Reconsidering "image metaphor" in the light of perceptual simulation theory

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Abstract

"Image metaphor" is defined in conceptual metaphor theory (CMT) as a mapping of visual structure from one entity onto another based on the mental images they evoke. It is considered an exceptional, one-off phenomenon that is most commonly found in literary discourses. However, according to perceptual simulation theory, all language, both literal and metaphorical, is understood partially by simulating in our minds what it would be like to actually perceive the things that are being described. These findings call into question the original distinction between image metaphors and the more prototypical correlation metaphors that have always been the focus of CMT. As I will argue in this article, there are nevertheless important differences regarding the detail, vividness and complexity of the mental imagery invited by these two types of metaphor. Since it is hard to consider visualization in the abstract, examples of pictorial equivalents of image metaphors will be used to support my argumentation.

Introduction

In conceptual metaphor theory (CMT), prototypical metaphors involve the mapping of rich knowledge and inferential structure from concrete, clearly structured experiences of our bodily actions and perceptions (e.g. journeys) onto more abstract domains (e.g. relationships). Such "correlation" metaphors (Grady, 1999) are seen to be deeply embedded in our basic reasoning and conventionalised in everyday language, typically generating clusters of related metaphorical expressions and idioms (e.g., "Our marriage is at a crossroads", "We're stuck in

a rut"). Even the most illustrious instances of metaphors in literature and poetry, CMT claims, are often no more than creative extensions, elaborations, or combinations of these same entrenched thought patterns (Lakoff & Turner, 1989).

According to Lakoff (1987), image metaphors represent a departure from this prototype, because they involve the mapping not of knowledge but of "conventional mental images onto other conventional mental images by virtue of their internal structure" (p. 219). This mapping can include part-whole structure, such as that between a person's face and body, or attribute structure, which involves basic visual characteristics such as colour, shape, and illumination (Lakoff & Turner, 1989, p. 90). For example, the line "My wife…whose waist is an hourglass" in André Breton's (1931/1984, p. 183) surrealist poem Free Union invites readers to map the image of an hourglass onto the image of a woman on the basis of their shared internal structure, with the middle section of the hourglass corresponding to the woman's waist (cf. Lakoff, 1987, pp. 221-222). Despite being "very common" (p. 219), particularly in literary discourses, image metaphors are thought to be fleeting, "one-shot" phenomena, which are not central to the way we understand ourselves and the world we live in (p. 221).

The notion of image metaphor has, over the years, received some critical attention from individual scholars (Caballero, 2001; 2003; Coëgnarts, & Kravanja, 2012; Crisp, 1996; Deignan, 2007; Gleason, 2009; Hamilton, 2004; Sweetser, 1995), yet the main focus of the CMT community has always been on the role played by correlation metaphors in our ordinary, everyday thinking and linguistic expression. As Gleason (2009, p. 438) notes, this has resulted in an "uncertain footing for image metaphors" within CMT. Crisp (1996, p. 79) goes even further, arguing that the notion of image metaphor poses a serious challenge to anyone who is convinced of the conceptual nature of metaphor, while offering critics plenty of arguments to buttress their scepticism. It is certainly true that the emphasis on image metaphors' one-off, creative nature appears to align them more closely with traditional

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literary theories of metaphor than with cognitive approaches, one of whose key tenets it is that "[s]pecial language expressing special thought is an exploitation of the common and to be analysed only in respect to it" (Turner, 1991, p. 14).

Perceptual simulation theory (PST), which is supported by a growing body of empirical evidence (Barsalou, 2008; Bergen, 2012; Gibbs, 2006; Ritchie, 2013), raises a new set of questions. According to PST, the processing of all language, whether literal or metaphorical, is accomplished through the partial simulation of associated bodily states, actions, and sensory perceptions: "[W]e understand language by simulating in our minds what it would be like to experience the things that the language describes" (Bergen, 2012, p. 13). The concept hourglass, for example, might be represented in terms of the mental visual image of the object's general shape and of the sand trickling down, or the sensation of holding it and turning it over. When we hear or read the word "hourglass," some or all of these simulations become partially activated, using the same parts of the brain that are dedicated to perceiving and interacting with the real world. The nature and intensity of the simulations, and our conscious awareness of them, are shaped by the degree to which words are grounded in physical experience and by the context in which they are encountered. PST thus suggests that some degree of visualization is involved in the way the human mind organises and processes all language relating to things we are able to perceive with our eyes; it is certainly not unique to image metaphor.

The aim of this article is to reassess the phenomenon of image metaphor in the light of these findings. As we have seen, Lakoff's definition of image metaphor rests on two key characteristics: its putative ability to evoke strong imagery for both the source and the target domain, and the one-off, strictly visual nature of the mappings that such pairings invite. These claims raise important questions:

1) Is the ability of metaphors to trigger mental imagery contingent upon the presence of two concrete conceptual domains?

2) If not, is the mental imagery evoked by image metaphors quantitatively or qualitatively different from any visualization involved in the understanding of other kinds of metaphor?

3) If image metaphors are really limited to the mapping of visual structure, why are they nevertheless apparently so common; what essential conceptual or communicative functions do they fulfil?

I will address these three key questions in turn, drawing on theoretical arguments and empirical findings from both CMT and PST. My main argument in response to question one will be that mental imagery may be evoked by all kinds of metaphors, irrespective of whether only one or both of the domains are concrete. However, since correlation metaphors typically generate a lot of conventional expressions and idioms, they are only likely to evoke vivid visual simulations if they are encountered in contexts or genres that re-activate the embodied meanings on which the metaphors are based. Turning to the second question, I will argue that image metaphors draw attention to the visual properties of things, which means that they are likely to invite not just more conscious and deliberate, but also more complex, vivid, and detailed mental imagery than prototypical correlation metaphors. Indeed, some of these evoked images may be so complex that they exceed most people's capacity for visualization. Because it is difficult to discuss mental imagery in the abstract, I will use pictorial equivalents of image metaphors from "graphic narratives," book-length stories in the comics format, to support my claims about the nature of the mental imagery invited by image metaphors.[1] The third section starts by distinguishing between the main functions that metaphor is thought to fulfil within human thought and communication: to allow us to

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understand abstract areas of life in terms of more concrete and embodied experiences; and to attract attention, change our perspective, and/or afford imaginative pleasure. While image metaphors have always been closely associated with the latter, more decorative function, I argue that they are also capable of shaping the way we think about and understand the world around us. This explains why they are found frequently in all kinds of literary and non-literary, everyday discourses (cf. Caballero, 2001; Deignan, 2007; Sweetser, 1995).

1. The role of visualization in the processing of correlation metaphors

As mentioned above, PST scholars have discovered that all language about things we perceive with our eyes can trigger visual simulations. This finding has important implications for CMT scholars, because it challenges one of Lakoff's main criteria for distinguishing between image metaphors and prototypical correlation metaphors.

According to PST, perceptual simulation occurs irrespective of whether language is used in a literal or nonliteral context, although there is some evidence that the simulations we construct in order to process metaphors are "slightly less detailed than ones we construct for literal language" (Bergen, 2012, p. 208), particularly when the metaphorical expressions used have become highly familiar and conventional over time: "In other words, over their careers, metaphorical expressions come to be less and less vivid, less vibrant, at least as measured by how much they drive metaphorical simulations" (p. 206). Perceptual simulations, which mostly take place without our conscious awareness, may be distinguished from the mental imagery we are able to conjure up intentionally, although the two forms of visualization are probably closely interrelated. It has been shown, for instance, that, when people are specifically asked to attend to the visual properties of a concept, the areas in the brain

responsible for such information become particularly active, which also indicates increased visual simulation (Barsalou, 2008, pp. 22-29).

One notable difference between image metaphors and correlation metaphors is that the former connect two concrete objects, while in the case of the latter the target domain is typically more abstract, which, according to Gleason (2009, p. 441), normally correlates with "low imageability." However, while concreteness and imageability are closely related, they are by no means co-extensive. In CMT, the concrete or abstract nature of a concept is determined by whether or not it refers to something we can perceive directly with our senses or experience through bodily actions (Lakoff & Johnson, 1999). It is true that abstract concepts such as love, life, freedom, truth, and loyalty cannot be visualized at all without recourse to some form of metaphor, metonymy, or symbol. Yet some entities that are concrete according to the CMT definition also lack imageability, either because they are perceived by sensory organs other than the eye (e.g. smells, sounds, tastes), or because they can only be perceived indirectly through their effects on our bodies or objects in the world (e.g. forces such as gravity, wind, tides). Conversely, some things that would be considered abstract in CMT terms, in the sense that they are not accessible to our vision, can nevertheless be seen through the aid of technology and thus also pictured in our mind's eye (e.g. viruses, planets, internal bodily processes). Most of us are also able to form a clear mental image of entities that do not exist in the real world, including angels, demons, fairies, and hybrid objects and creatures of all kinds.

It is nevertheless true that in the vast majority of correlation metaphors only the source domain is imageable, whereas image metaphors, by their very definition, consist of two imageable domains. There is no reason to assume that the presence of only one imageable domain, in itself, discourages visualization, but correlation metaphors are typically expressed through familiar expressions and idioms (Lakoff, 1987: 221), which, according to PST,

decreases the likelihood that they will trigger rich perceptual simulations. By contrast, metaphors that are based on the perception of physical resemblance, including image metaphors, tend to be a lot less constrained, since the human imagination "is boundless in its capacity to impose resemblance on disparate objects" (Grady, 1999, p. 96). They also tend to be expressed in more unconventional – and thus visually evocative – language than correlation metaphors.

However, there is some empirical evidence that even verbal idioms that represent highly conventionalized mappings from a concrete source onto a more abstract target, such as "spill the beans" and "hit the ceiling," are able to trigger remarkably consistent mental images when people are explicitly asked to describe their visualizations (Gibbs & O'Brien, 1994). Another way of guiding people beyond the "automatic and unconscious everyday use" of conventional correlation metaphors (Lakoff & Turner, 1989, p. 72) is by finding fresh, idiosyncratic extensions, elaborations or combinations, in the way that writers, poets and great rhetoricians are adept at doing. As Steen (1994) discovered in a series of experiments, readers typically also pay more attention to metaphors in literary than in non-literary texts, and this heightened attention increases the probability that the metaphors will generate rich ideas and fantasies. Even the most entrenched metaphorical expressions and idioms can also be (re-)activated by their immediate textual context, irrespective of the genre/register in which they occur (Goatly, 1997; Müller, 2008). For example, if a common metaphorical expression in a newspaper article is accompanied by an illustration or photograph that represents the source domain literally, readers may become more aware of the metaphorical nature of the expression. Similarly, if eyes and/or vision are mentioned explicitly in the vicinity of a particular poetic metaphor, the visual properties of the concepts that are being referred to are likely to be foregrounded in the reader's mind (Gleason, 2009, p. 445), thereby increasing the likelihood of vivid mental imagery.

A case in point is the example discussed by Kövecses (2011) of a journalist who was apparently inspired by the still visible devastation wreaked by Katrina in New Orleans to describe the hurricane as having "capsized" the life of one of the city's inhabitants, thus extending the general metaphor of "LIFE IS A JOURNEY" to include the more specific image of a sea journey that has ended in disaster (p. 64). This metaphorical expression may have also triggered mental imagery in some of the journalist's audience, particularly if they had recently seen (pictures or film footage of) overturned boats in New Orleans.

Even Lakoff & Turner (1989) concede that sometimes a source domain may create an image for an abstract target where none existed before. When, in Breton's Free Union, the wife's thoughts are likened to "summer lightning", the authors propose, the mapping is accomplished via the common correlation metaphor "UNDERSTANDING IS SEEING", while also creating "an image of a thought as a particularly powerful lightening bolt" (p. 94). The description of a sudden powerful thought as "summer lightening" is an unusual way of expressing the underlying mapping, thus perhaps appealing more strongly to people's visual imagination, especially when, as in this case, the metaphor is encountered in poetry. Gibbs & Bogdonovich (1999) included this line in their psycholinguistic study of how people interpret image metaphors in Free Union. Significantly, they do not mention any differences in terms of how this line was processed, compared to the genuine image metaphors in Breton's poem: In all cases, the participants were found to be more likely to draw on visual imagery than on general or relational knowledge of the source domain.

Although some degree of visualization may thus be evoked by both image metaphors and correlation metaphors, my assertion is that in the case of the latter, detailed, vivid mental imagery is only likely to occur in particular genres and discourse contexts and/or when conventional mappings are extended, elaborated, or expressed in striking new language, although this would of course need to be tested empirically.

2. Mental imagery in the processing of image metaphors

As we have seen, the ability to evoke mental imagery is not unique to image metaphors. However, this does not rule out the possibility that image metaphors may trigger a different type or quality of visualization.

A key characteristic of image metaphors that distinguishes them both from correlation metaphors and other resemblance metaphors is that they often only make sense if we consider the visual properties of the two concepts. Writing before PST was developed, Tsur (1992) put forward the interesting theory that, when interpreting metaphor, there is a human preference for similarities based on what the two things <u>do</u> rather than what they are <u>like</u> in terms of their aesthetic principles: "For the purpose of survival, it is less important to know what an objects looks like than to know what it can do. This seems to be the reason for the cognitive tendency first to notice the functional elements in a figurative construction and only when this fails to account for the metaphor, to notice – if at all – the sensuous elements" (p. 211). If the boy next door is described as a ball of fire, for example, people are more likely to think he is wild and energetic than that he is round and has red hair.

A similar line of argumentation is developed by Ritchie (2013, pp. 95-105). Combining PST with Sperber and Wilson's (1995) relevance theory, he suggests that when a unit of language is encountered, a whole range of semantic connections and perceptual simulations are at least partially activated. In the search for relevance, some of these activations will be reduced or even suppressed entirely as completely irrelevant to the present cognitive context, whereas others are more highly activated. In the case of some metaphors, the perceptual simulations may be more relevant than any semantic links: "In the extreme, the semantic links associated with the 'literal' meaning of words and phrases may be uninterpretable and

meaningless, and accordingly be supressed, leaving only the more abstract schemas and simulations indirectly associated with the target" (p. 100).

Accordingly, visual simulations are likely to be activated most strongly in the case of image metaphors that link together two domains of experience that have very little in common apart from their similar appearance. If, for example, a man is compared to a scarecrow, it is hard to find any significant actions or characteristics apart from the scarecrow's appearance that could plausibly be mapped onto the man, which means that people are most likely to focus on visual aspects when processing this metaphor. We might thus expect a greater degree of activation of the visual system as people consciously search for a relevant interpretation of such metaphors.

However, the fact that an image metaphor strongly invites visualization does not necessarily mean that everybody will actually process it in this way. Lakoff's (1987) original description of image metaphor placed emphasis on the conventional nature of the mental images evoked by both the source and the target domain: "[T]he images that image metaphors apply to are conventional images - images that are acquired largely unconsciously and automatically over the years by members of a cultural community. For example, we all have a conventional image of an hourglass that we can call upon without being shown a particular hourglass or a picture of one" (p. 220). While it is true that most people in western industrialized nations are probably able to form at least a schematic mental image of a woman's waist and of an hourglass without much conscious effort, many of the examples of image metaphors discussed by Lakoff (1987; 1993) and Lakoff and Turner (1989, pp. 90–99) are not, in fact, based on conventional mental images. The very next line in Breton's poem, for instance, likens the wife's waist to "the waist of an otter caught in the teeth of a tiger." It is doubtful that many people would be able to call upon a conventional image of an otter

caught in the teeth of a tiger without at least some conscious effort, since it is not something we are likely to see regularly either in reality or in pictures.

Moreover, there is an enormous variation between individuals' ability to visualize things in vivid detail (Breitmeyer, 2010, p. 139). This ability is dependent on memory, which works by selecting, discarding, and reshaping elements of our experiences to fit our current interests. People with a detailed visual memory are likely to use their vision system more when processing language than people who rely more heavily on their motor or auditory system. Indeed, about three percent of the population claim that they do not generate any visual imagery at all, at least on the level of conscious awareness (Bergen, 2012, p. 152). There is also good evidence for variations in the degree to which people are object or spatial visualizers (p. 172), with some depending more on the "What pathway," which processes the detailed visual properties of objects, and others on the "Where pathway," which is responsible for processing information about the arrangements of objects and motion (pp. 51-53).

To make matters even more complicated, image metaphors require people not only to visualize the two domains, but also to mentally map one onto the other. This process, Lakoff (1987) submits, can be very straightforward, as when the mapping just involves a shared (e.g. hour-glass) form, or more complex, as in the tiger example, where the extent of the mapping "depends on the imagination of the reader: The writhing motion of the otter may be mapped onto the wife's body; the dripping sheen of the otter's fur may be mapped onto the wife's shiny sweat" (p. 221).

But what visual processes does the "mapping" of properties from one mental image to another involve, exactly? The example of pictorial metaphors from graphic narratives may help us to explore this question in detail. Breitmeyer (2010, p. 145) is convinced that there is an intimate link between our ability to visualize things and the possibility of depicting them.

However, one important difference between verbal and visual manifestations of image metaphor is that, in the case of the former, the mapping of visual structure needs to be performed in the mind of individual readers/listeners, whereas in the latter case, the visualization has already been translated into a concrete picture by the image producer. Perhaps because of an innate talent, or because of years of paying close attention to shapes, colours and forms, visual artists are likely to be able to call upon a greater number of precise mental images than the average person and to use these to guide their visual representations: "Some of us might also be able to generate such imagery, but lack the skill to render them in any medium as art. Most of us, I must admit, simply do not have the mind's eye of a good artist" (Breitmeyer, 2010, p. 145). When an artist renders something in a visual form, he or she can thus be said to be doing some of the mental work for viewers, presenting them with imagery which may well exceed their individual capacity to visualize.

The following extract from the graphic memoir The Spiral Cage, in which Al Davison (1990) relates his experiences of growing up with a severe form of spina bifida, may serve to illustrate one possible answer to the question of what the mental mapping of visual properties triggered by an image metaphor might look like. The two panels in fig. 1 form part of an episode about the young adult protagonist's rejection by a woman with whom he has fallen deeply in love. Standing alone by the bus stop on his way home from her house, battered by the wind and rain, he catches sight of a scarecrow in a field opposite. The way Al and the scarecrow are represented in the two consecutive panels suggests that they are alike, which, in turn, may evoke a metaphorical interpretation.

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Figure 1: Al Davison (1990) The spiral cage: An autobiography. London: Titan Books, no pagination.

In this type of visual metaphor, which has been termed variously a "pictorial simile" (Forceville, 1996) and "symmetric image (object) alignment" (van Weelden et al., 2011; Schilperoord et al., 2009; Teng & Sun, 2002), entities belonging to two different conceptual domains are shown separately but in a way that emphasizes their similarity. Such metaphors often exploit a pre-existing resemblance between two entities, but the perception of resemblance may also be created by manipulating some of their attributes and/or arranging them in particular ways.

Schilperood et al. (2009: 158) draw a helpful distinction between the entities' "object-constitutive attributes," such as size, shape, colour, and texture, and their "object-depictment attributes," which concern the way they are displayed, including their visual context, distance from the viewer, and alignment along a horizontal, vertical or diagonal axis. The authors relate these attributes to Wertheimer's (1923) Gestalt principles of similarity and proximity, which are thought to guide the way we group perceptual elements in our environment together based on how similar they look or how close they are to each other. Somewhat surprisingly, the authors do not mention the Gestalt laws of symmetry, continuity, and common region, which also seem highly relevant to the discussion of object-depictment attributes. These principles suggest that items that are presented in a symmetrical order, continue a pattern or direction, or share a common background or bounded area tend to be regarded as belonging together (Zakia, 2002). In the two panels in fig. 2, for instance, the pre-exiting similarities between Al and the scarecrow in terms of size and overall shape are underscored through the way they are depicted from the same angle and at almost the same distance from the viewer, with the different body parts being roughly aligned. The similar shape and closeness of the two panel frames, and the visual parallels and continued lines

formed by the flashes of lightening and the driving rain in the background of both pictures also underline the resemblance.

If we apply these findings to the question of how people might process visual image metaphors, we may thus speculate that the two source domains are visualized as separate entities and then appraised for any visual correspondences between the two, in terms of either their part-whole structure or their visual properties. In some cases the shared properties are likely to be fairly straightforward, but other image metaphors draw parallels between objects that, on the face of it are not at all alike. In his study of metaphor in Imagist poetry, Gleason (2009, p. 444) discovered that image metaphor "often plays upon similarity of shape," but that there are also cases where physically dissimilar objects are compared (e.g. a coiled rope and a maple leaf). This, he believes, makes visualization much more challenging. Indeed, he is doubtful whether readers are ever really able to merge the two entities in their imagination. He cites the ambiguous figures invented by Gestalt psychologists in the first half of the 20th century, including the Necker cube and the duck-rabbit figure, which can be seen in two separate, incompatible ways, but only in one version at a time. The failure to fuse two images together in perceiving such ambiguous figures, Gleason suggests, may "help mark the limits of the visual imagination" in the case of image metaphor, too: "The cognitive lesson of ambiguous figures is that the terms of image metaphor, no matter how conceptually related or physically similar, must remain distinct in visual imagery" (p. 459).

The ambiguous figures in Gestalt psychology call to mind another possible way in which the notion of a mapping of visual structure in the processing of image metaphors might be translated into a pictorial form. In the following panel from Blankets, Craig Thomson's (2003) semi-autobiographical account of his fundamentalist Christian upbringing in a small town in the American Midwest (fig. 2), metaphorical meaning emerges from what might be

termed a "perceptual echo" (El Refaie, 2013), where one entity is depicted in a way that strongly calls to mind a different one.

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Figure 2: Craig Thompson (2003) <u>Blankets</u>. Marietta, GA: Top Shelf, p. 447.

As a teenager, the protagonist falls in love with a beautiful girl, but his faith makes him reluctant to consummate the relationship. Given this context, most readers are likely to recognise that the snow drifts in figure 2 look remarkably like a naked woman's hips, thighs and crotch, particularly as human beings have a natural tendency to see faces and bodies in clouds and other random forms and patterns in the world (Breitmeyer, 2010, p. 178). While it is perfectly possible that some people may construct such an ambiguous figure in their mind's eye when interpreting the equivalent verbal image metaphor ("<u>her body is snow drifts</u>"), this would probably require a particularly finely tuned capacity for complex, detailed visualization.

Kövecses (2002, p. 38) has described the process involved in the interpretation of image metaphors in slightly different terms, namely as the "superimposition of one image onto the other". This suggests a mental image akin to what visual metaphor scholars call a "hybrid," where target and source are visually amalgamated into one spatially bounded object (Forceville, 1996).[2] The following scene (see fig.3), which is drawn from an earlier section of Thompson's (2003) <u>Blankets</u>, contains a good example of a visual hybrid. Craig and his younger brother have been fighting, and the father punishes them by forcing the brother to sleep in the cubby hole under the stairs. In the eyes of the little boy, the folding bed takes on the features of a crocodile-like monster. This image speaks volumes about his terror at the prospect of spending the night alone in this dark, dusty, spider-infested place.

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Figure 3: Craig Thompson (2003) <u>Blankets</u>. Marietta, GA: Top Shelf, p. 16.

In order to interpret the equivalent verbal image metaphor ("<u>the folding bed is a crocodile</u>"), readers may indeed construct a unified hybrid figure similar to the one Thompson has created, but again the process would certainly require an extraordinary amount of conscious effort, as well as a detailed and accurate visual memory. Indeed, most people would probably find it challenging enough to picture even the most generic of crocodiles with any degree of precision, let alone to generate such a complex visual hybrid in their mind's eye.

In sum, because of their creative and unusual nature, and because they often only make sense if interpreted on the basis of a visual resemblance between two concepts, image metaphors typically invite more conscious, vivid, and complex visualizations than correlation metaphors. This process is likely to involve mental imagery that is akin to what visual metaphor theorist have described as symmetric image alignment, visual echoes, or hybrids. However, there are likely to be big differences with regard to how much individuals engage their visual system during language processing, and some image metaphors may well place excessive demands on many people's ability to perform the intricate visual processing task such metaphors invite. Clearly, these assumptions are still highly speculative and they would require rigorous empirical testing.

3. The communicative functions of image metaphor

In this final section I address the question why, if image metaphors are merely one-off mappings of visual structure with no essential conceptual function, they are nevertheless

apparently so common. Considering the many distinct approaches to the study of metaphor that have been developed since Antiquity, it is possible to distinguish very broadly between, on the one hand, views of metaphor as elaboration or adornment, and, on the other, metaphor as the very bedrock of human thought and language (Punter, 2007, p. 11). In the case of the former, the focus is on creative examples of verbal or visual metaphor in poetic or persuasive texts, whereas scholars in the latter tradition are most interested in those conventional, everyday metaphors that allow us to understand abstract areas of life in terms of more concrete and embodied experiences.

The difficulty with these polarized views of metaphor is that there is a tendency for proponents of each side of the argument to downplay the relevance of instances of metaphor that do not quite fit into their own explanatory frameworks. Accordingly, there is a danger that the notion of image metaphor is misused by some as a dumping ground for all those cases that challenge or contradict the conceptual paradigm. This increases the temptation for CMT scholars to regard image metaphors as utterly distinct from prototypical correlation metaphors. In fact, as I will argue, there are many overlaps between the two types of metaphor and their respective communicative functions. Although image metaphors are often used for poetic purposes, they can also offer new insights by encouraging us to modify our understanding of two distinct conceptual domains as we consider one entity in terms of another.

Lakoff and Turner (1989) concede that some image metaphors may trigger, reinforce, or interact with prototypical conceptual metaphors in complex ways. The image mapping of a tree onto a man, for instance, may activate the metaphor "PEOPLE ARE PLANTS" and thus prompt the mapping of knowledge and inferences from one domain to the other (p. 92). Yet, as Crisp (1996, p. 84) points out, in CMT, "such an activation of conceptual metaphor does not seem to be a necessary but rather an optional property of image metaphors."

If we consider again the examples discussed above, however, it seems that their meanings are not limited to the mapping of part-whole or visual attribute structure, at least when they are considered in their specific context of use. Even in the case of the image metaphor "her body is snow drifts", where the main focus is on the shared shape of the two entities, the choice of snow rather than grassy slopes, for instance, is surely significant, suggesting something about how the deeply enamoured young man perceives the softness of his girlfriend's skin and the purity of his feelings for her. In all the other examples, the mapping of any visual properties just seems to act as a cue for the evocation of a whole range of shared meanings, although, again, many of these meanings are only activated by their specific narrative contexts. In the case of the metaphor "the folding bed is a crocodile", for instance, readers are invited to transfer not just the not just the share part-whole structure, but also what we might imagine the little boy's feelings towards crocodiles to be onto the bed. Similarly, Al's self-identification with a scarecrow starts with a visual resemblance, but it also invites readers to project the scarecrow's lonely existence and immobility onto the young man's feelings of dejection and alienation from his own disabled body, for example.

In fact, when examined more closely, even the most prototypical examples of poetic image metaphors discussed by Lakoff & Turner (1989) turn out not to be limited to the mapping of image structure, particularly if they are interpreted within the context of the whole poem. For example, Breton's choice of an hourglass to describe a woman's waist may have been motivated not only by this object's shape but also by the perceptual simulations and cultural connotations it is able to activate. We know from experience that an hourglass is typically fragile, and that it is often used to stand metonymically for transience, for instance. Both these meanings have a long history in Western consumer societies of being closely associated with women's bodies and are thus likely to become activated in the mind of at least some of the readers processing this metaphor, especially after they have read the

following line that likens the wife's waist to that of an otter caught in the teeth of a tiger. Had Breton chosen instead to describe her waist as an African djembe drum, our interpretation of the metaphor would probably be very different, even though this instrument is also hourglass-shaped.

When image metaphors are used in non-literary genres, they have also been found to convey meanings that go beyond the one-off mapping of image structure. In architectural discourses, for instance, they form the basis of a lot of conventional jargon and fulfil an important heuristic role in helping architects and commentators grasp the elusive conceptual domain of space. The description of a building as "tadpole-like," for example, allows people to understand and comment upon its different parts and how they are arranged to make up the whole (Caballero, 2001, p. 84). If architects' specialist knowledge is taken into account, many of these image metaphors also carry important evaluative meanings. "Our ability to understand what is both explicitly and implicitly conveyed verbally is only activated when metaphors are seen in context – regardless of whether they map abstract knowledge or images," Caballero (2001, p. 99) concludes. Indeed, many cases of metaphor Caballero (2003) finds in her data are impossible to classify as pure image metaphors or pure conceptual metaphors. One example she gives is where the air-conditioning system in a building is described in terms of the "ingenious weaving of ductwork in ceilings" (p. 90, italics in the original). While reflecting the common conceptual metaphor "ARCHITECTURAL PRACTICE IS MAKING CLOTH," this metaphor also evokes a strong visual image that compares the arrangements of ducts in a building to the threads in a woven cloth.

It seems, then, that Lakoff's (1987) and Lakoff and Turner's (1989) original distinction between the mappings involved in the cases of conventional conceptual metaphor and image metaphor might be over-simplistic, particularly if the discourse context and the possibility of

perceptual simulations and more connotative meanings are taken into account (cf. also Deignan, 2007). The pervasiveness of image metaphors in literary and non-literary discourses may thus be due to their ability to fulfil a broad range of communicative functions, including attracting our attention, providing imaginative pleasure, and encouraging us to change our understanding or evaluation of particular conceptual domains.

Concluding remarks

The main aim of this paper was to test the claims made by CMT about image metaphors by confronting them with the main findings of PST. This has led me to put forward several propositions about the role and nature of mental imagery in the processing of both correlation metaphors and image metaphors. I have suggested, for instance, that visualization is not an exclusive property of metaphors with two concrete or imageable domains, but that image metaphors typically invite a more deliberate, conscious, and detailed form of visualization than conventional correlation metaphors. The processing of image metaphors may take several different forms, all of which place high demands on the individual's capacity for accurate and detailed visualization, which means that there is likely to be significant individual variation in terms of the way people actually interpret such metaphors. Finally, I made the point that, particularly when context is taken into account, image metaphors are able to fulfil a whole range of communicative and conceptual functions, including the ability to help us better understand and evaluate particular areas of life, and to afford a new perspective on the world, by encouraging us to "look at the world afresh" (Punter, 2007, p. 9). For this reason, metaphors based on visual resemblance are no less significant and influential to the way we perceive and understand the world than the correlation metaphors that have for so long been the almost exclusive focus of CMT. Although my claims are

consistent with the existing evidence, they do, of course, still need to be tested by rigorous empirical research.

The tendency for CMT scholars to concentrate on the search for universal patterns of metaphorical understanding and to underplay the creative potential of many metaphors has, unfortunately, alienated many literary critics. As Biebuyck and Martens (2011) point out, literary metaphor, in particular, typically requires readers to "pay close attention to the interaction it sustains with other tropes and to the narrative potential that thus emerges" (p. 72). This elicits "a reader attitude that is more reflexive, more cooperative and less authoritative than the type of metaphor comprehension cognitive research describes, acting less locally and hinging more strongly on dynamic inference" (p. 73). A re-evaluation by CMT of image metaphors and of the many unique interpretations they are often able to invite may allow a rapprochement and enhanced collaboration between the two main traditions of metaphor study. I see my paper as a small step towards this goal.

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[1] Although many work in this medium are replete with visual metaphors (El Refaie, 2012; Kukkonen, 2008), the phenomenon has, for the most part, been neglected by both metaphor and comics scholars.

[2] An alternative way of analysing hybrid visual metaphors might be in terms of "conceptual blends" (Fauconnier & Turner, 2002). However, a discussion of the strengths and weaknesses of Blending Theory exceeds the limited scope of the current article. For a critical review of this theory as an explanatory framework for metaphor, see Ritchie (2004).