

Paintings as “Visual Poetry”: Diagrammatic Iconicity in the Art of Juan Miró

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Conceptual Metaphor Theory (Lakoff and Johnson, 1980) and work on multimodal metaphors (Forceville, 2006) has opened up a new approach to the study of language and other modalities. However, relatively few cognitive linguistic investigations of visual art have been performed. We analyzed paintings done by Spanish Surrealist Juan Miró (1893-1983), focusing on diagrammatic iconicity, i.e. how his pictorial elements are arranged structurally in ways that correspond to their meaning. In particular, we examined the artist’s paintings between 1940 and 1970, based on the model advanced by Hiraga (2005). Our results show that iconic mappings like SIMILARITY IN MEANING IS SIMILARITY IN FORM, MORE CONTENT IS MORE FORM, and SEMANTIC RELEVANCE IS CLOSENESS, function as cognitive principles prevalent in these paintings. The current study therefore supports the proposal that diagrammatic iconicity operates across different semiotic systems, and at the same time contributes to the description and explanation of artistic practices involving language and painting.

Keywords: multimodality, grammatical metaphor, diagrammatic iconicity, language and painting, cognitive linguistics, cognitive semiotics, visual art, iconic mappings

Miró’s painting is a form of writing which one must know how to decipher.
Jacques Dupin

1. Introduction

Jakobson (1960) famously singles out six major functions of verbal communication: the *referential*, the *emotive* (expressive in nature), the *conative* (imperative in nature), the *phatic* (concerning conversation flow), the *metalinguistic* (focusing on the linguistic codes used), and finally the *poetic* (the way the message is presented). Among them, the poetic function is highlighted when it comes to art, for it is “not the sole function of verbal art”, but “in all other verbal activities it acts as a subsidiary, accessory constituent” (ibid, p.357). In Jakobson’s view, verbal art such as poetry can be best transmitted to the addressee because it foregrounds certain linguistic functions and grammatical characteristics. In the same spirit, Freeman (2009, p.193) states: “If we wish to explore the ways in which minding makes sense of our phenomenal world, then poetry is a natural place to turn”.

The need for studying the grammar of poetry is also emphasized by Hiraga (2005), who provides a model of iconic mappings displayed in Japanese poetic texts, both pictorial and verbal, structured via the form-content correspondence of phrase repetition, prolongation, and other grammatical devices across poetic discourses. Hiraga analyses these in terms of the notion of *grammatical metaphor*, introduced by Halliday (1994). This refers to the phenomenon in which the grammatical form of an expression implies its meaning. For example, nominalizations like the nouns *walk* or *motion* stand as a kind of grammatical metaphor, because events are understood as “things”. Encapsulating activities as objects, the process of nominalization makes it easier to “compress” the

expressed event. Thus, this mechanism highlights an analogical relationship between form and meaning, known as *diagrammatic iconicity* (see Section 2). In this article, we combine concepts from Hiraga's model with ideas from Conceptual Metaphor Theory (Lakoff and Johnson, 1980), as well as Blending Theory (Fauconnier and Turner, 2002), showing that the mappings that each one of these models uses are forms of diagrammatic iconicity.

In addition, the importance of also studying non-verbal metaphors has been highlighted by Forceville's multimodal studies since the 1990s. Forceville (2006, p.6) defines *multimodal metaphors* as "metaphors whose target and source are each represented exclusively or predominantly in different modes." By the latter, he means communicative modalities such as music, language, pictures, and gestures.

But what about visual art, and in particular modern painting which is largely free of mimetic or realistic representational iconicity (Donald, 2006)? It appears that this genre has not yet been systematically studied by multimodal researchers, as the existing studies mainly focus on more commercial materials like advertisements, films or political comics. As mass media pictorials do not represent the pictorial modality as a whole, it is necessary to examine this less-discussed and specifically expressive visual genre.

In this article, we analyze paintings by Spanish surrealist artist Joan Miró (1893-1983), whose artwork is semi-abstract in nature, and features a set of recurring pictorial "symbols". The question arises whether these are mere meaning-bearing pictorial units or pictorial units that allow certain distributive patterns in painting-plates, i.e. as having certain placement constraints that display diagrammatic iconicity. These aspects are investigated by adopting Hiraga's (2005) model, though reformulating some aspects of her analysis, as explained in the next section. Our main question is: Is there sufficient semiotic analogy between paintings such as Miró's and linguistic poems, such as those analyzed by Hiraga? That is to say, are aesthetic visuals structured systematically by diagrammatic iconicity as a form of "visual poetry"?

2. Theoretical background: diagrammatic iconicity and multimodality

The current study is based in the intertwining realm of metaphor, iconicity, art, and multimodality. In this section, we briefly review the notion of diagrammatic iconicity involved in Hiraga's (2005) linguistic-based model, which is adopted in our analysis of the multimodal texts (i.e. pictures and titles) that constitute Miró's paintings.

2.1 Imagistic and diagrammatic iconicity

Hiraga (2005) describes how the poetic content expressed in Japanese poems shows amazing alignment between the grammatical instantiation of the written forms and the aesthetic meaning. The expressed forms vividly reflect, or even intensify the meaning of the expressed contents. As an example, Hiraga (2005, p.48) demonstrates how phrasal repetition in poetry both constitutes the content of, and enhances the expressive power of the poem as a whole.

Hiraga highlights the interrelations between Halliday's notion of grammatical metaphor (see Section 1) and Peirce's diagrams and metaphors. According to Peirce (1955), *icons*, i.e. signs where the representamen resembles the object, may be further divided into *images*, *diagrams*, and *metaphors*. Images are based on "immediate mimicry" with their objects, as they display perceptual resemblance to them (Hiraga, 2005). For example, a portrait displays imagistic iconicity. Also notable are some forms of sound symbolism, e.g. ideophones like *SPLASH* and *KNOCK-KNOCK*. In addition, visual-saliency indicators (Kress and van Leeuwen, 1996) which draw the viewer's

attention to the more “eye catching” visual zones may be regarded as an aspect of imagistic iconicity.

Diagrams, on the other hand, are based on “structural or relational analogy” between two phenomena or domains, such as the relationship shown in the basic diagram below (Figure 1), where the dimension of quantity on the Y-axis is diagrammatically iconic with that of verticality.

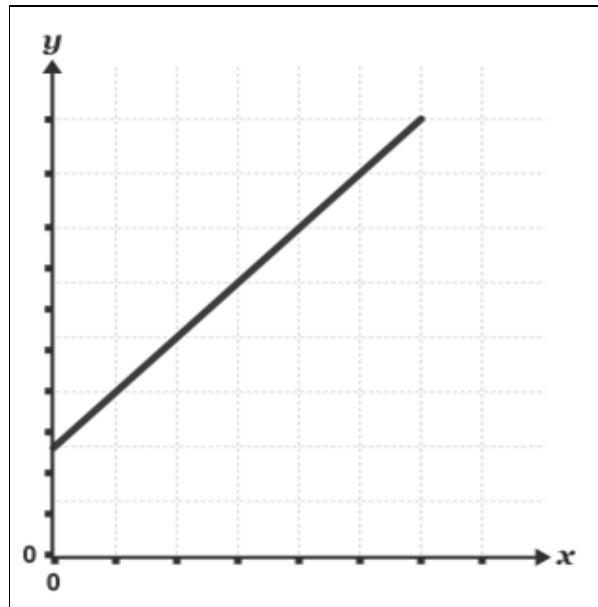


Figure 1. A basic line graph showing of the relation between time (x) and quantity (y), presupposing diagrammatic iconicity between QUANTITY and VERTICALITY¹

This implies that cross-domain mappings of Conceptual Metaphor Theory, such as the correspondences in the famous LIFE IS A JOURNEY metaphor, are in effect diagrams. More complex forms of sound symbolism also involve diagrammatic iconicity. For example, the relational mapping between “round and soft” figures and sound shapes like MUMU, and “edgy and sharp” figures with sounds like KIKI is diagrammatic (Ahlner and Zlatev, 2010).

Finally, “metaphors” according to Peirce should be even more abstract, involving abstractions over diagrams. There is a lack of consensus in the literature on what this implies, but we could apply it to the kinds of diagrams used in Blending Theory, where the mappings are not only between two domains (as in CMT), but across a number of “mental spaces”. For our analysis, this could be applied to the complex mappings between linguistic titles and pictorial content in Miró paintings, as shown in Figure 2.

¹ Source: <http://www.bbc.co.uk/education/guides/z7xcwmn/revision/4>

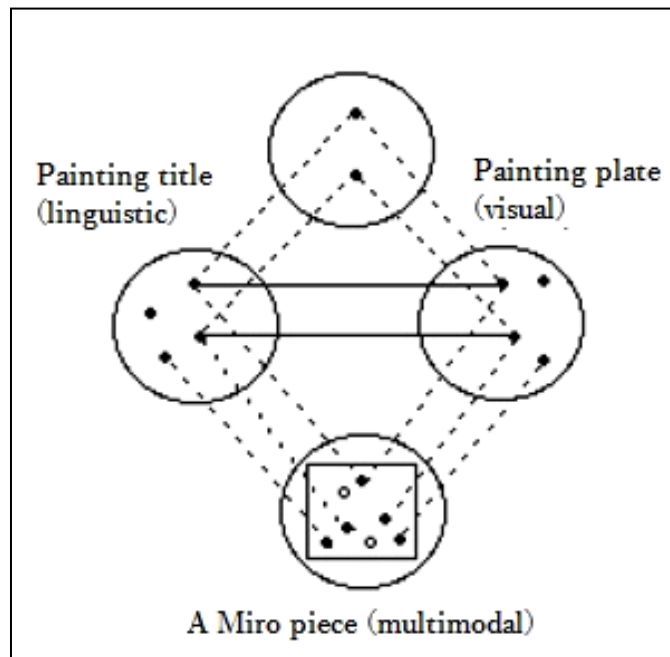


Figure 2. A multi-diagrammatic mapping across modalities, in the framework of Blending Theory, corresponding (possibly) to a Peircian metaphor

It is clear that the three sub-types of Peirce’s trichotomy of iconicity form a continuum of abstractness. The most relevant (for our purposes) is the distinction between imagistic iconicity based on perceptual similarity, and the others, which involve similarity of relations or structures. Hiraga (2005, pp.44-45) makes the same point:

The relationship of form and meaning in grammatical metaphorical mapping is diagrammatical, because what is preserved is an analogical relationship mediated indirectly by grammatical metaphors. This contrasts with a direct attributive connection such as pure imagistic iconicity between the linguistic form and meaning, e.g. a case of onomatopoeia and visual language such as logographs.

In addition, Hiraga distinguishes between two different kinds of diagrams in poetic texts. *Relational diagrams* involve similarity within one form-meaning dimension, i.e. the extent of effect. For instance, if some recurring forms display form-similarity (such as *gl-*), and their meanings are considered having similar semantic or pragmatic traits (e.g. LIGHT), this is identified as applying to the iconic mapping rules (1), and vice versa (2).

- (1) SIMILARITY IN MEANING IS SIMILARITY IN FORM
- (2) DIFFERENCE OF MEANING IS DIFFERENCE IN FORM

On the other hand, *structural diagrams* demand structural mappings between “structure of form and structure of content” (Hiraga, 2005, p.175). For example, if some repetitive phrasal structure intensifies and enriches the expression, the quantity of form then corresponds to the importance of meaning. This would be an instantiation of the iconic mapping rule (3).

- (3) MORE (LARGER) FORM IS MORE MEANING

Structural diagrams also include rules such as (4). This particular mapping describes the correspondence between the sequential placement of some expressed ideas and their actual event order. For instance, Hiraga (2005, p.179) distinguishes an event representation that follows an iconic mapping in (4a), and a non-iconic, odd expression in (4b).

- (4) TEMPORALITY IS LINEARITY
- a. Mary came in and sat down.
 - b. ?Mary sat down and came in.

In another iconic mapping, there is a matching between the distance of lexical items and their meaningful relatedness or *semantic relevance*. This refers to elements that are “semantically closer” (Hiraga, 2005, p.185), concerning the relatedness or categorical closeness of two semantic items. Hiraga illustrates this iconic mapping with the example in (5). In (5b) “Harry” and “Greek” are placed lexically closer, hence implying a “closer” relationship and a stronger pragmatic or rhetoric force compared to (5a). As noted by Hiraga, the latter rule is similar to Lakoff and Johnson’s (1980, pp.126-33) conceptual metaphor STRENGTH OF EFFECT IS CLOSENESS.

- (5) SEMANTIC RELEVANCE IS CLOSENESS
- a. I taught Greek to Harry.
 - b. I taught Harry Greek.

The markedness of form contrasts a default, more basic arrangement. For example, English past tense is considered more “marked” than their present simple counterpart, for they are often featured with overt semantic markers (Hiraga, 2005, p.184). There is thus an iconic relationship between the more special casings of English past tense verbs and their meaning, which is described by the iconic rule in (6).

- (6) MARED MEANING IS MARKED FORM

Finally, Hiraga (2005, p.182) describes how coordination of clausal elements creates their iconic form-meaning correspondences. In (7a), the symmetry of the two conjuncts attunes with their rhetoric meaning. In (7b), even if this is synonymous with (7a) in terms of content, it has a different and arguably lesser rhetorical force.

- (7) SYMMETRICAL MEANING IS SYMMETRICAL FORM
- a. The more he eats, the fatter he gets.
 - b. If he eats more, he will get fatter.

To sum up, Hiraga’s iconic mapping rules capture various linguistic form-meaning correspondences found in poetic discourse, which are arguably also prevalent in everyday language use. To contribute to a multimodal exploration on the same phenomena, we examine in the current study if the very principles apply in Miró’s unique paintings. In the following, we briefly introduce his distinctive paintings as a kind of multimodal text.

2.2 Miró's pictorial elements

Miró's semi-abstract paintings are uniquely filled with repeated elements. As shown by Corbella (1993), Miró's art involves a composition of a set of recurring signs, notably HUMAN, BIRD and STAR², a rare feature comparing to other artists. Miró's pictorial units are simplified and refined, evolving and changing continually in a way that keeps to their original image form, but with gradual stylistic transformations (see Figure 3 for Corbella's sketching for HUMAN, BIRD and STAR, from top to bottom), finally resulting in a vast number of unique artworks we are privileged to view today.

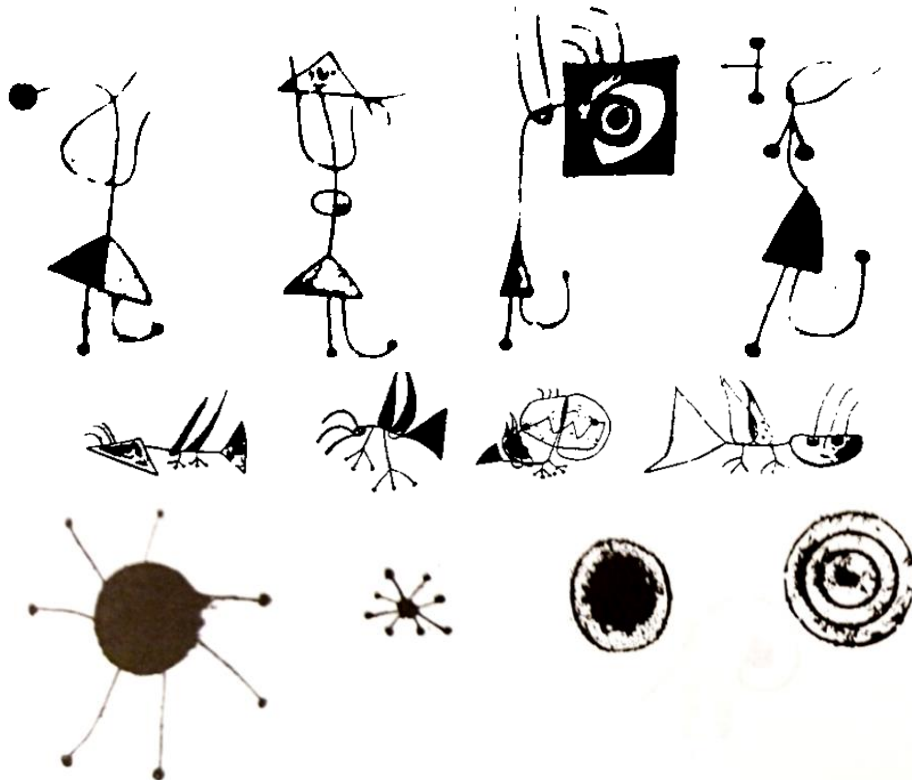


Figure 3. Excerpts of HUMAN (first row), BIRD (second row), STAR (third row) classification (reproduced from Corbella, 1993, pp. 24- 73)

On one level of analysis, Miró's paintings are composed by these pictorial signs, along with other more backgrounded visual arrangements. At the same time, all these elements add up to a complete Miró painting, distinguishing his artwork away from ideograms. Miró once stated that he usually based his painting title on the event expressed by the painting (Dupin, 2004). For example, a 1940 painting was entitled *Woman with Blond Armpit Combing Her Hair by the Light of the Stars*. This somewhat oddly detailed description in fact adds to the poetic value of the image itself, and further provides convincing information about the meaning of the painting. In this sense, the title and the pictorial parts of this Miró piece together create a complete *multimodal text* (as in the Blending diagram of Figure 2). Without the linguistic cue of the title, the viewer could possibly understand the painting as a portrait-like piece but without the expressive vividness.

As shown in Figure 3, the iconography of Miró's paintings involves diagrammatic iconicity even on the level of elements, as these representations are clearly schematic, and

² Also implying "music notes" and other non-human, decorative elements (Corbella, 1993)

thus diagrammatic rather than merely pictorially representational. However, their combinational constraints, or placement patterns within painting plates are not yet discussed in previous studies. In this study, we will fill the gap by exploring these aspects.

3. Diagrammatic iconicity in Miró paintings

Given the theoretical background reviewed in the previous section, the notion of diagrammatic iconicity appears to be fruitful for investigating visual and multimodal texts. Hence, focusing on a selection of semi-abstract paintings by Miró, we conducted a study that interrelates the pictures and the semantics captured by painting titles. In particular, we examined the distributive pattern of Miró's major pictorial elements (HUMAN, BIRD, STAR), and analyzed his paintings based on the iconic mapping principles proposed by Hiraga (2005).

Miró's paintings between 1940 and 1970 were chosen as data, for this was the period when Miró emerged and matured a set of recurring signs in his artwork (Dupin 2004). We selected 120 sample paintings from *Miró* (Dupin, 2004) and *Joan Miró, 1893-1983: The Man and His Work* (Erbe, 1988), as these books thoroughly include Miró's mature artwork created at different periods of time.³

The analysis comprised of two steps. First, we compared the painting titles and the pictorial contents. We studied Miró paintings with the reference of Corbella (1993) based on his study of a set of Miró's lithographs. Via Corbella's listing of Miró's sign variants (as shown in Figure 3), it was generally helpful for us to identify the pictorial instances we encountered in our database.

Second, we analyzed the selected paintings based on the iconic mapping rules (i.e. diagrams) proposed in Hiraga's model, excluding those restricted to purely linguistic aspects, such as politeness in language and frozen expressions. In the end, seven out of the nine diagrams were examined in the selected set of paintings, to see to what extent they apply, and thus to provide a basis for comparing diagrammatic iconicity across media (poetry vs. semi-abstract paintings). This step was accompanied by examinations of three of Miró's pictorial elements HUMAN, BIRD and STAR, specifically with respect to their distribution within painting-frames. The in-depth analyses are presented in the next section.

4. Analysis: The "grammar" of Miró paintings

As noted, Miró's artwork includes recurring, simplified meaning-bearing units HUMAN, BIRD and STAR, which underwent gradual transformation during his artistic career (Corbella, 1993). In our study, we asked whether Miró's art displays diagrammatic iconicity not only with respect to the forms of these elements, but in the way they are structurally organized.

According to our analysis, the diagrammatic rules that were found to be applicable (4.1.) and non-applicable (4.2) are discussed in what follows.

4.1 Identified iconic mapping rules

Five out of seven major iconic mapping rules identified by Hiraga (2005) could be applied to Miró's paintings, namely the following ones.

³ The two books covered Miró's artwork in different ways. For our data, we excluded sketches, sculptures and mural paintings, sampling only the painting pieces.

4.1.1 SIMILARITY IN MEANING IS SIMILARITY IN FORM

The ground for this is that Miró's paintings are composed of a set of conventionalized signs (most specifically HUMAN, BIRD, STAR) and that the variants of a single sign indeed resemble each other.

We found that 111(93%) paintings in our database (N=120) obeyed this rule. Elements that figure as conventionalized pictorial signs in the painting are usually given linguistic expression in the title (102 in total), and all contain HUMAN, BIRD, and STAR categorized by Corbella (1993), including paintings simply entitled *Painting*, *Mural painting*, or *Untitled*, etc. (18 in total). Figure 4, for instance, shows a painting which features two giant, horizontal forms as "birds", which is also stated in the title.

A few paintings could not be claimed to follow this rule. For example, in Figure 5, neither the pictorial nor the title suggests overt meaningful referent. We are unable to check the form-meaning relationship in such cases, which remain a small portion of our database.

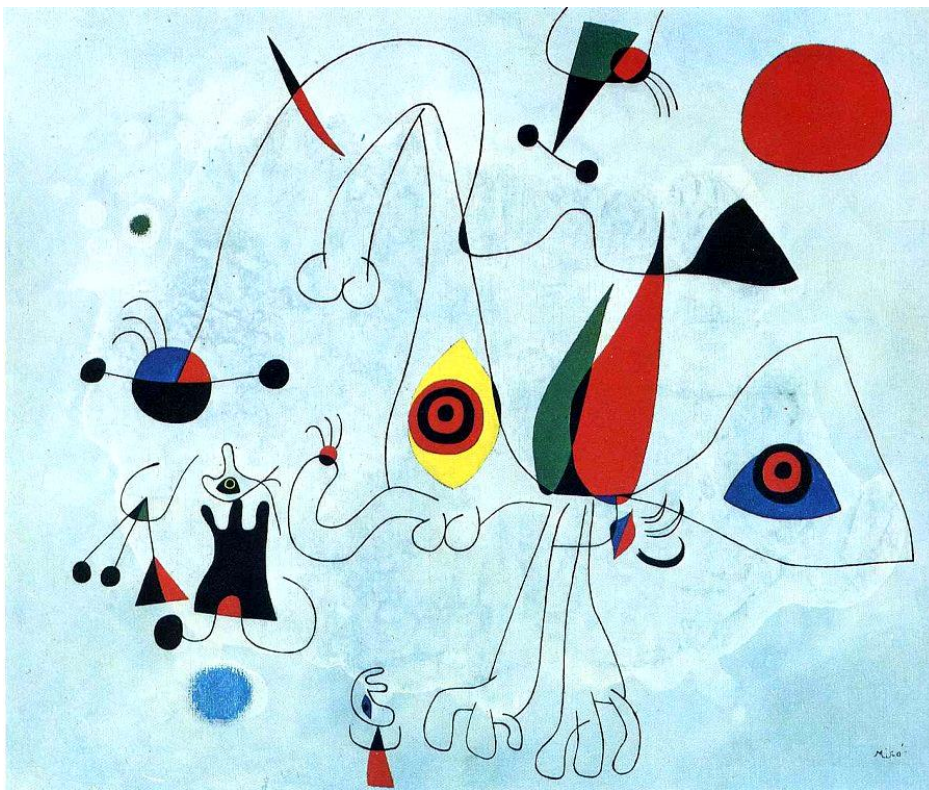


Figure 4. *Woman and Birds at Sunrise* (1946)

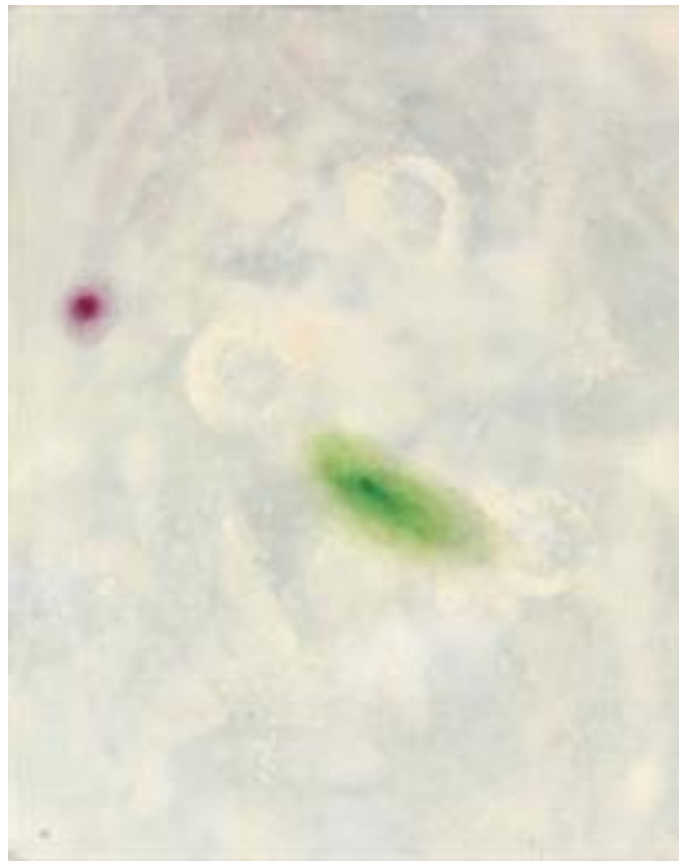


Figure 5. *Painting IV/V* (1960)

4.1.2 DIFFERENCE IN MEANING IS DIFFERENCE IN FORM

Similar Miró elements almost always refer to the same meaning. Conversely, however, look-alike Miró elements could bear different meanings.

A total of 90 paintings (75 %) follow this rule. For instance, in the painting shown in Figure 6, the “ladder” mentioned in the title has a distinct meaningful status compared to the other in-frame pictorials, such as the lined-up, three unmentioned HUMANs (colored in red) at the right.

In contrast, the painting shown in Figure 7 challenges this particular iconic principle. The “woman” and the “bird” fuse together, into a human-shaped character with wing-like arms. It is difficult to tell apart the HUMAN and the BIRD in such cases (usually Miró’s later work), in which the difference in meaning fails to guarantee a difference in form.

If we compare the lower ratio of this particular rule to the ratio of SIMILARITY IN MEANING IS SIMILARITY IN FORM, it appears a bit odd since the two principles both fell under the category of Hiraga’s (2005) relational diagrams. More discussion on this phenomenon is found in Section 5.2.

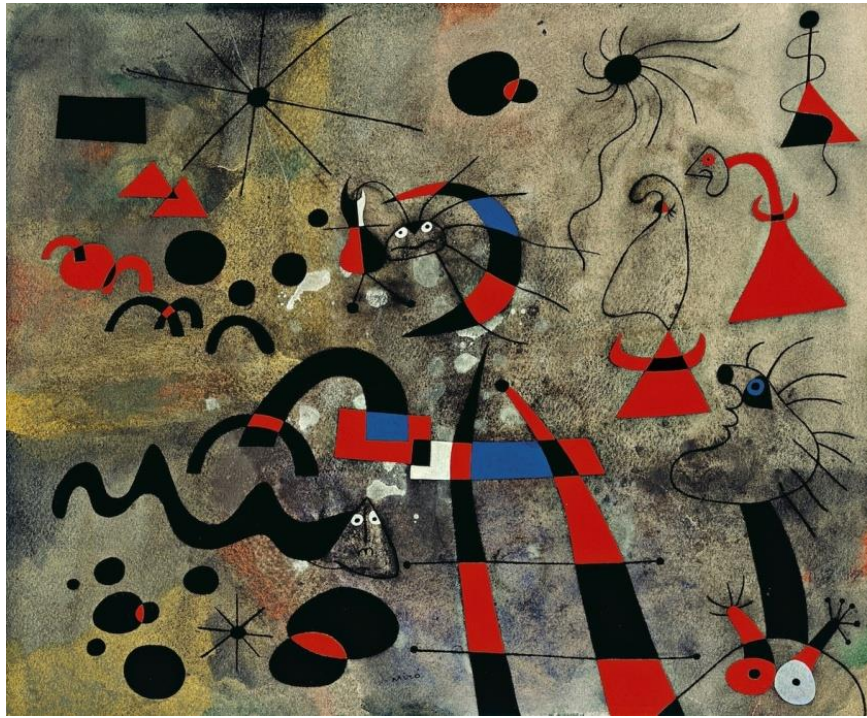


Figure 6. *The Escape Ladder* (1940)



Figure 7. *Woman and Bird* (1960)

4.1.3 MORE CONTENT IS MORE (LARGER) FORM

In our data, 110 paintings applied this rule (92%). We found that “more content”, i.e. the more up-front messages hinted by titles, often accompany a larger size or a bigger number of pictorial items (i.e. “more form”) in a painting. The semantic importance (“content”) of objects is usually strengthened by their visual saliency (“form”), be it a significant size or the repetition of an item (in accordance with Kress and van Leeuwen, 1996).

Figure 8 and 9 show two examples of this rule. In Figure 8, the size of the central object suggests its meaningful importance, which is aided by the title, *The Birth of Day*. Figure 9, on the other hand, obeys this rule by lining up three HUMANS, and occupies a great amount of painting space.

We may notice how our data perform this iconic rule differently than Hiraga’s verbal data. In Miró paintings, this particular rule applies indeed, but it is constrained to animated pictorial signs like HUMAN and BIRD, but less so for STAR. For instance, in Figure 10, the many STARS (the dotted black and yellow parts) hardly raise the meaningful importance of “star” in the painting—the HUMANS and the BIRD mentioned in the title remain the focus of this painting (see 5.1 for more discussion).

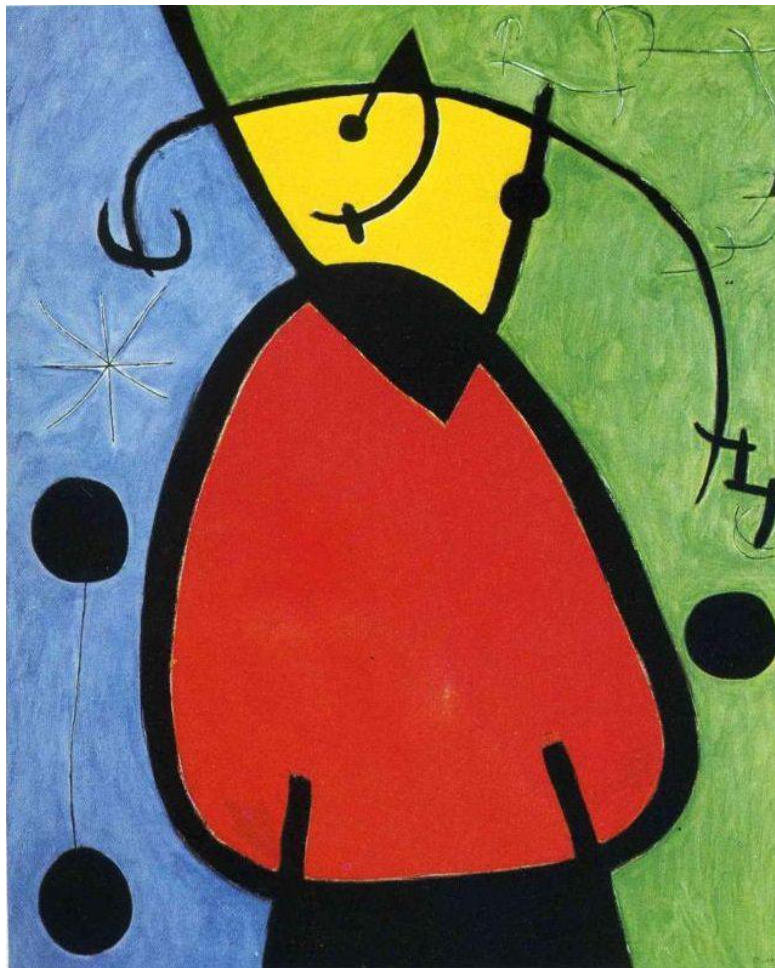


Figure 8. *The birth of day* (1968)



Figure 9. *Figures in the night* (1950)

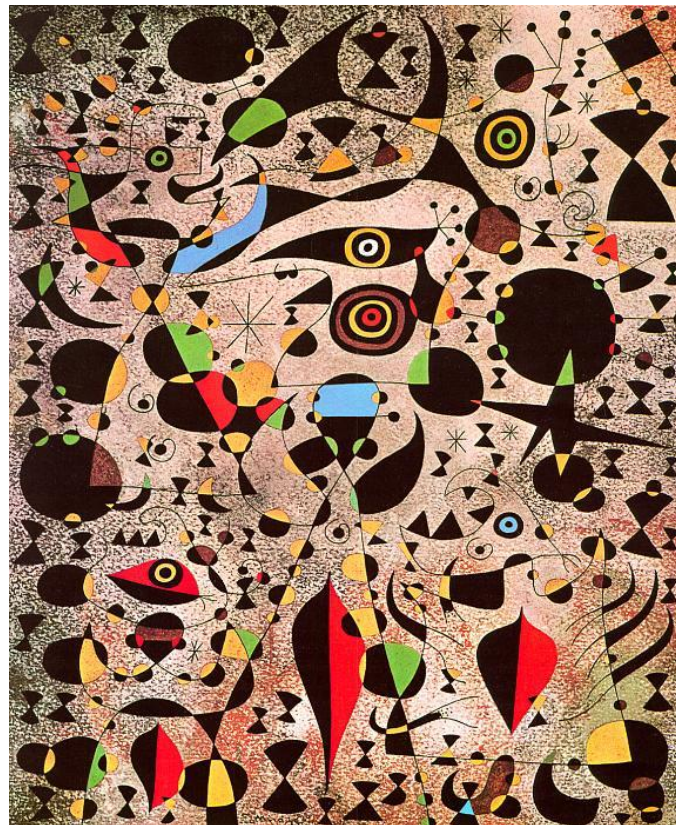


Figure 10. *Woman Encircled by the Flight of a Bird* (1941)

4.1.4 SEMANTIC RELEVANCE IS CLOSENESS

To better examine this particular rule, we studied the distributive pattern of Miró signs by visualizing the placements of the recurring elements in his artwork. We manually identified and sketched the core Miró elements (HUMAN, BIRD, and STAR), conducting a hands-on visualization of sign-distribution.

A rectangle is taken to represent the shape of most of Miró's paintings, which are usually based on canvases. We filled the rectangle with sketched instances of the three Miró core signs, allowing them to overlap. A circle stands for approximately the position (and size) a HUMAN, BIRD, or STAR appears in one painting. The recording of HUMAN, BIRD and STAR from the two books is visualized in Figure 11 and Figure 12, respectively:

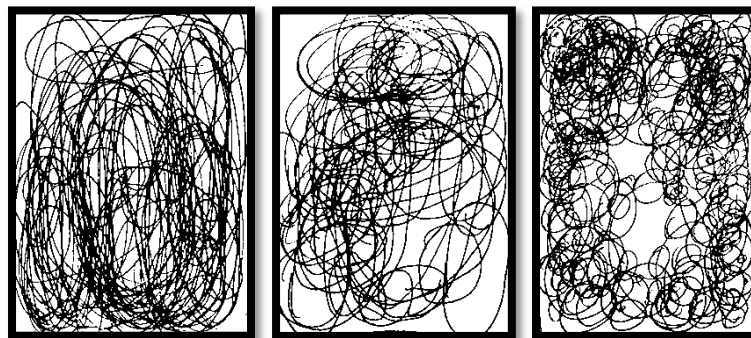


Figure 11. Instances of HUMAN, BIRD, STAR in Joan Miró, 1893-1983: *The Man and His Work* (Erben, 1988)

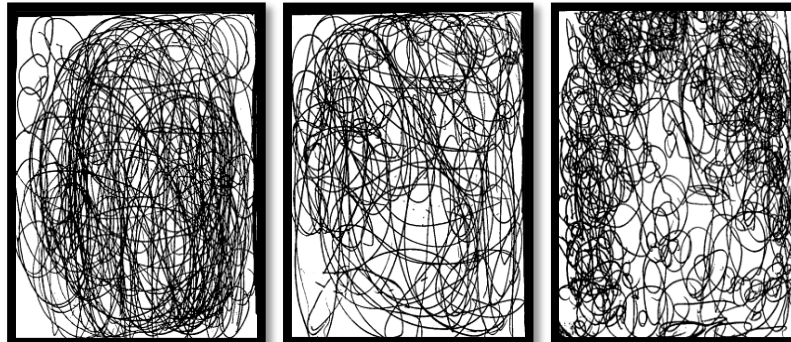


Figure 12. Instances of HUMAN, BIRD, STAR in *Miró* (Dupin, 2004)

According to the way HUMAN, BIRD, and STAR occupy the rectangles, we could make the following generalizations. First of all, the circles correspond to the *distribution* of each Miró sign. According to the look of these rectangles, each sign indeed distributes differently across painting-plates. HUMAN is almost always located in the middle of the sample paintings. STARS almost always occupy the edges of paintings. The locating pattern of BIRDS seems to land between HUMAN and STAR. It is distributed neither in the center nor at the margin.

Secondly, the density of circles indicates the *frequency* of each sign featured in the paintings. In all the three rectangles, HUMAN and STAR are almost of the same density, for they look equally “blackened” by sketched lines. BIRD is not so “darkened by lines”, yet remains attentively dense comparing to other rare images that appeared only several times throughout Miró's artwork.

This visual step, though rather simple in design, reveals the non-randomness of Miró's pictorial signs. It was affirmed that a diagrammatic pattern of signs could be found across the painting samples, and the patterns in the two painting albums turned out to be highly similar, as shown in Figure 11 and 12. Among the selected paintings, as seen in our sketching of all 120 samples, there is a tendency that HUMAN, BIRD and STAR each possesses a specific distributive placement. In other words, these pictorial units indeed distribute differently and at the same time remain closely juxtaposed with units of the same kind. For example, we could find the painting-areas that tensely consist of HUMAN, BIRD, or STAR, but not a total random mixture of image-signs.

Attuning with semantic qualities and textual placements, our visualization here reveals a pattern applying to Hiraga's (2005) iconic mapping rule SEMANTIC RELEVANCE IS CLOSENESS. A total of 109 (91%) applied this rule.

Figure 13 shows an example and an analysis of this rule, with the same method we demonstrated in Figure 11 and 12. STARS are placed at the peripheral, or together at a corner, while HUMANS occupy the more centralized area. The two sets of elements, like the majority of the sampled, are not spontaneously mixed in the painting space.

A few paintings do not conform to this rule. *A Seated Woman* (Figure 14) is a painting with at most two kinds of pictorial elements (a HUMAN, and two ovals that resample STARS) on canvas. In cases like this, we are unable to measure the in-painting distance (i.e. "closeness") between semantically relevant pictorials. Although there are indeed two STAR look-alikes in this painting, they are not consistent in shape or color (i.e. form), and also remotely placed. The painting in Figure 14 thus failed to be counted as obeying the relevance-closeness iconicity.

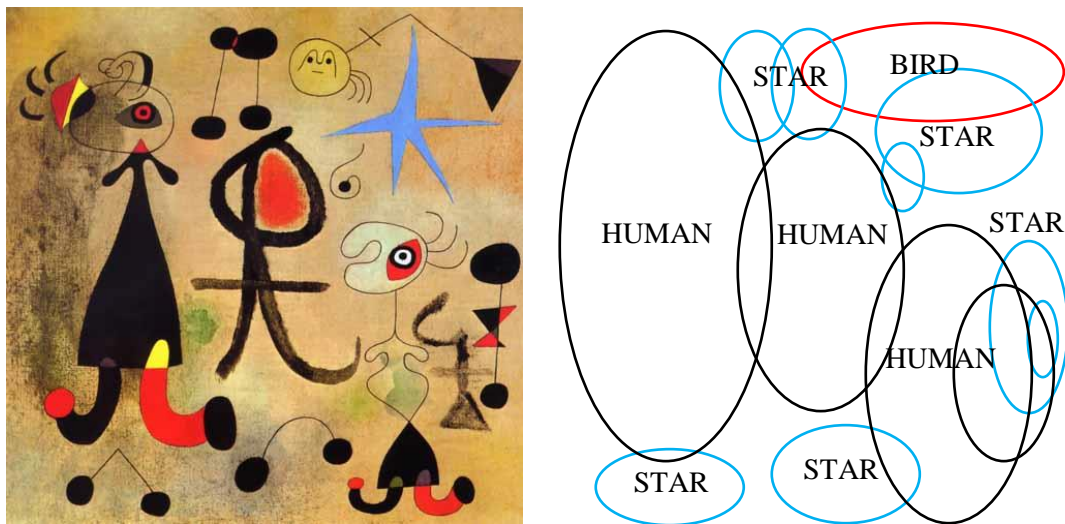


Figure 13. *Hope* (1946)



Figure 14. *Seated Woman* (1960)

4.1.5 MARKED MEANING IS MARKED FORM

When an item is “marked in form” in a painting, it is “eye-catching” in nature, salient in color tone, or depicted in greater effort and delicacy comparing to its normally anticipated look (*cf.* Kress and van Leeuwen, 1996). As for “marked in meaning”, we define this as referring to the instances when Miró featured rare referents in his paintings. For example, while encountering less-frequently depictions like some specific animals or objects (e.g. snake, church, etc.), Miró would not present them in his usual inventory of signs. Rather, he tends to represent these rarely-featured items in a less abstract, more imagistic fashion so as to make them more recognizable, and thus distinguishable from other fixed, highly-abstract signs. Thus, elements that are marked in terms of meaning can be said to be formally marked. Figure 15 illustrates how a more “marked” element—bull—is more figuratively depicted comparing to the more common HUMAN and STAR. The markedness of the element is iconically mapped to its more representational form.

In the two selected painting albums, 17 pictures (14 %) had such marked meanings. All of these, without exception, possessed its corresponding marked form.



Figure 15. *Bullfight* (1945)

4.2 Non-applicable rules

Meanwhile, two of Hiraga's (2005) iconic mapping rules could not be applied to the data: TEMPORALITY IS LINEARITY and SYMMETRICAL MEANING IS SYMMETRICAL FORM.

With respect to the first, it was not possible to analyze the temporality of signs events in the data, because these pictures usually imply a poetic situation, a state, a feeling, and these feelings are abstract in nature. They seldom represent actual happenings in the world, for Miró's paintings are basically non-realistic, two-dimensional surfaces that display miniature thematic events, but hardly an overt suggestion of action temporality.

Concerning the second, for Hiraga (2005, p.182), the symmetry of meaning and form was shown in examples like (7a), *The more he eats, the fatter he gets*. In our data, however, there is no such image-sign symmetrical arrangement. This could be due to the fact that most Miró's paintings defy the limited balance by the rectangular canvas space, so that viewers (for modern paintings particularly) could be intrigued by the novelty of the visual display.

5. Diagrammatic iconicity in Miró paintings

Generally speaking, the application of Hiraga's (2005) model shows that Miró's paintings share a lot in common with what is found in verbal texts (5.1). However, the fact that they nevertheless differ highlights what a (cognitive) semiotic model could contribute by illustrating the regularities of both modalities of texts, and the differences between them (5.2).

5.1 Diagrammatic iconicity across media

Our findings show that Miró’s pictorial signs are not distributed randomly, but rather, pattern-governed.

For example, the central position of HUMAN contrasts with the more “decorative” status of STAR, as STAR mostly occupies obvious canvas spaces at the edges. It makes sense, therefore, to say that the psychological saliency or the semantic centrality of the Miró signs determines their distributive position in a painting. HUMAN bears the strongest psychological saliency and semantic centrality in paintings, so it mostly appears at obvious, centered positions. Moreover, as noted in the examination of MORE CONTENT IS MORE (LARGER) FORM, we’ve noticed a semi-exception of such case: the animated signs like HUMAN and BIRD, according to the multimodal meaning of each painting, possess higher importance via their size as well as numbers of occurrence in a painting-plate; whilst unanimated sign STAR sometimes functions as decorative “fillers” to the painting-plate, as its semantic saliency does not necessarily arise when it is repeatedly featured in a painting.

The observed semantic or distributive inequality of Miró’s signs implies that they are not arranged randomly by the artist. This finding is in line with the “animacy hierarchy”, according to which many languages distinguish between human and non-human referents, with the usual pattern Human > Non-human Animal > Inanimate (Becker 2014, p.64). We may see this hierarchy reflected in the distributive pattern of HUMAN, BIRD and STAR in Miró’s artworks. Furthermore, HUMAN possesses the highest tendency (as visualized in Figure 11 and 12) of in-painting centrality and size, outshining BIRD and STAR.

As for the interactive relationship between Miró’s image-units, we found most of the iconicity principles in Hiraga (2005) to apply to his paintings. The relational diagrammatic principle SIMILARITY IN MEANING IS SIMILARITY IN FORM was highly attested for Miró’s work; DIFFERENCE IN MEANING IS DIFFERENCE IN FORM was found to be less applicable.

Further, diagrammatic iconic rules like MORE CONTENT IS MORE FORM, SEMANTIC RELEVANCE IS CLOSENESS, and MARKED MEANING IS MARKED FORM were found to be applicable to the analysis of Miró’s mature paintings. Our findings so far are listed in Table 1.

Table 1. Rules/mappings of diagrammatic iconicity in the corpus of Miró’s paintings

	SIMILARITY IN MEANING IS SIMILARITY IN FORM	DIFFERENCE IN MEANING IS DIFFERENCE IN FORM	MORE CONTENT IS MORE (LARGER) FORM	SEMANTIC RELEVANCE IS CLOSENESS	MARKED MEANING IS MARKED FORM
Numbers of paintings applied (N=120)	111	90	110	109	17
Percentage	93%	75%	92%	91%	14%

These findings highlight a commonality between verbal poetry and visual art, as the two appear to be structured in a way that utilizes relatively abstract form-meaning correspondences, i.e. diagrammatic iconicity. In sum, there is no reason to limit the kind of diagrammatic iconicity discussed by Hiraga (2005) to language, and it may well be extended beyond pictures as well. Miró reportedly said, “My work is intended as a poem translated into music by a painter” (Erben, 1988, p.227).

5.2 Specific kinds of iconicity in Miró's art

We also found that some of the rules proposed in Hiraga (2005) were not applicable to our data, mainly in three aspects.

Firstly, Hiraga's (2005) linguistic model, though highly applicable, does not fully capture the iconic moments of Miró's paintings. The element placement in Miró paintings, according to our previous examination, does indeed bear distributive patterns, yet never in strictly linear orders as those in linguistic texts. The pictorial signs in Miró paintings are collaged to create the simultaneity of imageries, but at the same time intend to intrigue and allow imaginative readings from the viewers. We propose that this "simultaneous juxtaposition" trait in paintings is one of the key features that distinguish paintings from linguistic texts, where linearity is overwhelmingly preferred.

Secondly, iconic mapping rules like SYMMETRICAL MEANING IS SYMMETRICAL FORM could not be found in Miró's paintings. There is no symmetrical arrangement, be it visual or semantic, in Miró's paintings. A Miró painting is almost always arranged by the contrast between imbalanced sizes, rich combinations of color, lines and textures, as well as between unexpected, non-realistic main characters. It is perhaps hardly surprising that the highly preferred symmetrical structures in language do not appear in Miró's paintings.

Lastly, as mentioned earlier, Miró developed his pictorial signs gradually. The seeming "violation" of the iconic rule DIFFERENCE OF MEANING IS DIFFERENCE IN FORM (4.1.2), as compared to its counterpart (SIMILARITY IN MEANING IS SIMILARITY IN FORM), illustrates an important difference between language and art: While linguistic forms bear relatively less space for ambiguity or polysemy, visual art allows, or welcomes, much more space of such instances; as a result, a rich set of free readings emerge. Hence in Miró's painting, there is a degree of sign-regularity; at the same time, some forms could regularly represent another meaning, for example the fusing of HUMAN and BIRD in his later artwork. It is exactly this kind of image-form blending that creates more expressive freedom, and intrigues more imaginative interpretation from the viewers. This highlights some the differences between different expressive modalities. While verbal texts tend to be more referential-orientated, visual art distances itself further from a "smooth" information conveyance and interpretation due to the call for artistic performance and aesthetic values.

Paintings may indeed be similar to language in some ways, as shown by our findings of the embedded diagrams. However, painting is not equivalent to language in semiotic terms. Our adaptation of a cognitive linguistic model of "grammatical iconicity" to a more general model of diagrammatic iconicity was able to demonstrate this.

6. Concluding remarks

We have illustrated that diagrammatic patterns, such as SIMILARITY IN MEANING IS SIMILARITY IN FORM, MORE CONTENT IS MORE FORM, SEMANTIC RELEVANCE IS CLOSENESS, and MARKED MEANING IS MARKED FORM, may function as cognitive principles identifiable in the paintings of Miró. These correspond to most but not all of the iconic mapping rules proposed in Hiraga's (2005) model. In the cases that are not applicable in our painting samples, we explained that such violation is due to the unique nature of paintings, in which aesthetic considerations blend with more content-based arrangements.

The results support the point that diagrammatic iconicity is not specific to one type of medium, but is a more general and possibly universal semiotic property.

From an interdisciplinary perspective, our multimodal study makes clear the existence of different kinds iconic signs throughout Miró's mature paintings and

demonstrates how cognitive-based studies could contribute to the description and explanation of artistic practices involving language and visual art. Limitations exist, however, due to the scope of our study. We only analyzed some of the most representative work of Miró and it could be questioned if our findings can be generalized to all of his creation. Still, the paintings analyzed are representative of the Western-modernism tradition to which Miró belonged, and it is likely that patterns of “visual poetry” that we analyzed can be extended to other work in this tradition.

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References

- Alhner, F. & Zlatev, J. (2010) Cross-modal iconicity: A cognitive semiotic approach to sound symbolism. *Sign System Studies*, 38(1/4):298-348.
- Becker, M.K. (2014). *The acquisition of syntactic structure: Animacy and thematic alignment*. Cambridge: Cambridge University Press.
- Corbella, L.D. (1993). *Understanding Miró: Miró Analysis of language from the Barcelona series: 1939-44*. Barcelona: UB Publications. Translated by Fen-lan Hsu. Taipei: Artist.
- Donald, M. (2006). Art and cognitive evolution. In M. Turner (Ed.), *The artful mind: Cognitive science and the riddle of human creativity*, (pp. 3-20). Oxford: Oxford University Press.
- Dupin, J. (2004). *Miró*. Paris: Flammarion.
- Erben, W. (1988). *Joan Miró, 1893-1983: The man and his work*. Cologne: Taschen.
- Forceville, C. J. (2006). Non-verbal and multimodal metaphor in a cognitivist framework: Agendas for research. In G. Kristiansen, M. Achard, R. Dirven and F. J. Ruiz (Eds.), *Cognitive linguistics: current applications and future perspectives* (372-402). Berlin; New York, NY: Mouton de Gruyter.
- Freeman, M. H. (2009). Minding: Feeling, form, and meaning in the creation of poetic iconicity. In G. Brône & J. Vandaele (Eds.), *Cognitive poetics: Goals, gains, and gaps*. (pp. 169-196). Berlin: Mouton de Gruyter.
- Halliday, M. A. K. (1994). *An introduction to functional grammar 2nd ed*. London: Edward Arnold.
- Hiraga, M. K. (2005). *Metaphor and iconicity*. New York, NY: Palgrave Macmillan.
- Jakobson, R. (1960). Linguistics and poetics. In T. A. Sebeck (Ed.), *Style in language*. (pp. 350-377). Cambridge, MA: MIT Press.
- Kress, G & van Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London: Routledge.
- Lakoff, G. & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Peirce, C. S. (1955). *The theory of signs: Philosophical writings of Peirce*. New York, NY: Dover.
- Turner, M., & Fauconnier, G. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York, NY: Basic Books.

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