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Metaphors of *Felicidad*: Ratings of affective valence, imaginability and familiarity

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Abstract

The affective component of metaphor meaning is explored in this paper. Previous studies have extensively examined the role of metaphor conventionality (novel vs. conventional metaphors) in metaphor comprehension. However, less is known regarding whether metaphor familiarity relates to the affective component of metaphor. We address this issue in the case of happiness metaphors in Spanish. The objective of this paper is twofold. First, metaphorical expressions of happiness were identified and classified into conceptual metaphors using the *Corpus del Español*. Second, 60 participants rated 96 metaphorical expressions of happiness for valence intensity, familiarity, and imaginability. The rating results show that the three variables are highly correlated, such that more familiar and imaginable metaphors are associated with more extreme values of affective valence. However, subsequent regression analysis suggests that the effect of familiarity on valence may be mediated by imaginability. Results are discussed in light of embodied models of conceptual metaphor representation.

Keywords: happiness metaphors, Spanish, valence, imaginability, metaphor conventionality.

Introduction

Metaphors convey both cognitive and affective meaning. However, most theories of metaphor comprehension have primarily focused on the cognitive aspect, giving less attention to the affective dimension. Sopory (2005) offers an analysis of how the affective component of metaphor—understood either as an experiential gestalt or as a categorical attribute—can be integrated into major theories of metaphor comprehension. She defines “affect” as the positive or negative valence, that is, the perceived degree of positivity or negativity in emotional states.

A key assumption, consistent with embodied theories of cognition, is that even basic interactions with the world involve bodily responses that assign a valence—positive or negative—to those experiences. The embodied nature of the affective component of metaphor meaning has been supported by recent studies showing that metaphors produce greater emotional engagement in listeners and readers, in terms of brain activity (Citron & Goldberg, 2014; Forgács et al., 2012; see Citron et al., 2019) and physiological activity (Rojo et al., 2014). These findings reinforce earlier behavioral research indicating that people tend to use metaphors more frequently when describing their emotional experiences than when recounting the events themselves (Fainsilber & Ortony, 1987; Ortony & Fainsilber, 1987), as well as more recent work showing that metaphorical language in narratives can enhance empathy and theory of mind in readers (Horton, 2013). Despite the uncontroversial importance of the affective component of metaphorical

meaning, discussion of affect has been relatively absent from recent theories of metaphor comprehension (with notable exceptions; cf. Sopory, 2005).

Comprehension of Metaphorical and Literal Expressions: The role of *Salience*

Many psycholinguistic experiments have explored the longstanding question of whether metaphorical meaning is processed using mechanisms similar to those used for literal expressions (see Müller and Tag, 2010; Gibbs, 1998; Katz et al., 1988; Müller, 1998a, for overviews of this debate). These studies provide evidence that metaphorical expressions are processed differently from literal ones, but these differences seem to depend on the “salience” of both metaphorical and literal expressions, where salience is defined in terms of frequency, familiarity, conventionality, and prototypicality (see Giora, 1996). When a word or an expression has both metaphorical and literal interpretations, the more salient meaning—regardless of its figurative or literal status—is accessed more quickly.

Some studies have compared the access and processing of conventional versus novel metaphors. Traditionally, the focus of comparison has been comprehension. Consistently with Giora’s idea that the salience of the expression is the key factor to determine comprehension accuracy and speed, findings typically show that conventionalized metaphors are understood more accurately and more quickly than novel ones (e.g., Holyoak & Stamenković, 2018). A possible explanation for why familiar metaphors are easier to comprehend has been proposed by Bowdle and Gentner (1999), who suggested what is known as the “career of metaphor”: while novel metaphors may be processed by a comparison mechanism, conventional, “dead” metaphors may be processed categorically, as they undergo a lexicalization process.

Affective Component of Metaphor Meaning

Much has been said regarding the cognitive component of metaphors. But do metaphors elicit greater affective meaning than literal expressions? Some research has been done that shows that metaphors produce more arousal and engagement. In one study, Mon et al. (2021) showed that metaphors are more cognitively engaging than their literal counterparts. They evaluated engagement of a set of statements that included metaphorical expressions, their literal equivalents, and concrete descriptions (e.g., a firm grip on a doorknob). They found that participants perceived metaphors as conveying deeper or “richer” meaning, although not necessarily more factual content.

Some additional evidence comes from neurophysiological studies showing that sensorimotor areas of the brain become active when people interpret verbal metaphors. Metaphorical expressions trigger bodily representations. For instance, brain regions involved in sensory perception or motor activity are activated when individuals read phrases such as “she grasped the idea” or “that idea stinks” (Boulenger, Hauk, & Pulvermüller, 2009; Cacciari et al., 2011; Citron & Goldberg, 2014; Pomp et al., 2018). In addition, metaphorical expressions tend to activate richer and more nuanced semantic networks. For example, the phrase “sweet girl” can convey multiple connotations—such as kind, nice, pretty, or cute—unlike the more narrowly defined *kind girl* (Gibbs & Colston, 2012; Prandi, 2010). According to *Relevance Theory* (Wilson, 2013), such layered meanings are known as emergent properties: features of the metaphorical expression (such as *sweet*) that go beyond its literal sense (e.g., sugar, delicious) and tap into broader, more abstract associations such as kindness or pleasantness. Taken together, these findings suggest that metaphorical expressions play a special role in evoking affective responses compared to their literal counterparts.

In a more recent study, Citron et al. (2019) looked directly at the affective norming of metaphorical expressions in German, showing that figurative expressions play a special role in evoking affective responses compared to their literal counterparts. In this study, they provided a database of conceptual metaphors that includes ratings of affective measures such as emotional valence and arousal, in addition to psycholinguistic measures. They created stories and isolated sentences, half of which contained conceptual metaphors and the other half their literal counterparts. Participants rated the stimuli for emotional valence, arousal, imaginability, metaphoricity, familiarity, and understandability. They found that metaphorical stimuli were rated higher in emotional arousal and easier to imagine than their literal counterparts.

Together, the evidence reviewed above suggests that figurative language is engaging and evokes emotion to a greater extent. However, the role of novelty/conventionality in eliciting the affective component of metaphor has been less explored. This paper addresses this question focusing on metaphors of happiness in Spanish as a case of study.

Metaphors of Happiness

Metaphors for emotions have been described in a wide range of languages (see Kövecses, 2010, for a classic review). Although the same conceptual metaphor—that is, the same mapping between source and target domains—may be said to exist in many languages, the corresponding linguistic expressions of the metaphor may not be exactly the same (e.g., Reali & Lleras, 2017). For example, contrastive studies of anger metaphors in Spanish and English have shown cross-linguistic differences at the level of conceptual elaboration, linguistic conventionalization, and degree of linguistic exploitation (Soriano, 2003).

Some studies have investigated the relation between certain metaphor-elicited spatial schemas and valence, showing that affective valence is associated with spatial schemas in the case of emotion metaphors (e.g., Crawford et al., 2006; Richardson et al., 2003) and time metaphors (e.g., Margolies & Crawford, 2008; Soriano & Piata, 2022). For example, positive valence is typically associated with spatial representations of *up* locations or upward movements along a vertical axis, while negative valence is associated with spatial representations of *down* locations or downward movements. Given that metaphorical expressions can elicit schemas that are related to affective valence in such a straightforward way, it is important to understand the affective component of metaphors and its relationship with culture-specific use and conventionalization of metaphorical expressions. For instance, describing the body falling into a bounded space should be associated with a rather negative-valence emotion, while metaphorical expressions describing a fluid going up (such as the body being filled by emotion) might be associated with positive valence (Reali & Arciniegas, 2015).

Metaphors of Happiness across Cultures Happiness is a fundamental and universally sought-after emotion. However, a concrete definition of “happiness” will depend not only on our subjective experience of it, but also on cultural and social factors. One approach to understanding the concept of happiness is through the study of the metaphors used to think and talk about it. Some conceptual metaphors construe happiness as a tangible entity that can be “given” or manipulated (Kövecses, 2010; Lakoff & Johnson, 1980), as in the expression “happiness in hand”. Other conceptual metaphors construe happiness as a liquid that fills a container (the body)—as in “I am filled with joy”, or a physical space where the body stands – as in “I am finally in a happy place” (see Reali & Arciniegas, 2015 for analysis of these two emotion schemas in Spanish).

Spatial metaphors play a role in the conceptualization of happiness that is typically construed as ‘up’ in space – as in “I’m feeling uplifted this morning.”, a pattern than has been found cross-linguistically in various languages including English, Chinese, Laki, Anywaa, Tunisian Arabic, Oromo and Spanish (Chen, 2010; Hamdi, 2015; Kövecses, 2008; Ojhu & Yigezu, 2022; Seidi et al., 2021; Hailu et al., 2024). Other documented happiness metaphors include such as heat or fire (e.g., “fires of joy were kindled by the birth of her son”), a natural force (e.g., “I was overwhelmed by joy”), a social superior (e.g., “they live a life ruled by happiness”), and an opponent (e.g., “she was seized by joy”) (Kövecses, 2010). Seidi et al. (2021) noted that happiness can also be conceptualized in terms of animalistic behavior in English and Laki. In Anywaa, happiness is metaphorically linked to ‘tasty food’ and ‘white color’ (Ojhu & Yigezu, 2022).

In summary, the evidence shows that happiness can be metaphorically represented through various domains such as up, light, fire, white color, container, tasty food, or natural

force. Cross-linguistically, conceptual metaphors show a level of coinciding source domains, as well as significant variability in terms of linguistic metaphorical expressions. The goal of the research reported here is twofold. First, Study 1 is a corpus analysis aimed at identifying and describing metaphors of happiness in popular media in Spanish. Second, explore the affective valence elicited by the expressions, as well as their level of familiarity and imaginability. To this end, Study 2 is a behavioral study in which human participants rate some of the expressions found in Study 1 for familiarity, imaginability, and emotional valence.

Study 1: Corpus Analysis of Metaphors of Happiness in Spanish

Method

Corpus We used *The Corpus del Español NOW (News on the Web)*, which contains over 7 million words from web-based newspapers and magazines in different Spanish-speaking countries from 2012 to 2019, of which, we restricted the search to 2019.

Procedure A search was conducted through the NOW platform interface, using the keyword *felicidad* as the target token. This resulted in 23,302 hits, from which 600 sentences were randomly selected for manual analysis and metaphor identification. Each expression containing the word *felicidad* was carefully read and manually coded as “metaphorical” or “non-metaphorical.” For each linguistic expression coded as metaphorical, the corresponding conceptual metaphors were manually coded.

Metaphor identification We were interested in identifying metaphorical expressions having *felicidad* (happiness) as the target domain mapped onto different source domains. For the purposes of metaphor identification, we used the MIPVU method (Steen et al., 2010). That is, for each expression containing the target word *felicidad*, we derived the literal meaning of the statement in which it appeared. Then, the meaning of the statement was tested against the context. An individual expression was considered metaphorical if: (a) one or more lexical expressions from a source domain were used in reference to the target domain (happiness) in a sense not connected with the source domain meaning per se, and (b) the target domain sense could be said to be related to the more concrete source domain sense via a cross-domain mapping instantiated by the lexical items from the source domain. Consider, for example, the expression “comprar felicidad” (to buy happiness). This was coded as a linguistic instantiation of the underlying conceptual metaphor: HAPPINESS IS A GOOD OF CONSUMPTION. To assess coding reliability, each metaphorical expression was categorized as a conceptual metaphor independently by the two authors of this work. This procedure resulted in 71% initial agreement (Cohen’s Kappa = 0.68; $z = 30.5$; $p < .001$). Initial disagreements were resolved by consensus.

Results From the sampled 600 sentences, a total of 190 metaphorical expressions were identified using MIPVU, corresponding to roughly a third of the sentences, which shows the high ubiquity of metaphorical expressions used to talk about happiness. Metaphorical expressions were coded to identify the conceptual metaphor corresponding to each expression. The conceptual metaphors (in order of frequency) were: FELICIDAD ES UN LUGAR (42) [HAPPINESS IS A PLACE]; FELICIDAD ES UN LÍQUIDO (39) [HAPPINESS IS A LIQUID]; FELICIDAD ES UN OBJETO HACIBLE (38) [HAPPINESS IS A GRABBABLE OBJECT]; FELICIDAD ES UN BIEN DE CONSUMO (14) [HAPPINESS IS A CONSUMPTION GOOD]; LA FELICIDAD ES MATERIAL BIOLÓGICO (14) [HAPPINESS IS A BIOLOGICAL ENTITY]; LA FELICIDAD ES ENERGÍA (12) [HAPPINESS IS ENERGY]; FELICIDAD ES UN AGENTE (11) [HAPPINESS IS AN ANIMATED AGENT]; FELICIDAD ES UNA BOMBA (4) [HAPPINESS IS A BOMB]; FELICIDAD ES COMIDA (4) [HAPPINESS IS FOOD], OTHER DOMAINS (12). Table 1 shows examples of linguistic expressions for conceptual metaphors.

Table 1: Sample metaphorical expressions

Source Domain	Expressions
LUGAR (PLACE)	“camino a la felicidad”, “conduce a la felicidad”
LIQUIDO (LIQUID)	“lleno de felicidad”, “felicidad desbordante”
OBJETO (OBJECT)	“alcanzar la felicidad”, “felicidad palpable”
BIEN DE CONSUMO (GOOD OF CONSUMPTION)	“vendiendo felicidad”, “comprar felicidad”
ENTIDAD BIOLÓGICA (BIOLOGICAL ENTITY)	“la hormona de la felicidad”, “felicidad farmacológica”
ENERGÍA (ENERGY)	“radiante de felicidad”, “irradia felicidad”
AGENTE (AGENT)	“el abrazo de la felicidad”, “la felicidad nace”
BOMBA (BOMB)	“estallido de felicidad”, “explosión de felicidad”
COMIDA (FOOD)	“porción de felicidad”, “saborear la felicidad”

Study 2: Norming of valence, imaginability and familiarity

The aim of Study 2 was to rate metaphorical expressions of happiness (*felicidad*) with the objective of examining whether the intensity of the valence assigned to an expression is related to the perceived familiarity and imaginability.

Method

From the expressions tagged as metaphorical in Study 1, 96 metaphorical expressions were selected to be included in the norming study, to be rated for valence, imaginability, and familiarity by members of the university community. The study was approved by the Ethics Committee of Universidad Católica del Uruguay, and is in line with the guidelines of the

American Psychological Association and the Declaration of Helsinki.

Participants Sixty native speakers of Spanish took part in the rating study (77% women). Their ages ranged from 18 to 40 years old (mean = 22, SD = 5.15). Participants were university undergraduate or graduate students who gave their consent to participate and completed the paper survey voluntarily.

Each participant rated the full set of 96 metaphorical expressions selected from the corpus, a third for each property; that is, 32 for affective valence, 32 for imaginability, and 32 for familiarity. On average, each metaphorical item was rated for a single property by 20 participants in a between-participants design, given that different properties of the same stimuli were rated by different participant samples.

Materials From the 190 identified metaphorical expressions in Study 1, 96 expressions containing the word *felicidad* [happiness] were reduced to two- or three-word phrase items to be normed. The following are examples of phrase items used in the questionnaire: *lleno de felicidad* [full of happiness], *saborear la felicidad* [to savor happiness], *felicidad profunda* [deep happiness], and *robar felicidad* [to steal happiness]. These linguistic examples correspond to the conceptual metaphors HAPPINESS IS LIQUID, HAPPINESS IS FOOD, HAPPINESS IS A PLACE, and HAPPINESS IS A GOOD, respectively. All phrases were present in the corpus (Study 1) as part of a larger expression. Rating questionnaires contained 96 items: a third of them to be rated for valence, a third for familiarity, and a third for imaginability. Each phrase item in the questionnaire was followed by a Likert scale. The scale used for imaginability and familiarity perception ranged from 1 to 7 (1 = not familiar at all, 7 = extremely familiar), while the scale used for valence rating ranged from -3 to 3 (-3 = very negative, 0 = neutral, 3 = very positive). Different questionnaires were created so that a third of the items were rated for one property only in each of them. Items were presented in three blocks of 32 items each (one block for valence, one for familiarity, and one for imaginability). The order of items assigned to each block was pseudo-randomized across questionnaires, as was the order of item presentation within a block.

Procedure Participants were presented with a printed questionnaire and asked to read it carefully. Each rating block was preceded by instructions and a filler item as a rating test. Participants were asked to read each item once and rate it for either valence, familiarity or imaginability, using their first impressions. Participants took between 13 and 18 minutes to complete the questionnaire.

Results

Table 2 shows the mean rating values obtained for valence, familiarity, and imaginability across the 96 phrase items analyzed. We were interested in the extremeness of the

affective valence perceived rather than the polarity of it (positive/negative). Thus, the variable considered for the analyses was “valence intensity,” defined as the absolute value of the raw valence score, which ranged from 0 to 3 (instead of -3 to 3).

Table 2: Mean rating scores.

Property	Mean (SD)
Valence intensity (range 0 to 3)	1.83 (0.48)
Imaginability (range 1 to 7)	4.50 (1.02)
Familiarity (range 1 to 7)	4.17 (1.25)

The phrase item that obtained the highest score of valence intensity was *lleno de felicidad* [full of happiness] (mean valence intensity = 2.62), while the item obtaining the lowest valence intensity score was *algoritmo de felicidad* [happiness algorithm] (mean = 0.75). In terms of familiarity and imaginability, the items obtaining the highest scores were *radiante de felicidad* [radiant of happiness] for familiarity (mean = 6.6) and *desbordante de felicidad* [overwhelmed by happiness] for imaginability (mean = 6.30). The phrase item obtaining the lowest scores was *deber felicidad* [to owe happiness] for both imaginability and familiarity (mean = 1.95, and 1.41 respectively). A correlation matrix showed very significant associations between the three properties: imaginability and valence intensity (Pearson $r = 0.73$, $p < .001$); familiarity and valence intensity (Pearson $r = 0.66$, $p < .001$); (imaginability and familiarity, Pearson $r = 0.83$, $p < .001$).

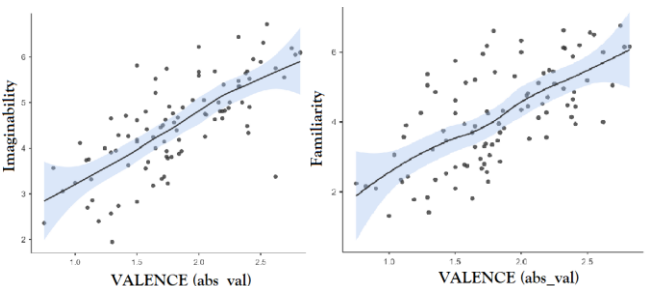


Figure 1: Scatter plots for Valence Intensity, Familiarity and Imaginability norming values per metaphor item.

Given the strong association between the three variables, a multiple linear regression was conducted to assess the partial effects of familiarity and imaginability on valence intensity while controlling for each other. The model used valence intensity as the dependent variable and imaginability and familiarity as predictor variables. The model was highly significant ($F(2, 93) = 56.7$, $p < .001$), accounting for 55% of the variance (adjusted $R^2 = 54.6\%$). Imaginability was a significant predictor of valence intensity when controlling for familiarity ($\beta = 0.27$, $p < .001$). However, the effect of familiarity did not reach significance when controlling for imaginability ($\beta = 0.06$, $p = .13$). The combined results

suggest that the association between familiarity and valence intensity could be mediated by imaginability.

Discussion

The results showed that familiar and imaginable metaphorical expressions of happiness evoke more extreme values of affective valence. This can be interpreted from an embodied perspective. Previous studies on brain activity have shown that metaphorical expressions activate perceptual-motor representations. For example, brain regions involved in sensory perception or motor activity are activated when people read phrases like “she grasped the idea” or “that idea stinks” (Boulenger et al., 2009; Cacciari et al., 2011; Citron & Goldberg, 2014; Pomp et al., 2018). In addition, metaphorical expressions tend to activate richer and more nuanced semantic networks. For instance, the phrase “warrior crowd” can convey multiple connotations—such as combative, energetic, resilient, or passionate—unlike the more narrowly defined “energetic crowd.” According to Relevance Theory (Gibbs & Colston, 2012; Prandi, 2010; Wilson, 2013), these multiple meanings are known as emergent properties of metaphor representation, as the use of a metaphor in various contexts can reinforce the emergent properties of the associative semantic networks underlying the expression. Thus, the meaning representation of expressions that include the figurative use of “warrior”, for example, may elicit features beyond its literal meaning and taps into broader, more abstract associations such as resilience or passion. Taken together, these findings suggest that metaphorical expressions play a special role in evoking affective responses.

Second, the three norms were highly correlated. However, the regression analysis showed that the effect of familiarity on valence was diminished when controlling for imaginability, which remained a significant predictor. This pattern suggests that the association between metaphor familiarity and affective valence could be mediated by the imaginability of the expressions, highlighting imaginability as a key factor.

Imaginability can be defined as the ease with which a mental image can be generated for a word. A strong association between imaginability and familiarity is not surprising given previous research. Numerous studies show that imaginability is a predictor of ease of word recognition: imaginability norms predict reaction times and accuracy in lexical decision and word-naming tasks (Dymarska et al., 2025). However, there is substantial variability in the correlations between imaginability and other variables when norms are examined at the level of individual words. Moreover, norms are highly dependent on part of speech, with the highest-imaginability words in English being almost exclusively nouns (Chiarello et al., 1999; see Dymarska et al., 2025, for a review). In turn, imaginability has been shown to be high in words that depend on both external and internal sensory input (i.e., words referring to proprioceptive, interoceptive, and emotional states). Our results are consistent with studies showing strong correlations between

the imaginability of negative emotional words and negative theoretical words, particularly for extreme fear scores (Raghunath et al., 2021). This aligns with the idea that words more closely linked to direct sensory and perceptual experiences, whether external or internal, are expected to rate higher in imaginability.

Finally, most studies on lexical norming are based on single-word or literal forms, with the notable exception of Citron et al. (2019) who examined the rating of affective and lexical properties of metaphors. Taken together, these studies point to a fundamental link between the representation of affective meaning, imaginability, and language use. The present work focuses on expressions of happiness, showing that, for this emotion concept, the metaphorical expression used to frame it significantly influences the perceived valence, imaginability, and familiarity in a manner consistent with previous research. This work, however, represents only a step toward a thorough exploration of the affective component of metaphorical meaning.

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