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ABSTRACT

The use of words to label concepts is a weak point in CMT but one which is little discussed. This article considers the relative merits of image and writing as semiotic modes for identifying conceptual metaphor domains and whether image can offer an alternative to TARGET IS SOURCE formulae. It reports on an experiment in which MA translation students draw composite drawings to represent orientational metaphoric aspects of a UK government press release. Conventional metaphoric language deriving from the orientational metaphors, especially GOOD IS UP/BAD IS DOWN, plays a significant role across this text, forming a "metaphor chain" pattern. The drawings and post-task interviews with the participants reveal details of the internal structure of the source domain UP and how it is conceptualized. Particularly of note is the strong horizontal FORWARD aspect of orientation which emerges when the written text is represented pictorially. The article demonstrates how drawing can be used as a tool in metaphor-led discourse analysis.

Introduction

This article discusses the limitations of using language to label SOURCE and TARGET conceptual metaphor domains. The significant shift in our understanding of metaphor brought about by CMT has led to metaphor being characterized as primarily a thought phenomenon rather than a matter solely of language. Having made this important stride forward, returning to language when labeling conceptual metaphor domains seems like a step backward, though this is the established practice. The article discusses whether there is a way out of the circularity of talking in words about the concepts which give rise to linguistic expressions.

The question as to what extent the image mode is fit for the task of identifying conceptual metaphor domains, and whether image can provide a workable alternative or parallel mode for this purpose, is explored. Image as a semiotic mode has its limitations and lacks a developed grammar of the kind we find in language. The interface between our conceptual systems and metaphor in the real world can be seen from two different theoretical standpoints: the "metaphor hierarchy" perspective, where individual utterances occupy the most specific level of a multilevel system; and the "discourse school" approach which focuses on metaphor identification, systematic metaphor and patterns of metaphor in discourse. The two approaches are combined in this article, as it explores: how analyzing a written text using image can lead to new insights into the internal structure of conceptual metaphor domains; and how visual image can be used as a research tool for investigating the role of metaphor in organizing discourse.

The article reports on an experiment in which six MA translation students from a London university are asked to analyze a written text by drawing an assembly of images to represent orientational metaphoric elements of this written text. The text contains numerous examples of conventional

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linguistic metaphors in a "chain" pattern deriving from orientational metaphors, particularly "GOOD IS UP/BAD IS DOWN." The participants are asked to draw a parallel text based on vehicle terms relating to spatial orientation they encounter in the written text, creating as they go a single composite drawing. Findings from these drawings and post-task interviews conducted with the participants are discussed.

The experiment shows how a multimodal approach to metaphor-led discourse analysis (MLDA) can provide a tool for understanding more deeply both the nature of the internal structure of conceptual metaphor domains and how metaphor structures discourse at the whole-text level.

Using language to describe conceptual metaphor domains

The practice of using words to describe domains of conceptual metaphors is problematic. It assumes that word categories can do the job of accurately delimiting conceptual domains, but word categories have their own individual architecture which does not necessarily coincide neatly with abstract concepts. The recurrent use of schematic diagrams in cognitive linguistics, e.g. Langacker (1986), is indicative of a need to go beyond verbal description. Just because a word roughly covers a conceptual domain, it does not mean it will accurately define it. Perceiving something as discrete or continuous is ultimately a matter of construal (Langacker, 2006), but thinking of CATEGORIES as CONTAINERS encourages us to see word boundaries as well-defined (Lakoff, 1993). Words are not neutral, "pure" thoughts but culturally informed entities, each bound up with a particular etymological path and a specific place in the speech community in which they are found. Words are units of language which have their own cultural profile, their own idiosyncratic semantics and specific histories of lexicalization, occurring in specific colligational/collocational environments and participating in formulaic language.

Another problem when using words to name domains is that many words are polysemous. The word *journey*, for example, has established (conventionalized) senses which are both physical and metaphorical, so to identify a conceptual domain with the word *journey*, as in "LIFE IS A JOURNEY", introduces complications from the start, as the lexeme is already metaphorically structured. Ritchie observes that, in the "ARGUMENT IS WAR" formula, both words identifying domains are polysemous, both can refer to intellectual debates or angry physical exchanges, so to discuss mappings between domains named in this way is complicated by the presence of alternative senses and associations in the mental lexicon (Ritchie, 2013, p. 84). The problem remains when we look at alternative cognitive theories of metaphor, such as conceptual blending (Fauconnier & Turner, 2002), where words are used to name input spaces. It is problematic assigning names, such as SURGEON, BUTCHER and DEVIL, to mental spaces when discussing, e.g. *This surgeon is a butcher* and *The devil is in the detail*, as these words are associated with both literal and conventionalized metaphoric meanings already established in the mental lexicon.

A further issue with the structure of words is that meaning making through signs by its very nature is partial. Signifiers give access to concepts via partial surface elements: *laptop*, for example, tells you where you might operate the device but not that it is a computer; *mobile* tells you that you can take the phone around with you but not that you can use it to take photos, watch films, or make calls. While representation is "*full* in relation to the sign-maker's interest at the moment of making the sign," it is "*partial* in relation to the object or phenomenon represented" (Kress, 2010, p. 71). Gestures, too, are partial in their representation. Mittelberg maintains that gestures "are essentially metonymic" and "exhibit the principle of partial semiotic portrayal" (Mittelberg, 2019, p. 2). It is the nature of signs that domains can never be fully represented by words (or by any other semiotic system). Also, perhaps more fundamentally, how confident can we be that domains really exist, or that the divisions we impose across continua of mental phenomena accurately reflect how the mind is configured. Are domains pure, self-contained entities with clear boundaries, in an Aristotelian essentialist sense, or are they categorizations we impose for our convenience, artificial constructions of our own making?

Cognitive linguists encourage us toward a view that certain mental concepts are indeed well defined, in part because they are grounded in a common experiential reality through repeated sensory

stimuli. Physical position and movement in space offer readily accessible mental frames for talking about things which are less concrete. Concepts such as UP-DOWN, IN-OUT, FRONT-BACK, LIGHT-DARK and WARM-COLD (Lakoff & Johnson, 1980, p. 57), hunger, temperature, pain and physical orientation (Ritchie, 2013, p. 70), are among those concepts we experience directly, i.e. literally, through the senses. They ground image schemas which in turn underpin the conceptual domains of primary metaphors (Grady, 1997). As primary metaphor domains are grounded in schemas, they are well defined and tend to be universal; while the domains of complex metaphors, such as "LIFE IS A JOURNEY", are less well defined, as their content is more distant from first-hand experience of the physical world through the senses.

Lakoff and Johnson emphasize that a conceptual metaphor formula represents concepts not language, and that such a label "is intended not as a sentence in English, but as a name for a metaphorical mapping across conceptual domains" (Lakoff & Johnson, 1999, p. 58). Coll-Flovit and Climent consider the problem of "domain labelling" and formulating conceptual metaphors to be very real, and that "no precise method for determining conceptual domains is yet available" (Coll-Florit & Climent, 2019, pp. 50–52), but for Kövecses domain naming is less problematic: "CMT works with a fairly clear definition of a domain that goes back to Fillmore's definition of a frame: A domain, or frame, is a coherent organization of human experience. This definition makes do in most cases" (Kövecses, 2017, p. 24).

The most widely used convention for naming conceptual metaphors is as formulae written in (usually small) capitals in the form TARGET DOMAIN IS SOURCE DOMAIN, reflecting the practice in semantics of using capitals to distinguish meanings (signifieds) from language items (signifiers). There are minor variations to this convention in the metaphor studies literature. Goatly (1997) writes formulae with an equals sign (=) between domains, e.g. evil = dark. Goatly favors the term "root analogy" over "conceptual metaphor," as roots are buried, undetectable, extending deep underground, and develop shoots and flowers which become noticeable but can die (Goatly, 1997, pp. 43–45). A disadvantage of the equals sign is that it suggests mappings are bidirectional. Lakoff and Johnson employ two different notations in *Philosophy in the flesh* (Lakoff & Johnson, 1999): one has target before source, Similarity Is Proximity; the other has source before target and an arrow indicating the direction of the mapping, Proximity→Similarity. Semino et al. use dashes to reinforce the idea that formulae are single units, LOVE-IS-A-JOURNEY, and refer to them as "small capital expressions" (Semino, Heywood, & Short, 2004, p. 1273).

Some conceptual metaphor formulae, such as "LOGICAL STRUCTURE IS PHYSICAL STRUCTURE" or "PERSISTING IS REMAINING ERECT," can sound strange to the ear, or, as Kövecses puts it, "lifeless", though they are perhaps the formulae we can rely on most, as they are primary metaphors; they are metaphors people do not consciously engage with "in their thought in real cultural contexts" because they *are* so basic (Kövecses, 2005, p. 11). For this reason, primary metaphors do not provide obvious tools for the analysis of discourse in its social context. Complex metaphors, such as "TIME IS MONEY" and "LIFE IS A JOURNEY", are a different matter; they sound more plausibly like syntagmatic word strings one might actually utter. It seems to me that the naming of conceptual metaphors using language is a weak link in the CMT edifice, though in most accounts it is passed over quickly if mentioned at all. It is not for example among the methodological issues discussed in Kövecses (2011). I feel it deserves as much scrutiny as other objections to CMT even if there is no credible alternative.

Using image to describe conceptual metaphor domains

In this section, I consider whether the image mode offers an alternative semiotic system to language for describing conceptual metaphor domains. One reason to do so is to find a way out of the circularity problem of naming metaphor domains using words, for what is gained in CMT by seeing metaphor in terms of thought, it seems to me, is partly undone by returning to language to describe mental concepts. This is different from Gibbs and Perlman's sense of *circularity*, for whom the "language – to – thought – to – language circle" refers to linguistic evidence being both the path to identifying conceptual metaphors and the proof of the existence of conceptual metaphors (Gibbs & Perlman, 2006, p. 215), rather than the appropriacy of using language to describe thought. In the experiment

described in this article, a multimodal approach is adopted for a further reason: to see if the image mode can offer a research tool for analyzing written text and thereby give new insights into the internal structure of conceptual domains and our conceptualization of metaphor more generally.

Is a visual grammar comparable to a language grammar? Or, better, when the term "grammar" is applied to image, are scholars using it analogically or metaphorically? To explore this question, I dedicate the next few paragraphs to the visual grammar Kress and van Leeuwen lay out in *Reading images* (Kress & van Leeuwen, 1996). I refer to the first edition throughout this article, rather than later editions, as this was the foundational work in which these ideas were first laid out. This grammar of visual design explains how "visual lexis" combines into "visual statements" to create "meaningful wholes", structured and organized in a regular and systematic way (p.1). It shows that visual components in communication do not just accompany written text, in the way that e.g. Barthes envisaged, but interact with it, often with the visual mode dominating (p.16). Language and visual communication realize the same systems of meaning but "each does so by means of its own specific forms, and independently" (p.17).

In this work, Kress and van Leeuwen apply the principles of Hallidayan Systemic Functional Grammar (SFG) to visual texts. They adopt the theoretical notion of metafunctions, ideational, interpersonal, and textual strands of meaning (field, tenor, and mode), and demonstrate how these are realized in image (Kress & van Leeuwen, 1996, p. 40). Other concepts they adopt from functional grammar are: actor/goal, recipient/participant/circumstance, given/new, offer/demand, carrier/attribute, and the six processes: material, mental, relational, verbal, existential, and behavioral (p.77). They also discuss image in terms of coherence, cohesion, collocation, and colligation (Kress & van Leeuwen, 2001, pp. 57–58), and use left-to-right branching diagrams, a hallmark of Hallidayan functional grammar, to show the choices available to the sign-maker (e.g. Kress & van Leeuwen, 1996, p. 73, 107, 154, 223): "we have tried to write our grammar [. . .] as a flexible set of resources that people use in ever new and ever different acts of visual sign-making" (p.264).

Other concepts in Kress and van Leeuwen's visual grammar are redolent not of functional grammar (or generative grammar) but the third of the Three Grammars, cognitive grammar (Denroche, 2021). **Salience** is one such concept, which Kress and van Leeuwen define as "the degree to which an element draws attention to itself, due to its size, its place in the foreground or its overlapping of other elements, its colour, its tonal values, its sharpness or definition, and other features" (Kress & van Leeuwen, 1996, p. 225). A salient element is "the most eye-catching element in the composition" (p.181), one which attracts the viewer's attention through factors such as placement, relative size or differences in sharpness (p.183). It is one of three "principles of composition" along with information value and framing (pp.183, 212–214).

For Langacker, *salience* (also "prominence") is basic to construal, a "dimension of imagery" (Langacker, 1986, pp. 10–12), and determines many of the asymmetries found in language where the focus of attention is drawn to one element rather than another, such as "figure" relative to "ground", "profile" to "base" and "trajector" to "landmark" (Langacker, 2013, pp. 66–73). The closely related term, "attention," is also found in both multimodality and cognitive grammar. Attention begins the sequence "attention-framing-interpretation" in Kress's model of communication (Kress, 2010, p. 32). For Talmy, the "attention system," one of the four "conceptual structuring (or 'imaging') systems," allows us to differentiate between figure and ground (Talmy, 2006 [1988]).

Frame is another concept found in both Kress and van Leeuwen's visual grammar and cognitive grammar. *Framing* is one of the three "principles of composition," along with salience and information value, and is the second step in the "attention-framing-interpretation" sequence. Framing is intended here in a physical sense; frame lines, dividing lines and empty space act as "framing devices" to indicate separation or association between elements (Kress & van Leeuwen, 1996, pp. 215–218). For Kress, there is "no meaning without framing" (Kress, 2010, p. 10). "A *frame* defines the world to be engaged with; it excludes and it includes; and in doing that it shapes, presents the world according to the interest and the principles of those who *frame*" (Kress, 2010, p. 149). Frames are "essential for all meaning-making in all modes" (p.149) but "the material means for *framing* differ from mode to mode" (p.151).

The cognitive linguistic understanding of "frame" (similar to schema, script, domain, and cognitive model) emphasizes the importance of cognitive context in interpreting propositions and the role of encyclopedic knowledge in structuring long-term memory. According to Fillmore's "frame semantics," a word cannot be understood without reference to an innate or learned frame of experience; to understand a concept "you have to understand the whole structure in which it fits" (Fillmore, 2006 [1982], p. 373).

A third concept from cognitive linguistics which has a resonance in Kress and van Leeuwen's visual grammar, though it is not a term they use, is **construal**: the ability to conceptualize and structure the content of a frame in different ways. This makes every structuring partial. What is profiled, the level of specificity, scale and scope, and perspective are all factors in construal in cognitive linguistics (Langacker, 1986, pp. 6–13). This accords with Kress, who argues that representation is always partial when making and re-making (interpreting) signs (Kress, 2010, p. 71). Kress and van Leeuwen maintain that "[i]t is never the 'whole object' but only ever its criterial aspects which are represented" and that these "are represented in what seems to the sign-maker, at the moment, the most apt" (Kress & van Leeuwen, 1996, p. 6).

Where does this leave us in terms of considering the eligibility of image as a semiotic system to describe conceptual metaphor domains? We can conclude that the image mode shares many features identified by functional and cognitive grammars for describing speech and writing. Image offers a complex semiotic system with a meaning potential similar to language but it also differs in many respects. Machin asks whether there is a visual grammar, a grammar of image, and responds that images are like language in that they are made up of elements, "volumes", representing actor/goal participants (visual nouns), and "vectors," representing transactions (visual verbs), which can be assembled and deconstructed; but that they are unlike language elements in not being as cleanly divisible (Machin, 2007, pp. 159–188). Images are hard to break down into their components because the image mode does not have a real "lexicon of elements" (p.185). For Kress "Images are [. . .] difficult to describe and analyse since, unlike writing, they are rarely composed of clearly discrete constituent elements, as words are" (Kress, 2010, p. 47). Also, images are not read linearly.

Dillon concurs with Machin, considering it misleading to speak of a "grammar of visual design" except in a very general sense, because you cannot parse an image in the same way you parse language; "rules of image" are more like "rules of thumb" as "they are never necessary (unless explicitly invoked) and they are not fixed in number" (Dillon, 2006). As images do not have clearly definable parts like words, anything in an image can trigger a semiotic rule, or more than one, or none; in language, rules determine how discrete elements (words and affixes) combine into connected graphs and only one "rule of grammar" applies at a time (Dillon, 2006).

The experiment described in this article displays another phenomenon not discussed in the account above, namely, that image is good at representing the materiality of a situation but less good at representing abstract concepts. If we consider that conceptual metaphors are made up of a TARGET domain which is usually more abstract in nature, and a SOURCE domain which is more concrete, using image to represent the TARGET domains of conceptual metaphors may well have limitations.

Metaphor in the real world

Conceptual Metaphor Theory has been subjected to intense scrutiny since Lakoff and Johnson's original account (Lakoff & Johnson, 1980). Every aspect has been interrogated and reexamined and problematic areas in the program identified. In response to these criticisms, metaphor scholars have modified CMT to the extent that it is no longer a single theory but a series, or progression, of different theories, often driven by the same authors. One area of criticism is a lack of explanation as to how a description of the idealized conceptual system of metaphor in our minds translates into language production in real-world contexts.

Kövecses does some deft theoretical conflict resolution to meet the criticism that CMT "ignores the study of metaphor in the contexts in which metaphorical expressions actually occur; namely, in real discourse" (Kövecses, 2010, p. 664) by extending the "metaphor hierarchy" to include the individual

level of mental spaces and on-line metaphor processing (Kövecses, 2020). For him, "the systematic identification of linguistic metaphors in natural discourse is a goal that is connected with what I call the individual level" (Kövecses, 2011, p. 27).

The metaphor hierarchy has at its most schematic level the skeletal preconceptual structures of image schemas, engendered by the direct embodiment of our human experience of the real world through our senses, such as CONTAINER, SOURCE-PATH-GOAL, CLOSENESS, DIRECTION, and AMOUNT OF FORCE (Lakoff, 2008, p. 30). These structure the domains of primary metaphors (Grady, 1997), also called "simple metaphors" (Deignan, 2005, p. 106), such as "CAUSES ARE FORCES", "EVENTS ARE MOTIONS", "PROGRESS IS MOTION FORWARD", "PURPOSES ARE DESTINATIONS" and "DIFFICULTIES ARE IMPEDIMENTS" (Kövecses, 2005, pp. 3–4). Primary metaphors are "directly grounded in the everyday experience that links our sensory-motor experience to the domain of our subjective judgments" (Lakoff & Johnson, 2003, p. 255), and tend to be universal thanks to our common body plan and living environment: "universal primary experiences produce universal primary metaphors", such as "AFFECTION IS WARMTH" (Kövecses, 2005, p. 3). Primary metaphors are less structured than complex metaphors; as a consequence their function in discourse is invariably to give textual coherence or positive/negative evaluation. At the next level, primary metaphors combine into complex metaphors, such as "LIFE IS A JOURNEY" or "ARGUMENT IS WAR." They do so differently across languages and cultures and for this reason are less likely to be universal (Kövecses, 2005, p. 4). Complex metaphors in turn form "systems," such as the "great chain of being" and "event structure" metaphor systems (Kövecses, 2002, pp. 124–129). The least schematic level in Kövecses's extended "hierarchy of metaphor" is that of individual utterances and mental spaces, at which level the entire system is activated in the brain (Kövecses, 2020, p. 127).

Adherents to the discourse-analysis school of metaphor studies, e.g. Deignan (2005), Semino (2008), Cameron, Low, and Maslen (2010), Deignan, Littlemore, and Semino (2013), Semino, Deignan, and Littlemore (2013), start at the mental-space level of Kövecses's hierarchy. Several procedures for metaphor identification have been developed, such as MIV (Cameron, 2003), MIP (Pragglejaz Group, 2007) and MIPVU (Steen et al., 2010), and the extended version of MIP for image, VISMIP (Šorn & Steen, 2018). These procedures recognize that CMT is too idealized to explain fully the behavior of metaphor in text or how the conceptual system of metaphor is configured when bound up with language.

The "discourse dynamics" approach of Cameron et al. takes pains to avoid over-interpreting data and over-generalizing beyond the text (Cameron et al., 2009). Instead of approaching metaphor from high-level statements about universals, generalizations are built up from individual instances of linguistic metaphor vehicles identified in the text (Cameron, Low, & Maslen, 2010). Patterns of metaphor are described as "systematic metaphors" (Cameron & Maslen, 2010); they differ from conceptual metaphors in being text specific, and are written in italics to make this distinction (Cameron, Low, & Maslen, 2010, p. 117), e.g. *DNA IS A LIBRARY*, *CRIMINALS ARE RATS*. This lower level of abstraction comes closest to conceptual metaphors only when they represent "highly conventionalized linguistic metaphors that fall into highly conventionalized patterns of use" (p.134).

The experiment

The data for this article were collected from an experiment conducted with postgraduate students enrolled on master's programs in translation and interpreting at a London university. All six participants had an awareness of CMT from attending workshops, as part of their course, which involved identifying metaphor in written and spoken texts. For the experiment, they were asked to draw a visual representation of orientational metaphoric aspects of a text, their drawings providing a parallel visual text to the written text. The text is a press release about a UK government scheme for alleviating child poverty, entitled *Government outlines new ways to lift children out of poverty and increase social mobility*, published online by the UK Treasury in 2009 (reproduced as an Appendix to this article).

Scholars working in the field of "metaphor-led discourse analysis" identify a number of different ways in which metaphor patterns discourse (Cameron et al., 2009). These can be categorized into three main types: "metaphor clusters," "extended metaphor," and "metaphor chains," and are paralleled by the ways metonymy patterns discourse (Denroche, 2018). A "metaphor cluster" is a point in a text where there is a high concentration of linguistic metaphors, deriving from various different SOURCE domains, where intense discourse work is being done (Cameron & Stelma, 2004); in contrast, an "extended metaphor" involves novel metaphoric language from a single complex conceptual metaphor, extending over a relatively long stretch of language (Darian, 2000; Goatly, 1997; Semino, 2008; Steen, 2007); while a "metaphor chain" shows a more even distribution of vehicle terms, which are highly conventional and usually derive from a single primary conceptual metaphor (Koller, 2003; Semino, 2008). The text used in the experiment described in this paper displays the third of these metaphor-in-discourse patterns, the *metaphor chain* pattern.

The text describes a pilot scheme for a UK government initiative which gave poor families a £200 child development grant to improve family wellbeing by encouraging parents to take up local state services, such as childcare, and give their children access to better futures. The text was chosen because it draws heavily on orientational (spatial) metaphors, particularly GOOD IS UP/BAD IS DOWN, and because it is sited sufficiently distantly in time to be part of a common narrative resonating with the 2008 financial crisis, without being too far in the past to read as ancient history or lacking in relevance.

The experiment is an exercise in "metaphor-led discourse analysis" (MLDA) and "multimodal discourse analysis" (MMDA). MMDA examines the co-operation between modes in establishing meaning from a discourse perspective: "In MMDA attention is drawn to the part all modes have in constituting the meaning of a text: differently because of their different materiality and because of the affordances which derive from that" (Kress, 2012, p. 39). The experiment combines both approaches as the participants: 1) analyze a written text for metaphor; 2) use multimodality to interpret that text; and 3) create a multimodal text (writing and image) in the process. So, although the experiment involves the analysis of a *monomodal* text, *multimodality* is the research tool for carrying this out, and the outcome is a *multimodal* text.

The experiment was conducted with each informant individually on separate days. They were allowed as much time as they needed to complete the different stages of the experiment – on average this was an hour and a half in total.

The stages of the experiment

There were five stages to the experiment: 1. Preparation, 2. Marking up the text, 3. Listening, drawing and annotating, 4. Introspective interview, and 5. Retrospective interview. The stages are described below.

Stage 1 – preparation

The experiment started with an informal chat with the informant to put them at their ease and reengage with them on a personal level. I then played a round of a drawing game with them, in which we took turns to depict a word through drawing, such as *snail*, *aeroplane*, *competition*, while the other guessed what the word was. This was to make the participant feel comfortable with the activity of drawing in front of someone else, not something one is often called upon to do. This stage lasted about fifteen minutes.

Stage 2 – marking up the text

In this mark-up stage, the participants were given the press release text they were to work on. They were asked to underline words they felt derived from source domains of orientational conceptual metaphors, those involving physical position or movement in space and time, which they felt played a role in

structuring the text. Steen et al. distinguish between bottom-up "inductive" approaches to analyzing discourse for metaphor, where the analyst keeps an open mind before going on to describe the linguistic expressions they have identified in terms of systematic metaphors; and top down "deductive" approaches, where a preconceived idea of the conceptual metaphors involved is assumed by the analyst (Steen, Dorst, Herrmann, Kaal, & Krennmayr, 2010, pp. 760–761). The method used in this experiment shares with MIV, "Metaphor Identification through Vehicle terms" (e.g. Cameron, 2003), that it includes multiword vehicle terms as well as single words, but departs from MIV, MIP (Pragglejaz Group, 2007) and MIPVU (Steen et al., 2010) protocols in being top down, as participants were asked from the outset to look for vehicle terms associated with orientational metaphors. The instructions, read to them for consistency, were:

> Please underline on the text any words or phrases which you think express orientational metaphors. Show in the text where you feel metaphors based on physical position or physical movement play a role in structuring the text as a whole.

After this, I reviewed the article with them to gain a better understanding of their mark-ups and why they had underlined those particular words/phrases. This allowed me to ensure they were certain about their choices and give them the opportunity to make changes. Words of orientation which relate to reporting within the press release, rather than the narrative of the government's intervention itself, such as *the announcement* ***comes ahead of***, were ignored for the purposes of the experiment. This stage took fifteen to twenty minutes.

Stage 3 – listening, drawing and annotating

For this stage, I read the article back to them slowly, stressing the words they had highlighted in their mark-up. Speech was introduced at this juncture to guide the task and give uniformity of input, as my tone of voice, pace, and emphases would be constant, while reading styles and approaches to the task would vary if participants worked with their own mark-ups. I also used speech to keep the modality (sensory channel) of "seeing" unencumbered so they could focus on the drawing task without having to switch between visual modes (writing and image), and to give the participants a deeper familiarity with the text by experiencing it coming to them via an auditory source.

Their task was to represent pictorially, on a sheet of A3 paper, the words I was giving weight to, and build the individual parts of the drawing into a single composite picture. The process of re-representing a text in one mode in terms of another has been called "intersemiotic translation" by Jakobson (2012 [1959], p. 227) and "transduction" by Kress (2010, pp. 125–128). The participants were told they could annotate their drawing if they wanted to. This stage also took about fifteen to twenty minutes. The instructions I read to them were:

> I will now read the text back to you, emphasizing the words you underlined in your mark-up; I want you to draw a pictorial representation of the article, integrating the individual elements into a single drawing, and annotating your drawing where necessary.

Stage 4 – introspective interview

This stage was conducted immediately after the drawing stage. In it, I asked them to talk me through their drawing. This helped give insights into the thinking behind their choices and resolve ambiguities where aspects of the drawing were hard to interpret. This stage took on average fifteen minutes.

Stage 5 – retrospective interview

A further interview was conducted for each informant a couple of weeks after they did their drawing. This gave me the opportunity to hear further thoughts on the experiment which had occurred to them in the intervening time and any reflections they might have had on the experience as a whole.

Findings

In this section, I present findings from three students who participated in the experiment, Tanya, Markus, and Kathryn (pseudonyms). Below, I give for each informant: profile; description of the drawing; and information from the interviews.

Informant 1 - Tanya

Profile

Tanya was born in Poland and works with three languages including English. She was studying for a master's degree in interpreting at the time of the experiment. The words/phrases she underlined on her mark-up, in the order they appear were:

> lift, increase, mobility, a renewed drive, increase, mobility, come ahead, mobility, unleashing, mobility, the driving ambition, on the path to, delivering prosperity, build on, low, take up, development, improve, expanded, to move into work, enhanced, to boost, progress, incentives, overcome constraints, overcome the high childcare, to develop new and innovative, affluent, be scope to extend, increase social mobility

The drawing she produced is shown in Figure 1.

Description of the drawing

The main element of this drawing is a large, dashed circle covering most of the page, labeled *cycle of poverty*. Across the circle runs a linear band of images diagonally from bottom left to top right, starting bottom left with the image of a car, labeled *Government*, and ending top right with a smiling sun, labeled *Success*. Depicted along the route are: a set of waves, which cuts across the boundary from outside to inside the circle; two adult figures with downcast expressions standing side by side, labeled *Low income families*; a short vertical arrow; a fence, above which is another less clearly drawn arrow and two small figures, labeled *childcare*. Next to these are a three-story building, a short stretch of road, a factory with smoking chimneys, labeled *work*, another road, two adult figures with happy faces, and

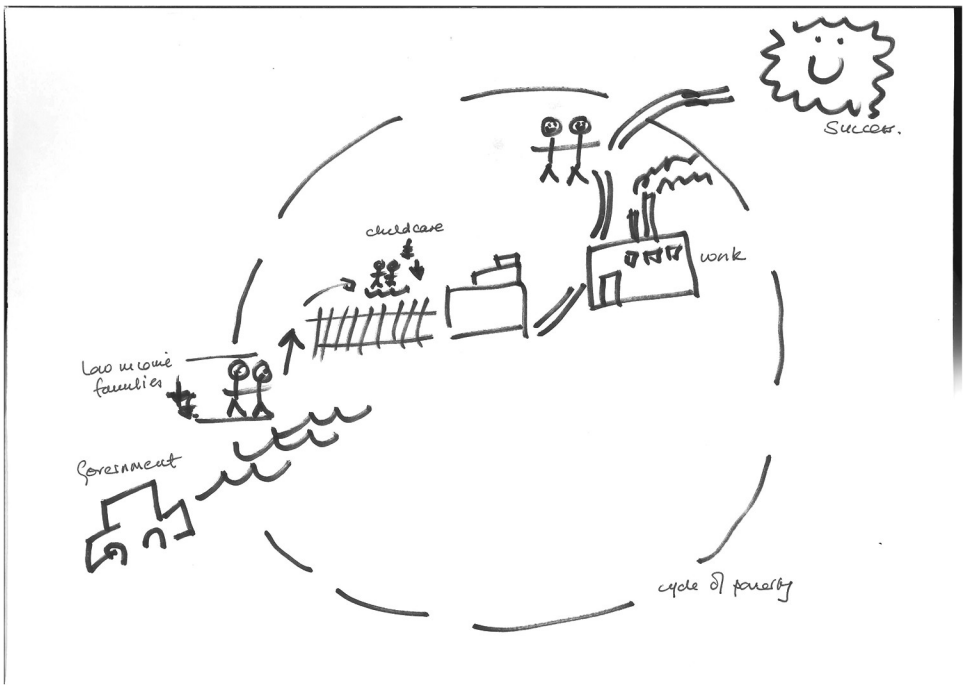

Figure 1. Informant 1, Tanya's drawing.

a third stretch of road leading out of the circle to the smiling sun, top right. It is interesting to note that of the words she uses to annotate her drawing only *childcare* appears highlighted on her mark-up, and that the words annotating the drawing all relate to the TARGET rather than the SOURCE domain.

Tanya explained that the drawing represents the "path to success" along which low-income families "overcome barriers" through "childcare" and "work" to reach the sunny destination of "success"; that the two arrows, one vertical, another more or less horizontal, represent the contribution of the government in "lifting" children out of poverty; and that the government, represented by a car, provides the "drive" for all the movement occurring within the "cycle of poverty".

Information from the interviews

Ambiguities in Tanya's drawing were resolved in the introspective interview, for example, that the smaller figures were children and the image labeled *Government* was a car, not, as I had thought, a building. She commented in the introspective interview that "it was hard to show the information as a sequence because the themes repeat" and that it worked better to "draw it less as a sequence of events and more as a diagram summarizing the whole."

In the retrospective interview Tanya said the task reminded her of a note-taking technique she had been taught for conference interpreting, to note down main ideas diagrammatically rather than use words or shorthand. When asked if the exercise would be a good way to prepare a text for translation, she said she thought it would but that it "wouldn't work for all texts."

Informant 2 - Markus

Profile

Markus is a native speaker of two European languages and has worked as a technical translator. He was studying for a master's degree in bilingual translation at the time of the experiment, a course which involves translating into and out of your mother tongue. The words/phrases he underlined in his mark-up, in order, were:

> lift, out of, social mobility, drive, social mobility, ahead, mobility, unleashing a new wave, driving ambition, to put . . . on the path to success, breaking cycles of poverty, low income parents, under, take up services, to be in poverty, expanded, move into, support, support families, enter and progress in work, enter work, overcome constraints, overcome . . . the high, barriers, supported accommodation, support, high risk, extend, end, stop, passing from one generation to the next, increase mobility

The drawing he produced is shown in Figure 2.

Description of the drawing

The drawing Markus produced is striking for the number of arrows it contains. There are eight: one long arrow running diagonally across the page from bottom left to top right, labeled *social mobility*; two vertical arrows on the left of the page, one above the other, labeled *support* and *lift*; three horizontal arrows, a short double-stemmed arrow marked *drive*, a longer arrow marked *path to success*, and a zigzag arrow marked *enter work*, *move into work* and *progress in work*; and two hoop-shaped arrows, one becoming a circle, labeled *high risk*/*cycle of poverty*, and one scaling an obstacle, labeled *overcoming barriers*/*constraints*. There is also a child standing on a platform between the vertical arrows on the left and the word *in*; the representation of a wave; the word *stop* in a box with *passing from generation to generation* written next to it; and at the center of the drawing, two adult figures, the parents of the child. All the words Markus uses to annotate his drawing are highlighted on his mark-up; but in contrast to Tanya's, these words relate to the SOURCE rather than the TARGET domain, either on their own, e.g. *support*, *in*, *lift*, or in combination with TARGET elements, e.g. *high risk*, *cycle of poverty*, *social mobility*, *move into work*. It should be noted that not all lexical items identified by the participants, such as *support* and *build on*, derive purely from orientational metaphors.

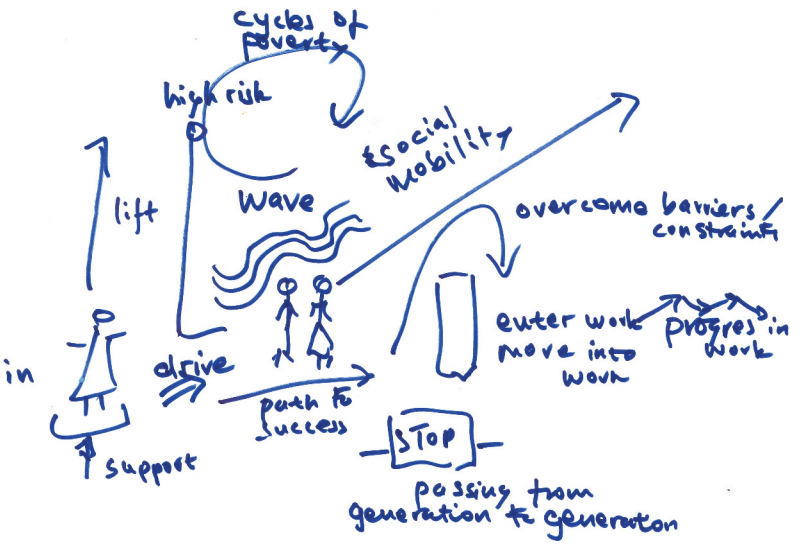

Figure 2. Informant 2, Markus's drawing.

Information from the interviews

In the introspective interview, Markus said he felt his drawing was "near enough a representation of the whole article" and that identifying orientational metaphor in this manner was a good way of summing up the text and a good way of preparing a text like this for translation because "you can hang the whole article on the idea of UP without losing much content." It is interesting that he felt that representing the words he underlined on the text pictorially allowed him to capture the article as a whole, as the number of words he (and the other participants) underlined is a relatively small proportion of the whole text—72 out of 615 words (11.7%). This indicates the important contribution that words relating to orientational metaphors can make to the overall coherence of a text even when they are not very numerous.

In the retrospective interview, I asked Markus why the endpoint of the progression across the page ended in a blank space. He replied that, although the end-state of the article was "all about that blank space," the result of the journey, where the child had been lifted out of poverty and achieved social mobility, he could not find a way to show it in his drawing: "it is difficult to represent success as it's an abstract idea."

Informant 3 – Kathryn

Profile

Kathryn works with three European languages, including English, her first language. She has experience as a language teacher and as a translator. She was studying for her master's degree in translation at the time of the experiment. The words/phrases she underlined on her mark-up, in order, were:

> drive to increase social mobility, come ahead of a speech, unleashing a new wave of social mobility, driving ambition, put children on the path to success, breaking cycles of poverty, will build on, low income, In-Work Credit pilots will be expanded, move into work, boost their confidence, extend the London Childcare Affordability pilots, enter work, overcome constraints to returning to work, overcome the high childcare and transport costs, barriers in the capital, high risk, passing from one generation to the next, social mobility

The drawing she produced is shown in Figure 3.

Figure 3. Informant 3, Kathryn's drawing.

Description of the drawing

Kathryn's drawing is the most dense and complex of all the participants, using every bit of space, and introducing images and symbols other informants did not use. She also employs two colors, blue for the drawing and red for (most of) the annotations. The main thrust of the drawing takes us from bottom left of the page, where poverty is represented graphically and in words, to top right, where success is represented as a forest of plus (+) and pound (£) signs, amid which there is the figure *200*, mentioned in the article (£200), and the words *prosperity*, *success*, and *incentive*. There is a strongly drawn vehicular road with a dashed line down the middle joining these two areas, marked *road to*.

Kathryn talked me through her drawing. In the left-hand section there is a child being lifted out of poverty toward its loving parents (loving, she explained, because their faces are shown encircled by a heart), an arrow running vertically, and arrows pointing toward work and the words *cutting costs*, *barriers* and *mother*; the middle section shows a building with towers, representing institutional success, labeled *increased social mobility*, costs and waves, represented graphically and as annotations; while the right-hand section has a large eye, the words *boost confidence* below a bicycle without a rider arriving at the end of the road, and the names *Yvette* and *Ed*, government ministers mentioned in the article. The words Kathryn uses to annotate her drawing are predominately from the TARGET domain, e.g. *mother*, *child*, *success*, *costs*, *incentives*, *prosperity*, and the names of the politicians.

Information from the interviews

Kathryn commented in the introspective interview that an initial reading of any text "is a bit like drawing a sketch." She said her first instinct was to draw a very simple representation consisting of a single line: "I just wanted to draw one line across the page from bottom to top, but then I felt I needed to fill in the detail." She said her drawing was organized on two levels, the upper level, "heaven," representing prosperity, and the lower level, "hell," representing poverty. Her idea of heaven and hell adds another layer of metaphor to the interpretation of the text, a layer implicit in her drawing but not explicitly stated in the text. When asked whether the exercise would be a good way to prepare a text for translation, she said she thought it would be good for teaching "active reading of any text" particularly "children learning to read and in adult literacy classes."

Conclusions

The main focus of this article is the exploration of drawing as a research tool for carrying out metaphor-focused discourse analysis. The experiment shows that analyzing a written text, by having informants produce a parallel visual text, can shed new light on how metaphor is conceptualized and how metaphoric thought structures discourse. As the experiment combines "metaphor-led discourse analysis" (MLDA) and employs "multimodal discourse analysis" (MMDA) as a tool of analysis, we could refer to the approach adopted as "multimodal metaphor-led discourse analysis" or MMLDA.

There were striking similarities across the participants in terms of the ease and speed with which the participants took on the task; the similarity of their word lists; the similarity in the overall plan of their composite drawings; and how much of the article was represented in the final drawings. It was also striking that the subjects all went beyond UP/DOWN and showed the dimensions of FORWARD in their drawings. The words Tanya, Markus and Kathryn marked up relating to movement and physical position indicated both processes (verbs), e.g. *boost*, *enter*, *support*, *move*, *overcome*, *support*, *lift*, *unleash*, and participants (arguments), e.g. *incentive*, *costs*, *low-income parents*, *wave*, *path to success*, *work*, *success*, *child*, *childcare*, *cycle* of *poverty*.

The drawings were strikingly similar in that Tanya, Markus, and Kathryn all depict a trajectory from bottom left to top right with obstacles and points of interest along the way, and all give visual representations of "cycles of poverty," "barriers," and "wave", although these are mentioned only once each in the press release. Tanya's drawing is the most static, with movement represented by a few short arrows; Markus and Kathryn have arrows running diagonally across the page to indicate UP and FORWARD as well as shorter vertical arrows indicating UP; while in Kathryn's drawing UP and FORWARD are represented by a clearly defined road overlaid with an arrow. The similarities across the mark-ups and across the drawings are indicative of a shared conceptual system and a shared response to the text, this in spite of the many variables built into the design of the experiment, such as drawing skills, native and non-native subjects, and the intervention of the researcher at different stages in the experiment and interviews.

The participants were told they could annotate their drawings if they wanted to. Tanya, Markus and Kathryn all did so, exploiting the different properties of the two semiotic systems. None produced a purely visual composition; all incorporated words into their drawings. Tanya's and Kathryn's annotations are mainly from the TARGET domain, while Markus's are mainly from the SOURCE domain. Tanya's annotations add information about nominal arguments, *government*, *low-income families*, *childcare*, *work*, *cycles of poverty* and *success* (most of them are not highlighted on her mark-up); while Markus additionally names verbal processes, *drive*, *support*, *lift*, *enter*, *move*, *progress*, and *overcome*; as does Kathryn, with some processes reified, *cutting costs* and *social mobility*. There is a division of labor between visual image and written language as meaning-making resources, and a multimodal approach to analyzing discourse reveals the symbiosis between them. More rigorous experimentation through the collection of a larger set of data, less researcher intervention and more consistency across the participants would test these findings.

The starting point for this article was whether the image mode can provide an alternative to the practice of identifying conceptual metaphors using formulae expressed in words of the kind SOURCE IS TARGET. A comparison of visual grammar with language grammar shows up the different affordances of the image and writing modes, with language having the advantage of a more developed grammar with distinct entities and combinatory rules, and image capable of giving access to more precise information. The drawings show the complementarity of the two semiotic systems; the mode of image is particularly good at representing source-domain elements of orientational metaphors, such as UP/DOWN, because of the closeness of these domains to directly experienced spatial phenomena and the iconic or indexical (rather than symbolic) nature of image elements; while not lending itself to the representation of more abstract concepts, such as GOOD and SUCCESS, for the same reasons. We should certainly not abandon image; however, as the composite drawings do much more than just depict individual SOURCE and TARGET elements from the text: as assemblies of elements, they do the job of indicating abstracted overarching conceptual frames metonymically, if not perhaps as neatly as SOURCE IS TARGET formulae do.

The most significant finding from the data is the insight it gives into the internal structure of "GOOD IS UP/BAD IS DOWN." The experiment gives us a mind-map of the meaning-making resource that the metaphoric idea "GOOD IS UP/BAD IS DOWN" offers a text producer; the experiment also shows that the TARGET IS SOURCE convention for representing conceptual metaphors belies the intricacies of orientational conceptual metaphors. Although "GOOD IS UP/BAD IS DOWN" may be considered a single metaphoric idea, the picture the reader builds up as they move line by line through a text is complex and multifaceted. Particularly striking is the strong horizontal FORWARD component in addition to UP which emerges when the subjects represent "GOOD IS UP/BAD IS DOWN" pictorially. The metaphors "GOOD IS UP" and "GOOD IS FORWARD" are working behind the scenes in the text but become evident in the drawings, depicted as an overall diagonal movement on the page from bottom left to top right.

In the political speeches, government documents and interviews which Koller and Davidson (2008) examine, the choice of the conceptual metaphor "SOCIETY AS BOUNDED SPACE" to frame governmental management of poverty, where "GOOD IS INSIDE" and "BAD IS OUTSIDE," deliberately avoids the vertical dimension UP. They show that discussing social inclusion/exclusion solely in terms of a horizontal trajectory, without a vertical component, helps hide disparities within the socially included group, and avoids drawing attention to social inequalities expressed as hierarchies or strata in society (p. 326). The possible interplay of other metaphors involving spatial orientation, such as "TIME IS MOTION", "PROGRESS IS FORWARD" and "BAD IS UP" make analysis complicated, as do culturally specific drawing conventions, such as whether forward movement is depicted left to right or right to left. Nonetheless, we can conclude that interpreting a written text through an assembly of images can give a better understanding of the internal structure of the conceptual domains of orientational metaphors and how sharply they are defined, and that multimodality can be usefully employed as a tool in metaphor-led discourse analysis.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix: The text used in the experiment [Author's note: errors not corrected]

Government outlines new ways to lift children out of poverty and increase social mobility

A package of new initiatives to help families and end child poverty as part of a renewed drive to increase social mobility will be announced by Children's Secretary Ed Balls, Work and Pensions Secretary James Purnell and Chief Secretary to the Treasury Yvette Cooper today.

The announcement of the pilot measures come ahead of a speech on social mobility by the Prime Minister Gordon Brown this evening. The Prime Minister will say that unleashing a new wave of social mobility must be the driving ambition of the Government. The new measures aim to put some of the poorest children on the path to success, delivering prosperity and fairness for hard-working families that play by the rules and breaking cycles of poverty once and for all.

The pilots will build on already successful initiatives – such as offering new services in children's centers as well as testing new approaches to improving families' incomes. They include:

- A new Child Development Grant of around £200 will be available to low income parents with children under the age of five in 10 local authorities from early 2009. Parents who take up services such as their free entitlement childcare places and work with children's center staff to take agreed action to support their child's development and improve their families' wellbeing, could be eligible. £12.75 m will be available through this pilot;
- Children in couple households are 60% less likely to be in poverty when both parents are working than if neither parent works. The current In-Work Credit pilots will be expanded to provide financial incentives for both parents to move into work as well as providing tailored work-related support. Over £5 m will be available for this pilot;
- Help in children's centers in Preston and Newham for parents to better understand and claim tax credits – to support families with everyday costs and childcare costs.
- £7.6 m for 30 Children's Centers across 10 Local Authorities to offer enhanced work-focused services, helping parents with training and work experience to boost their confidence, skills and support them to enter and progress in work;
- Funding will be made available to extend the London Childcare Affordability pilots and find new ways of making childcare more affordable for these families so that parents can enter work;
- Up to £10 m will be invested in incentives to help parents in London, in particular mums, to overcome constraints to returning to work, for example by helping them to overcome the high childcare and transport costs which act as particular barriers in the capital;
- Improved supported accommodation for teenage mothers by providing additional services to improve the health and development of their children, improve their parenting skills and support them with learning. Pilots are expected to begin in early 2009;
- At least £20 m will be available through grants to local authorities to develop new and innovative approaches to tackle the causes and consequences of child poverty. The pilot areas will include remote rural areas, pockets of deprivation in otherwise affluent areas as well as deprived communities in inner cities. They will test out new approaches to support groups at particularly high risk of living in poverty including disabled children, Black and Minority ethnic and White working-class families.

Depending on the success of the pilots in the first two years, there may be scope to extend or introduce additional pilots in year 3. Children's Secretary Ed Balls said: "Child poverty blights the life chances of far too many children in our country which is why we are absolutely determined to end child poverty, stop poverty passing from one generation to the next and increase social mobility.

UK HM Treasury 2009