THE CONTRIBUTION OF COGNITIVE LINGUISTICS TO COMICS STUDIES

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Abstract:

The aim of our paper is to present the ways in which cognitive linguistics has contributed to various developments in the domain of comics studies. After providing introductory remarks, the paper describes the main views found within the works of authors considered to be the precursors of contemporary comics studies, Will Eisner and Scott McCloud, with the intention of providing the basics that will facilitate the reader's understanding of the present issues. The main section of the paper contains the basic tenets of cognitive semantics, including the ideas traced in the works of the authors who have observed various types of comics from the cognitivist viewpoint. This section of the paper presents the research conducted thus far by a number of scientists who have engaged in drawing parallels between cognitivist theories and comics studies, including work on visual and multimodal metaphor and metonymy and the visual language of comics. This is followed by concluding remarks that end the paper.

Key words: comics, cognition, linguistics, conceptual metaphor, visual language.

1. Introduction

Comics studies is a relatively new academic field that deals with comic strips, comic books, and graphic novels. Although comics – as an instance of sequential art which dates back to prehistoric times – precede film and some other forms of visual art, they have long been regarded as nothing more than a popular pastime. As Will Eisner, one of the forefathers of modern comics, duly notices:

"[F]or reasons having much to do with usage, subject matter and perceived audience, sequential art was for many decades generally ignored as a form worthy of scholarly discussion. While each of the major integral elements, such as design, drawing, caricature and writing, have separately found academic consideration, this unique combination took a long time to find a place in the literary, art and comparative literature curriculums. I believe that the reason for slow critical acceptance sat as much on the shoulders of the practitioner as the critic." (Eisner 1985/2008: xi)

However, things have changed dramatically in recent times, with scientists and researchers from various, even seemingly unrelated, areas of academia contributing to the literature on comics studies. One such field is cognitive linguistics, where several authors have endeavoured to apply the fundamental cognitivist principles and practices to the study of phenomena in comics. This paper is an attempt to provide a concise overview of the work done within the cognitivist framework relating to comics studies.

Section 2 of the paper sheds light on the precursors of contemporary comics studies, Will Eisner and Scott McCloud. It is intended to outline the basics of comics studies to facilitate the reader's understanding of the present issues. Section 3 contains the basic tenets of cognitive semantics, with particular emphasis on the ideas traced in the works of the authors who have observed various types of comics from the cognitivist viewpoint. Conceptual Metaphor Theory and Conceptual Blending Theory, as well as the notion of *embodiment*, will be explained in this section. Most importantly, sub-sections 3.1

and 3.2 of this paper present the research conducted thus far by a number of scientists who have drawn parallels between cognitivist theories and comics studies, including work on visual and multimodal metaphor and metonymy and the visual language of comics, among other things. The paper ends with concluding remarks.

2. The Beginnings of Contemporary Comics Studies

2.1. The Pioneering Work of Will Eisner

Despite rare early ventures into the study of comics as a proper art form (e.g. Kunzle 1973; Seldes 1957; Sheridan 1973), it was not until the first book in Will Eisner's trilogy of instructional books – *Comics and Sequential Art* – was published in 1985 that serious academic research was directed towards examining this medium, which had previously been viewed predominantly as a merely popular phenomenon. What Eisner set out to do was to define comics as a form of reading, an art which possesses and communicates in its own language (a notion further expanded and examined in detail by Neil Cohn, as we will see later on), whose "disciplined application [...] creates the 'grammar' of sequential art" (Eisner 1985/2008: 2). Throughout the three books, the other two being *Graphic Storytelling and Visual Narrative* (1996) and *Expressive Anatomy for Comics and Narrative* (published posthumously with Peter Poplaski in 2008), the famous cartoonist, who spent over eighteen years teaching a course in Sequential Art at the School of Visual Arts in New York, scrutinizes various aspects of the medium, from the earliest instances of its creation by the artist/author to its consumption by the end user, i.e. the reader.

The first book in the series deals primarily with "the unique aesthetics of sequential art as a means of creative expression [...] studied within the framework of its application to comic books and comic strips" (Eisner 1985/2008: xi). Consequently, the author pays attention to how imagery and timing are used in comics to perform their fundamental function of communicating ideas and/or stories, and how the experiential basis of the artist helps her or him to achieve this feat. The largest chapter of the book is dedicated to the 'frame' or 'panel' as an indispensable tool in this creative process, and it shows how it is used to encapsulate the view and act as both a narrative device and a structural support. Even here, when Eisner talks about the function of perspective and how the reader's response is influenced by her

or his position as a spectator, a cognitive linguist can easily recognize that the author in fact entertains the notion of 'embodiment,' something which, as mentioned below, plays a crucial role in cognitivist theory. The first book also contains a discussion on using sequential art to tell stories and an examination of expressive anatomy, ideas which were subsequently employed as cornerstones of the next two books in the series. Thus, the second book is concentrated on a basic understanding of narration with graphics, where comics are to some extent compared to film and theatre, which both use graphics and text or dialogue to narrate a story. Finally, the third book in the series elaborates on the chapter on expressive anatomy from the first book, and puts its focus on the mastery of the body grammar of the human figure as one of the most important skills which an artist should possess in order to communicate her or his ideas effectively.

2.2. McCloud's Expansion of Comics Studies

In *Understanding Comics: The Invisible Art*, Scott McCloud (1993/2004) starts from Will Eisner's definition of comics as "sequential art," claiming that a more precise definition of comics would demand "a little aesthetic surgery" that would allow us to separate its form from its content. The art form of comics is viewed as a vessel that can hold a number of ideas or images. The original Eisner definition is expanded to cover "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer" (McCloud 1993/2004: 9). After providing a brief history of comics, McCloud analyzes facets of vocabulary and visual iconography used in comics to elaborate the ways in which they communicate meaning. McCloud links comics to the phenomenon of *closure*, i.e. observing the parts but perceiving the whole; comics panels "fracture both time and space, offering a jagged staccato rhythm of unconnected moments" (McCloud 1993/2004: 67). Besides this, McCloud offers an analysis of time frames in comics, claiming that interaction between time and comics is essentially based on sound (word balloons and sound effects) or motion (panel-to-panel closure and motion within panels). A large section of McCloud's study is dedicated to how comics can represent abstract phenomena related to emotions and senses, as well as to how words and pictures interact and get combined to convey information. Like any other form of art, comics follow the path leading from the original ideas and moving through lines of form, idiom, structure, and craft

toward a purpose. McCloud concludes that comics are a great balancing act, being both subtractive and additive, and offering a range of possibilities for combining imagery and the written word, all while the language of comics continues to evolve.[1]

3. Cognitive Semantics as a Framework for Comics Studies

This study will present two cognitive strands in the studies of comics, both of which stem from the Chomskyan premise that the nature of language depends on its coding in the minds of speakers. One of them is based on Ray Jackendoff's approach, positioned on the boundary between generative linguistics and cognitive linguistics, whereas the other draws on cognitive linguistics proper and the works of George Lakoff, Mark Johnson, Mark Turner, Gilles Fauconnier, etc. When it comes to studying comics, perhaps the most important facet of Jackendoff's approach (e.g. Jackendoff 1983, 1990, 2002) is the fact that he attempts to link language to other cognitive capacities, especially music (e.g. Jackendoff and Lerdahl 2006). For instance, he proposes that music is not a mere stream of sounds. If one is familiar with the musical "idiom," then she or he understands it by recognizing patterns belonging to its grammar. Therefore, if we claim that music has a grammar, then we open a set of questions resembling those we tend to ask when it comes to language – questions related to the grammar's acquisition, its learned and innate part, its relation to general cognitive capacities, and its mental representations and comprehension. It becomes clear why Jackendoff's approach is valuable in the sphere of comics. If we view comics and visual languages in general as another cognitive capacity, then we can talk about its structure, a grammar that could organize its elements and the kind of meaning they might convey. We could also, in turn, attempt to compare comics to music, language, and other capacities.

When we consider cognitive linguistics proper, we can say that comics studies have so far made good use of *Conceptual Metaphor Theory* (henceforth CMT) and *Conceptual Blending Theory* (henceforth CBT), both of which are closely linked to the *embodied mind thesis* (Lakoff and Johnson 1999). The embodiment hypothesis is based on the idea that all aspects of cognition and the human mind are largely determined by the form and functioning of the human body. CMT (Lakoff and Johnson 1980; Lakoff 1993) is one of the main vehicles of cognitive semantics. Perhaps the most fundamental notion in CMT is the notion of *mapping*. This term refers to systematic metaphorical correspondences between closely related ideas. In the CMT system, the features of one domain are said to "map" onto the ontological or structural features of another domain. Other elements of the *source domain* are likewise "mapped" onto elements of the *target domain* (Lakoff 1993; Grady 2007). The constancy with which different languages employ the same metaphors – which often appear to be perceptually based – has led to the idea that the mapping between conceptual domains corresponds to neural mappings in the human brain (Feldman and Narayanan 2004: 385–392). According to CMT, metaphors provide rich evidence about the ways in which some aspects of our lived experience are associated with others, for reasons that reflect basic aspects of perception, thought, and neurological organization. Within cognitive linguistics, the term 'metaphor' is understood to refer to a pattern of conceptual associations, rather than to an individual metaphorical use or a linguistic convention (Grady 2007: 188–189). Lakoff and Johnson (1980: 5) describe the essence of metaphor as "understanding and experiencing one kind of thing in terms of another." The conceptual essence of metaphors has gradually led towards studying metaphor in non-linguistic domains, and such studies have been labelled the studies of multimodal metaphor. These are based on the claim that "if researching non-verbal and not-purely-verbal metaphor does not yield robust findings, this jeopardizes the Lakoff-and-Johnsonian presupposition that we think metaphorically" (Forceville and Urios-Aparisi 2009: 4). Finally, CBT (Fauconnier and Turner 2002) offers a view in which elements belonging to different domains and mental spaces get blended together in a subconscious process: the blended space contains not only the elements from both domains, but also vital relations existing between or among them. Blending is an everyday process which is used in basic construals of our reality, no matter how complex it might be. It accounts for a whole variety of human faculties, including language, mathematics, music, visual arts, etc. Blends are very frequent in comics, whereas studying visual blends and their comprehension might reveal some aspects related to comics cognition.

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[1] For more recent studies in this direction, consult Bramlett 2012; Dean 2000; Groensteen 2009, 2013; Hague 2014; Heer and Worcester 2009; Kukkonen 2013; McCloud 2006, 2007; Miller 2001; Saraceni 2003; Varnum and Gibbons 2007; Wolk 2008.

3.1. Charles Forceville and Other Authors Examining Comics within a Cognitivist Framework

As every theory strives towards eventually becoming universal, and bearing in mind that the work done within both CMT and CBT was for years concentrated exclusively on verbal or linguistic manifestations of the underlying conceptual phenomena, it should not come as a surprise that a faction of researchers decided to look elsewhere for proof that these theories can truly be applied to all aspects of human life and behaviour (Tasić and Stamenković 2013). The most prominent figure among these is Charles Forceville, who has worked prolifically on pictorial (visual) and multimodal metaphor and metonymy and has produced a number of publications on the topic, beginning with his paper on pictorial metaphor in the works of Rene Magritte and other surrealists (Forceville 1988). This was followed by his research into the presence and use of pictorial metaphor in the field of marketing, which culminated in 1996 with *Pictorial Metaphor in Advertising*. Here, Forceville (1996: 64–65) draws our attention to the four criteria which have to be taken into consideration when attempting to find a satisfying definition for pictorial metaphor:

> "1. For a pictorial representation to be called metaphorical, it is necessary that a 'literal', or conventional reading of the pictorial representation is felt either not to exhaust its meaning potential, or to yield an anomaly which is understood as an intentional violation of the norm rather than as an error. [...]
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> 2. Considerable confusion has arisen from the fact that the word 'metaphor' has both been used in the broad sense in which it is more or less equivalent with 'trope', and in a much more narrow sense in which it is used as one trope among many others [...]. Any model of pictorial metaphor should specify whether it claims to cover metaphor in the broad or in the narrow sense. [...] Since this is a task of intimidating proportions, it seems advisable, for the time being, to concentrate on 'pictorial metaphor' in the narrow sense.
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> 3. An account of pictorial metaphor should show an awareness that a metaphor has two distinctive terms, one the primary subject or tenor, the other the secondary subject or vehicle, which are usually non-reversible. This entails that the transfer or mapping of features is from secondary subject (on)to primary subject, and not vice versa. The account must furthermore indicate by what mechanisms the identities of primary subject and secondary subject are established.
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> 4. For the identification of the two terms of the metaphor, their labelling as primary subject and secondary subject, as well as for the interpretation of the metaphor, it is necessary to take various contextual levels into consideration. These contextual levels are partly text-internal, partly text-external."

With the theoretical foundations laid, Forceville eventually moved to the medium which would prove to be the most fertile ground for researching both pictorial (purely visual) and multimodal (image + text) metaphor. His work on manifestations of conceptual metaphor in comics began with his article on the visual representations of anger in an *Asterix* album (Forceville 2005). Based on the work of Zoltan Kövecses on Idealized Cognitive Models (ICM) of various human emotions (Kövecses 1986, 2000, 2002), particularly on the metaphor ANGER IS THE HEAT OF A FLUID IN A CONTAINER, Forceville shows how anger can be represented in a graphic medium using comics-specific tools that often do not have adequate linguistic counterparts. The ability of the visual medium of comics to emphasize eyes, mouths, hand/arm positions and volume, something which can easily be traced back to Will Eisner's work, makes them particularly good at representing certain manifestations of anger. Forceville points out multiple pictorial signals of anger in the *Asterix* album, including bulging or tightly closed eyes, a wide or tightly closed mouth, a red/pink face, the position of arms or hands, shaking, etc. This is where he also introduces the notion of *pictorial runes* (as taken from Kennedy 1982), which we will return to later. Bart Eerden (2009) elaborates on Forceville's findings, again using the examples from the *Asterix* comics, only this time accompanied by the examples from animated films as well. He divides the signs of anger into two major groups, one being the aforementioned pictorial runes and the other indexical signs, both of which are metonymically motivated as claimed by Forceville in the former paper. He goes on to propose that video games can also be of interest to researchers seeking to find representations of various emotions in new media.

Other emotions have been the subject of research as well. Shinohara and Matsunaka (2009) analyze pictorial metaphors of emotion in Japanese comics, supporting Forceville's argument that many

of the metaphors expressed through both the verbal modality and other (non-verbal) modalities seemingly share the same fundamental motivation that lies in the mappings between conceptual domains. Their analysis includes emotions such as anger, happiness, love, anxiety, surprise, and disappointment, showing that conceptual metaphors are shared by verbal and visual modalities, but also that differences can emerge due to the nature of each modality even though basic conceptual mappings are shared by both of them, leading to the conclusion that metaphor is a matter of concept and cognition not limited to language. Abbot and Forceville (2011) also tackle the matter of visual representation of emotions in *manga* by examining the 'loss of hands' as an unusual signal which conveys that a character is emotionally affected or has 'lost control' in *Azumanga Daioh*, a popular Japanese comic. The authors manage to show how non-facial information helps express emotion in manga and demonstrate the way in which the artist uses hand loss to contribute to the characterization of the comics' main actors. As is the case with previous efforts, Abbott and Forceville successfully utilize their findings to support the theorization of emotion in CMT.

Some of the basic tenets of Conceptual Metaphor Theory have also been employed in the examinations of visual metaphors in newspapers and editorial cartoons. Elisabeth El Refaie (2003, 2009) uses examples from political cartoons to explore the "grammar" of visual metaphor. She argues that it is impossible to adequately describe visual metaphors in formal terms only, and that they must be considered visual representations of metaphorical thoughts or concepts, which would lead to a proper cognitive definition of metaphor. She also suggests that "[w]hile language is perhaps more precise in expressing some areas of meaning, other meanings may be shown more easily and more effectively in images rather than in words" (El Refaie 2003: 85). Furthermore, starting from the claim that many metaphors derive from our bodily experience, which makes them easily understood in similar ways by all human beings, El Refaie shows that the interpretation of metaphors is partly dependent upon people's socio-cultural background and the contexts in which the metaphors are used. The results of her research into the ways in which political metaphors in newspaper cartoons are understood by viewers from different backgrounds suggest that "some metaphorical mappings [...], such as those between size and power/status and between movement through space and the passing of time, might be understood more generally and at a more intuitive level than more elaborate structural metaphors" (El Refaie 2009: 190). Bounegru and Forceville (2011) take on the similar task of examining political editorial cartoons that portray the global financial crisis, and show how they rely heavily on pictorial and multimodal metaphors, which themselves are rooted in conceptual metaphors.

Finally, Charles Forceville's work on the aforementioned *pictorial runes* and their presence in comics deserves mentioning. In Forceville's words, "pictorial runes can be described as non-mimetic graphic elements that contribute narratively salient information, [and the e]xamples of pictorial runes are lines behind a running character to indicate speed, a halo of droplets around a character's head to suggest she is emotionally affected, and the wavy lines above a garbage bin to convey its smell" (Forceville 2011: 875). Even though he does not make the distinction at first (Forceville 2005), in his article on pictorial runes in a *Tintin* album, Forceville (2011: 876) distinguishes between pictorial runes and *pictograms* (skulls, lightning, flames, etc.), with the former having no inherent meaning whatsoever, while the latter still carry some meaning with them due to their mimetic character. The author here claims that pictorial runes are, in fact, metonymically motivated Peircian indices, which can thus be linked to the "embodied cognition" view that serves as the basis of the cognitivist approach. A preliminary catalogue of pictorial runes found in the studied comics album is presented, comprising *speed lines*, *movement lines*, *droplets*, *spikes*, *spiral*, and *twirl*, along with several special cases. Forceville concludes his article by proposing that "[p]ictorial runes [...] constitute a rudimentary "language" that is used to (help) visualize non-visible events and experiences understood to take place, or to have taken place, in a static medium" (Forceville 2011: 888). In the next section, we will take a closer look at how Neil Cohn draws on the principles of cognitive linguistics (among other things) in an attempt to constitute a legitimate visual language of comics.

3.2. Neil Cohn's Approach to the Visual Language of Comics

Neil Cohn has authored a number of very influential papers in the field of visual language (e.g. Cohn 2005, 2010, 2011, 2012a), with his approach largely based on the way in which Jackendoff compared languages to other human faculties. Cohn treats structured sequential images as visual language – drawn structures have the ability to consti-

tute a visual language in a similar way in which structured sequential sounds can become a spoken language, and in which structured hand and body motions can constitute a sign language. An analogy in this direction can easily be made: individual manual expressions (which have no grammar) are to sign languages (that use a grammar) what individual drawn images (which again have no grammar) are to visual languages (which all have a grammar). Cohn's intention is "not to force equivalencies between the structures used in verbal and visual forms, [... nor] to make direct mappings between spoken and visual language, but rather to understand how the two systems use analogous functions and units of organization" (Cohn 2012a: §Future Research: "Visual Linguistics"). At the same time, the different areas of visual language studies can follow the major branches of linguistics, these being *graphemics*, *photology* (visual analogues to *phonetics* and *phonology*), *morphology*, *semantics*, and *grammar*, as well as *multimodality* and *visual language acquisition*. His approach to visual languages builds around what he dubs The Principle of Equivalence, which states that we "should expect that the mind/brain treats all expressive capacities in similar ways, given modality-specific constraints" (Cohn 2013: 195). Whereas they operate within a different modality, visual languages have both *meanings* and *grammars*, and share many features with their verbal and sign counterparts. The elements that build a visual language include its graphic structure, morphology, and sequences which are to be decoded, and these elements are organized by means of a navigational structure which directs us in regard to the beginning of a sequence and its progression. These graphic elements lead us to a conceptual structure, with further possibilities for studying event and narrative structures. Neil Cohn's study *The Visual Language of Comics* (2013) offers a comprehensive approach that would account for a variety of visual traditions and the underlying cognitive mechanisms (Stamenković 2014). The book looks at many issues related to the cognitive study of comics, starting from an exploration of visual morphology. Cohn defines the notion of a 'visual lexicon' and analyzes both open-class and closed-class lexical items. When it comes to open-class lexical items, Cohn sees these as having conventionalized schematic features determined by the author. These schematic representations and patterns are combined into larger, novel forms in the same way that sounds are combined into words, and words into sentences. As far as closed-class lexical items are concerned, Cohn divides them into bound morphemes within the process of visual affixation (i.e. carriers such as thought bubbles, speech balloons, and indexical lines, as well as path and deictic lines, impact stars, and upfixes), umlauts, action stars and fight clouds within the process of suppletion, and elements involved in the process of reduplication. Cohn also provides an account of ideas related to sequential image comprehension, panel transitions, linear coherence relationships, promiscuous transitions, and general cognitive scripts and schemas, followed by a proposal of the basic narrative categories, including orienters, establishers, initials, prolongations, peaks and releases. These categories serve as the parts of speech/grammatical functions in Visual Narrative Grammar. He also discusses constituent structure in visual narrative and the possibilities for modification, and analyzes page layouts, variations, comprehension and constraints related to the notion of external compositional structure, embedding structures, descriptive tree structures, and the infinite canvas. Perhaps the most influential part of Cohn's book is the one dealing with Cognition of Visual Language, built on empirical data from the author's doctoral dissertation (Cohn 2012b), and a range of data coming from other related papers. All these studies aimed at discovering what happens in the human brain in the process of decoding visual language. Starting with various attempts to tackle the cognition of graphic morphology, such as motion lines and carriers, the author goes on to discuss our comprehension of narrative grammar – narrative categories, separation of structure and meaning, and constituent structure – with the aid of a series of ERP/EEG and fMRI experiments. The results of these experiments were comparable to those acquired in similar experiments related to spoken languages. For instance, the N400 effect was evoked by violations of meaning, whereas the P600 effect was initiated by violation and/or manipulation of narrative grammar in comics. Cohn explores three different visual languages – the American Visual Language (AVL), the Japanese Visual Language (JVL) and the Central Australian Visual Language (CAVL). For each of them, Cohn provides a description of the graphic structure, morphology and narrative grammar, while highlighting the unique features of each. When dealing with AVL, Cohn differentiates between visual languages and dialects. When exploring JVL, he deals with some elements of visual language transmission and contact. With CAVL, its description is linked to its cultural role, and to static and dynamic signs and compounds in its lexicon. Through this description,

Cohn proves that although these different visual languages are composed of different lexicons and grammars, they share the basic underlying principles rooted in our cognition and therefore transcend culture. Cohn's study offers many possibilities for future research. He lists possible directions of further investigations of visual language: conceptual structure and semantics, multimodality, visual language acquisition, linguistic typology, historical linguistics, comparative and contact linguistics, anthropological linguistics, sociolinguistics, computational linguistics, and cognitive neuroscience. Finally, Cohn believes that the "split between the sociocultural object/context ('comics') and the structural/cognitive system ('visual language') is the key to future research of the graphic form in the linguistic sciences," the focus being "not just on 'comics,' but on the system they are written in and how the mind works to create meaning." In this way, the ultimate objects of the study should be "the abstract representations and principles in the human mind that motivate comprehension of various domains" (Cohn 2012a: §Visual Language versus Comics).

4. Conclusions

By presenting a number of studies that employ a cognitivist position in researching comics, we have witnessed its seemingly vast potential for contributing to the further development of comics studies. However, this relationship does not function in a single direction. On the one hand, the application of such an academically accepted framework gives legitimacy to the still young and not fully established field of comics studies, while providing it with novel and interesting ways of examining the works of "the ninth art." On the other hand, the fact that comics are closely related to our cognitive capacities allows us to consider them to be adequate material for proving that cognitivist principles are, indeed, universal, and not merely related to only one channel of expression. Further research in this area will likely expand both of the above disciplines.

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