

Does Comprehension Time Constraint Affect Poetic Appreciation of Metaphors?

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Introduction

Metaphors, such as “My love is a red rose”, are literary devices used to say something about a concept (i.e., the “topic”) figuratively in terms of a different concept (i.e., the “vehicle”). Although how metaphors are comprehended or understood has been examined by the enormous number of cognitive or psychological studies (e.g., Bowdle & Gentner, 2005; Gibbs, 2008; Glucksberg, 2003; Lakoff & Johnson, 1980), there have been relatively few attempts to examine the mechanism of metaphor appreciation. Metaphor appreciation refers to some aesthetic judgment, especially on poetic character of metaphors. Exploring the mechanism of poetic appreciation of metaphor is an important topic of research on literary texts in general and metaphors in particular, because the primary function of metaphor is to evoke poetic or aesthetic effects to the addressee’s mind, as well as to communicate what literal language cannot precisely convey. Recent arguments for “language as sexual ornament” hypothesis (e.g., Miller, 2000) on the origin of language seem to suggest that the importance of poetic or aesthetic function may be also the case with language in general. (Think of a birthday cake that makes your son, daughter or wife happy. Such cake must have not only a good sweet taste, but also beautiful decorations!)

One intriguing question that arises here is whether (and how) metaphor comprehension affects metaphor appreciation. Early studies (e.g., Gerrig & Healy, 1983; Gerrig, 1989; McCabe, 1983) reported negative findings against the relationship between metaphor comprehension and appreciation. For example, Gerrig and Healy (1983) demonstrated that ratings of metaphor quality (i.e., the goodness of metaphors) had no reliable effect on reading times of the metaphors. McCabe (1983) showed that metaphor quality was not correlated with either ratings of topic-vehicle similarity or ratings of comprehensibility when metaphors were presented in an extended natural context. On the other hand, recent studies (e.g., Utsumi, 2005, 2006; Taira, Kusumi, & Utsumi, 2012) have demonstrated the strong relationship between metaphor comprehension and appreciation. For example, Utsumi (2005) found that metaphor poeticality was correlated with the richness of interpretation (i.e., interpretive diversity). He also suggested that the relationship of comprehension and appreciation may differ between comprehensible and less comprehensible metaphors.

In this paper, we address this question and examine whether metaphor comprehension affects metaphor appreciation by imposing a constraint on the comprehension time of metaphors.

Two Types of Comprehension

Gerrig (1989) argued that metaphor comprehension can be divided into two types according to the total time constraint. The first type of comprehension is *time-limited comprehension*, which is governed by the total time constraint. This type corresponds to the situation where people

understand metaphors in everyday conversation, in the theater, or other time-limited circumstances. The second type is *leisurely comprehension* and freed from the total time constraint. This type corresponds to the situation where metaphors (especially poetic metaphors) are enjoyed at leisure.

Gerrig (1989) also suggested that different theories or models may be required for the two types of comprehension, implying that the two types may be governed by different processes. It naturally follows that, if metaphor comprehension affects metaphor appreciation, the same metaphors would be appreciated differently depending on whether they are experienced in a time-limited circumstance or enjoyed at leisure. On the other hand, if metaphor comprehension and appreciation are independent processes, metaphors would be appreciated in the same fashion regardless of comprehension type.

Hypothesis

In this paper, we compare the poetic quality of metaphor appreciation between the two types of comprehension. On the basis of the empirical findings obtained by our recent studies (Utsumi, 2005, 2006; Taira et al., 2012), we argue that metaphor comprehension affects metaphor appreciation, and consequently the same metaphors are appreciated differently between the two types of comprehension.

Specifically, we predict that *poetic appreciation is facilitated when metaphors are comprehended at leisure, and thus the degree of metaphor poeticality perceived is higher in leisurely comprehension than in time-limited comprehension*. The rationale behind this prediction is that metaphor appreciation is governed by the process of incongruity resolution (Utsumi, 2005, 2006). According to the incongruity resolution theory, poetic effects are evoked when an incongruity is perceived in a figurative expression and it is resolved by reinterpretation. Therefore, when people enjoy poetic metaphors at leisure, they are more aware of the incongruity involved in these metaphors, and thus arrive at a richer interpretation to receive a reasonable payoff for the efforts. As a result, people who enjoy metaphors at leisure appreciate them more than those who comprehend metaphors under the total time constraint.

Method

Participants

Ninety-four undergraduate students of the University of Electro-Communications participated in the experiment as volunteers. All participants were native speakers of Japanese.

Materials

Forty Japanese nominal metaphors of the form “An X is a Y,” which were used in our previous experimental study (Utsumi, 2005), were used for this experiment. These metaphors were divided into 10 groups, and four metaphors in each group were constructed from all possible pairings of two topic words with two vehicle words. For example, from the two topics “life” (“jinsei” in Japanese) and “lover” (“ai” in Japanese), and the two vehicles “journey” (“tabi” in Japanese) and “game” (“ge-mu” in Japanese), the following four metaphors were created: “Life is a journey” (“Jinsei wa tabi da”), “Life is a game” (“Jinsei wa ge-mu da”), “Love is a journey” (“Ai wa tabi da”), “Love is a game” (“Ai wa ge-mu da”). Table 1 provides a list of 10 groups of topic-vehicle pairs from which 40 metaphors were constructed.

Table 1: Topic-vehicle pairs from which metaphors for the experiment were constructed

Group	Topic	Vehicle
1	life (jinsei), love (ai)	journey (tabi), game (ge-mu)
2	anger (ikari), sleep (nemuri)	sea (umi), storm (arashi)
3	perfume (ko-sui), star (hoshi)	bouquet (hanataba), ice (koori)
4	sky (sora), eye (me)	mirror (kagami), lake (mizuumi)
5	lover (koibito), hope (kibou)	sun (taiyo), rainbow (niji)
6	child (kodomo), words (kotoba)	jewelry (houseki), water (mizu)
7	the aged (roujin), voice (koe)	deadwood (kareki), doll (ningyou)
8	character (seikaku), marriage (kekkon)	fire (hi), stone (ishi)
9	death (shi), anxiety (fuan)	night (yoru), fog (kiri)
10	time (jikan), memory (omoide)	money (okane), arrow (ya)

Note. The original Japanese expressions used in the experiment are shown in parentheses, preceded by their literal English translations.

Procedure

A between-participants design was used with each participant rating metaphors in only one of the two conditions, i.e., a time-limited comprehension condition and a leisurely comprehension condition.

In the time-limited comprehension condition, 38 participants were assigned two metaphors that shared neither vehicles nor topics (e.g., “Anger is the sea” and “Sleep is a storm”) from each of the 10 groups; therefore, each participant was assigned 20 metaphors from the total of 40. Metaphors of each group were counterbalanced across participants such that they were rated by 19 participants. The presentation order of metaphors was randomized for each participant. Participants in this condition were asked to understand each metaphor as quickly as possible and rate the poeticality of the metaphor on a 7-point scale ranging from 1 (*nonpoetic or nonliterary*) to 7 (*poetic or literary*). In addition, they were asked to rate the comprehensibility of the metaphor on a 7-point scale ranging from 1 (*not at all comprehensible*) to 7 (*extremely comprehensible*).

In the leisurely comprehension condition, 56 participants were assigned five metaphors. Metaphors were counterbalanced across participants such that they were rated by seven participants. The presentation order of metaphors was randomized for each participant. Participants in this condition were asked to understand each metaphor at leisure and write down at least five meanings of the metaphor. Afterwards, they were asked to rate the poeticality and comprehensibility of the metaphor on the same 7-point scales as in the time-limited comprehension condition.

Result and Discussion

For each metaphor and condition, the poeticality and comprehensibility ratings were averaged across participants. The mean comprehensibility rating across 40 metaphors was 3.76 (SD=1.23) in the time-limited comprehension condition and 4.14 (SD=1.16) in the leisurely comprehension condition. A paired t-test revealed that metaphors were significantly easier to understand in the leisurely comprehension condition than in the time-limited comprehension condition, $t(39) = 3.52$, $p < .01$. This result indicates that this experiment was successful in manipulating the participants’ mode of comprehension; in the leisurely comprehension condition, they indeed took much time to understand metaphors, and as a result they found the same metaphors easier to understand

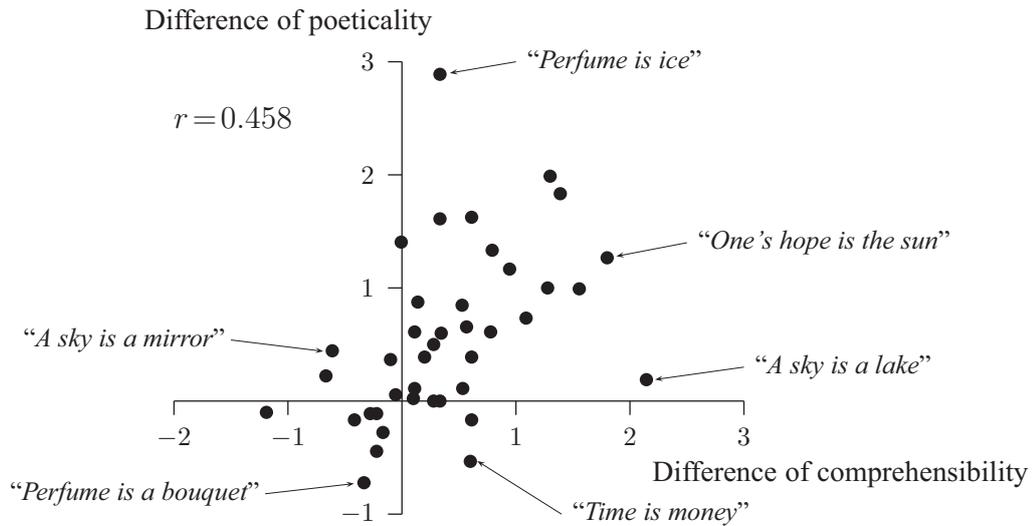


Figure 1: A scatterplot of comprehensibility difference and poeticity difference

as compared to the time-limited comprehension condition.

The mean poeticity rating across 40 metaphors was 4.05 (SD=0.69) in the time-limited comprehension condition and 4.60 (SD=0.70) in the leisurely comprehension condition. A paired t-test revealed that metaphors were perceived as significantly more poetic in the leisurely comprehension condition than in the time-limited comprehension condition, $t(39) = 4.57, p < .0001$. This finding is consistent with the prediction, suggesting that poetic appreciation of metaphors is affected by the process of metaphor comprehension and the incongruity resolution theory provides one possible explanation for the relation between metaphor comprehension and appreciation.

To further confirm whether an increase in comprehensibility of an individual metaphor contributes to the increase in poeticity of that metaphor, we also analysed a correlation between comprehensibility change and poeticity change. Figure 1 shows a scatterplot of comprehensibility difference and poeticity difference for all the 40 metaphors. These difference values were calculated by substituting the mean rating in the time-limited comprehension condition from that in the leisurely comprehension condition. For example, in the case of the metaphor “One’s hope is the sun,” its mean comprehensibility and poeticity rating increased by 1.80 and 1.27 when it was understood at leisure, as compared to the time-limited comprehension condition.

As Figure 1 shows, poeticity difference was positively correlated with comprehensibility difference. Although there are some exceptions (e.g., “A sky is a mirror,” “Time is money”), metaphors whose comprehensibility increased in the leisurely comprehension condition were perceived as more poetic, and metaphors whose comprehensibility decreased were rated as less poetic. A correlation coefficient between two differences was $r = .458$ and statistically significant ($p < .01$). This result obviously indicates that metaphors are appreciated more poetically if they are easier to comprehend and provides empirical evidence for the view that metaphor comprehension affects metaphor appreciation.

Concluding Remarks

In this paper, we have demonstrated that comprehension time constraint affected poetic appreciation of metaphors; metaphors were appreciated more poetically when they were comprehended at leisure than when comprehended in a time-limited circumstance. This finding implies that meta-

phor appreciation is affected by the comprehension process and it is consistent with the incongruity resolution view of poetic appreciation (Utsumi, 2005, 2006). Future work includes exploring the cognitive processes of two types of comprehension and developing a unified theory of poetic appreciation of several figurative languages and aesthetic judgment in general (e.g., Leder, Belke, Oeberst, & Augustin, 2004).

Acknowledgments

This study was supported by a Grant-in-Aid for Scientific Research C (No.20500234) and B (No.23300098) from the Japan Society for the Promotion of Science.

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