

An Integrated Approach to Metaphor and Framing in Cognition, Discourse, and Practice, with an Application to Metaphors for Cancer

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In this article, we examine the notion of ‘framing’ as a function of metaphor from three interrelated perspectives—cognitive, discourse-based, and practice-based—with the aim of providing an adaptable blueprint of good practice in framing analysis. We bring together cognitive and discourse-based approaches in an integrated multi-level framework, and demonstrate its value to both theory and practice by applying it to a corpus-based study of violence-related metaphors for cancer. Through the application of this framework, we show that there are merits in applying the notion of framing at different levels of generality in metaphor analysis (conceptual metaphors, metaphor scenarios, and linguistic metaphors), depending on one’s research aims. We warn that researchers and practitioners need to remain aware of what conclusions can and cannot be drawn at each level, and we show the theoretical and practical advantages of taking all three levels into account when considering the use of metaphor for communicating about sensitive topics such as cancer. We emphasize the need for a ‘rich’ definition of framing, including aspects such as agency, evaluation, and emotion.

1. INTRODUCTION

Metaphors are important in communication and cognition because they express, reflect, and reinforce different ways of making sense of particular aspects of our lives. This central function of metaphor is itself often referred to metaphorically as ‘framing’ (Lakoff 2001; Semino 2008; Cameron *et al.* 2010; Ritchie 2013; cf. Fillmore 1975). For example, being ill with cancer can be described as a ‘fight’ or a ‘journey’, as in the two extracts below from a UK-based online forum for people with cancer¹:

ask your chemo nurses or your specialist if your looking for anything that might be of help in your fight against cancer

There are certain points in the cancer journey where the plan has to change.

These two metaphors typically suggest different framings of the experience of being ill. In the ‘fight’ metaphor, the disease tends to be positioned as an enemy or aggressor (cf. ‘against’ in the first extract above), while in the ‘journey’ metaphor it is usually a road to travel on (cf. ‘points’ in the second extract above). The two framings imply different relationships between the person and the disease, and may therefore reflect and reinforce different ways of conceiving of as well as experiencing the illness, with potential bearing on the individual’s sense of self.

There are, broadly speaking, three main interrelated perspectives on metaphor that consider these framing effects: cognitive (e.g. Lakoff and Johnson 1980), discourse-based (e.g. Cameron *et al.* 2010), and practice-based (e.g. Reisfield and Wilson 2004). All three perspectives are concerned with the implications of the existence and use of different metaphors, but each has its own specific priorities. From a cognitive perspective, scholars are primarily concerned with metaphors in thought, and tend to see metaphorical expressions such as ‘cancer journey’ as evidence of the central role of metaphor in conceptual structures and processes. From a discourse perspective, scholars investigate in detail the forms and functions of metaphors in authentic language use, taking into account who uses them, why, in what contexts, and with what possible effects and consequences. From a practice perspective, the focus is on how metaphors can help or hinder communication in particular institutional settings (e.g. healthcare or education), and the goal is to make recommendations or policy decisions about which metaphors should be adopted and which should be avoided. The notion of framing is central to all three perspectives, but is defined in different ways and at different levels of generality. As a result, there is no clear consensus on how framing works and how best to analyse it. For example, from the perspective of practice in healthcare, Miller (2010: 20) includes what he calls the ‘military metaphor’ among the ‘words, phrases, or themes’ to ‘banish’ in oncology. This is because, he suggests, ‘it is well known that many patients, who would prefer that we call their illness anything rather than a battle or a war, detest this’. This raises at least two questions: Is the ‘military metaphor’ the most appropriate way of capturing the tendency to use words such as ‘battle’ and ‘war’ in relation to cancer? And what evidence is there that these metaphors consistently have such negative implications for patients that they should be avoided across the board in talking about cancer?

In this article, we propose an integrated multi-level framework for the analysis of metaphor and framing, and apply it, for the purposes of demonstration, to a corpus-based study of metaphors for cancer. This framework brings together cognitive and discourse-based approaches to metaphor, and can be used to make evidence-based recommendations for practice in areas such as healthcare communication. We show that there are merits in applying the notion of framing at different levels of generality in metaphor analysis (conceptual

metaphors, metaphor scenarios, and linguistic metaphors), as long as one is aware of what conclusions can and cannot be drawn at each level. We demonstrate the theoretical and practical advantages of taking all three levels into account when considering the use of metaphor for communicating about sensitive topics such as cancer. Throughout, we emphasize the importance of basing one's claims on the systematic analysis of actual metaphor use by members of specific discourse communities, and highlight the need for a 'rich' definition of framing, which includes aspects such as agency, evaluation, and emotion. Overall, we aim to provide a blueprint of good practice in framing analysis that can be adapted to suit different research interests and perspectives, but which allows cross-perspective comparisons by making key assumptions and decisions explicit.

2. FRAMING AND METAPHOR

We begin our discussion by introducing the notions of 'frame' and 'framing'. We then consider how the framing power of metaphor has been approached in previous work from the perspectives of cognition, discourse, and healthcare practice.

2.1 Frames and framing

The notions of 'frame' and 'framing' have been used in a range of different fields, including in classic studies in sociology (Goffmann 1967), artificial intelligence (Minsky 1975), and semantics (Fillmore 1975, 1985). In spite of inevitable differences between different fields, a 'frame' tends to be defined as a portion of background knowledge that (i) concerns a particular aspect of the world, (ii) generates expectations and inferences in communication and action, and (iii) tends to be associated with particular lexical and grammatical choices in language. Entman (1993) provides an overarching definition of 'framing' that aims to reconcile the different uses of the term in different disciplines in relation to communication:

Framing essentially involves *selection* and *salience*. To frame is to *select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation* for the item described. (Entman 1993: 52; italics in original)

Entman shows how, broadly speaking, frames can be identified in 'at least four locations in the communication process: the communicator, the text, the receiver and the culture' (Entman 1993: 52). Although all four aspects are relevant to our study, our approach to framing takes the 'text' as its starting point, or, more precisely, choices and patterns in metaphor use in naturally occurring verbal communication.

2.2 Frames and metaphor in cognition

In the conceptual theory of metaphor proposed by Lakoff and Johnson (1980), metaphors are seen, first and foremost, as mappings (or sets of correspondences) across different domains in conceptual structure. Expressions such as ‘He shot down all of my arguments’ are regarded as linguistic manifestations of conceptual metaphors, such as, in this case, ARGUMENT IS WAR.² This conceptual metaphor involves the mapping of aspects of the ‘source’ domain of WAR onto aspects of the ‘target’ domain of ARGUMENT. For example, within this metaphor the person one is arguing with corresponds to an opponent, criticizing another person’s ideas corresponds to physical or armed attack, and so on. Lakoff and Johnson (1980: 10–13 et passim) emphasize that the choice of source domain highlights some aspects of the target domain and hides others. This bias in the process of conceptualization is what, from this theoretical perspective, constitutes the ‘framing’ power of metaphor. For example, ARGUMENT IS WAR highlights the competitive aspect of arguments, and hides their potential cooperative aspects. Metaphors are therefore regarded as important because they reflect and influence how we think about different kinds of experiences, and potentially how we consequently act.

Lakoff and Johnson’s notion of conceptual ‘domains’ owes much to Fillmore’s concept of ‘frames’ in semantics, which was a major influence in cognitive linguistics more generally (see Clausner and Croft 1999). However, in the original version of Conceptual Metaphor Theory (CMT), Lakoff and Johnson (1980) use the term ‘domain’ rather broadly to refer to the chunks of conceptual structure involved in metaphorical mappings. A wide variety of concepts and types of experiences were therefore labelled domains, including, besides WAR and ARGUMENT, LIFE, DEATH, TIME, MONEY, LOVE, and so on. Subsequent developments of the theory have explicitly problematized both the choice of level of conceptual structure involved in mappings and the process of labelling both conceptual structures and conceptual metaphors (e.g. Croft and Cruse 2004: 7–39; Sullivan 2013; Dancygier and Sweetser 2014: 13–21). As a result, different terms have been used to capture more specific conceptual structures involving representations of particular situations, such as ‘scenes’ (Grady 1997) and ‘frames’ (e.g. Sullivan 2013). When the notion of frame is defined in contrast with that of domain, it is used to capture a sub-domain structure, so that a domain can subsume multiple frames, for example, the BODY domain includes frames such as EXERCISE, INGESTION, and many others (Sullivan 2013). Following Sullivan (2013), Dancygier and Sweetser (2014) use the notion of frame in this way and argue more generally that only a ‘multilevel model of analysis’ can adequately account for figurative language.

2.3 Framing and metaphor in discourse

A large number of discourse-based studies have analysed choices and patterns of metaphorical expressions in authentic data to consider their implications for

rhetorical effects, identities, social relations, ideologies, and so on. These studies tend to be concerned both with metaphor as an object of study in its own right and with issues within the specific domains of communication from which textual data are drawn, such as education (e.g. Cameron 2003), politics (e.g. Musolff 2004), or healthcare (Semino *et al.* 2015).

Many studies within this line of research explicitly adopt the notion of 'framing' to explain how choices of metaphor may relate to people's views and opinions on specific issues in specific contexts. The focus here tends to be on framing as a process involving the use of language to reflect and facilitate different ways of understanding and reasoning about things (e.g. Schön 1993: 137). This attention to actual metaphor use in context has led to a number of important insights and advances, particularly in relation to: what is included within framing effects, what level of conceptual structure is considered in relation to metaphors and framing, and the role of linguistic choices and patterns in claims about metaphor and framing.

A series of studies by Ritchie and colleagues (e.g. Ritchie 2013, Ritchie and Cameron 2014) have highlighted particularly the importance of evaluations, emotions, and perceptual simulations among the framing implications of different metaphors. More generally, Ritchie (2013: 106) describes 'framing' as a useful shared metaphor among researchers from different disciplines, but also points out that it is defined differently by different researchers, and that the relationship between framing as a process and different types of conceptual structures is often unclear. This issue is addressed directly by Musolff (2006) in a study of British and German press reports on the single European currency. Musolff (2006) points out the inadequacy of the general notion of conceptual domain for discourse approaches to the study of metaphor. He proposes the more specific notion of 'scenario' as a 'specific sub-domain category' (Musolff 2006: 24), which he defines as:

a set of assumptions made by competent members of a discourse community about 'typical' aspects of a source-situation, for example, its participants and their roles, the 'dramatic' storylines and outcomes, and conventional evaluations of whether they count as successful or unsuccessful, normal or abnormal, permissible or illegitimate, etc. (Musolff 2006: 28; see also Semino 2008)

For example, Musolff shows how some specific uses of metaphor in his press data exploit different specific scenarios from the broad conceptual domain of MARRIAGE, such as END-OF-HONEYMOON and ADULTERY. This definition of scenario is compatible with the notion of frame from the cognitive linguistic studies we discussed in the previous section (e.g. Sullivan 2013; see also Semino 2008: 218–22). Indeed, Musolff emphasizes that scenarios are extracted from discourse data and provide 'a platform to link the conceptual side of metaphor to its usage patterns in socially situated discourse' (Musolff 2006: 36).

In a similar vein, Cameron *et al.* (2010: 138) describe conceptual metaphors as 'overarching frames which inform and influence discourse', but also warn

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that '[c]laims about metaphor framing need to avoid the danger of over-generalization, beyond what is warranted by empirical data'. They introduce the notion of 'systematic metaphor' to capture the use of semantically related linguistic metaphors in relation to the same topic within a particular discourse event. For example, the systematic metaphor *A RESPONSE TO TERRORISM IS NEGATIVE LABELLING OF MUSLIMS*³ is formulated to capture one of the ways in which a group of Muslim participants in a focus group discussion talked about the response to terrorism on the part of the UK authorities (e.g. 'they'll just label all of us'). Cameron *et al.* (2010: 137) describe systematic metaphors as 'emerg[ing] from the metaphor analysis as ways of "framing" the ideas, attitudes and values of discourse participants'.

Cameron *et al.*'s work is part of a broader development in discourse-based approaches to metaphor that adopts dynamic systems theory to argue that the meanings and functions of metaphorical expressions cannot be adequately explained in terms of single factors such as the 'activation' of pre-existing conceptual metaphors. Rather,

a dynamical perspective shows how various cognitive, linguistic, social and cultural forces simultaneously shape, along different time-scales, people's use and understanding of metaphoric discourse. (Gibbs and Cameron 2008: 74)

Cameron and Deignan (2006) more specifically state that their:

perspective on metaphor is that it evolves and changes in the dynamics of language use between individuals, and that this local adaptation leads to the emergence of certain stabilities of form, content, affect, and pragmatics that we have called 'metaphoremes'. (Cameron and Deignan 2006: 675)

Cameron and Deignan discuss the metaphorical uses of the noun 'baggage' in English (e.g. 'emotional baggage') as an example of metaphoreme: when used metaphorically, the noun shows distinctive tendencies in terms of grammatical structures, collocations, evaluative slant, and distribution across registers that cannot be adequately explained by seeing it as a realization of a conceptual metaphor such as DIFFICULTIES ARE BURDENS.

From this discourse-based perspective, the framing power of metaphors does not just depend on the conceptual structures involved, but emerges in the dynamic interaction of people 'talking and thinking' in interaction. This applies both to language-wide metaphoremes such as 'baggage' and to more fleeting instances of metaphor use that may only be shared by specific groups of people in specific situations (e.g. the use of 'lollipop trees' to describe childlike drawings of trees in a particular classroom setting; Cameron 2003).

Cameron and Deignan's (2006) account of metaphoremes and Musolff's (2006) notion of scenario show how the approaches to metaphor we have labelled 'cognitive' and 'discourse based' can be combined in practice. This is particularly obvious in studies that investigate empirically how different

metaphorical descriptions of the same topic can influence people's reasoning. For example, Thibodeau and Boroditsky (2011) found that the use of different metaphors in descriptions of crime (crime as a 'virus' or a 'beast') affected the solutions that readers favoured. Hauser and Schwarz (2015) have similarly shown how metaphorical descriptions of cancer as an enemy frame the topic in a way that appears to reduce people's intention to engage in self-limiting prevention behaviours (e.g. not smoking) while not increasing the intention to engage in self-bolstering prevention behaviours (e.g. taking regular exercise).

2.4 Framing and metaphor in healthcare practice

The framing power of metaphor is particularly relevant in areas such as healthcare, where the choice of different descriptions of illness can have both positive and negative implications for the general well-being of people already in a vulnerable position. Here the emphasis is on the potential consequences for individuals of different (assumed) framings, and the goal is to develop guidelines or recommendations on what kinds of language should or should not be employed.

The use of war-related metaphors for cancer in particular has been criticized both in scholarly essays such as Sontag's (1979) *Illness as Metaphor* and in media articles and academic papers that are directly concerned with practices and training in healthcare communication (e.g. Miller 2010). In a 2014 piece in the UK *Guardian* newspaper, Kate Granger, a consultant geriatrician with advanced cancer, wrote that she found the 'wartime rhetoric about cancer [...] uncomfortable and frustrating to hear', especially 'as someone who is never going to "win her battle" with this disease'.⁴ Granger pointed out one of the main potential shortcomings of the 'battle' metaphor when she said:

I do not want to feel a failure about something beyond my control. I refuse to believe my death will be because I didn't battle hard enough. (Granger 2014)

There is indeed increasing awareness among healthcare professionals and policymakers of the potential negative consequences of war-related metaphors for cancer, especially for patients. For example, recent policy documents on cancer care in the UK avoid references to 'battles', 'wars', and 'fights' in favour of the metaphor of cancer as the patient's 'journey', with different treatment and care plans referred to as 'pathways' (e.g. the 2007 *National Health Service [NHS] Cancer Reform Strategy* and the 2015–20 *Cancer Strategy for England*). On the other hand, there is also some evidence that metaphors do not work in the same way for everyone, and that even war-related metaphors can be motivating for some (e.g. Reisfield and Wilson 2004; Semino *et al.* 2015).

As we mentioned earlier, from this practice-based perspective, questions of labelling and generalization with respect to metaphor are also relevant. A number of specific metaphorical expressions are objected to (especially 'fight', 'battle', and 'war'), and different labels are used to refer to the general

metaphor that is viewed as problematic, such as ‘the military metaphor’ (Miller 2010) and the ‘martial metaphor’ (Reisfield and Wilson 2004). However, generalizations about the framing implications of this kind of metaphor are seldom based on systematic evidence.

In the rest of this article, we deal with these issues explicitly and systematically by demonstrating a multi-level approach to metaphor and framing that can lead to evidence-based recommendations for communication about cancer.

3. CANCER, METAPHORS, AND FRAMING: A CORPUS-BASED STUDY

The framing implications of metaphors for cancer are a useful case study for our purposes as there is evidence that metaphors can have an important, and potentially beneficial, role in the experience of people with the disease (e.g. Gibbs and Franks 2002; Appleton and Flynn 2014). On the other hand, as we have mentioned, there is considerable controversy around the use of war-related metaphors in particular for this illness.

The case study data come from the project [anonymized] ESRC-funded ‘Metaphor in End-of-Life Care’ project at Lancaster University (<http://ucrel.lancs.ac.uk/melc/>). It consists of a corpus containing 500,134 words from online forum posts by 56 different contributors to a publicly available UK-based website for people with cancer (see Demmen *et al.* 2015).

A 15,000-word sample from the corpus was manually analysed for metaphorical expressions following the metaphor identification procedure (MIP) proposed by Pragglejaz Group (2007). According to this procedure, an expression is regarded as metaphorically used when its ‘contextual meaning’ contrasts with a more physical and concrete ‘basic meaning’, and where the former meaning can be understood via a comparison with the latter (e.g. the use of ‘veteran’ in the expression ‘a chemo veteran’). We also included similes and other figurative comparisons following Steen *et al.*’s (2010) definition of ‘direct metaphor’ within their ‘MIPVU’ extension of the Pragglejaz Group’s MIP. Each metaphorical expression⁵ was further allocated to a semantic field such as Violence, Journey, Sports, Machines⁶ on the basis of its basic meaning.⁷

The online corpus software Wmatrix (Rayson 2008; <http://ucrel.lancs.ac.uk/wmatrix/>) was used to extend the analysis to the complete patient corpus. The tools in Wmatrix allowed us to concordance: (i) all instances of words that we identified as potentially relevant metaphors in the sample analysis (e.g. ‘weapon’ to refer to cancer treatment); and (ii) all instances of words that the in-built lexicon categorized under particular semantic fields (e.g. the semantic fields Warfare and Sports and Games). The concordance lines were then analysed manually to establish whether they indeed contained metaphorical uses of the relevant expressions.

Overall, our analysis shows that the cancer patients represented in our data use a wide variety of metaphors to talk about different aspects of their experiences, including metaphors to do with machinery, sports, animals, fairground rides, and so on. The most frequent patterns, however, involve violence-related metaphors (including cancer as a ‘battle’, ‘fight’, etc.) and journey-related metaphors (e.g. ‘cancer journey’, cancer as a ‘hard road’): 1.8 words per 1,000 were analysed as violence-related metaphors for the experience of cancer, and 1.46 per 1,000 as journey-related metaphors for the experience of cancer (see Semino *et al.* 2015, Demmen *et al.* 2015 for more detail). This is consistent with the amount of explicit attention these metaphors have received in scholarly discussion, the media, and policymaking.

We now focus in particular on metaphors that are broadly violence related and propose a multi-level account of their framing implications on the basis of their specific manifestations in our data. Starting from a cognitive perspective, in Section 3.1, we consider the most general patterns in our data as potential evidence of mappings between the broad source domains of CMT, and discuss both the insights and limitations of this approach. In Section 3.2, we show how a more nuanced account of the patterns in our data needs to involve the sub-domain level of conceptual structure which Musolff (2006) labels ‘scenarios’, and which he presents as the link between cognitive and discourse-based approaches. In Section 3.3, we discuss some examples of patterns which can only be fully accounted for by considering the use of specific linguistic expressions by specific groups of people in specific contexts of communication. We account for these patterns from a discourse-based perspective in terms of Cameron and Deignan’s (2006) metaphoremes and Cameron *et al.*’s (2010) systematic metaphors. In Section 3.4 we discuss the implications of these different levels of analysis, both singly and in combination, for communicative practice in healthcare. We present the three levels of analysis as complementary rather than mutually exclusive and emphasize that analysis at each level allows different conclusions to be drawn, which may be more or less pertinent in different research and practice settings. However, what is important in all settings is making theoretical assumptions and methodological decisions explicit.

3.1 First level of analysis: conceptual metaphors in the cognitive approach to metaphor

We have identified in our data 899 metaphorically used words which can be seen as instances of what have been variously referred to as ‘military’, ‘war’, or ‘martial’ metaphors (e.g. Sontag 1979; Gibbs and Franks 2002; Reisfield and Wilson 2004; Miller 2010), such as those in examples 1–6 below (NB: In extracts from our data, the relevant expressions are underlined):

1. It’s sad that anyone, but especially younger people like yourself, find themselves with this battle to fight.

2. I feel such a failure that I am not winning this battle.
3. But the emotional side of cancer and of BC [breast cancer] in particular is the real killer—it strangles and shocks your soul.
4. I'm new to the forum and wanted to know if there are any other younger bowel cancer fighters amongst us.
5. Also it [the online forum] allows me to leave a record for my family, showing them how much I love them and how much I am fighting to stay with them for as long as possible.
6. Your words though have given me a bit more of my fighting spirit back. I am ready to kick some cancer butt!

Following Lakoff and Johnson (1980), expressions such as these have tended to be interpreted as realizations of conceptual metaphors involving WAR as the source domain.⁸ However, the noun 'war' is used only once by a patient in our data (not shown here) to refer to the experience of illness,⁹ and only the use of 'battle' in examples 1 and 2 has clear military associations. The other expressions either do not have such associations (e.g. 'kick butt', in 6) or may not have them in all contexts (e.g. 'fighters' in 4, may suggest physical aggression).

At a general level, therefore, the pattern exemplified above can be seen as the realization of a conventional conceptual metaphor that can be labelled BEING ILL WITH CANCER IS A VIOLENT CONFRONTATION WITH THE DISEASE. This conceptual metaphor can in turn be seen as a specific version of a more general metaphor BEING ILL IS A VIOLENT CONFRONTATION WITH DISEASE, which would also capture expressions such as 'fighting' heart disease, motor neurone disease, and so on. At an even more general level, these metaphors can be explained in terms of a more basic metaphor DIFFICULTIES ARE OPPONENTS, which, in Grady's (1997) terms, can be seen as a 'primary' metaphor arising from an experiential correlation between difficulties and aggressors.

These generalizations, and the labels that express them, do not just have a clear empirical basis in our data, but they are also valuable in several respects. First, a conceptual metaphor such as BEING ILL WITH CANCER IS A VIOLENT CONFRONTATION WITH THE DISEASE can account for a wide variety of linguistic expressions. Secondly, it can be clearly related to a more basic primary metaphor that explains its motivation in experience alongside similar metaphors with different target domains. Thirdly, it can be used to make comparisons within and across languages and cultures: the metaphorical construction of illness as an opponent or enemy may not be equally conventional for different illnesses within the same language, for example, or for the same illness in different languages and cultures. Importantly, at this level of analysis, the notion of framing captures the implications for thought and communication of relatively stable, entrenched, but also very general correspondences between domains in conceptual structure.

Let us now consider how this level of analysis accounts for the framing implications of examples 1–6. Generally speaking, all of the examples suggest

a consistent framing of the experience of illness. The patient is explicitly placed in the role of fighter, and the disease is implicitly placed in the role of opponent, aggressor, or enemy; being cured, or living longer, are construed as winning the fight, while not recovering or dying correspond to losing. More generally, these expressions take the 'experiential viewpoint' of the patient, and suggest difficulty, danger, and the need for bravery (Dancygier and Sweetser 2014: 46). In other words, it is both possible and meaningful to group them together under one conceptual metaphor resulting in one particular framing of the illness experience.

Nonetheless, there are also differences among the examples, particularly in terms of the relationship between the person and the disease, which arguably could result in different framings. Examples 1–3 express negative emotions, and place the patient in a disempowered position. This is particularly obvious in example 2: the fact that treatment has not worked is described as the patient 'not winning this battle', which makes her feel 'a failure'. In contrast, in examples 4–6 the expressions 'fighters', 'fighting', and 'kick butt' are used to emphasize the patient's own agency and determination in difficult circumstances, and suggest a sense of pride in one's own efforts. These differences should prevent hasty conclusions about whether the overarching conceptual metaphor is 'good' or 'bad' for patients. The examples also demonstrate how the notion of 'framing' needs to be fleshed out. It needs to include and be able to account for aspects such as agency, (dis)empowerment, evaluations, and emotional associations (Semino *et al.* 2015).

In addition, our analysis of the corpus also revealed a number of metaphorical expressions which describe the patient as being involved in a violent physical confrontation with an opponent *other than* the disease (Demmen *et al.* 2015). In example 7, the opponent is cancer treatment, and in example 8 it is a healthcare professional:

7. what did i think all my normal little cells were doing after being hit by a sledgehammer of both toxic chemicals and radiation.
8. I now have another thing to beat my surgeon up about.

In terms of CMT, these examples realize different conceptual metaphors, as they involve different topics, or target domains, that is, treatment in example 7 and communication in example 8. Examples 7 and 8 also show that, as we have noted, VIOLENT CONFRONTATION metaphors vary in terms of the specific framings they provide. The patient is in a vulnerable position in example 7, but in an active, empowered position in example 8.

Overall, therefore, an account of our data in terms of a general source domain such as VIOLENT CONFRONTATION allows some useful generalizations, but does not account for variation in terms of some important aspects of framing (e.g. emotions, evaluations, and agency) which are particularly relevant for potential consequences for the individuals involved.

3.2 Second level of analysis: metaphor scenarios as the link between cognitive and discourse approaches to metaphor

As we have mentioned, the conceptual domains of CMT tend to be postulated at a very high level of generality. In this section, we follow a number of previous studies in considering conceptual structures at the sub-domain level to account for the framing implications of specific patterns in our data that are not adequately accounted for in terms of broad conceptual metaphors (e.g. Sullivan 2013). Musolff's (2006) 'scenarios' are particularly appropriate for our purposes, as they capture the implications of metaphor patterns in specific authentic datasets, and were intended to link discourse-based and cognitive approaches to metaphor. More specifically, we use the term 'scenario' to refer to (knowledge about) a specific setting, which includes: entities/participants, roles and relationships, possible goals, actions and events, and evaluations, attitudes, emotions, and the like.¹⁰ From this perspective, framing is a process that involves the use of metaphorical expressions to reflect and facilitate particular understandings and evaluations of topics or situations.

The different kinds of metaphorical expressions that we previously captured in terms of the broad source domain VIOLENT CONFRONTATION can be grouped and labelled in a bottom-up fashion according to the more specific types of violent scenarios they suggest. In our data, 'battle' as a noun or verb is used as part of expressions that suggest three main scenarios, corresponding to different stages of military confrontations:

PREPARING FOR BATTLE¹¹: For example, 'ready for battle', 'sharpening my weapons in case I have to do battle'.

ENGAGING IN BATTLE: For example, 'do battle', 'you battle on'.

OUTCOME OF BATTLE: For example, 'I'm not winning this battle'.

A more general group of expressions suggests different types of non-military violent physical attacks:

PHYSICAL ATTACK ON AN EXTERNAL AGENT: For example, 'kick some cancer butt'.

PHYSICAL ATTACK FROM AN EXTERNAL AGENT: For example, 'a battering from chemo'.

The use of 'fight' as a verb or noun and of 'fighter' can evoke both military and non-military confrontations:

ENGAGING IN A FIGHT: For example, 'I am such a fighter', 'I am fighting'.

Among other things, these scenarios vary in terms of the nature and intensity of violence (e.g. 'a large kick' vs. 'a battering'), the position of the patient as attacker or attacked, and the degree to which they include a competitive element: battles can be won or lost, but 'a large kick' and 'being hit by a

sledgehammer' do not suggest competitive scenarios (cf. Dancygier and Sweetser 2014: 67–9 on Competition metaphors).

Turning to the topics of the metaphors (cf. the target domains of CMT), the violence-related metaphorical expressions in our data are used to describe various aspects of the patient's experience. These include:

The patient trying to get better/live longer: For example, 'I'm ... also sharpening my weapons in case I have to do battle'.

The effects of the disease on patient: For example, 'But the emotional side of cancer and of BC in particular is the real killer—it strangles and shocks your soul'.

The effect of treatment on patient: For example, 'what did i think all my normal little cells were doing after being hit by a sledgehammer of both toxic chemicals and radiation'.

Communication between patients and health professionals: 'We won that battle but imagine what would have happened if she hadn't had a family to defend her?'

Some regularities can be observed in our data in terms of which types of scenarios are used to describe which aspects of the experience of illness. For example, the patient's attempt to get better tends to be expressed in terms of PREPARING FOR BATTLE, ENGAGING IN BATTLE, ENGAGING IN A FIGHT, and PHYSICAL ATTACK ON AN EXTERNAL AGENT. In contrast, the effects of both the disease and the treatment on the patient tend to be expressed in terms of PHYSICAL ATTACK FROM AN EXTERNAL AGENT.

More importantly, at this level it is possible to go further in accounting for the framing effects of violence-related metaphors, especially in terms of the patient's own degree of (dis)empowerment in relation to the disease, and in terms of associated emotions and evaluations. By empowerment and disempowerment we mean an increase or decrease in the degree of *agency* that the patient has, or perceives him/herself to have, as manifest in the metaphors and their co-text. This involves the (perceived) ability to control or react to events for one's own benefit, where this ability is desired by the patient and not externally imposed (Semino *et al.* 2015).

In some cases, the fact itself that a particular aspect of the patient's experience is metaphorically framed in terms of a violence-related scenario suggests difficulties that may need to be addressed by healthcare professionals. This applies both to the use of metaphors involving an ATTACK FROM A PHYSICAL AGENT scenario to describe the effects of cancer treatment, and to metaphors evoking an ENGAGING IN BATTLE scenario to describe patients and families' interactions with healthcare professionals. On the other hand, the use of expressions evoking an ATTACK AGAINST AN EXTERNAL AGENT scenario for the patient's attempt to get better or live longer tends to place the patient in an empowered position and to have positive emotional associations, as in example 6 above

and in: 'be sorry for cancer whose ass I'm kicking, not me!'. The expressions involved in this pattern tend to be colloquial and to have a humorous, light-hearted tone, as well as to suggest determination and confidence.

In other cases, however, the precise implications of particular scenarios vary depending on who uses them, how, and in what specific co-text and context. In the case of the OUTCOME OF BATTLE scenario, for example, there is an obvious contrast between the uses that express the possibility of getting better (e.g. 'Glad to hear you're still smiling, still winning that battle.') and those that refer to terminal diagnoses or death (e.g. 'I feel such a failure that I am not winning this battle'). The former tend to place the patient in an active, empowered position, and can be used to express determination and optimism or to encourage others. The latter present the patient as unsuccessful, and can reflect and reinforce low self-esteem and feelings of guilt for something that is not the person's fault. This is the most negative effect of violence-related metaphors we have observed in our data.

Similar considerations apply to the metaphorical expressions that realize the ENGAGEMENT IN A BATTLE/FIGHT scenarios in relation to the patient's attempt to get better or live longer. On the one hand, this scenario can be used in a disempowering way to suggest lack of acceptance and frustration, as in example 1 above. On the other hand, the same scenario can also be used in empowering ways to suggest pride, determination, and a positive sense of self as in examples 4 and 5 above, and in:

9. Cancer and the fighting of it is something to be very proud of.

This variation suggests that, even when making generalizations at the level of specific scenarios, there may be individual and/or contextual differences that have important implications for framing. As we show in the next section, however, our adoption of a corpus-based approach has enabled us to observe that, in some cases, further regularities in framing can be identified at the level of specific metaphorical expressions as used in specific contexts by particular groups of people.

3.3 Third level of analysis: metaphoremes and systematic metaphors in the discourse-based approach to metaphor

Some linguistic metaphors in our data show distinctive tendencies in terms of how they are used to frame the patient's experience, even though the scenario they evoke can be used in a variety of different ways. An example is the noun 'fighter', which is used metaphorically 15 times in our corpus to describe oneself or others in positive, upbeat ways (see also example 4):

10. Your husband sounds like a fighter which will hold him in good stead.

11. You are such a fighter and so inspirational.

12. My consultants recognized that I was a born fighter and saw my determination to prove them wrong.

In other words, ‘fighter’ is used by patients to present themselves and others as active, determined, and optimistic people who never give up, in spite of finding themselves in adverse circumstances. This tends to involve praise for oneself or others, and mutual encouragement.

This particular use of ‘fighter’ is consistent with the metaphorical use of this noun in English generally, which is captured by the *Macmillan Dictionary 2009-2015* as: ‘someone who refuses to be defeated even in the most difficult situations’ (e.g. ‘She was definitely a fighter for her kids’ from the Oxford English Corpus; <http://www.oxforddictionaries.com/words/the-oxford-english-corpus>). In Cameron and Deignan’s (2006) terms, ‘fighter’ can therefore be seen as an example of a metaphoreme, as it has very specific semantic, affective, and pragmatic qualities that do not apply in the same way to other apparently similar expressions, such as ‘fight’ or ‘battle’, or to non-metaphorical uses of the noun. The use we have noted in our corpus is a specific application of the general use, as it involves cancer patients in particular, and is consistently used for (self or mutual) praise and encouragement by contributors to the online forum. In other words, the general language-wide metaphoreme is employed in a specific sense and for specific purposes by the discourse community of patients with cancer, who use it to frame people who are ill in a positive and empowered way¹² (see also Gibbs and Cameron 2008; Deignan *et al.* 2013).

Finally, our data also include some local patterns of metaphor use that are only loosely related to broader patterns in English generally, but rather arise and develop in the context of the interaction among contributors to the online forum. One of the longest threads in the forum is headed ‘For those with a warped sense of humour WARNING—no punches pulled here’ and is explicitly presented as a space for people ‘who cope by being irreverent and silly and able to laugh at all the bad stuff’ (Demjén 2016; Semino and Demjén 2016). In the course of the interactions, one of the contributors starts using military titles such as ‘Captain’ for the other forum users, pretending that they are all at the same military camp:

13. Popped out from your Dictators monthly have we Captain Tom?

14. share nicely our Camp Commandants.... and I bought it at a shop, cos you just don’t listen do you Colonel

The use of these titles then becomes an in-joke that contributors creatively exploit, particularly to tease one another in a mutually supportive way:

15. Well done Flight lieutenant Tom for finding your way all the way over here from blog land ... I am impressed ... I would promote you but a) i think you have reached top rank already and b) I can’t think of other ranks ... and not sure what the top one is ...

In other words, the contributors to the thread exploit a MILITARY CAMP scenario as a source of titles with which to address one another metaphorically. This particular pattern can be related to conventional WAR metaphors in English, and more specifically to the conventional description of cancer patients as 'fighters'. However, neither the general WAR domain nor the specific MILITARY CAMP scenario can account for the meanings and functions of the various military titles in context: they refer to particular individuals with cancer, and place them in an empowered position and in a network of connections with one another. In addition, the military titles are used humorously and affectionately to suggest and reinforce intimacy and solidarity among the contributors, but also to avoid taking one another, and the illness, too seriously.

Taken individually, each military title could be described as a metaphoreme that is specific to the discourse community of contributors to the 'Warped' thread within the larger community of forum contributors.¹³ Taken collectively, the various titles form a vehicle grouping that is consistently used to express a particular topic, that is, the roles, identities, and mutual relationships of that particular subset of contributors to the thread. This regularity of use can be expressed as a systematic metaphor that is specific to the particular discourse context of the forum thread, along the lines of *CANCER PATIENTS CONTRIBUTING TO THE 'WARPED' THREAD ARE HIGHLY RANKED MILITARY OFFICIALS*. In other words, the framing implications, or potential consequences, for individual patients of the expressions that form this metaphorical pattern can only be fully accounted for at a level of analysis that is firmly grounded in the specific context of communication from which the pattern emerges. At this level, framing is therefore linked to specific (groups) of expressions as they are used metaphorically by the members of a particular discourse community using a particular channel of communication.

3.4. The three levels of analysis and implications for practice in communication about cancer

The approach to metaphor and framing we have demonstrated in this section makes it possible to address, from an evidence-based perspective, the concerns and objectives of healthcare practitioners involved in communication about cancer.

Our analysis at the level of conceptual metaphors confirms that there is a well-established tendency in English to talk about the experience of having cancer in terms of a violent confrontation, and provides further evidence of the potentially detrimental effects of this tendency (e.g. when patients feel guilty for 'not winning the battle'). These findings support the decision to avoid Violence metaphors in mass communication with patients or the public generally, as in leaflets that are handed out to patients and their families, or NHS web pages providing information about cancer symptoms and treatment. Our analysis additionally shows that there is no single War, Military, or Martial metaphor for cancer: patients use violence-related metaphors to talk about a

variety of aspects of their experiences of illness, including their perceptions of the effects of cancer treatment and of communication with healthcare professionals (see also Demmen *et al.* 2015). These findings potentially highlight the need for further support for patients before and during treatment, and for a more sensitive approach to communication with patients.

Our analysis at the level of metaphor scenarios shows that there are different specific applications of Violence metaphors, and that these different applications can differ in terms of the attitudes they express, encourage and/or reinforce. These differences are particularly relevant to communication with individual patients, or with groups of patients who are at the same stage of disease or treatment. As we have shown, some specific types of Violence metaphors are strongly associated with negative emotions and a sense of disempowerment, for example, when metaphors to do with 'losing the battle' are used in relation to incurable cancer. In such cases, it would be appropriate for healthcare professionals not just to avoid using such metaphors, but to question them and suggest alternatives when patients use them. On the other hand, some specific applications of Violence metaphors appear to be empowering and motivating for some patients, as when people are going through potentially curative treatment. When patients use these metaphors in empowering ways, healthcare professionals may wish to acknowledge those particular metaphorical framings as valid, and possibly exploit them themselves in communication with particular individuals who seem to find them helpful.

The analysis at the level of specific linguistic expressions shows that it is important to pay close attention to specific word choices, both in the language used by patients and in the language used by healthcare professionals. For example, our findings about the generally positive use of 'fighter' on the part of cancer patients suggest that healthcare professionals may need to acknowledge and validate the self-perceptions and feelings of patients who use that term to describe themselves. Equally, a healthcare professional may wish to sensitively suggest alternative expressions and framings where the use of 'fighter' seems to indicate unrealistic expectations about treatment, or external pressures to 'never give up'. In other work on our data (Semino *et al.* 2015), we have highlighted specific expressions that healthcare professionals would be well advised to actively question in interaction with patients, such as when people in remission describe themselves as 'time bombs'.

When considered in combination, the three levels of analysis can be used to develop a nuanced, evidence-based approach to communication in healthcare, which distinguishes between what is appropriate when communicating with the public or patients generally from what may be appropriate when interacting with small groups or individuals.

4. CONCLUSIONS

In this article we have focused on the 'framing' function of metaphor as a phenomenon that is relevant from the different perspectives of cognition,

discourse, and practice. We have used a corpus of contributions to an online forum for people with cancer as a case study to demonstrate the value of a multi-level approach to labelling and analysing patterns of metaphor in use, and accounting for their potential framing effects.

We consider these levels of analysis as complementary: different insights can be gained at different levels, and decisions about which level to privilege depend on one's perspective, research questions, and goals. An analysis at the level of conceptual metaphors makes it possible to compare, for example, the broad metaphorical framings of the same illness across different languages, or of different illnesses within the same language. However, our data analysis suggests that the framing implications of metaphors in discourse can only be adequately explained by considering more specific sub-domain conceptual structures we refer to as scenarios, and by allowing for the emergent and context-sensitive properties of specific (groups of) expressions as used by members of particular discourse communities. When the three levels of analysis are combined, one can arrive at a more comprehensive account of metaphor as a cognitive and discourse phenomenon: for example, the use of 'fighter' in our data can be described as (i) a linguistic instantiation of a general conceptual metaphor that has a basis in physical experience, (ii) the expression in discourse of one of several different violence-related metaphorical scenarios for the role of the patient in the experience of cancer, and (iii) a group-specific metaphoreme whose particular affective and pragmatic associations emerge from the experiences and interactions of people with cancer writing online.

Throughout we have also emphasized how the notion of framing is only theoretically and practically useful if it includes not only entities, roles, and relations, but also aspects such as agency, (dis)empowerment, evaluations, and emotions. This is particularly important when metaphor researchers deal with sensitive topics and aim to address the concerns of practitioners in areas such as healthcare.

ACKNOWLEDGEMENTS

We are grateful to the other team members of the ESRC-funded project 'Metaphor in End of Life Care' at Lancaster University: Veronika Koller, Andrew Hardie, Sheila Payne, and Paul Rayson.

FUNDING

The research presented in this article was supported by the UK's Economic and Social Research Council (ESRC grant number: ES/J007927/1). Information about the dataset analysed in the article can be found here: [http://www.research.lancs.ac.uk/portal/en/datasets/metaphor-in-endoflife-care-corpus-dataset\(f5908ca7-8e6e-486e-9292-d4968891f6be\).html](http://www.research.lancs.ac.uk/portal/en/datasets/metaphor-in-endoflife-care-corpus-dataset(f5908ca7-8e6e-486e-9292-d4968891f6be).html)

Conflict of interest statement. None declared.

NOTES

- 1 Original spellings and punctuation are retained throughout when quoting from our data. The nicknames, online usernames, and other identifiers of forum contributors have been changed.
- 2 We follow the general convention in Conceptual Metaphor Theory to use small capitals for conceptual domains and the formulation of conceptual metaphors.
- 3 Cameron *et al.* use italic small capitals to refer to systematic metaphors.
- 4 Kate Granger died on 23rd July 2016.
- 5 Unless otherwise indicated, in the rest of this article the term 'metaphorical expression' or 'metaphor' in relation to language use includes similes and other figurative comparisons, as well as the metaphorically used words captured by MIP.
- 6 We use initial capitals when labelling semantic fields.
- 7 This phase of the analysis was carried out by three team members: the main analyst's codings were independently verified by two other team members to ensure accuracy and consistency.
- 8 Lakoff and Johnson (1980: 9) state that, in formulating conceptual metaphors, they opt for 'the most specific metaphorical concept' even if some of the relevant expressions are more general (e.g. TIME IS MONEY VS. TIME IS A RESOURCE/VALUABLE COMMODITY).
- 9 When 'war' is used metaphorically in English in relation to cancer, it tends to apply not to the individual effort to recover, but to the collective societal effort to prevent or cure cancer, as in the case of President Nixon's 'War on Cancer'.
- 10 We also prefer the term 'scenario' to 'frame' for this level of conceptual structure, as we use the term 'framing' for a phenomenon that applies at all three levels of our analytical framework.
- 11 We follow Musolff (2006) in using the same convention for referring to scenarios as for the conceptual domains of CMT.
- 12 The data we collected as part of a larger project suggest that this metaphorical use of 'fighter' is shared by family carers writing online, but not by healthcare professionals writing online about cancer and end-of-life care (Demmen *et al.* 2015).
- 13 In fact, this is arguably the level of analysis at which the notion of metaphoreme is most useful (see Semino and Demjén 2016).

REFERENCES

- Appleton, L. and M. Flynn.** 2014. 'Searching for the new normal: Exploring the role of language and metaphors in becoming a cancer survivor,' *European Journal of Oncology Nursing* 18/4: 378–84.
- Cameron, L.** 2003. *Metaphor in Educational Discourse*. Continuum.
- Cameron, L. and A. Deignan.** 2006. 'The emergence of metaphor in discourse,' *Applied Linguistics* 27/4: 671–90.
- Cameron, L., G. Low, and R. Maslen.** 2010. 'Finding systematicity in metaphor use,' in L. Cameron, and R. Maslen (eds): *Metaphor Analysis: Research Practice in Applied Linguistics, Social Sciences and the Humanities*. Equinox, pp. 116–46.
- Clausner, T. C. and W. Croft.** 1999. 'Domains and image schemas' *Cognitive Linguistics* 10/1: 1–31.
- Croft, W. and D. Cruse.** 2004. *Cognitive Linguistics*. Cambridge University Press.
- Dancygier, B. and E. Sweetser.** 2014. *Figurative Language*. Cambridge University Press.
- Deignan, A., J. Littlemore, and E. Semino.** 2013. *Figurative Language, Genre and Register*. Cambridge University Press.

- Demjén, Z.** 2016. 'Laughing at cancer: Humour, empowerment, solidarity and coping online,' *Journal of Pragmatics* 101, 18–30. doi:10.1016/j.pragma.2016.05.010.
- Demmen, J., E. Semino, Z. Demjén, V. Koller, H. Hardie, P. Rayson and S. Payne.** 2015. 'A computer-assisted study of the use of violence metaphors for cancer and end of life by patients, family carers and health professionals,' *International Journal of Corpus Linguistics* 22/2: 205–31.
- Entman, R.** 1993. 'Framing: Toward clarification of a fractured paradigm,' *Journal of Communication* 43/4: 51–8.
- Fillmore, C. J.** 1975. 'An alternative to checklist theories of meaning,' in *Proceedings of the First Annual Meeting of the Berkeley Linguistics Society*, Berkeley, pp. 123–31.
- Fillmore, C. J.** 1985. 'Frames and the semantics of understanding,' *Quaderni di Semantica* 6/2: 222–53.
- Gibbs, R. and L. Cameron.** 2008. 'The social-cognitive dynamics of metaphor performance,' *Journal of Cognitive Systems Research* 9/1–2: 64–75.
- Gibbs, R. and H. Franks.** 2002. 'Embodied metaphor in women's narratives about their experiences with cancer,' *Health Communication* 14/2: 139–65.
- Goffmann, E.** 1967. *Interaction Ritual: Essays in Face-to-Face Behaviour*. Aldine Publishing Company.
- Grady, J.** 1997. 'Foundations of meaning: Primary metaphors and primary scenes,' Unpublished PhD thesis, University of California.
- Granger, K.** 2014. 'Having cancer is not a fight or a battle,' *The Guardian*, 25 April, available at <http://www.theguardian.com/society/2014/apr/25/having-cancer-not-fight-or-battle>. Accessed May 2016.
- Hauser, D. and N. Schwarz.** 2015. 'The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions,' *Personality and Social Psychology Bulletin* 41/1: 66–77.
- Lakoff, G.** 2001. *Metaphorik.de*, 11 September 2001, available at <http://www.metaphorik.de/aufsaetze/lakoff-september11.htm>. Accessed May 2016.
- Lakoff, G. and M. Johnson.** 1980. *Metaphors We Live By*. University of Chicago Press.
- Macmillan Dictionary.** 2009–2015. Macmillan Publishers Limited, available at <http://www.macmillandictionary.com/>. Accessed May 2016.
- Miller, R. S.** 2010. 'Speak up: 8 words and phrases to ban in oncology!,' *Oncology Times* 32/12: 20.
- Minsky, M.** 1975. 'A framework for representing knowledge,' in P. Winston (ed.): *Knowledge and Cognition*. Lawrence Erlbaum, pp. 201–310.
- Musolff, A.** 2004. *Metaphor and Political Discourse. Analogical Reasoning in Debates about Europe*. Palgrave Macmillan.
- Musolff, A.** 2006. 'Metaphor scenarios in public discourse' *Metaphor and Symbol* 21/1: 23–38.
- NHS Cancer Reform Strategy.** 2007. 'COI for the Department of Health,' available at <http://www.nhs.uk/NHSEngland/NSF/Documents/Cancer%20Reform%20Strategy.pdf>. Accessed May 2016.
- Pragglejaz Group.** 2007. 'MIP: A method for identifying metaphorically used words in discourse,' *Metaphor and Symbol* 22/1: 1–39.
- Rayson, P.** 2008. 'From key words to key semantic domains,' *International Journal of Corpus Linguistics* 13/4: 519–49.
- Reisfield, G. and G. Wilson.** 2004. 'Use of metaphor in the discourse on cancer,' *Journal of Clinical Oncology* 22/19: 4024–7.
- Ritchie, L. D.** 2013. *Metaphor*. Cambridge University Press.
- Ritchie, L. D. and L. Cameron.** 2014. 'Open hearts or smoke and mirrors: Metaphorical framing and frame conflicts in a public meeting,' *Metaphor and Symbol* 29/3: 204–23.
- Schön, D. A.** 1993. 'Generative metaphor: A perspective on problem-setting in social policy,' in A. Ortony, (ed.): *Metaphor and Thought*. Cambridge University Press, pp. 137–63.
- Semino, E.** 2008. *Metaphor in Discourse*. Cambridge University Press.
- Semino, E. and Z. Demjén.** 2016. 'The Cancer Card: metaphor, intimacy and humour in online interactions about the experience of cancer,' in B. Hampe (ed.): *Metaphor: Embodied Cognition & Discourse*. Cambridge University Press.
- Semino, E., Z. Demjén, J. Demmen, V. Koller, S. Payne, H. Hardie, and P. Rayson.** 2015 (online first). 'The online use of violence and journey metaphors by patients with cancer, as compared with health professionals: A mixed methods study,' *BMJ Supportive and Palliative Care*. doi:10.1136/bmjspcare-2014-000785.
- Sontag, S.** 1979. *Illness as Metaphor*. Allen Lane.

- Steen, G. J., A. G. Dorst, B. J. Herrmann, A. A. Kaal, T. Krennmayr, and T. Pasma.** 2010. *A Method for Linguistic Metaphor Identification: From MIP to MIPVU*. John Benjamins.
- Sullivan, K.** 2013. *Frames and Constructions in Metaphoric Language*. John Benjamins.
- Thibodeau, P. H. and L. Boroditsky.** 2011. 'Metaphors we think with: The role of metaphor in reasoning,' *PLoS One* 6/2: e16782, available at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0016782> (last accessed May 2015).

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