

Distinctive Features Influence Perceived Metaphor Aptness and Preference for Metaphor Use

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The present study investigated whether distinctive features influence speakers' evaluations of metaphor aptness and their preference for metaphor use. We examined three types of topic-attributed features: (i) distinctive features of the target metaphor, (ii) distinctive features of the competitive metaphor (unique features of a metaphor that has the same topic as the target metaphor but a different vehicle), and (iii) common features (features that are shared by both the target and competitive metaphors). Both metaphor aptness (Experiment 1: $N = 90$) and preference (Experiment 2: $N = 132$) were more pronounced when the distinctive features of the target metaphor rather than those of the competitive metaphor and common features were attributed to the topic. These results suggest that distinctive features determine the use of a specific metaphorical expression. These findings have implications for metaphor production and use because they can be used to identify the most apt vehicle.

Keywords: metaphor; aptness; preference; distinctive features

In our daily lives, we use metaphorical expressions to describe different things. For example, if we see a woman who has a bright and pleasant smile, we may use the metaphorical expression, "*Her smile is a flower*" or "*Her smile is a sun*," to describe the topic. In this situation, both the flower and sun represent the features (i.e., pleasant, bright) that are attributed to the topic (i.e., her smile). In contrast, if we see a woman who has a gorgeous and blooming smile, we can use only the following metaphor: "*Her smile is a flower*."

The preceding discussion raises the following question: what are the properties of the topic-attributed features that determine which expression (or both expressions) should be used? Past studies have shown that the types of features that are attributed to the topic influence the aptness (i.e., the extent to which a vehicle captures the salient features that are attributed to the topic) of a given vehicle (Glucksberg & Haught, 2006;

Haught, 2013). However, the kinds of features that enhance the aptness of a metaphor require further delineation. In addition, it is also unclear whether the types of features that are attributed to a topic influence the selection of a metaphor vehicle.

The aim of the present study was to examine whether the distinctive features of a metaphor influences speakers' evaluations of metaphor aptness and their preference for metaphor use. Distinctive features refer to the features that can be derived from only a certain vehicle (e.g., a flower). For example, "gorgeous" and "blooming" are the distinctive features of a flower because there are only a few other vehicles that can simultaneously capture both these features. We predicted that distinctive features will enhance speakers' evaluations of metaphor aptness and their preference for metaphor use because distinctive features have numerous salient features that correspond to the candidate vehicle that is to be used in a metaphorical expression (Giora, 1997).

Vehicle Selection in Metaphor Use

When we use metaphors to describe an object or action (e.g., Her smile is gorgeous and blooming), we have to choose a vehicle (i.e., a flower) that typifies the topic (i.e., her smile) as well as the topic-attributed features (i.e., gorgeous, bloomed). The property attribution model (Glucksberg, McGlone, & Manfredi, 1997) is one of the most prominent models that are used to explain how we process metaphorical expressions. It suggests that metaphorical expressions are processed as statements that describe categories. Specifically, the topic of a metaphorical expression is a member of an abstract superordinate category that is exemplified by a vehicle. According to this model, a vehicle "functions as an attributive category in that it provides properties that may be attributed to the topic" (Glucksberg et al., 1997, p. 52). The validity of this model in explaining metaphor comprehension has been supported by many experimental findings (George & Wiley, 2016, 2018; Gernsbacher, Keysar, Robertson,

& Werner, 2001; Glucksberg et al., 1997). However, a majority of past studies have tested the validity of the property attribution model as a framework within which metaphor comprehension rather than metaphor production and use can be situated and examined.

The findings of a few recent studies (Beaty & Silvia, 2013; Chiappe & Chiappe, 2007; Pierce & Chiappe, 2009; Silvia & Beaty, 2012; Utsumi & Sakamoto, 2015) have suggested that the property attribution model is applicable to metaphor production. With regard to metaphor production and use, an apt vehicle that typifies the to-be-attributed features of a topic is chosen. For example, when we want to describe a certain topic (e.g., her smile) and the attributed feature (e.g., gorgeous) using a metaphorical expression, we must identify an apt vehicle (e.g., a flower, a chandelier). Glucksberg and Keysar (1990) have contended that an apt vehicle must not only possess the appropriate features that are attributable to the topic but also be a prototypical exemplar of the respective property. For example, the sentence, “*Cigarettes are a time bomb*,” suggests that (the use of) cigarettes can result in illness and death at an unpredictable time in the future. In contrast, although “stroke” shares some of the core features of a “time bomb” (i.e., both can kill someone), the expression, “*Cigarettes are a stroke*,” is absurd because “stroke” is not a prototypical exemplar of the respective property (i.e., death at an unpredictable time in the future). As such, metaphor production and use necessitate the identification of the most apt vehicle that typifies the topic-attributed properties.

The property attribution model suggests that the type of features that are attributed to the topic determines which vehicle must be used. In their studies, Glucksberg and Haught (2006) and Haught (2013) asked their participants to evaluate the aptness of a given metaphor. These metaphors included four types of adjectival

modifiers: topic-applicable adjectival modifiers (e.g., “*My lawyer was a well-paid shark*”), vehicle-applicable adjectival modifiers (“*My lawyer was a razor-toothed shark*”), adjectival modifiers that were applicable to both the topic and vehicle (“*My lawyer was an old shark*”), and no adjectival modifier (“*My lawyer was a shark*”). The results showed that the adjectival modifiers that were applicable to both the topic and vehicle received higher aptness ratings than topic-applicable and vehicle-applicable adjectival modifiers. These results suggest that the kind of feature that is attributed to the topic or vehicle influences the perceived aptness of a metaphor.

Distinctive and Common Features in Metaphor Use

In the present study, we aimed to examine whether the type of topic-attributed features influences speakers’ evaluations of metaphor aptness and their preference for metaphor use. Specifically, we compared two types of topic-attributed features: distinctive features that are unique to a specific vehicle and common features that are shared by multiple vehicles. For example, “blooming” and “gorgeous” are the distinctive features of “a flower” because few other vehicles entail these features. On the other hand, “bright” and “pleasant” are the common features of “a flower” because, even though “a flower” has these features, other vehicles also have these features (e.g., the sun, light, a baby).

In the present study, we hypothesized that speakers’ evaluations of metaphor aptness and their preference for metaphor use will be more pronounced when distinctive features rather than common features are attributed to the topic. According to the property attribution model (Glucksberg et al., 1997), metaphor aptness is contingent on the extent to which the vehicle describes the topic and captures the topic-attributed features (Chiappe & Kennedy, 1999). Additionally, the number of features that is attributed to the topic also influences speakers’ evaluations of metaphor aptness.

Specifically, vehicles that entail a higher number of features will be perceived to be more apt. However, the qualitative aspects of these features that influence metaphor aptness remain unexplored.

In the present study, we focused on the type of topic-attributed features. Specifically, we focused on the difference in feature salience (Giora, 1997) between distinctive and common features. Feature salience refers to the availability of multiple meanings that can be ascribed to a word (or phrase). Distinctive features entail a higher number of salient features that correspond to the candidate vehicle that is employed in metaphor use. For example, “blooming” and “gorgeous” are features that cannot be described using any other vehicle except “a flower.” Thus, “a flower” is a salient candidate vehicle that can be used in the following expression: *Her smile is blooming and gorgeous*. On the other hand, common features have fewer salient features that correspond to the candidate vehicle that is employed in metaphor use. For example, “bright” and “pleasant” are features that are captured by numerous candidate vehicles. However, none of these candidate vehicles (i.e., including “a flower”) can serve as a salient candidate vehicle in the following expression: “Her smile is bright and pleasant.”

The Present Study

We sought to examine whether distinctive features influence speakers’ evaluations of metaphor aptness and their preference for metaphor use. We hypothesized that, when compared to common features, distinctive features will result in higher metaphor aptness ratings and a greater preference for metaphor use.

In Experiment 1, we examined whether the type of topic-attributed features influences speakers’ evaluations of metaphor aptness. In this experiment, the participants were required to read a short sentence that described a topic (e.g., *Her smile is gorgeous and blooming*). The participants were required to evaluate the aptness of a

given metaphor (e.g., “*Her smile is a flower*”) as a paraphrase of the respective sentence. In this experiment, we designed three conditions (i.e., the distinctive features of the target and competitive metaphor, and common features). In the condition in which the distinctive features of a target metaphor were used, the participants were presented with the interpretations that were generated from only one metaphor (e.g., “*Her smile is a flower*”) rather than from another metaphor that shares the same topic (e.g., “*Her smile is the sun*”). On the other hand, in the condition in which the distinctive features of a competitive metaphor were used, the participants were presented with the interpretations that were generated from other metaphors (e.g., “*Her smile is the sun*”) rather than from only one metaphor (e.g., “*Her smile is a flower*”). In the condition in which common features were used, the participants were presented with the interpretations that were generated from both the metaphors. If the distinctive features of the target metaphor amplify its salience for metaphor use, then the participants’ evaluations of metaphor aptness should be higher in the condition in which the distinctive features of a target metaphor are used than in the conditions in which the distinctive features of a competitive metaphor and common features are used.

In Experiment 2, we examined whether the type of topic-attributed features influences speakers’ preference for metaphor use. In this experiment, the participants were required to choose the best paraphrase of a given sentence out of a set of four options (e.g., *Her smile is gorgeous and blooming*). There were two critical options: a target metaphor (i.e., “*Her smile is a flower*”) and a competitive metaphor (i.e., “*Her smile is a sun*”). We controlled the topic-attributed features that were used (i.e., gorgeous and blooming) and compared the proportions of target metaphor responses between the conditions. If the distinctive features of a target metaphor render it more preferable for metaphor use, then the participants’ preference for the target metaphor

must be higher in this condition than in the conditions in which the distinctive features of the competitive metaphor and common features were used.

Experiment 1

Method

Participants

We recruited 132 participants (73 males and 59 females) who were between the ages of 20 and 64 years ($M = 38.9$, $SD = 9.0$) using Crowdworks, which is a crowdsourcing service in Japan. All the participants were recruited anonymously, and each participant was compensated with 50 yen. In this experiment, the sample criteria were defined to include only those who were of Japanese origin.

Design

Experiment 1 adopted a 3 (type of topic-attributed features: distinctive features of the target metaphor, distinctive features of the competitive metaphor, and common features) $\times$ 6 (list: lists A, B, C, D, E, and F) experimental design. The type of topic-attributed features served as a within-participants and -items variable; on the other hand, the lists served as a between-participants variable.

Stimuli

We used two types of stimuli: metaphors and the features that were attributed to the topic. Table 1 presents a few examples of the stimuli that were used in Experiment 1.

To gather the stimuli (i.e., metaphors) that were to be used in the experiment, we identified 48 Japanese metaphors that have been anthologized by past researchers (Nakamoto & Kusumi, 2004; Nakamura, 1995; Utsumi, 2005). All the metaphors were

presented in the following format: “*NOUN is a NOUN*” (Japanese: “*NOUN ha NOUN da*”). A majority of these metaphors have been used in past studies on metaphor (or simile) comprehension among Japanese participants (Kusumi, 1995; Nakamoto, 2003).

The 48 metaphors that were used in this experiment consisted of 24 pairs of vehicles (e.g., “*Her smile is a flower*” and “*Her smile is a sun*”); one metaphor served as the target metaphor, whereas the other served as the competitive metaphor. All the target and competitive metaphor pairs were supposed to yield three types of interpretations. The first type was the distinctive features of a target metaphor that were unique interpretations of the target metaphor. For example, “*Her smile is a flower*” (target metaphor) and “*Her smile is the sun*” (competitive metaphor) were a pair of metaphors (i.e., gorgeous, blooming) that entailed the distinctive features of the target metaphor. The second type was the distinctive features of a competitive metaphor that were unique interpretations of the competitive metaphor. For example, “shining” and “hot” were supposed to be the distinctive features of the competitive metaphor. The third type was common interpretations that were shared by both pairs of metaphors. For example, “bright” and “pleasant” were features that were shared by both the following metaphors: “*Her smile is a flower*” and “*Her smile is the sun.*”

To identify the three types of features that are attributable to the topic, we conducted a pilot study in which 194 participants (101 males and 93 females) who were between the ages of 20 and 71 years ($M = 38.9$, $SD = 8.7$) were asked to generate a maximum of three verbs or adjectives for each metaphor. In this study, we used similes (i.e., “*NOUN is like a NOUN*”; Japanese: “*NOUN ha NOUN no youda*”) rather than metaphors because it is sometimes difficult for participants to generate interpretations of metaphors. Half of the participants generated interpretations of the target metaphor and the other half of the participants generated interpretations of the competitive metaphor.

All these interpretations were grouped using the following steps: first, nonsense responses were excluded; second, responses that shared the same root form were grouped together; finally, any token that had only one response was excluded. Subsequently, the first and second authors selected two apt interpretations for each type of topic-attributed feature (distinctive features of the target metaphor, distinctive features of the competitive metaphor, and common features) from the set of grouped interpretations. These interpretations served as the topic-attributed features in this experiment. In sum, we used 48 metaphors and two features that were attributed to the topic for each type of topic-attributed feature and metaphor in the present experiment.

Procedure

We collected the data using the Qualtrics platform (Qualtrics, 2019). The participants could respond to this survey using a personal computer. As a first step, the participants read information about the present study and provided informed consent. Next, the participants read detailed task instructions, following which they were required to read a short sentence that described a topic (e.g., *Her smile is gorgeous and blooming*). This sentence was composed of a topic (i.e., her smile) and a few features (i.e., gorgeous, blooming). The participants were required to rate the aptness of the metaphor (e.g., “*Her smile is a flower*”) that was presented beneath the sentence. In this case, the aptness of the metaphor was defined as the extent to which the vehicle captured the salient feature of the topic. The participants were asked to indicate their perceived metaphor aptness on a 7-point scale (0 = “does not capture the salient properties of the topic”; 6 = “captures the salient properties of the topic extremely well”).

Results

Figure 1 shows the mean aptness ratings for the target metaphors that were used in each

condition. As predicted, the mean aptness rating was the highest for the target metaphor across all the three conditions. To further examine this emergent pattern, we used a mixed effects regression model that was executed using the lmer program of the lme4 package (Bates, Mächler, Bolker, & Walker, 2015) in the R (version 3.3.2) environment for statistical computing (R Development Core Team, 2016). We entered the type of topic-attributed feature as a fixed factor with the distinctive features of the target metaphor as the default level. In addition, we specified the random slope of the type of topic-attributed features and the intercepts for participants and items as the random factors. The comparisons between the distinctive features of the target metaphor and common features ($\beta = 0.42$, $SE = 0.12$, $t = 3.46$, $p < .01$), and the distinctive features of the target and competitive metaphors ($\beta = 1.79$, $SE = 0.14$, $t = 13.09$, $p < .001$) yielded significant results. In addition, we tested a model that was the same as the first model albeit with the exception that common features served as the default level. The comparison between common features and the distinctive features of the competitive metaphor ($\beta = 1.37$, $SE = 0.14$, $t = 9.48$, $p < .001$) yielded a significant result. These results supported the hypothesis that the distinctive features of the target metaphor (3.91) will evidence higher aptness ratings than common features (3.49) and the distinctive features of the competitive metaphor (2.12).

Discussion

The results of Experiment 1 showed that the main effect of the type of topic-attributed feature on speakers' evaluations of metaphor aptness was significant. This finding suggests that the aptness of a vehicle is enhanced by its distinctive features (i.e., features that are not shared by other vehicles). In addition, we found that there was a significant difference between common features and the distinctive features of the competitive metaphor in the aptness ratings that were provided for the target metaphor. This

suggests that metaphor aptness is influenced by shared features. Indeed, even though there was a difference in metaphor aptness between the distinctive features of the target metaphor and common features, the topics and topic-attributed features that were shared by the vehicle also influenced metaphor aptness.

In Experiment 2, we examined whether the type of topic-attributed features influences speakers' preference for metaphor use. If there is a positive correlation between speakers' evaluations of metaphor aptness and use, speakers' preferences for target metaphors should be in accordance with the following descending order: the distinctive features of the target metaphor, common features, and the distinctive features of the competitive metaphor.

Experiment 2

Method

Participants

We recruited 90 participants (61 males and 29 females) who were between the ages of 20 and 59 years ($M = 38.1$, $SD = 8.7$) using the same sampling procedure that was used in Experiment 1. Since the participants were recruited anonymously, some of the participants who had participated in Experiment 1 may have also participated in the present experiment.

Design

Experiment 2 used a 3 (type of topic-attributed features: distinctive features of the target metaphor, distinctive features of competitive metaphor, and common features) $\times$ 3 (list: lists A, B, and C) design. The type of topic-attributed features served as a within-participants and -items variable; on the other hand, the list was a between-participants

variable.

Stimuli

The stimuli that were used in the present experiment were identical to what was used in Experiment 1.

Procedure

We collected data using the Qualtrics platform (Qualtrics, 2019). The participants could respond to the survey using a personal computer. As a first step, the participants read information about the present study and provided informed consent. Second, the participants read detailed instructions about the study; subsequently, they were required to read a short sentence that described a topic (e.g., *Her smile is gorgeous and blooming*). This sentence was composed of a topic (i.e., “her smile”) and a few features (i.e., gorgeous and blooming). The participants were required to choose the best paraphrase of a given sentence from a set of four options: (i) target metaphor (e.g., “*Her smile is a flower*”), (ii) competitive metaphor (e.g., “*Her smile is a sun*”), (iii) nonsense metaphor 1 (e.g., “*Her smile is a dagger*”), and (iv) nonsense metaphor 2 (e.g., “*Her smile is a copper coin*”). The first author selected the nonsense metaphor options by identifying a vehicle that did not share any feature of the topic. The presentation order of the options and stimuli was randomized.

Results

We defined nonsense metaphors 1 and 2 as filler responses. Figure 2 shows the proportions of target metaphor, competitive metaphor, and filler responses that were recorded in each condition. As predicted, the proportion of target metaphor responses was the highest across the three conditions. To further examine this emergent pattern,

we used a mixed effects logistic regression model, which was executed using the lmer program of the lme4 package (Bates et al., 2015) in the R (version 3.3.2) environment for statistical computing (R Development Core Team, 2016). We entered the type of topic-attributed features as a fixed factor with the distinctive features of the target metaphor as the default level. In addition, we specified the intercepts for participants and items as the random factors. We first tested a model in which the responses were coded as one of the following: target or non-target metaphor responses (i.e., competitive metaphor and filler responses). The comparison between the distinctive features of the target metaphor and common features ($\beta = 2.16$, $SE = 0.14$, $z = 15.31$, $p < .001$), and the distinctive features of the target and competitive metaphors ($\beta = 5.13$, $SE = 0.22$, $z = 23.36$, $p < .001$) yielded significant results. In addition, we tested a model that was the same as the first model albeit with the exception that common features served as the default level. The comparison between common features and the distinctive features of the competitive metaphor ($\beta = 2.97$, $SE = 0.20$, $z = 15.20$, $p < .001$) yielded significant results. These results support the hypothesis that a higher proportions of target metaphor responses will be recorded in the target metaphor condition (.85) than in the condition in which common features (.47) and the distinctive features of the competitive metaphor (.07) are used.

Discussion

The results of Experiment 2 showed that the main effect of the type of topic-attributed features on speakers' preference for metaphor use was significant. This finding suggests that the participants preferred a vehicle that had distinctive features (i.e., features that are not shared by other vehicles). In addition, a comparison of the effects of common features and the distinctive features of the competitive metaphor on speakers' preference for metaphor use revealed that metaphor preference was influenced by

shared features. Even though there were differences in metaphor preference between the conditions in which the distinctive features of the target metaphor and common features were used (i.e., higher number of target metaphor responses), the topics and topic-attributed features that were shared by the vehicle also influenced metaphor preference.

Moreover, with regard to speakers' evaluations of metaphor aptness, an analogous pattern that had emerged in Experiment 1 was observed in Experiment 2. Specifically, metaphor aptness and the preference for features emerged in the following order: the distinctive features of the target metaphor, common features, and the distinctive features of the competitive metaphor. These results suggest that there is a positive correlation between speakers' evaluations of metaphor aptness and their preference for metaphor use.

General Discussion

In the present study, we examined whether distinctive features influence speakers' evaluations of metaphor aptness and their preference for metaphor use. The major finding of Experiment 1 is that the distinctive features of the target metaphor evidenced higher aptness ratings than common features and the distinctive features of the competitive metaphor. The results of Experiment 2 showed that the highest number of target metaphor responses was recorded in the condition in which the distinctive features of the target metaphor were used than in the conditions in which common features and the distinctive features of the competitive metaphor were used. These results suggest that distinctive features are the key determinants of metaphor use.

According to the property attribution model (Glucksberg et al., 1997), metaphor aptness is determined by the extent to which a vehicle captures the salient features that are attributed to the topic. In the present study, we examined the effect of the type of features that are attributed to the topic on speakers' evaluations of metaphor aptness

(Experiment 1). Past studies have distinguished between different types of topic-attributed features by adding adjectival modifiers to metaphorical expressions (Glucksberg & Haught, 2006; Haught, 2013). Consequently, they have shown that the modifiers that are applicable to both the topic and vehicle are perceived to be more apt than modifiers that are applicable to either the topic or vehicle. These results were important because they suggest that the metaphor aptness of a vehicle can be altered by modifying the topic-attributed features. In contradistinction to these findings, the present findings suggest that distinctive features also influence speakers' evaluations of metaphor aptness.

As articulated in the introductory section of this article, past studies have examined the processes that underlie metaphor production and use in accordance with the property attribution model (Beaty & Silvia, 2013; Chiappe & Chiappe, 2007; Pierce & Chiappe, 2009; Silvia & Beaty, 2012; Utsumi & Sakamoto, 2015). However, these studies did not use a metaphor to distinguish between the types of topic-attributed features that are required to describe a topic (Beaty & Silvia, 2013; Chiappe & Chiappe, 2007); in other words, these studies did not control the features that were attributed to the topic. In order to address this limitation, we controlled topic-attributed features in the present study, and showed that speakers' preference for target metaphor use is more pronounced when the topic entails the distinctive features of the target metaphor rather than common features (Experiment 2). These results suggest that, despite the aptness of both the distinctive features of the target metaphor and common features for a given topic, distinctive features tend to be perceived as more apt because they are the salient features of the target metaphor (Giora, 1997).

Our results have implications for models that pertain to metaphor production and use because they delineate how the most apt vehicle can be identified. In studies that

examine metaphor production and use, participants are required to find the most apt vehicle that typifies the topic and topic-attributed features. Our results suggest that target metaphors that entail distinctive features will be perceived to be more apt. Thus, if we wish to paraphrase a topic based on its topic-attributed features, we must identify the vehicle that has the corresponding distinctive features. For example, if we want to paraphrase the sentence, *Her smile is bright and blooming*, we must first identify the vehicle that has the corresponding topic-attributed features (i.e., bright and blooming). During this step, we must derive the N-most similar nouns from each topic-attributed feature (i.e., similar to the metaphor comprehension model; Kintsch, 2001). Subsequently, we must assign a weight to each vehicle in such a manner that distinctive features are assigned heavy weights. In other words, distinctive features can be identified by retrieving the interpretations of metaphors that entail the topic and the (N-most similar) candidate vehicle. Specifically, if a feature (e.g., blooming) is shared (i.e., has a high level of similarity) by only a certain vehicle (e.g., a flower), then the respective vehicle must be assigned a weight that is indicative of a high possibility of being an apt vehicle. Finally, based on the weighted average of the possibility that a vehicle will share a given feature, the most apt vehicle can be selected (e.g., “*Her smile is a flower*”). Future researchers can use this technique to test the models that pertain to metaphor production and use using simulation strategies.

In each experiment, the distinctive features were derived from only one of the two metaphors (e.g., “*Her smile is a flower*”; “*Her smile is a sun*”). In principle, distinctive features should be the only features that are retrieved from a certain metaphor. However, it is difficult to compare all the candidate vehicles that can typify the given topic and topic-attributed features. This is also true for common features. Specifically, across the two experiments, common features were identified based on

only the two metaphors that share the same topic. Nevertheless, we believe that the fundamental properties of these features were preserved even though these features were retrieved from only two metaphors. Future researchers must examine the distinctiveness and commonness of the topic-attributed features that were used in the present study by comparing a larger set of candidate vehicles.

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Table 1. Examples of Stimuli that were Used in Experiment 1

Topic	Target	Competitive	Distinctive	Common	Distinctive
	vehicle	vehicle	features of the target metaphor	features	features of the competitive metaphor
Her smile	Flower	Sun	Gorgeous and blooming	Bright and pleasant	Shining and hot
Her baby	Angel	Fawn	Innocent and pure	Cute and childlike	Hopping and frightened
His rage	Volcanic eruption	A crash of thunder	Hot and harsh	Intense and scary	Rolling and resounding

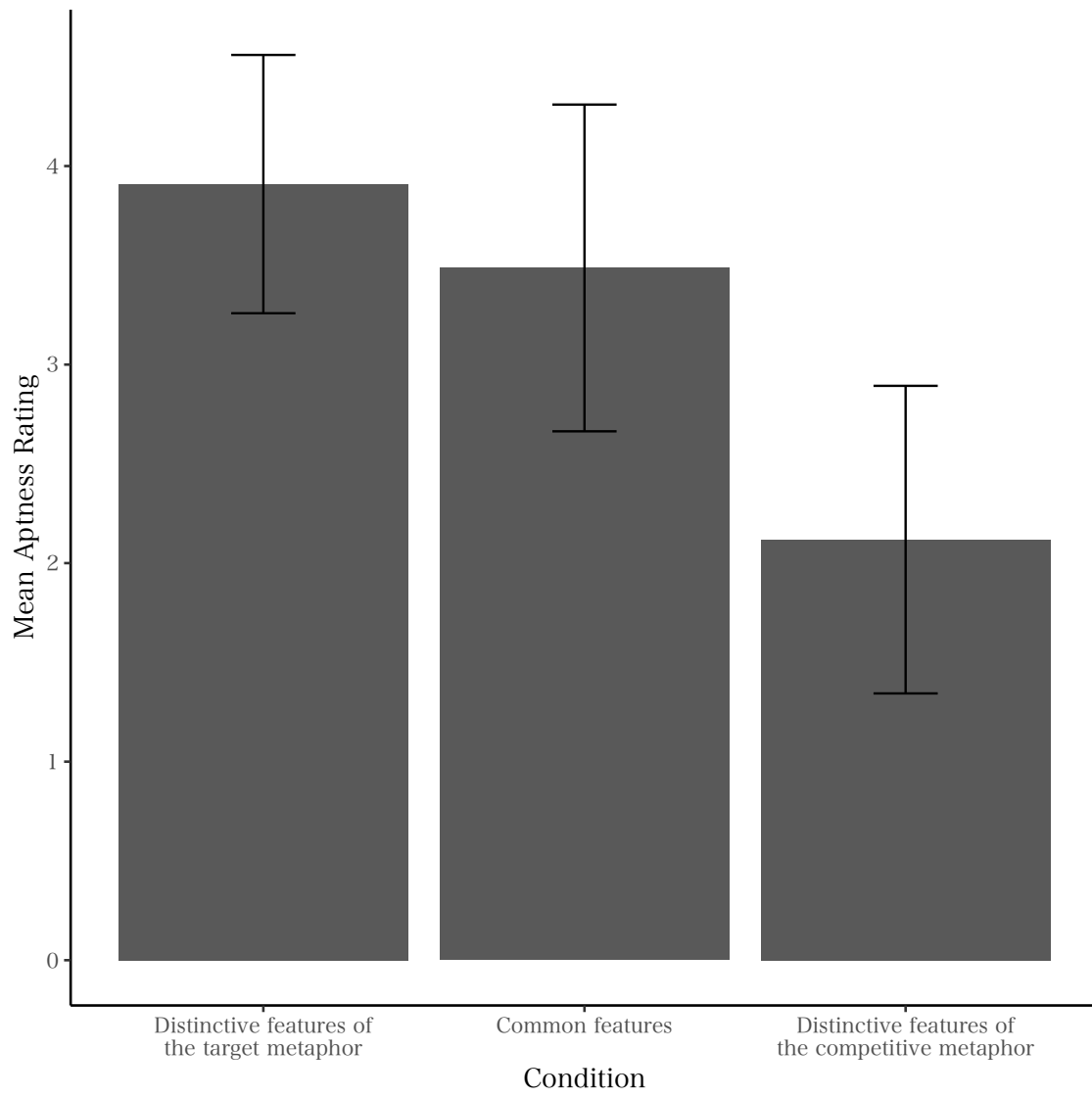


Figure 1. Mean aptness ratings for the target metaphor across the three conditions that differed in the type of shared significant features.

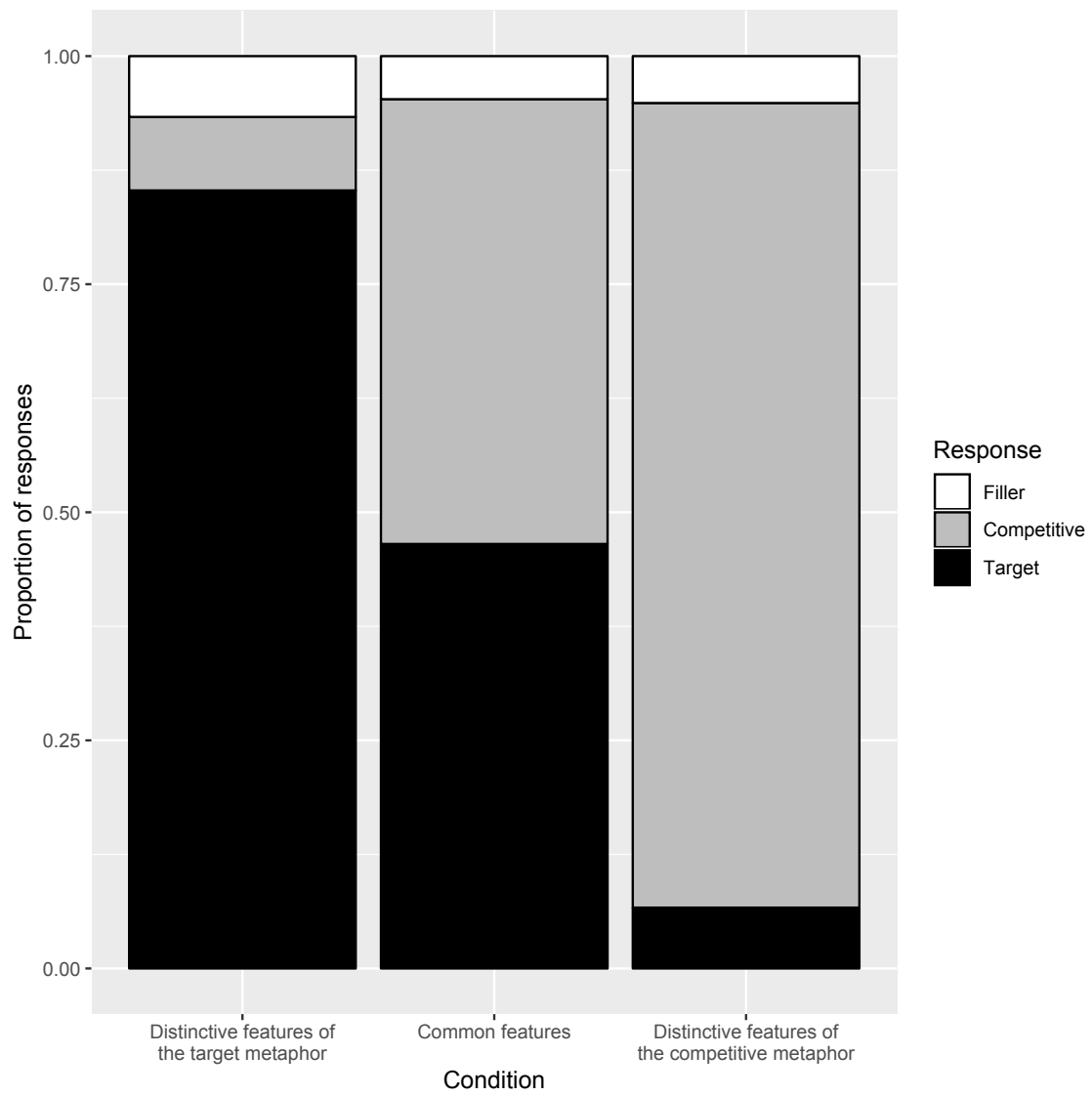


Figure 2. The proportions of target metaphor, competitive metaphor, and filler responses across the three conditions that differed in the type of shared significant features.