

Do Metaphors Matter? A Corpus and Cognitive Linguistic-Based Analysis on Conceptual Blending and the Conceptual Metaphor

Nawal Shekar^a, ^aArab Open University, Bahrain, 2019, Email:
nawal.shakar@aou.org.bh

In asking whether one phenomenon reduces another, scientists aim to understand what the fundamental basis of the first phenomenon is, as is the case when reducing all higher level phenomena to fundamental physics. Therefore, in order to understand how the Conceptual Metaphor is constructed, we need to understand the construction of the first mental spaces and conceptual domains that form the *simile*. This paper aims to analyse the fundamental basis of Conceptual Metaphor in light of the linguistic-cognitive theories of Mental Spaces and Conceptual Blending, using a nineteenth-century literary text by Kate Chopin as a model.

Introduction

Recent research regarding Mental Spaces and Conceptual Blending, has initiated thinking that any possible world is part of a conceptual holistic network, and all the conceptual domains of any possible world owe each other. This statement is derived from the Metaphysical Unity of Science (or MetaScience) theory, although the principles of this theory first originated based on the 'dependence relations' of the biology-chemistry and the chemistry-physics interfaces. Thus, "while logic only produces mental relations", word mining, a branch of Corpus Linguistics, deals with the surface (or the physics) of language and can be studied in light of MetaScience (Ashely, 2006 p. 278).

There is a belief that letters are matters; both when articulated and when printed and are so both when they are blended and translated. When articulated they construct acoustic waves and then sounds. However, as this matter of 'acoustic waves' relates to thoughts and conceptualisation, it has seldom (if ever) been addressed by physicists. When printed, (or handwritten), as the ink interfaces with paper, letters construct visual messages that the eyes take in before the mind

entertains them. When children use chalk, pens or crayons to write letters (and later on words) they touch them, blend them, learn how to visualise them, compare between the colours and shapes of them, point to them and most importantly, map tens of lives (of animate and inanimate objects) from and unto them. They construct new mental spaces and domains from letters by using their neurotransmitters. They also turn them into *acoustic waves* and this research proposes that this process then, is a vivid case of unification.

Thus, although mental and conceptual spaces are not physical matters, letters (such as the letter “I”) that construct them, are. Sometimes they *are* meaningful even when not articulated; even when they remain *thoughts* that travel via neurotransmitters. Given that the very neurotransmitters themselves are “chemical matters” (Jaglul, 2013, p.33) the question are thoughts not chemical matters also? "Thinking ...takes place predominantly in the cascading network of the Prefrontal Cortex invoking vast resources of our mental model of the world and enabling the language centres that provide the words for our thoughts. Thinking is the seat for analyzing things for example, the moves in a chess game. However, humans do not have the means to pinpoint the context of any particular thought before it arises although we know that the Caudate Nucleus at the Stratum, initiates the movement of our thoughts. (Jaglul, 2013, Pp.132-140)

The question remains, why cannot letters be a subject to the perspective of metaphysics and philosophy of science and why can't they be a scientific phenomenon requiring explanation? This raises the issue of metaphors. The linguistic and/or literary aspects of texts, including those that are discussed in light of Narrative Theory, can also be studied in light of the recent cognitive theories of Mental Spaces and Conceptual Blending, as these cognitive theories can reveal hidden complexities in the construction of conceptual domains as they map and cross-map each other. Thus, the philosophy of language, particularly the construction of mental spaces and blends, although not physical, is to some extent similar to the philosophy of science when compared to case studies from biology, chemistry and physics:

Like biology, culture and learning give us entrenched integrations that we can manipulate directly. In both cases, once we have the integration it is hard or impossible to escape it. We construe the physical, mental and social worlds we live in by virtue of the integrations we achieve through biology and culture. There is no other way for us to apprehend the world. Blending is not something we do in addition to living in the world; it is our means of living in the world (Fauconnier and Turner, 2003, p. 390)

Cognitive-based Theories

Fauconnier and Turner state that the known world is a set of mental spaces that are blended (or compressed) by vital relations (2003). The Theoretical basis of this paper is founded upon

research into the theory of Mental Spaces by Fauconnier, 1994, and the theory of Conceptual Blending of spaces by Fauconnier and Turner, 2003. These two theories are used as the primary tool in exploring aspects of the Conceptual Metaphor. Moreover, this paper is an attempt to explain certain metaphorical structures in light of the theories of the Conceptual Metaphor—as presented and discussed by Johnson and Lakoff which both Fauconnier and Turner also discuss in terms of mental spaces construction as well as neuroscience.

The Conceptual Metaphor

The domains of metaphor stand as fixed concepts or as neural information structures. The abstraction of the neural organization of metaphors therefore, might be the reason why the reader views the imaginatively combined elements of such networks as real and hence, views and weaves the blended spheres (or domains)—as narrators in literary texts wittily aim for.

When we systematically use inference patterns from one conceptual domain to reason about another conceptual domain, ‘we call that phenomenon conceptual metaphor, and we call the systematic correspondences across such domains metaphorical mappings’ (Lakoff and Johnson, 2003, p.246). However, conceptual metaphors are so called because they ‘are not just matters of the intellect’; rather they govern our thoughts and also our everyday functioning, down to the most mundane details (p.3). Our concepts, therefore, structure what we perceive, how we get around in the world, how we describe things and how we relate to other people. ‘Our conceptual system thus plays a central role in defining our everyday realities’ (p.3).

Structuring a Conceptual Metaphor is not an easy process, though. According to Johnson and Lakoff. When we imagine seeing a scene, our visual cortex is active. When we imagine moving our bodies, the pre-motor cortex and motor cortex are active. In short, some of the same parts of our brains are active in imagining as they are in perceiving and doing. The term *enactment* will be used in this paper for dynamic brain functions shared both during perceiving and acting and during imagining. An enactment, real or imaginative, is dynamic, that is, it occurs in real time. Our sensory-motor concepts arise from our sensory-motor experiences (experiences moving in space, perceiving, manipulating objects and so on). Fixed concepts are neural information structures called neural *parameterizations* that can guide imaginative enactments when activated. Conceptual metaphors, at the neural level, link source domain parameters to target domain parameters. (2008, p.257)

In their neural interpretation of conceptual metaphor, Fauconnier and Turner define the conceptual metaphor as ‘mental spaces [that] are sets of activated neuronal assemblies, and the lines between elements correspond to coactivation-bindings of a certain kind’ (p.40). The properties of neural organization, however, ‘would clearly yield a strong feeling of ‘reality’ for such mental representations in spite of their abstraction (Fauconnier, 1994, p.xxxii). In *From Molecule to Metaphor: A Neural Theory of Language*, Jerome Feldman notes that ‘thought and

language are neural systems [that] work by neural computation, not formal symbol manipulation' (Feldman, 2008, p.8). Similarly, Fauconnier and Turner also believe that compression in blending networks operates on a surprisingly small set of relations rooted in fundamental human neurobiology as well as shared social experience (2003, p.xiii).

Furthermore, Johnson and Lakoff, in *Metaphors We Live By*, point out that originally 'the terms map and mapping used here come from neuroscience' (2008, p.255). In this regard, therefore, 'metaphors are computed neurally via neural maps—neural circuitry linking the sensory-motor system with higher cortical areas' (p.255). Thus, according to Johnson and Lakoff, the theory of blended spaces developed by Fauconnier and Turner, overlaps in important ways with certain aspects of the Neural Theory of Language (Johnson and Lakoff, 2008, p.261). In other words, what is called blending or conceptual integration in blending theory seems to correspond to binding in the neural theory. It is, therefore, concerned with conceptual integration: how conceptual structures are combined for use in particular cases, especially in imaginative cases.

On the other hand, Fauconnier and Turner believe that metaphors equally deploy systems of blending and mapping. To them, the conventional source-target metaphor is a single-scope network (a blend) of a framing input space (the source domain) and a focus input space (the target domain)¹. Hence, conceptual mapping takes place between the connected elements, as well as their roles, in the two inputs. However, these connected elements are not necessarily 'directly identical' (Fauconnier and Turner, 2003, p.127). In the neural theory of metaphor, therefore, the terms map and projection take on a whole new meaning. The domains are highly structured neural ensembles in different regions of the brain (Johnson and Lakoff, 2008, p.256). The neural maps are, thus, learned via neural recruitment, and 'this neural learning mechanism produces a stable, conventional system of primary metaphors that tend to remain in place indefinitely within the conceptual system' (p.256). However, sometimes the conceptual borders are not always clear, as 'spaces are not all world scenarios; some are more like domains' (Dancygier and Sweetser, 2005, p.30).

A Model Text

'A Harbinger': A Theory of Conceptual Metaphor

But there was nothing to keep him from remembering the hills; the whirr of the summer breeze through delicate-leafed maples; the bird-notes that used to break clear and sharp into the

¹ There is, the English conventional metaphor AN INSTRUMENT IS A COMPANION, where adults treat certain significant instruments like cars and guns as companions, giving them names, talking to them, etc. In their conceptual system, accordingly, the English preposition 'with', indicates Both INSTRUMENTALITY and ACCOMPANIMENT (Johnson and Lakoff, 2008, p.134).

stillness when he and Diantha were together on the wooded hillside ('A Harbinger', Chopin and Gilbert, 2002, pp.726-727).

Pursuing the notion of self-education, which seems to be the most dominant approach in Chopin's philosophy of learning, 'A Harbinger' presents a model of a self-learning painter, or traveller, who travels freely from one place to another in order to improve his artistic skills. While practicing fine art, Bruno explores the effect of time and place on creativity, as two elements that control cognitive learning. Thus, in defining the difference between the reality of things and their representations, this short story explores two educational; learning by analogy and learning by association. This story also explores how cognitive learning is governed by one's linguistic skills. Moreover, it reveals the relationship between the two linguistic devices; simile and conceptual metaphor and how the latter is based on the former. This exploration, however, is conducted by the application of the Theory of Mental Spaces as proposed by Fauconnier (1994).

Bruno is a young painter. He spends his life travelling and moving between the city and the countryside. Bruno is fascinated by beauty and therefore he likes to transmit the beauty he witnesses in the real world to his fictional world of painting. This transmission, which takes place by some tools, involves complex cognitive learning. However, among all the 'nice work' he presents 'in black and white; sometimes in green and yellow and red', nothing seems to be as 'clever' as the painting of Diantha. As a painter, Bruno has 'bags' that contain his painting tools; 'his brushes and colors and things'. This 'bag' helps him establish his classes of art in a learning environment that is managed by various factors of time and space. As a matter of fact, in Bruno's fictional world but not necessarily in the real world, the process of this student-centred learning, in theory and practice, is stimulated by beauty. However, as Bruno discovers, mastering this art of representation is not the same as coming to grips with reality.

Art as a Learning Experience

There is very little, if there is any at all, published work on 'A Harbinger'. Similarly, the text in its own right is very short and it tells us very little about Bruno's paintings. Nevertheless, with regard to the representation of beauty and beautiful figures in his paintings, one might be tempted to assume that they are romantic paintings. However, the main focus of the school of 'romantic painting' (that was later on developed as 'landscape painting movement' led by Hudson River School of art around 1835 through 1870) was on the 'rugged and vast beauty' of the American 'pastoral' landscape (Palmer, 2011). On the contrary, Bruno views landscape beauty as a reflection of the beauty of a human being. He blurs the landscape with the form of Diantha, especially after he has left them both behind: 'He tried not to think of sweet-eyed Diantha. But there was nothing to keep him from remembering the hills; the whirr of the summer breeze through delicate-leafed maples; the bird-notes that used to break clear and sharp

into the stillness when he and Diantha were together on the wooded hillside' (p.727). Unlike the different schools of fine arts, Bruno's concern is not to express the emotions (the abstract expressionism), nor to represent the beauty of human body (the profane art). Rather, his work represents the human figures either as 'mountain flowers', 'morning dew', 'ripe wheat' or 'a white-robed lily'. Therefore, it is, if we may call it, the fine art of *metaphor*.

In this text, visualising the physical aspects of the universe is the means of conceptualisation, whether it is visualising objects or the representations of these objects. Here, the visual sensory processing is also associated with time, in particular summer. Associated with the presence of 'gentle Diantha', summer seems to be the season of love and joy. Summer, thus, works as a harbinger of 'gentle Diantha'. Even more, thinking of summer summons up her presence, the matter that makes Bruno retrieve all data stored in the mental space labeled by the name of 'summer', and render it as a mental space called 'Diantha'. For him, moreover, Diantha is present in 'the hills' and among 'the whirr of the summer breeze through delicate-leafed maples; the bird-notes that used to break clear and sharp into the stillness'. Cognitively this is a reflection of one type of associative learning.

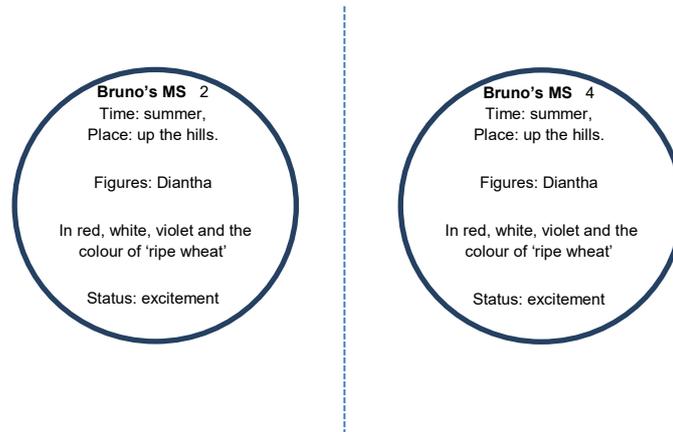
As a result, all feelings, physical aspects as well as chemical and psychological reactions and interactions, associated with the presence of Diantha are simulated in the mental space of the upcoming summer. This simulation however means that Bruno based his expectations on the physics and biology of both nature and man, overlooking the social and cultural contexts of this artistic experience: 'He sang even, when he was not lost in wondering if the sunlight would fall just as it did last June, aslant the green slopes; and if—and if Diantha would quiver red and white again when he called her his sweet own Diantha.' Based on this simulation, Bruno, who has an analogical mind at this stage of life, starts to head towards Diantha by the arrival of summer, fully conscious of the facts recorded in the mental space of last summer but unconscious of other facts and probabilities generated from these facts. One of these facts is that he has been away from her for about a year and, accordingly one of the probabilities is that his 'own' Diantha might have been owned by someone else.

In the meantime, however, he starts to project all the elements stored in the mental space of past summer (including biological and physical aspects) onto the mental space of the coming summer. This means, therefore, that Bruno has unconsciously drawn a line of symmetry before projecting the mental space of first summer (MS 2) on the mental space of the second summer (MS 4). This mental projection or anticipating of a future mental space before it actually takes place in his reality (in his world) comes as a natural result of a specific type of learning that utilises a past experience as a model of an upcoming event of the same nature. Logically, drawing a mental line of symmetry indicates that Bruno has drawn an analogy and defined a number of similarities between the two mental spaces. These similarities are simply recognized by an analogical mind through definition of the main elements of the two spaces, such as

‘Bruno’, ‘Diantha’, ‘the hills’ and ‘summer’. Thus, from one viewpoint, the mental space of the first summer works as the domain source upon which the mental space of the second summer is projected.

Figure 1 below shows this mental projection:

Figure 1. The Projection of mental space 2 onto the mental space 4 in 'A Harbinger'



From the cognitive viewpoint, Bruno’s mental simulation followed by mental projection is an indicator of analogical investigation as deduced from a past experience and this seems to be a simple form of learning by analogy based on memory-based reasoning. ‘Associative Memory-Based Reasoning (AMBR) has been proposed as a model of human reasoning in problem solving, unifying analogy, deduction, and induction’ (Gentner et al, 2001). Similarly, Fauconnier believes that ‘analogical mappings are viewed as higher-level reasoning processes’ (1994, p.xxv). The analogical mapping between two mental spaces as two domains (MS of a flower and MS of Diantha) also shows the role of analogy in metaphor construction as will be shown in a later section. However, as Fauconnier notes ‘these domains—or interconnected mental spaces [...] are not part of the language itself, or of its grammars; they are not hidden levels of linguistic representation, but language does not come without them’ (p. 1).

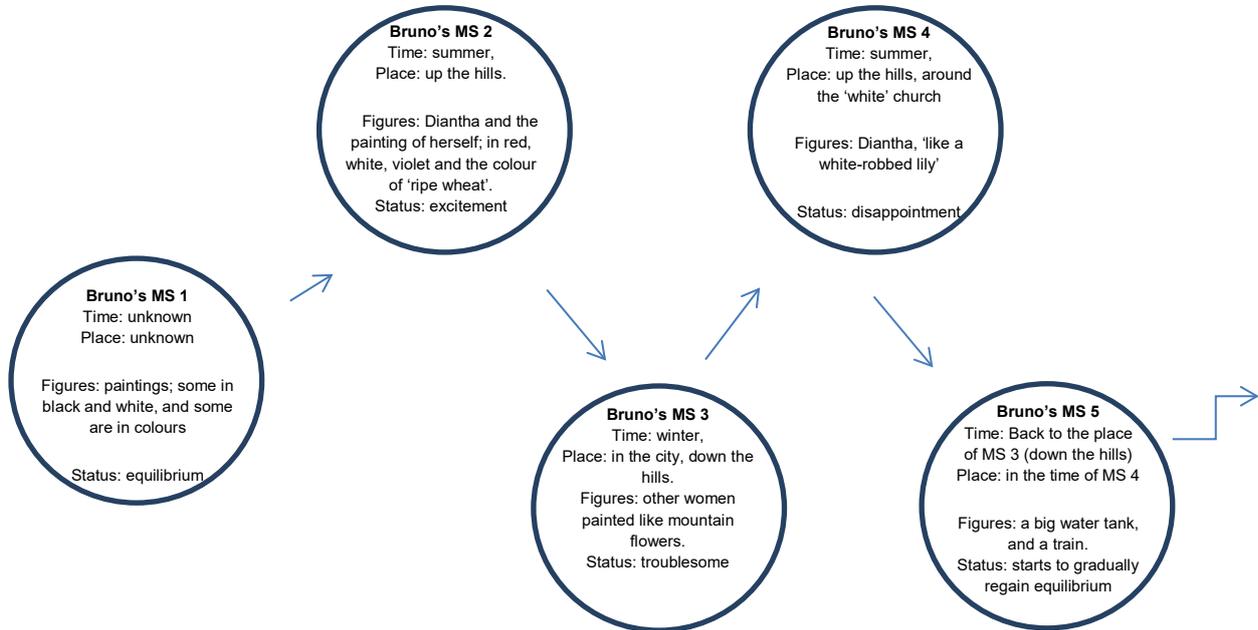
In contrast, this type of learning (which helps unifying analogy) does not seem to help the learner to solve the problem of conditional uncertainty. Bruno should have been wondering if the next summer would share all those desired features as occurred in the previous summer. The narrator and the reader, are more conscious of this conditional uncertainty than Bruno. He was only wondering about *how* Diantha would be (‘if Diantha would quiver red and white again’) and in the same way he was wondering about how this summer’s ‘sunlight’ would fall, as if he meant to treat Diantha and ‘sunlight’ as equal mental values. Bruno was, after all, certain of Diantha’s presence, just as he was certain of the ‘summer’ being there. Diantha, however, turns not to be there, his furthest desire. Thus, Bruno’s associative memory-based reasoning unexpectedly fails him.

Prior to knowing Diantha, Bruno was in a state of equilibrium; painting ‘in black and white’ sometimes and ‘sometimes in green and yellow and red’. While, painting Diantha was different and because of this and most importantly, because their love relationship was different; ‘but he never did anything quite so clever as during that summer he spent in the hills’. This difference was so positive in his life that it made him psychologically excited (up) and consequently, able to learn and produce more in terms of artistic productivity, which is a blend of verbal and visual art. At first, it was linguistically present in his mind as an unseen thought. Then by portraying that unseen to a visual material, it became visualised. After his first love experience, Bruno’s paintings all start to share some resemblance with the painting of Diantha, who seems to be present in everything and everywhere. Now, ‘the women he painted were all like mountain-flowers’.

Bruno’s sudden awakening to the truth that the ‘white-robed lily’ Diantha has just become married makes him disappointed or ‘down’ and might, as a result stop his upcoming flow of metaphors. However, when Bruno realises the truth (and starts to regain his equilibrium) he sensibly consoles himself with a metaphorical consolation ‘Foolish Bruno! to have been only love’s harbinger after all! This indicates that the literary skills he has learned via painting have effectively made a sustainable change in his behaviour. This also indicates that the nature of learning is sustainable and irreversible. Perhaps, when learning is involved in any love experience, there must be some positive outcome in the sub-total of that experience, even if it is doomed to failure. Here, the positive outcome is rendered as regaining equilibrium.

The following, Figure 2, shows the progress of Bruno in a year time of learning, from summer 1 to summer 2:

Figure 2. the progress of Bruno in a year time of learning in 'A Harbinger'



Reality vs. Representation

Reality is sharply distinguished from images: there are real, essential referents on the one hand and various representations of these referents on the other. According to this view, the triggers will always be real referents, while the targets may be concrete or mental representations of them. However, this asymmetrical view is not reflected by the linguistic data: the triggers may be in the pictures, beliefs, etc., and the targets in the so-called real world (Fauconnier, 1994, p.14). In Bruno's world, there are real referents which exist in reality and in the concrete representations of them; paintings. However, Chopin's story suggests that the real material of Bruno's paintings is his inner world of emotions rather than his physical surroundings.

Conceptually, each painting is a blended space in which both the mental space of the external reality and the mental space of Bruno's world of emotions and feelings co-exist. The mental space of the 'reality' (in the text but not in the real world) works as the parent space (R) for the mental spaces of the representations and the normal situation is for linguistic descriptions (using nouns, adjectives, similes and metaphors) to refer to reality and/or its representation (Fauconnier, 1994). When Bruno describes the women he painted, the reader experiences such contextual uncertainty, that it is not clear whether Bruno describes their paintings or *them*: 'Bruno sighed a good deal over his work that winter. The women he painted were all like mountain-flowers.'

Logically, there are two probabilities:

a. In reality, there were women who were all like mountain-flowers and these women were painted.

(Reality (R) is inferred as a parental space to which belongs the daughter space of the women's paintings (WP) or 'his work': $WP \subset R$ (WP belongs to R);

or

b. In 'his work' (which he painted), the women were all like mountain-flowers.

'His work' is a space that establishes property. It is a daughter space which is relative to reality R.

Therefore, the simile constructed might be constructed by visualising reality, or by visualising the paintings, alike. Mitchell suggests that paintings operate across the boundaries of genre and which mix the functions of the verbal and the visual are able to provide a 'visual analogue' to the study of literature, (see *Picture Theory: Essays on Verbal and Visual Representation*, Mitchell, 1995, p.85). In this kind of art, verbal representations are amplified in visual representations, or as Mitchell names it a 'metapicture.' 'If there is such a thing as a metalanguage,' she writes 'it should hardly surprise us that there is such a thing as a metapicture' (Mitchell, 1995, p.82). Bruno's paintings therefore can be read as visual metaphors, as pictorial versions of verbal similes.

In *Metaphors We Live By*, Johnson and Lakoff do not talk about simile or its significance in metaphor configuration. However, they talk about personification as 'the most obvious of ontological metaphors [...] where the physical object is further specified as being a person,' in order to comprehend that object (or entity) in terms of human characteristics, motivations or activities (Johnson and Lakoff, 2008, p.33). This is very much the case with Bruno's comprehension of Diantha. Within the fictional world of the story, there is a 'reality' in which Diantha exists and there is a painting (representation) of her, that took place in 'that summer' before the 'winter' in which he painted the other women. When Bruno describes Diantha, however, the reader experiences contextual certainty, that it is clear that Bruno describes *her*, rather than her painting. This assumption is based on the following extract, which is vivid with changing colors and full of physical motion; postures and gestures, that cannot be captured in a single oil painting that has no timeline.

And then there was the gentle Diantha, with hair the color of ripe wheat, who posed for him when he wanted. She was as beautiful as a flower, crisp with morning dew. Her violet eyes were baby-eyes—when he first came. When he went away he kissed her, and she turned red and white and trembled. As quick as thought the baby look went out of her eyes and another flashed into them.

The mental space of Diantha here is one of her in reality, in one scene, in one setting, one summer. By analysing this extract linguistically we notice the presence of adjectives (level 1) and similes (level 2). The following sentence is studied as a model:

She was as beautiful as a flower, crisp with morning dew.

Semantically, the sentence can be interpreted as:

- a. She was like a beautiful flower, which is crisp with morning dew.
- b. Diantha was like a beautiful flower and she was crisp with morning dew.

Thus, the adjective ‘beautiful’ helps constructing the simile in *a* and *b*. However, in *b* it is conceptually elaborated into another linguistic device which is metaphor: Diantha was crisp with morning dew. The main domain in this metaphor is the flower and the target domain is Diantha. What happened here is that the two domains worked as two mental spaces that are conceptually mapped with a connector. This connector is beauty and dewiness. This simple mapping however, will set a series of conceptual mappings and therefore, potential artistic ambiguity. From another conceptual viewpoint, the mental space of Diantha mingles with the mental space of the flower and forms the core that has two particles at least: Diantha and the flower that are mingled by the semantic relationship (resemblance or connector) provided by one linguistic unit at least; an adjective, a noun and/or an adjectival noun phrase.²

Figure 3. The conjunction of the mental space of Diantha and the flower, as two conceptual domains

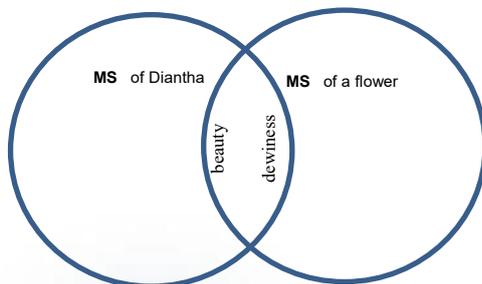
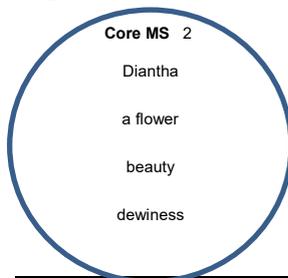


Figure 4. The Core mental space of Diantha and the flower



² This name, which reminds us of a type of flower called a Dianthus, is itself a kind of metaphor. Perhaps Chopin uses this name because there was a strong fashion for plant and flower names for women in the nineteenth century. Therefore, the flower-woman metaphor is also culturally conditioned and reinforced in the literary contexts.

In paragraph 5, Bruno continues to describe Diantha ‘like a white-robed lily now’. Semantically, this subordinating clause is a simile. It is also a personification if we read the particle ‘a white-robed lily’ which is interpreted as: ‘a lily is a white-robed woman’ and this is another linguistic device called personification ‘He did see her though—when the doors of the rustic temple swung open—like a white-robed lily now.’ The vivid scene of Diantha in her wedding dress urges Bruno to construct a simile that soon develops as personification, or *vice versa*; the borders of the two domains are almost lost here. However, the construction is too complicated to be a simple simile.

Here a ‘lily’ is personified, but the metaphor is not merely LILY IS A PERSON. It is much more specific, namely, LILY IS A BEAUTIFUL WOMAN. It not only gives us a very specific way of thinking about LILIES but also reveals some of its characteristics, such as whiteness. This whiteness is also applicable to Diantha. In paragraph 6, when Bruno looks at Diantha’s groom he views his rival as someone who gathers a flower. This metaphor summons up the imagery of harvesting, in some field, at some harvesting season. Thus, ‘harvesting’ works as the source domain, while ‘wedding’ works as the target domain. The two domains mingle together and form a conceptual metaphor where ‘a man’ gathers ‘a wild flower for his own’.

Art as a Laboratory of Metaphors

In summary, Johnson and Lakoff believe that most of the ‘key ideas’ in their book *Metaphors We Live By* ‘have been either sustained or developed further by recent empirical research in cognitive linguistics and in cognitive science generally’ (2008, p.272). These ideas are presented in the following table as source concepts to compare with the linguistic features of ‘A Harbinger’ and are presented in Table 1 below.

Table 1: The comparison between the ‘key ideas’ in Metaphors we Live by and the metaphorical language in ‘A Harbinger’

| | Key ideas in cognitive linguistics | The Text of ‘A Harbinger’ |
|----|---|---|
| 1. | ‘Metaphors are fundamentally conceptual in nature; metaphorical language is secondary’ (p.272). | Bruno first experienced certain concepts of botany and of Diantha, found the resemblance between the two, then he constructed a metaphorical language. |
| 2. | ‘Conceptual metaphors are grounded in everyday experience’ (p.272). | Bruno constructed metaphors related to his environment and his everyday life experience with nature. |
| 3. | ‘Abstract thought is largely, though not entirely, metaphorical’ (p.272). | Diantha’s beauty is largely metaphorical, that Bruno thought that it must be described in relation to ‘ripe wheat’, ‘a white-robed lily’, and ‘a flower, crisp with morning dew’. |
| 4. | ‘Metaphorical thought is unavoidable, ubiquitous, and mostly unconscious’ (p.272). | Whenever Bruno sees or thinks of Diantha or even the ‘women he painted’ a metaphorical thought emerges. |
| 5. | ‘Abstract concepts are not complete without metaphors. For example, love is not love without metaphors of magic, attraction’ (p.272). | In this text Beauty as an abstract concept is not complete without metaphors of whiteness, dewiness, crispiness and ripeness. |
| 6. | ‘We live our lives on the basis of inferences we derive via metaphor’ (p.273). | Bruno inferred Diantha’s ‘ripeness’ by the metaphor a man ‘gathered this wild flower’ which is a metaphor of harvesting and ripeness. |
| 7. | ‘Abstract concepts have a literal core but | An abstract concept might be a clause like: |

| | | |
|--|---|--|
| | <p>are extended by metaphors, often by many mutually inconsistent metaphors' (p.272).</p> | <ul style="list-style-type: none"> • A flower is beautiful • Diantha is beautiful <p>and the literal core might be a source (noun), such as beauty, ripeness, crispness and dewiness.</p> <p>Examples of many mutually inconsistent metaphors: 'the gentle Diantha, with hair the color of ripe wheat [...] She was as beautiful as a flower, crisp with morning dew'.</p> |
|--|---|--|

Therefore, working on an everyday basis in a laboratory of 'beauty' offered by nature, Bruno infers from his experiences in artistic work that beauty as an abstract concept is not complete without metaphors of whiteness, dewiness, crispness and ripeness. Then he unconsciously decides that Diantha's beauty is largely metaphorical; he is unable to avoid describing it using the figurative language, specifically metaphors that reflect some shared literal cores, such as beauty, ripeness, crispness and dewiness. However, using multiple material options in order to create conceptual metaphors on Diantha's beauty—'ripe wheat', 'a white-robed lily', and 'a flower, crisp with morning dew'—might indicate that language (and metaphors in particular) are deficient. Even more, this might indicate that Diantha's beauty (which is epistemologically one manifestation of a larger concept) is *infinite*.

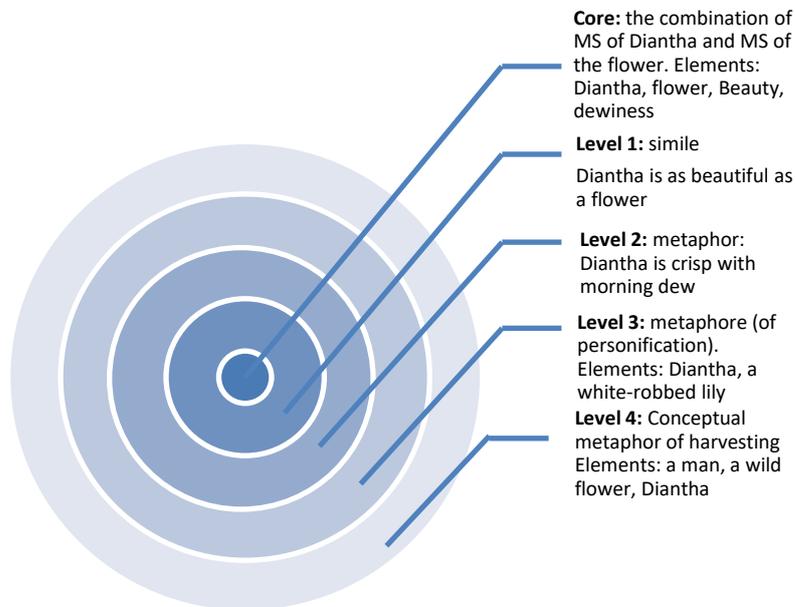
However, although Johnson and Lakoff (2008), see that 'abstract concepts have a literal core' and that these abstract concepts 'are extended by metaphor', there is no reference to the simile as being the core. On the other hand, in *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*, Fauconnier and Turner define 'core meaning' as follows:

Core meaning is, as the formally minded philosopher sees it, the part of meaning that can be characterized formally and truth-conditionally. Therefore, goes the logic, it must be the only important and fundamental part of meaning' (Fauconnier and Turner, 2008, p.16).

Bruno soon leaves the scene, and simultaneously he abandons all the linguistic devices related to it. If he stayed, he would construct other metaphors while viewing the man kissing his wife. Perhaps as: 'the man bent to smell the fragrance of that flower', or 'the man bent to suck the nectar of that flower'. Whatever it is, any further metaphor he might construct would be based on the core (adjectives) and on the first level (simile).

The following, Figure 4, shows that natural process of metaphor construction is a configuration of conceptual layers, and the layers are endless.

Figure 4. The mental construction of conceptual metaphor



It seems that the stronger the simile is established in one's conceptual system linguistically (or in one's linguistic system conceptually), the further the layers will build and multiply around the core. Moreover, the more attentive to its characteristics a person is, the more s/he will construct conceptual metaphors describing a certain figure. Generally, we may say that the number of layers that Bruno constructs depends on a number of factors. These factors are, but are not limited to:

1. Bruno's sensation and sensibility
2. his physical viewing angle
3. his conceptual viewpoint of things and existence
4. his experience history and cultural background
5. his creativity and
6. the maturity and richness of his linguistic system

However, this linguistic-conceptual establishment should be based on a real experience, with direct contact with the elements that may coexist in a conceptual core as particles (in this case a flower and Diantha). This coexistence is conditioned by the existence of the semantic relationship that the linguists call 'analogy'. In other words, the existence of the core will stand as long as the resemblance between the two elements exists. Regarding Bruno's paintings of other 'women', he only describes them using a simile. He goes no further, which means that

these ‘women’ deserve no further linguistic and/or conceptual consideration. They are a noun in a short simple sentence that is terminated and then, followed by another sentence with a totally different noun phrase and a different subject: ‘The women he painted were all like mountain-flowers. The big city seemed too desolate for endurance often.’ Bruno’s description of the women is so brief and straightforward, yet ambiguous at the same time. He does not even imply the connector between the women and the mountain-flowers; whether it is beauty, whiteness, freshness or dewiness. Thus, although he forms a linguistic device, simile, as the following figure shows, he only combines the two mental spaces (or domains) with the basic particles (or elements); ‘women’ and ‘mountain-flowers’ as described in Figures 5 and 6 below.

Figure 5. The conjunction of the mental space of Diantha and the flower, as two conceptual Domains

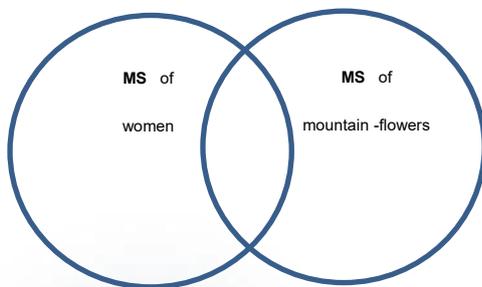
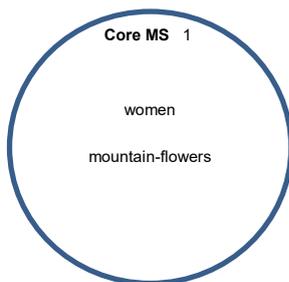


Figure 6. The core mental space of the ‘women’ and mountain-flowers



The absence of the semantic relationship (resemblance or connector), which is also the absence of an adjective, a noun and/or an adjectival noun phrase, terminates any further interaction, and therefore, terminates the possible construction and multiplication of the layers of metaphors around this core.

As an artist, Bruno spends most of his time in the hills. He has direct contact with landscapes and the world of botany. On the other hand, he has direct contact with Diantha and this contact is his experience with her, no matter how long or realistic this experience is. Moreover, he

views every element in this world of botany as both concrete and abstract existence, physical and metaphysical; semantically, it is the abstract properties of the flower and the abstract properties of Diantha that combine together to form one combined *mental* space. This mental space does not exist in Bruno's physical world, but rather in some distant zone; call it his mind or call it the metaphysical existence. A metaphor thus, is a form of the metaphysical existence; an abstract form that has a core, particles, elements and layers that coexist interactively in a specific order. Most importantly, this abstract form has a latent inner strength that sustains this semantic existence and interaction inside and/or outside this form and this is simply what linguists call 'coherence'³. The interaction however, is what they call 'network mapping'. This short story, 'A Harbinger', written by Kate Chopin over a hundred years ago, is the presentation of 'the theory of Conceptual Metaphor'. It also presents a theory of Conceptual Blending; where two mental spaces (domains) blend and construct a core.

This story also indicates that two cores can blend, leading to blended layers as well: 'And then there was the gentle Diantha, with hair the color of ripe wheat, who posed for him when he wanted. She was as beautiful as a flower, crisp with morning dew.' The core mental space of Diantha-flower blends here with a core-mental space of Diantha-wheat. This blend leads to an outer interaction or mapping; so as to create a more complex system of layers; rather metaphors for metaphor. Metaphor, as a linguistic centralised construction, proves to have the same system of the cosmos, and the atom, alike. It also operates like a plant cell. Therefore, a metaphor is a cosmic construction. It is not constructed in the physical space but is present in both the mental space and the time space, necessarily. Thus it contains many of the qualities of a seed, as described by Augustine, especially in its ability to expand into something much larger than itself.

In the seed all those parts existed primordially, not in the dimensions of bodily mass but as a force and causal power [...] here exists in the tiny grain that power more wonderful and excellent by which moisture was mingled with earth forming a matter capable of being changed into wood [...] with all parts developed into a well-ordered whole [...] in the seed, then, there was invisibly present all that would develop in time into a tree. And in this same way we must picture the world, when God made all things together. (Augustine (Mandelbrote and Meer, 2008, p.137)

Literally, a metaphor is like a tree; where 'moisture' and 'earth' mingle together inside the 'seed' (core), forming consecutive layers—that is a tree. Accordingly, any simile if uttered

³ Coherence and cohesion are two very prominent terms in discourse analysis and text linguistics, but are difficult to distinguish. They are etymologically related, though, and share the same verb 'cohere'. Cohesion refers to the means and surface features. However, a text is 'coherent' only if it makes sense and has a unity. After Widdowson (1979), coherence is sometimes seen as referring to the underlying development of propositions in terms of speech acts. Culler (1975) uses the term models of coherence to refer to the various ways in which readers make sense of texts and naturalise them, by drawing on the familiarity with other texts, their culture, knowledge, etc. (Wales, 1991, pp.73-75).



and/or represented, is a metaphor as a force and causal power (in a possible literary world), in the same way that any seed is a tree as a force and causal power (in a possible physical world).

Pedagogical Notes

In 'A Harbinger', Chopin reveals yet another philosophy of learning. Her short story indicates that learning can take place via representing some realities via painting. Finally, the museum composed of Bruno's paintings will be a record of more than mere figures, feelings or colors; rather it will be a record of a complete circle of learning. In Bruno's case, a close study of his work will reveal the symbolism of 'winter' and 'summers', as well as the relationship between 'women' and 'flowers'. Moreover, it will reveal his metaphysical (metaphorical) view of things. For instance, Diantha's hair is not only Diantha's hair; it is also 'ripe wheat'. Most importantly, it will reveal unique equations regarding the biology of beauty and the chemistry of love. Thus, for Chopin, a painting is a twofold piece of cloth which is loaded with linguistic symbolisms, similes, metaphors and, therefore, analogy, although no words are written or spoken during the process of initiating them.

Such aesthetic experimental learning is classified within the philosophical school of Pragmatism. C.S. Pierce and William James championed *pragmatism*, their ideas later extended by *John Dewey* who applied them to education and took them into the classroom in late nineteenth and early twentieth-century America. However, many of his teaching methods also have their roots in earlier ideas about education based in the Romantic period of the late eighteenth and early nineteenth century (Bundy, 2007, p.352). As Shaffer notes, Dewey 'emphasized a hands-on approach that placed the student at the center of learning,' and valued problem-solving as 'quality mental processing' (Shaffer, 2015, p.54). In particular, he 'brought recognition to the value of museums and integrated museum experiences' (p.39). 'For his students, the galleries of Chicago's museums were a place of learning every day' (p.39). Similarly, Liora Bresler believes that Dewey also offered 'explication of what it means to encounter an object—a thing, a view, a remembered experience, even abstract knowing—as a separate experience in its own right' (Bresler, 2007, p.702). Moreover, she adds that 'his conceptions of the aesthetic experience [...] suggest a network of questions about how learning happens in museums ...[and] they also suggest a layer of interpretation that can be placed on our reading of what we do know about museum learning' (p.702). Dewey developed a view of the role of the arts in education that transformed the learning experience in the classroom (see Janesick, 2003, and Jackson, 2000).

Dewey's ideas about the patterns of learning map value add to those of Chopin in 'A Harbinger'. As Larry Hickman says, for Dewey learning is 'a circuit of imbalance and restored equilibrium,' where the learner is an active player within the experience, bringing with him/her a set of learned 'behaviours and expectations from past events' (Hickman, 2009, p.8). Dewey

‘developed a pragmatic notion of truth’, emphasizing ‘the continuity of experience and nature as well as the cultural contexts of knowledge’. Thus, for Dewey experience ‘takes place on a twofold ‘existential matrix’, namely, on a biological and cultural basis’ (p.25). Hickman also presents Dewey’s five-step analysis of effective learning. The following, Table 5, shows a comparison between Dewey’s analysis of effective learning as summarized by Hickman (2009), with some adaptation and the analysis of Bruno’s process of learning in ‘A Harbinger’.

Table 5. The comparison between Dewey’s pragmatic approach and Bruno’s process of learning in 'A Harbinger'

| | Dewey’s five-step analysis of effective learning (Pragmatic Approach) | the analysis of Bruno’s process of learning in ‘A Harbinger’ |
|----|--|---|
| 1. | Emotional Response: A child in a state of equilibrium, comes upon something new/unexpected (visualising the light of a candle). His equilibrium is disturbed. The situation is now unstable and this instability triggers an emotional response. | Emotional Response: Bruno in a state of equilibrium, comes upon something new/unexpected (visualising and painting sweet-eyed Diantha). His equilibrium is disturbed. The situation is now unstable and this instability triggers an emotional response. He approached towards her, so she ‘posed for him when he wanted’. |
| 2. | Definition of problem: The child attempts to make the situation more stable by applying lessons learned from past experiences— seeing a candle is a new situation that calls for exploration, just as the previous ones have. This phase of learning involves an intellectual response. | Definition of problem: ‘The big city seemed too desolate for endurance. He tried not to think of sweet-eyed Diantha. But there was nothing to keep him from remembering her.’ He is aware that life with sweet-eyed Diantha was better, |
| 3. | Formation of Hypothesis: Now that the problem has been defined as something (a candle) that requires exploration, the learner uses a familiar method—he reaches for the candle. | So he ‘gathered his bags, his brushes and colors and things’ and headed to approach Diantha; believing that approaching a girl is to <u>own</u> her. |
| 4. | Testing/ experimenting: his reach for the candle is a test for the proposed solution. In the past, he has grasped objects In order to become better acquainted with them, but now his attempt to apply this familiar solution results in a burned finger. | Testing/ experimenting: He wondered ‘if Diantha would quiver red and white again when he called her his sweet <u>own</u> Diantha’, when he reaches her. However, his journey resulted in disappointment, as there was another man ‘who had gathered’ Diantha ‘for his <u>own</u> ’. |

| | |
|---|--|
| <p>5. Application: if the burn sensation is sufficient to prevent further exploration, the child has completed the circuit of learning. He now knows about the effect of flame on fingers, and has thus added a new circle of adjustment to his understanding of the world. The problematic situation is now resolved. As an organism, he is once again in a state of equilibrium.</p> | <p>Application: Bruno admitted that he was ‘dreaming’, and that he was ‘foolish’. He turned away, and ‘with hurried strides he descended the hill again, to wait [...] for a train to come along’. In other words, he was no longer ‘dreaming’. Most importantly, descending ‘the hill <u>again</u>’ indicates that was going straight, i.e. he is once <u>again</u> in a state of equilibrium.</p> |
|---|--|

Reflecting upon Dewey’s analysis of learning, Hickman adds:

Dewey insists that learning always begins in the middle of things. The learner is not a blank slate upon which ideas are to be written. Nor is [his] mind a file cabinet, into which facts are to be filed away. Each learner is a living *organism* with [his] own history, needs, desires, and interests [...] Dewey thought that learning takes place outside, as well as inside, the school room (Hickman, 2009, p.9).

Chopin’s view of education thus shares elements with the American pragmatic school of philosophy, especially in her awareness of how learning can be facilitated by objects and works of art.

Further Inferences

The process of learning by analogy is simply like drawing a line of symmetry; reflecting the same frame and elements from the source mental space to the target mental space. For a great part, this type of learning also resembles generalisation in psychology. Thus, it is not necessarily valid. It is also a short-term process. Bruno could not accredit this type of learning and it is most likely that he has generalised the fact that learning by analogy has no credibility; all of a sudden he realises that he ‘was dreaming’. He decides to rectify this mistake and change the direction of his path, choosing a different future journey. This rectification also indicates that another type of learning has just taken place simultaneously, though unconsciously. It is learning by trial and error and then by error correction. Now, his sensory motor system is stimulated to sensualise the aspects of the real world, rather than his illusionary world of painting or dreaming: ‘With hurried strides he descended the hill again, to wait by the big water-tank for a train to come along’. Perhaps he will adopt a different kind of painting; abandoning the flowers of his old pictures, for a different style that is painting trains and water-tanks—a characteristic of the fine art of realism. Chopin, therefore, seems to agree with the mainstream of Pragmatism, which began in the United States around 1870, founded by Charles Sanders Peirce who states the Pragmatic maxim as:

Consider what effects that might conceivably have practical bearings you conceive the objects of your conception to have. Then, your conception of those effects is the whole of your conception of the object (Peirce, 2009, p. 245).

Bruno is now more awake and active (to walk with ‘hurried strides’), more conscious (to notice the position and size of the ‘big water-tank’) and more alert (to await a train and, simultaneously, to watch time). Thus, he does not seem to be absent-minded, or acting in an inattentive disposition. Rather, he acts like someone who has just *woken up*, paying noticeable attention and effort to follow the right path, at the right time. He has, therefore, learnt new skills (changes in behaviour) to deal with the real world and these skills might be the indirect objectives of the lesson learnt: reality is reality and a dream is a dream, even if the two have cognitively been forced to share the same space. A conceptual metaphor, no matter how realistic it is (in a painting or in a real life situation), or how conceptually it is grounded in the mind, may fail when it encounters a more empirical reality. Thus, Bruno's metaphor needs to be compared with reality and tested against the empirical process of trial and error. Further, although metaphor has been a crucial part of Bruno's learning process, a metaphor in theory does not necessarily create a practically noticed change in one's behaviour. It is only by trial and error that Bruno achieves a pragmatic resolution to his dilemma.

According to the Orientational theory of metaphor, (Johnson and Lakoff, 2008), to be sad is to be down (‘happy is up; sad is down’). This is consistent in meaning with Bruno's emotional status (disappointment and sadness) as well as his motion ‘descending the hills’ and going to be down to earth. However, the same theory states that ‘conscious is up; unconscious is down’, a matter that indicates contradiction of some sort, as Bruno is conscious, yet sad, which means that he is ‘up’, yet ‘down’ at the same time. Perhaps this is a natural outcome of the clash of two contradictory mental spaces; a clash that is often interpreted as rude awakening. Perhaps this is the way an artist lives. However, going back to real life so fast indicates that what Bruno experienced in his feeling for Diantha was infatuation rather than love. He still uses the lexicon ‘love’ to describe his state, though: ‘Foolish Bruno! to have been only love's harbinger after all!’ Thus, although he is aware that he was ‘foolish’, he could not recognize the difference between love and infatuation, and, therefore, could not choose the exact linguistic expression.

However, Bruno is still aware that he was motivated by some inner impulse to take this long journey. Accordingly, the meaning of ‘harbinger’ seems to be the archaic use of the word as shown in *Merriam-Webster's Collegiate Dictionary*: ‘a person sent ahead to provide lodgings’ (Merriam-Webster, 2004, p.567). It is used figuratively here. ‘Love’ has sent Bruno for some purpose; another conceptual metaphor based on personification. This is more contextual evidence that shows that Bruno's analogical mind conceptualises life as a matter of metaphors. Through this system, however, Chopin shows a gradual process of self-learning; Bruno gradually educates himself through a linguistics museum-learning theory of analogy and

metaphor, closely connected to his profession as a painter. This reminds us of the Isaac Asimov's famous quotation: 'Self-education is, I firmly believe, the only kind of education there is. The only function of a school is to make self-education easier; failing that, it does nothing. What's more, formal education stops; self-education never does.' (Isaac Asimov, 1975, p.208).

Conclusion

In the end, it would be absurd from the scientific perspective to discuss a linguistic matter as a dependence-relations-based matter of chemical interface if the theories of Mental Spaces, Conceptual Blending were not presented. Yet the question remains as to why this theory was rejected in the first place when 'chemistry' has been marked as an aspect (and conceptual definition) regarding matters that enter into a concord relationship? Therefore, instead of questioning "Are letters *matters*?", this research raises the question "Are *not* letters and the sounds of letters *matters*?" The letter "I", maps unto a number of domains, seen and unseen, when the speaker is 'man'; an 'entity', a 'living thing', a 'human being', a 'soul', a 'student', a 'spouse', a 'citizen', a 'lover', an 'artist', etc. The list is endless.

In the final analysis, the findings reveal how the philosophy of language can help understand the constructions of realities and metaphors (of voices and images) and therefore, unfold the cognitive systems of the brain including the cognitive linguistic patterns. It can help discover which constructions are concrete and which are abstract. Eve Sweetser, who worked on metaphor in terms of mapping between domains in her book *From Etymology to Pragmatics*, believes that conceptual mapping further structures our understanding of the more abstract domains in terms of our understanding of the more concrete domains (Sweetser, 1991, p.59). However, the conceptual borders might be blurred when wondering "what is real and what is metaphoric?" Is it what we feel and comprehend in the hidden cognitive worlds or what we hear and see in the physical world?



References

- Ashley, Benedict M. *The way toward wisdom: an interdisciplinary and intercultural introduction to metaphysics*. University of Notre Dame Press, 2006.
- Asimov, Isaac. *Science Past, Science Future*. Knopf Doubleday Publishing Group, 1975.
- Bresler, Liora. *International Handbook of Research in Arts Education*. New York: Springer, 2007.
- Bundy, Wayne. *Out of Chaos: Evolution from the Big Bang to Human Intellect*. Greys: Universal-Publishers, 2007.
- Chopin and Gilbert, Sandra. *Complete Novels and Stories*. New York: Library of America, 2002.
- Dancygier, Barbara and Eve Sweetser. *Mental Spaces in Grammar Conditional Constructions*. Cambridge: Cambridge University Press, 2005.
- Fauconnier, Gilles and Mark Turner. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books, 2003.
- Fauconnier, Gilles. *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge: Cambridge University Press, 1994.
- Gentner, Dedre, Keith James Holyoak and Boicho N. Kokinov. *The Analogical Mind: Perspectives from Cognitive Science*. Cambridge, MA: MIT Press, 2001.
- Hickman, Larry. *John Dewey: Between Pragmatism and Constructivism*. New York: Fordham University Press, 2009.
- Jackson, Philip. *John Dewey and the Lessons of Art*. New Haven: Yale University Press, 2000.
- Jaglul, Dewan. *The Enigmatic Brain Reveals*. AuthorHouse, 2013.
- Janesick, Valerie. *Curriculum Trends: A Reference Handbook*. Santa Barbara: ABC-CLIO, 2003.
- Johnson, Mark and George Lakoff. *Metaphors We Live By*. Chicago: University of Chicago Press, 2008.
- Mandelbrote, Scott and Jitse van der Meer. *Nature and Scripture in the Abrahamic Religions: Up to 1700 (2 vols)*. Leiden: Brill, 2008.



Merriam-Webster's Collegiate Dictionary: Eleventh Edition. Springfield, MA: Merriam-Webster 2004.

Mitchell, W. J. T., *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press, 1995.

Palmer, Allison. *Historical Dictionary of Romantic Art and Architecture*. Lanham Seabrook, MD: Scarecrow Press, 2011.

Peirce, Charles. *The Logic of Interdisciplinarity. 'The Monist'-Series: Herausgegeben von Elize Bisanz*. Oldenbourg Verlag, 2009.

Shaffer, Sharon. *Engaging Young Children in Museums*. Walnut Creek, CA: Left Coast Press, 2015.

Sweetser, Eve. *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press, 1991.

Wales, Katie. *A Dictionary of Stylistics*. London: Longman, 1991.