of linguistic systems and rules by designing a novel language game. Two of the traditional language games in Japanese, dajare and shiritori, will be described to illustrate the effect of linguistic principles on language games. We will then introduce a hitherto undescribed language game designed as a conceptual art, and see how it is created through the balance and tension between creativity and unexpectedness on the one hand and grammatical well-formedness and meaningfulness on the other. Designing language games—or studying designs of language games—may tell us a lot about the nature of our creativity.

1. Introduction
People play with their language(s) all the time, a practice referred to as “language games”. People enjoy finding out similarities in sounds of words (punning), recalling words with similar meanings or sounds (rensoo geemu ‘association game’), trying to utter phrases that are difficult to pronounce (tongue twister), creating new phrases by changing the order of letters or sounds, etc. Language games are widespread among different language communities, and different language communities have different language games. Some of them are traditional, and some of them are innovative. In Japanese, we have, for example, shiritori (the players say a word which begins with the final mora of the previous word), kaibun (palindrome), dajare (puns), goroawase (puns especially for numbers, often used as mnemonic or just for fun), to name just a few. In this paper, we show that traditional language games are governed by linguistic principles and thus speakers avoid deviating too much from their linguistic knowledge. However, we also show that speakers can consciously challenge part of linguistic systems and rules by designing a novel language game.

2. Traditional language games in Japanese
2.1. Dajare (puns)
Dajare is very common among Japanese speakers. In typical cases, speakers compose dajare by creating sentences or phrases using identical or similar words, as in (1) and (2).

(1) Arumikan-no ue-ni aru mikan.
aluminum can-GEN top-LOC exist orange
‘An orange on an aluminum can.’

(2) Aizu-san-no aisu.
Aizu-from-GEN ice-cream
‘Ice cream from Aizu.’

The example in (1) involves an identical sequence of sounds, [arumikan]. The second example on the other hand involves a pair of two similar phrases, [aizu] and [aisu], where the corresponding consonantal pair [z]−[s] involves non-identical—yet similar—consonants.

In my previous projects with Shigeto Kawahara, we have investigated linguistic principles that govern Japanese puns, and we observe that speakers can change an underlying form to make it more similar to the corresponding word. For example, in Hokkaidoo wa dekkai zo ‘Hokkaido is big’, speakers change the sentence-final particle /zo/ to [do] to make [dekkai zo] more similar to [hokkaido]. Other types of dajare include those that hide the first element and let hearers guess what it is. Many of this type of dajare are made by replacing a part of proper names, clichés, or famous phrases with a similar sounding word. For instance, we find a pun like Maccho-ga uri-no shoojo ‘A girl who’s proud to be a macho’, which is based on Macchi uri-no shoojo ‘The Little Match Girl’.
especially cases like (2) which involve non-identical pairs of sounds (imperfect puns) (see [1] for a review). By way of corpus analysis and experimentation, we have found that in making puns, Japanese speakers attempt to maximize the similarity between the corresponding words. This principle holds true both in terms of vocalic similarity [2] as well as consonantal similarity [3]-[4]. Another study of ours has also found that both psycholinguistic and phonetic prominences affect the measure of similarity deployed in the formation of Japanese puns [6]. These results show that speakers do not necessarily randomly combine words to make funny sentences, but they care about the phonetic/phonological aspects of pun sentences.\(^3\)

2.2. Shiritori

*Shiritori* (literally ‘bottom taking’) is a language game in which the players need to come up with a noun that begins with the final mora of the previous noun [9]. Participants take turns, and the person who says a word ending with a coda \([N]\) or repeats a noun that has been already said loses. An example of a series of words produced in shiritori is: *risu* (squirrel) ⇒ *suzume* (sparrow) ⇒ *medama* (eye ball) ⇒ *maruta* (log) ⇒ *tatami* (room mat) ⇒ *mikan* (orange). The person who said *mikan* loses.

Although this principle of *shiritori* is simple, some groups of people use different local rules, because different interpretations are possible with regard to what counts as “the bottom”. If the last letter (in Japanese orthography) is taken as the bottom, *kaisha* (company) ⇒ *yakyuu* (baseball) is allowed because in Japanese writing system, the last letter of *kaisha* is the same as the letter representing *ya*. If the last syllable (or the mora) is taken as the bottom, *kaisha* ⇒ *shachoo* (president) is allowed. If the last mora is the bottom but the last syllable is not, *shachoo* ⇒ *oni* (goblin) is possible but *shachoo* ⇒ *choori* (cooking) is not allowed. Each group playing *shiritori* can adopt one or more of these local rules. Although we observe a variety of options, these rules are all based on linguistic principles: Japanese writing system or Japanese phonology.

Some people add further restrictions on *shiritori* as well, some of which are semantic. Some players for example like to limit the nouns to be of a specific genre or associated with a specific topic. Limits can also be imposed on lexical aspects: proper nouns are usually not allowed, and compound nouns are largely restricted except when they are fully conventionalized or lexicalized. One of the other intriguing phenomena is the fact that nouns used in *shiritori* are very frequently those belonging to so-called “basic-level categories” [10-12].

In summary, both *dajare* and *shiritori* are governed by linguistic principles. Some of the principles are unconscious (the similarity restrictions on punning): others may be conscious but easy to understand and follow (the local rules in shiritori). This property of language games does not come as a surprise because if the principles and the rules are complex—or against our linguistic intuition—playing such games would require too much effort and participants may not have fun. For this reason, traditional language games tend to be intuitively understandable, easy, while allowing for much freedom.

Now we would like to raise the following question: can we consciously design a language game that is substantively different from traditional language games? Although it is quite easy to modify the rules of traditional language games or add optional rules to them, is it possible to create a novel language game? The answer to this question is ‘yes’. In the next section, we will look at a different kind of language game, i.e., a novel language game designed by a particular person or a group.

3. Hiragana kookan (Hiragana exchange)

3.1. The system of hiragana kookan

Taiichi Uchiyama, a Japanese modern music composer and conceptual artist, designed a language game called *hiragana kookan* (hiragana exchange). The system of this game is similar to the traditional Japanese literary game *renge* (two or more people write lines of a poem in turn), but unlike *renge*, the unit in *hiragana kookan* is designed to be as small as possible—participants can write only one hiragana at one time (a hiragana represents a mora or in most cases a syllable consisting of one vowel or a consonant plus a vowel; one hiragana can represent, for example, \([ka]\) or \([bo]\), which requires two letters in alphabet, or a single vowel like \([a]\), \([i]\), or \([u]\). The rules of *hiragana kookan* are simple: two or more people participate, one of them writes one hiragana on a sheet of paper and passes it to another person, who adds one hiragana to make a meaningful phrase, and then participants go on in the same way in turn. In so doing, participants are not allowed to tell other participants what words or phrases they
are thinking of when and after they write their own hiragana, although when a text is finished, participants discuss what they intended and how they interpret the text. Since this “silence rule” makes it impossible to communicate one’s intention to the others while creating the text, the result of this activity usually becomes a very unexpected one for the participants. For example, imagine that three people are participating in hiragana kookan. One participant writes wa, and then a second participant adds ta. At this point, a meaningful word wata ‘cotton’ emerges. The third person may adopt this interpretation and continue a sentence, or try to think of some other word that begins with wata such as watari but only an actor’s name ‘Watari Tetsuya’ came up to his mind, so he wrote te after ri. The second person sees watarite, but he did not understand it at all. Situations like this often occur and participants sometimes have a tough time trying to continue a phrase. One interesting aspect of this game is that we experience how different words/phrases other people come up with given the same sequences of sounds.

The following example (3) is a part of a result of hiragana kookan played by three people. [13, p.7] A, B, and C represent the three participants; hyphen separates each hiragana’s sounds.

(3) すみずりおえふとふでをとってもちにくいをさがしくさよ。
Su-mi-o-su-ri-o-e- fu-to-fu-de-o- to-t-te
A B C A B C A B C
mo-chi-ri-ku-i-o-sa-wa-ga-shi-ku-sa-su-yo-(period)
A B C A B C A B C A B C

By its nature, hiragana kookan does not necessarily produce interpretable sentences. In this example, however, one possible reading may be; ‘Having finished making ink, I am picking up a large writing brush and sticking a stake noisily into a rice cake.’ Several other interpretations are possible. The phrase futo-fude ‘a large writing brush’ can be broken down into two phrases futo ‘unconsciously, absent-mindedly’ and fude ‘a writing brush’, and this changes the meaning of the sentence: ‘Having finished making ink, I am picking up a writing brush absent-mindedly, and sticking a stake noisily into a rice cake.’ This kind of ambiguity or the possibility of multiple parsing is an ordinary phenomenon even in daily use of language, so it may be uninteresting. The latter part of (3) gives us more implication. The part mochinikui can be interpreted as ‘hard to hold’ if it is not followed by -o (accusative marker). This interpretation is contextually natural because the first half of the text says that the person is picking up a writing brush. Thus, if we see only the first half of this text up to mochinikui, we will not ordinarily think of sticking a stake into a rice cake. The person who wrote -o destroyed this whole context, and it was intentional (the participants discussed what they did after finishing this text and the person who wrote -o confessed that he did it intentionally, while the other two were imagining that the phrase would continue like mochinikui-to tsuyakuwomou kanjiru ‘say/think/feel that it is not easy to hold’). This is a typical phenomenon that occurs in hiragana kookan: a participant can change the whole context or destroy the grammatical well-formedness, semantic consistency, or contextual naturalness totally by putting only one letter, and nobody can predict who will or will not do this until it actually happens.

(4) is another example, which was written by four people [13, p.5]. The sequence of hiraganas produced by the players is shown in (4 a); English gloss and rough translation is shown in (4 b).

(4) a. ゆくえのしれぬぼうふらは、きのりのしるし。
yu-ku-e-no-shi-re-nu- bo-u-fu-ra-wa-(comma)
A B C D A B C D A B C D A
ki-no-ro-no-shi-ru-shi-(period)
B C D A B C D

b. yukeno shirenu boofura-wa, kinori-no shirushi.
whereabouts-GEN unknown wriggler-TOP kinori-GEN sign
‘The wriggler whose whereabouts is unknown is the sign of kinori.’

The hardest part of this text is the phrase kinori-no shirushi. There is a word kinori in Japanese, but it is used negatively as in kinori-no shinai ‘don’t feel like doing/reluctant/halfhearted’.

An optional rule allows players to put a comma or a period instead of a hiragana letter. The original members of hiragana kookan (Taichi Uchiyama, Kazuko Shinohara, Shin-ichi Yamamoto) adopt the exceptional rule that one can write a hiragana followed by a comma or a period at one time but not a comma or a period followed by a hiragana [14, p.20].
Thus, three of the four participants, A, B, and D, expected the phrase *kinori-no shi* to continue as *kinori-no shinai*. Only C did not hit upon this phrase but he interpreted *kinori* as *ki* ‘tree’ plus *nori* ‘glue’, and imagined some kind of pitch-like substance on the surface of a tree. C thus added *ru* after *shi* to make a word *shiru* ‘liquid/ juice’. For C, this was a natural association given the word *boofura*, i.e., mosquito larvae, which grow in sewage. However, D could not make sense of *kinori-no shiru*, and in perplexity, she put an end to the phrase by adding *shi* to make *shirusi* ‘sign’ and a period, according to the rule they used (see footnote 3). The phrase in (4) was created in this way.

In *hiragana kookan*, accidents like this not only occur within a word, a phrase, a sentence or in a line, but also discourse may get disturbed due to such miscommunications. Participants try to “read” other people’s mind and try to make sense of the text. Nevertheless the outcome sometimes only becomes ill-formed or incomprehensible, or sometimes sense of the text. Nevertheless the outcome sometimes only becomes ill-formed or incomprehensible, or sometimes extraordinarily funny. The funniness of the texts produced by *hiragana kookan* is something a person cannot create intentionally; it is a very strange strangeness. It may be because this system is designed to prohibit each person from controlling even one word at his/her own will, and to incorporate “other minds” even in determining the boundary of one word.

### 3.2. Implication of hiragana kookan to collaborative art

As we have seen in section 2, traditional language games are fundamentally governed by linguistic principles and intuitively easy to understand. *Hiragana kookan* is not an exception in that it relies on players’ linguistic intuition. The unit exchanged in this game is hiragana, which represents a mora in Japanese. In this way, it relies on players’ ability to control moras. However, *hiragana kookan* is a novel language game in that it exchanges elements that basically do not have meanings in themselves. Moras are bigger units than phonemes, but they are not meaningful. Putting one hiragana cannot totally control the meaning of the text, even a word or a phrase, nor can it totally control the grammatical structure of a sentence. This imposes a strong restriction on the players’ control over the text they are producing, and this restriction of control can induce unexpected results that go beyond a person’s imagination or association, or of course a person’s intentional deviation from grammaticality as a rhetorical technique. Grammatical well-formedness is often destroyed or shaken in a curious way, and in this sense too, *hiragana kookan* is different from traditional language games.

Uchiyama designed an exchange system like this first as a way of experimental musical composition, where each one of two persons writes only one note on a music sheet in turn. He noticed that this method produced very strange music that a single person could not imagine by him/herself. He saw what happened when “other minds” came to interplay in a process of creation. Then he extended this idea to writing, and Shinohara employed it as a system of experimental poetry [15, p.32–34].

Collaborative poetry writing like *renga* has a long history in Japanese literature, but in *hiragana kookan*, the unit is made as small as possible (there are smaller linguistic units such as phonemes, but hiragana seems to be the smallest possible unit that can be used without much stress, since ordinary speakers of Japanese will have difficulty in thinking of and writing phonemes or alphabets). By making the unit small enough, it becomes easy for “other minds” to be incorporated and thus more unexpectedness can be induced. The unexpectedness induced by this game includes breakdown of grammatical well-formedness: sometimes participants cannot rescue the text from collapsing grammatically. Even in such cases, grammatical rips in the text can be fun and enjoyable because they are often unexpectedly strange.

Another interesting effect of *hiragana kookan* in poetry writing is that author’s identity is shaken in this language game. In *renga*, the authors are well aware which part of the poetry they wrote and with what intention or feeling. On the other hand, in *hiragana kookan*, we cannot identify who wrote which word or phrase, since players collaboratively write even one word. Even when an uninteresting, poor text is produced, it cannot be attributed to a single person. Actually, participants in *hiragana kookan* tend not to feel that the text they wrote are their original text. They feel as if some other person(s) wrote it. This is a curious experience especially for those who are obsessed by the idea of self-identity.

### 4. Concluding remarks

Linguistic principles govern conventional as well as innovative language games. At the same time, speakers can consciously challenge part of linguistic systems and rules by designing a

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*Some hiraganas have more grammatical information than others: since *-o* (お) is an accusative marker, it has more grammatical information than most other hiraganas. Particles like *-ha*, *-he*, *-ni*, *-ga*, and others can also convey grammatical information if put in a proper place.*
novel language game. Designing language games—or studying designs of language games—may tell us a lot about the nature of our creativity.

Appendix : Sample texts of hiragana kookan.
1. A poetry line produced by four poets
(February 6, 1988, by Manabu Okayasu, Seiko Naradate, Naoko Shinozawa, Ben Kurao.)
ΘΕ͔͔͋ͷΈΛɺ͋ͭΊ΅͏΅͏͘Δͻͷ͜Έ͍ͨͭͤΜ͕ɺ
΍Έ͍Δ΋͏΋͘Λ͍͠Β͵ɻ
2. A passage produced by two players
(January 8, 1989, by Kazuko Shinohara and Shin-ichi Yamamoto)
ͲΕΈ;͊ͦʔͦ;͊ΈΕͲ͠Β͠Βͳ͍Αɺ͘Β΂ͯΈͨΒɺ
ͷͬΆͷ͓͡͞Μ͕ʹͬ͜ͱΘΒͬͯͽ͑ΖͷΑ͏ͳ͔͓Λͩɻ͵Μ΅͏ͱ͍͠΅͏ͱɺ͍·͝΅͏ͱ΁ͪ΅͏͕ɺ͜΍ͷͳ͔Ͱ͍ͬ͠ΐʹ͏ͲΜΛͨ΂ͳ͕Β͍ͤ͹ͭʹͰ͔͚Α͏ַ͏ͩΜ͍ͯͨ͠ɻ͖ͼͩΜ͝΋ͻͱͭͣͭ͘ͼʹͿΒ͛͞ɺ͔͍͋·͔͚͑Λ͚ͭͯɺ͓͋͠ͱ͔Δ͘ͲΒΛͳΒ͠ɺͲ͏ͿͭͨΛ͔ͲΘ͔͠ɺ͓·͍Γ΋͢·ͤͯ͋͞͠Ύͬͺͭʂ͛Μ͡΅ͨΔ͕͍ͬͽ͖͔ͨ͢͠ͻƠΛͻͬͺΔͱɺ͘Β͍ΑͧΒ΋ͺͬͱ͔͋Δ͘ͳͬͨɻ͋·ͷ͡Ό͘ͳ͙Μ͡Μ͕ɺͦΕΛΈ͍ͯΘΔΛ͠Α͏ͱͨ�ΒΈɺ·͑͹ΛΉ͖͓ͩͯ͠Λͬͳ͍ɺΜ΋ͻ·Λ΋ͯ͋·͠ɺ Ouͭɷͷɼɺ͍͔ͤ͡ɋ͍ͯ͠Δ͜ͱͩΖ͏ɻͳΈͩͳ͕Βʹ͏͗͞ͷͩΜ͢Λ͓Ͳ͍ͬͯ·͢ɺͱɺͷɻͭɻ͵ͬ͢ͱͷ͠ΒΛ͖Δͨ͢ʹɺ͖͋Ε͸͔ͯͣ͠ʹͨͪ͹Λ·͛ΔͷΛɺͭͨͷ͔Β·ΔͪΌ΃ΔͰ͚Μ͕͍ͯ͘͠Δ͏͗͞͞Μ΋ɺΕ͍͗ͨ

