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More or different metaphors in fiction? A quantitative cross-register comparison

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Abstract

This article presents a quantitative cross-register comparison of the forms and frequency of linguistic metaphor in fiction based on a 45,000-word annotated corpus containing excerpts from 12 contemporary British-English novels sampled from the British National Corpus. The results for fiction are compared to those for three other registers, namely news texts, academic discourse and conversations. The linguistic manifestations of metaphor in the corpus were identified using the MIPVU procedure (Steen et al., 2010), a revised and extended version of the original Metaphor Identification Procedure, or MIP, as developed by the Pragglejaz Group (2007). Contrary to common expectations, fiction was not the register with the highest number of metaphors, but was situated in between academic discourse and news on the one hand, and conversation on the other. However, it turned out that metaphor signals and direct expressions of metaphor (e.g. simile) were typical of fiction, as has been claimed in the literature (e.g. Goatly, 1997; Lodge, 1977; Sayce, 1953). Based on these quantitative findings, this article will show that fiction does not contain more metaphors than the other registers, but rather, different ones.

Keywords

Corpora, fiction, metaphor, MIP(VU), register, simile

1 Introduction: Metaphor in literary texts

Since the time of Aristotle, metaphor and literature have been inextricably linked. In their overview of approaches to metaphor in literature, Semino and Steen (2008) point out that most contemporary scholars still maintain – consciously or unconsciously – that the metaphors found in literature are somehow more creative, original, interesting, complex and

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rich than those found outside literature. They emphasize that the metaphors found in literary texts may in fact be different from those outside literature for different reasons: because of their properties and distribution, because of the way they are treated by authors and/or readers, or because of an interaction between these two parameters (2008: 243). People may expect literary texts to contain more metaphors due to their aesthetic function, but this expectation need not correspond to actual usage. It may also be that people are more aware of the metaphors they read in literature, or that metaphors in literature are more prominent or noticeable than those in other types of discourse.

Discussions of metaphor in literature such as Dorst (2011a), Semino (2008), Semino and Steen (2008), Steen (1994) and Steen and Gibbs (2004) have stressed the fact that most work on literary metaphor has focused on the distinctive uses of metaphor in specific genres, in specific texts, or by specific authors. For example, Crisp (1996) focused on image metaphors in Imagist poetry, Hiraga (1999) on the genre of the haiku. Examples of studies that focused on individual authors using metaphor in original ways are Freeman's (1995) study of metaphors for life and death in Emily Dickinson's poetry, and Hamilton's (2002) study of personifications in the poetry of WH Auden. Studies focusing on how particular texts are characterized by systematic patterns of metaphor include Simon-Vandenbergen's (1993) study of George Orwell's *Nineteen Eighty-Four*, Popova's (2002, 2003) studies of Henry James's short story 'The Figure in the Carpet' and Patrick Süskind's novel *Perfume*, and Werth's (1999) study of EM Forster's novel *A Passage to India*. And finally, the way metaphor can be used in novels to create different mind styles for different characters has been shown by Semino's (2002) study of John Fowles's *The Collector*, Semino and Swindlehurst's (1996) study of Ken Kesey's *One Flew over the Cuckoo's Nest* and Black's (1993) study of William Golding's *The Inheritors*.

The present study breaks with this tradition and approaches the analysis of metaphor in literary texts from the level of register, following corpus-based register studies by Biber and colleagues (Biber, 1988, 1989; Biber and Conrad, 2001; Biber and Finegan, 1989, 1992, 2001; Biber et al., 1999). These studies have shown that the language of fiction is characterized by lexico-grammatical features that are different from the language of news texts, academic discourse and conversations. The present study can be seen as building on these register profiles by adding the semantic dimension of (linguistic) metaphor as a feature of language variation. The texts included in the present study were not selected because they represent great novels, great authors or great examples of (literary) metaphor, but were selected randomly from the fiction section of the BNC-Baby corpus, that is, without any knowledge of titles, authors or contents. Similarly, the objective of the current article is not to provide original, attractive or challenging interpretations of the identified metaphors; rather, it aims to empirically establish the actual frequency and distribution of metaphors in fiction as opposed to other registers on the basis of a reliable and explicit identification method. The results demonstrate how quantitative corpus-based analyses of literary metaphor may offer interesting new directions for further research.

Section 2 of this article will first present the methods and materials used in the present study and offer a detailed discussion of the different relations and types of metaphor analysed. Section 3 will then explore different relations to metaphor in the corpus: *clear* cases of metaphor-related words (clear MRW), *borderline* cases of metaphor-related words (borderline MRW), words that are *not* related to metaphor (non-MRW) and words

that are not metaphors themselves but *signal* metaphor, such as 'like' and 'as a' (MFlag). Section 4 explores the different types of metaphor: *indirect* MRW (i.e. metaphor proper), *direct* MRW (e.g. simile and analogy), and *implicit* MRW (i.e. metaphor via ellipsis and substitution). Section 5 provides a general discussion and offers suggestions for further research.

2 Method

The cross-register comparison of the forms and frequency of linguistic metaphor in fiction presented in this article is based on a 45,000-word annotated corpus containing excerpts from 12 contemporary British-English novels. The results for fiction are compared to those for news texts, academic discourse and face-to-face conversations. The encompassing corpus, containing all four registers, was annotated as part of the *Metaphor in Discourse* project at VU *University Amsterdam*, and has been published as the Vrije Universiteit (VU) Amsterdam Metaphor Corpus (Steen et al., 2005–2010). The linguistic manifestations of metaphor in the corpus were identified and analysed using the MIPVU procedure (Steen et al., 2010), a revised and extended version of the original Metaphor Identification Procedure (MIP) as developed by the Pragglejaz Group (2007). The MIP and MIPVU procedures are described in Section 2.1; Section 2.2 offers an overview of the materials included in the fiction corpus.

2.1 Linguistic metaphor identification: MIP and MIPVU

One central issue in contemporary metaphor studies has been the reliable identification of linguistic metaphor in authentic data (see Cameron and Low, 1999; Steen, 2007). In response to the need for a flexible and reliable tool for metaphor identification, the Pragglejaz Group, consisting of 10 metaphor researchers (namely, ***P***eter Crisp, ***R***ay Gibbs, ***A***lan Cienki, ***G***raham Low, ***G***erard Steen, ***L***ynne Cameron, ***E***lena Semino, ***J***oe Grady, ***A***lice Deignan, and ***Z***oltán Kövecses. The first-name initials spell the name of the group) developed the MIP (2007), standing for Metaphor Identification Procedure, which consists of a brief set of instructions to be followed by analysts aiming to find linguistic metaphor in a stretch of discourse. The MIPVU procedure (Steen et al., 2010) is a revised and extended version of MIP that was developed at the Vrije Universiteit in Amsterdam within the framework of the *Metaphor in Discourse* project.[1]

Both MIP and MIPVU identify linguistic metaphor at the level of the lexical unit and assume a one-to-one correspondence between words, concepts and referents in the text world, that is, it is assumed that words evoke concepts and that concepts designate referents in the text world. It should be noted that the identification of metaphors in discourse using MIP(VU) does not move beyond the linguistic level, that is, MIP(VU) does not aim to specify the underlying conceptual mapping or determine any specific entailments.

In the original MIP, analysts need to work through a series of four systematic steps. First, they should read the entire discourse in order to get a firm understanding of the subject matter. Secondly, they should determine the lexical units within the discourse. In step 3a, the analyst must first specify the contextual meaning of the lexical unit, that is, 'how it applies to an entity, relation or attribute in the situation evoked by the text'

(Pragglejaz Group, 2007: 3), and then determine in step 3b whether the lexical unit 'has a more basic contemporary meaning in other contexts than the one in the given context' (2007: 3). Such basic meanings tend to be

> more concrete [what they evoke is easier to imagine, see, hear, feel, smell, and taste]; related to bodily action; more precise (as opposed to vague); [and] historically older. Basic meanings are not necessarily the most frequent meanings of the lexical unit. (Pragglejaz Group, 2007: 3)

In order to specify the contextual and basic meanings, analysts can adopt different dictionaries or reference works. After having established the contextual and basic meanings of the lexical unit, the analyst should determine in step 3c whether the contextual meaning contrasts with, that is to say, is sufficiently distinct from, the basic meaning but can also be understood in comparison with it. If so, the lexical unit is marked as metaphorically used in step 4.

The following sentence from the fiction corpus provides a straightforward example of the application of MIP (emphasis added to the relevant lexical unit):

(1) 'That girl is a *dog*!' Paula said when they were alone again. 'I'm sure she can't do justice to your designs.' (BNC-Baby: BMW)[2]

In example (1) a girl is derogatively described as a 'dog'. The contextual meaning of 'dog' that can be found in the Macmillan dictionary (step 3a of the MIP) is: 'someone who is not attractive, especially a woman' (sense description 2, online version). The basic meaning of 'dog' (step 3b of the MIP) is: 'an animal kept as a pet, for guarding buildings, or for hunting' (sense description 1, online version). Step 3c determines that the contextual and basic meanings can be considered sufficiently distinct – the basic meaning concerns animals while the contextual meaning concerns human beings, particularly women – and the contextual and basic meanings can be compared on the basis of non-literal similarity. As a result, the outcome of step 4 is that the lexical unit 'dog' is metaphorically used. As mentioned before, the exact nature of the mapping does not need to be specified at this point.

MIPVU extends the MIP by taking into consideration that not all metaphor in discourse is expressed through indirect meaning. Metaphors can also be expressed by direct language use, for example in similes or non-literal analogies, or via lexico-grammatical substitution and ellipsis. These two other forms of linguistic metaphor can be illustrated by examples (2) and (3) from the fiction corpus (emphasis added):

(2) He turned on me *like a snake*. (BNC-Baby: CCW)

(3) Coincidentally, as the community and their lives together broke up, *so did* the weather. (BNC-Baby: CDB)

In example (2) a male character (human domain) is compared to a snake (animal domain) but the outcome of MIP would be that the word 'snake' is not metaphorically used, as the contextual meaning is exactly the same as the basic meaning in this case, namely 'a long thin animal with no legs and a smooth skin' (Macmillan dictionary, online version). The

difference with example (1) is that in (2) the word 'snake' refers directly to a referent in the text world, that is, the word 'snake' refers to an actual snake. This means that simile cannot be analysed as a linguistic realization of metaphor in the same way as indirectly expressed metaphor. Since the contextual meaning and the basic meaning are not distinct, contrasting and comparing them (step 3c of MIP) is not possible. The conclusion in step 4 of MIP would therefore have to be that 'snake' is not a metaphorically used word.

Example (3) is slightly different again; in this case what has happened is that the lexical unit to be analysed is stated implicitly via lexico-grammatical substitution: the words 'so did' substitute for 'broke up', which, in relation to the weather, therefore implicitly expresses a metaphorical expression. In this case the basic sense of breaking involves something concrete separating into pieces while the contextual meaning refers to the weather changing. This means that step 3 of MIP does actually work – the senses are distinct and can be compared – and this is therefore a metaphorically used lexical unit, but the lexical unit itself is implicit and the words 'so did' should not be analysed in terms of their own meanings but in terms of the meanings they are substituting for.

To capture these phenomena, MIPVU makes a distinction between three different *types* of Metaphor-Related Words (MRWs), namely *indirect* MRWs such as 'dog' in (1), *direct* MRWs such as 'snake' in (2), and *implicit* MRWs such as 'so did' in (3). The term 'Metaphor-Related Words' is used to reflect the fact that MIPVU aims to identify all lexical units in the discourse that can be *related* to cross-domain mappings in conceptual structure rather than only metaphorically *used* words, as is the case in MIP. The indirect MRWs relate to cross-domain mappings via referential incongruity, the direct MRWs via topical incongruity, and the implicit MRWs via referential incongruity through substitution or ellipsis.

Finally, MIPVU wanted to acknowledge that some words are clearly related to metaphor (such as 'dog' in (1)), some words are clearly *not* related to metaphor (such as 'girl' in (1)), and others seem to be in between. Examples of such borderline cases can be found in examples (4) and (5) (emphasis added).

(4) 'As I *see* it we've got two choices.' (BNC-Baby: BPA)

(5) Buzz never cheated to let Elinor win: she knew that Elinor would immediately sense this and *feel* humiliated. (BNC-Baby: FPB)

The verb 'see' can involve both concrete vision and abstract understanding and thus be considered to be metaphorically used as well as metonymically used. In the application of MIP and MIPVU, metonymy and metaphor are considered to be independent though often interacting forces, and so the presence of metonymy does not mean that a word cannot also be metaphorically used. A similar argument holds for 'feel'. Though some emotions may also lead to physical sensations in the body, emotions are generally taken to be abstract, and are often metaphorically described in terms of other source domains (for example, temperature). When 'see' potentially involves both vision and understanding, and 'feel' both physical and emotional sensations, they can be considered borderline cases of metaphor.

To allow for such cases, and other ambiguous or unclear examples that analysts nevertheless want to keep in, MIPVU distinguishes between *non*-MRWs, *clear* MRWs and *borderline* MRWs. In addition, words that signal similes, comparisons and analogies,

1. Read the entire text/discourse to establish a general understanding of the meaning.
2. Determine the lexical units in the text/discourse.
3a. For each lexical unit in the text, establish its meaning in context, i.e. how it applies to an entity, relation or attribute in the situation evoked by the text (contextual meaning). Take into account what comes before and after the lexical unit.
3b. For each lexical unit, determine if it has a more basic contemporary meaning in other contexts than the one in the given context. For our purposes, basic meanings tend to be:
   - more concrete; what they evoke is easier to imagine, see, hear, feel, smell, and taste
   - related to bodily action
   - more precise (as opposed to vague)
   - historically older

   Basic meanings are not necessarily the most frequent meanings of the lexical unit.
3c. If the lexical unit has a more basic current/contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it.
4. If yes, mark the lexical unit as metaphorical.

Figure 1. The steps of MIP (Pragglejaz Group, 2007: 3).

such as 'like' in (2), are clearly related to metaphor but are not actually indirect, direct or implicit expressions of metaphor themselves (see Goatly (1997) for an extensive list of words signalling metaphor). MIPVU codes such signal words as Mflags, short for 'Metaphor Flag', indicating that these are signals of metaphor rather than metaphor-related words themselves.

Figures 1 and 2 summarize the steps of the original MIP and the additional steps in MIPVU.

2.2 Fiction materials

All of the texts in the VU Amsterdam Metaphor Corpus were randomly selected from the BNC-Baby corpus, a 4-million word sub-corpus of the 100-million word British National Corpus. The files selected for the fiction sample were all classified by the BNC as being books belonging to the imaginative domain. Aside from the classification 'imaginative writing', no further subdivision into romance fiction, adventure fiction, horror fiction and so on was made either by the BNC or within the *Metaphor in Discourse* project, though such distinctions have been made in studies by, for instance, Biber (1988, 1989), Oostdijk (1990), and De Haan (1996).

In total, the fiction sample in the corpus contained 12 excerpts from the following novels (listed by their BNC identifier codes):

AB9: *Death of a Partner.* Neel, Janet (1991).
AC2: *Man at the Sharp End.* Kilby, Mike (1991).
BMW: *Folly's Child.* Tanner, Janet (1991).
BPA: *The Titron Madness.* Bedford, John (1984).

1. Find metaphor-related words (MRWs) by examining the text on a word-by-word basis.
2. When a word is used indirectly and that use may potentially be explained by some form of cross-domain mapping from a more basic meaning of that word, mark the word as metaphorically used (MRW: indirect).
3. When a word is used directly and its use may potentially be explained by some form of cross-domain mapping to a more basic referent or topic in the text, mark the word as direct metaphor (MRW: direct).
4. When words are used for the purpose of lexico-grammatical substitution, such as third person personal pronouns, or when ellipsis occurs where words may be seen as missing, as in some forms of co-ordination, and when a direct or indirect meaning is conveyed by those substitutions or ellipses that may potentially be explained by some form of cross-domain mapping from a more basic meaning, referent, or topic, insert a code for implicit metaphor (MRW: implicit).
5. When a word functions as a signal that a cross-domain mapping may be at play, mark it as a metaphor flag (MFlag).
6. When a word is a new-formation coined by the author, examine the distinct words that are its independent parts according to steps 2 through 5.

Figure 2. The steps of MIPVU (Steen et al., 2010: 25–26).

C8T: *Devices and Desires.* James, PD (1989).
CB5: *Ruth Appleby.* Rhodes, Elvi (1992).
CCW: *Crackdown.* Cornwell, Bernard (1990).
CDB: *A Fatal Inversion.* Vine, Barbara (1987).
FAJ: *Masai Dreaming.* Cartwright, Justin (1993).
FET: *Still Life.* Byatt, AS (1988).
FPB: *Crimson.* Conran, Shirley (1992).
G0L: *The Lucy Ghosts.* Shah, Eddy (1993).

Since the current analyses are concerned with patterns of metaphor in the language of fiction in general, rather than with metaphor in specific works of fiction or metaphor as used by specific authors, the BNC identifier codes will be used when examples from the corpus are discussed in the following analyses.

3 Analysis 1: Relations to metaphor in fiction

As discussed in Section 2.1, MIPVU distinguishes between four different relations to metaphor, namely: non-metaphor-related words (non-MRW); clear metaphor-related words (clear MRW); borderline metaphor-related words (borderline MRW); and metaphor flags (MFlags). Section 3.1 demonstrates how the distribution of these four relations to metaphor in fiction differed from their distributions in the three non-literary registers (academic discourse, news and conversation). Given the strong associations between literature and metaphor, the expectation is that fiction, being the only literary register, will contain the highest number of metaphor-related words.

Table 1. Frequencies and percentages of the four relations to metaphor per register.

Register	Non-MRW	Clear MRW	Borderline MRW	MFlag
Academic	40,174 (81.5%)	8624 (17.5%)	496 (1.0%)	20 (0.0%)
News	37,413 (83.5%)	6854 (15.3%)	488 (1.1%)	37 (0.1%)
Fiction	39,281 (88.0%)	4883 (10.9%)	410 (0.9%)	74 (0.2%)
Conversation	44,237 (92.3%)	3250 (6.8%)	437 (0.9%)	10 (0.0%)
Total	161,105 (86.3%)	23,611 (12.6%)	1831 (1.0%)	141 (0.1%)

3.1 Results

Table 1 presents the frequencies and percentages of the different relations of metaphor across the four registers. The table has been ordered to reflect the cline in the frequency of metaphor-related words (MRWs) from the register with the highest frequency to the register with the lowest frequency.

A chi-square analysis showed that there was a significant association between register and metaphor, though the effect size was small: $\chi^2(9) = 3{,}043.56$, $p < 0.001$; Cramer's $V = 0.07$. The non-MRWs were unevenly distributed across the four registers, with fiction (88.0%) situated in between conversation (92.3%) on the one hand, and news (83.5%) and academic discourse (81.5%) on the other. The clear MRWs formed a complementary pattern to the non-MRWs, again with fiction in the middle (10.9%) between conversation (6.8%) on the one hand and news (15.3%) and academic discourse (17.5%) on the other. Together, these two relations to metaphor (non-MRW and clear MRW) account for 99% of the data. The additional inclusion of borderline MRWs and MFlags in the analysis revealed that both of these relations to metaphor were rare, with borderline MRWs forming only 1.0% of the data and MFlags only 0.1%.

The table shows, first of all, that in all four of the registers words were normally either clearly metaphor-related or not; borderline cases were extremely rare. More surprisingly, and contrary to common expectations, fiction was not the register with the highest number of metaphor-related words: fiction contained more MRWs than conversation, but it contained fewer MRWs than news and academic discourse. Moreover, this finding proved to be stable across the fiction sample. Although there were some differences in the percentages of MRWs between the 12 fiction files, these percentages ranged from 7.3% to 14.0% – a range that lies exactly in between the overall percentages for news (15.3%) and conversation (6.8%).

The significant chi-square analysis showed that there was a strong interaction between register and relation to metaphor: fiction had significantly fewer cases of clear MRWs than expected by chance (standardized residuals (st. res.) −10.2), as did the conversations (st. res. −36.1), while the academic texts and news texts contained significantly more clear MRWs than expected by chance (st. res. +30.2 and +15.8 respectively). The borderline MRWs did not contribute to the interaction but were evenly distributed across the four registers. This indicates that borderline cases are not only rare, but they are also not typical of any of the registers. The MFlags, on the other hand, though rare in terms of frequency, did significantly contribute to the interaction between register and relation to metaphor; it turned out that fiction was the only register that contained significantly

more MFlags than expected by chance (st. res. +6.9), although these MFlags comprised only 0.2% of the sample. In the academic texts and conversations there were significantly fewer MFlags than expected (st. res. −2.8 and −4.4 respectively) while the distribution of MFlags in news was according to chance (st. res. +0.5).

3.2 Discussion

The analysis of the interaction between register and relation to metaphor revealed that in all four of the registers most of the language that is used is not related to metaphor. Overall, metaphor-related words (both clear and borderline) account for only 13.7% of the data. Though metaphor is indeed ubiquitous in everyday discourse, as claimed by cognitive metaphor studies in the tradition of Lakoff and Johnson (1980, 1999), it is clearly not the case that metaphors are extremely frequent. More importantly, fiction was not the register with the highest number of metaphor-related words. With a percentage of 11.8% (clear and borderline MRWs), fiction contained fewer MRWs than academic discourse (18.5%) and news (16.4%), though more than conversation (7.7%). These differences between the registers were statistically significant, and suggest that there is a relation between the nature of the register and the presence of metaphor.

The results show that while the clear MRWs and non-MRWs demonstrate a division between academic texts and news texts on the one hand, and fiction and conversation on the other, the MFlags are most typical of fiction. Although the percentage of MFlags in each of the registers was almost zero, the division of the 141 instances in the corpus across the four registers reveals that 52.5% of the MFlags occurred in the fiction sample. By comparison, the news texts contained 26.2% of all of the MFlags in the corpus, the academic texts 14.2%, and only 7.1% of the MFlags occurred in the conversations. This clearly shows that metaphor signals are most typical of fiction, as argued by Goatly (1997), even though their absolute frequency is small. Given the relationship between metaphor signals and direct expressions of metaphor (such as simile), this finding suggests that directly expressed metaphors may also be typical of fiction, an issue that will be further investigated in Section 4 in the analysis of the different types of metaphor.

At this point it is important to emphasize that the percentages for analysis 1 represent *all* potentially metaphor-related words, no matter how conventional or 'mundane'. In fact, it turned out that novel and creative metaphors were extremely rare, though unfortunately no annotations were added for novel or deliberate usage (though this is currently being done in a new project at VU University Amsterdam[3]). Based on the manual annotations, however, their occurrence is estimated at around 1% of the data (see Steen et al., 2010). As a result, one important issue for future investigations is the question whether fiction is the register that contains the largest proportion of novel and creative metaphors, rather than the register that contains the largest overall proportion of metaphor.

The high numbers for academic discourse and news are partly due to the fact that the subject matters discussed in these texts are sometimes conventionally expressed in metaphorical terms: for instance, academic texts about electricity are bound to refer to *fields, currents* and *flows*, while news texts about politics are likely to refer to *members, houses*, and *bodies*. Because these domains are largely understood via metaphor, the occurrence of linguistic metaphors in these texts increases. In fiction, on the other hand, the subject

matter is normally people, the places they visit, and the objects they handle, which suggests that fiction may largely be grounded in non-metaphorical concepts and therefore non-metaphorical language.

Most of the metaphor-related words in fiction can in fact be related to general patterns of metaphor in everyday language use. For example, many of the MRW adjectives in fiction derived from the source domain of size and dimension (emphasis in the following examples is added):

(6) They stayed like that for a *long* moment and then he said, 'Light the candle.' (BNC-Baby: CB5)

(7) Turnbull explains through the interpreter that time is *short*. (BNC-Baby: FAJ)

(8) In *high* spirits, his father was talking about the immense advances made in forensic science in recent years. (BNC-Baby: CDB)

(9) This is a very *big* war.' (BNC-Baby: FAJ)

Other common source domains involved shapes, textures and colours. Of the 575 MRW adjectives in fiction, the top 10 consisted of *long* (17 instances), *hard* (11), *golden* (9), *high* (9), *great* (8), *pale* (8), *whole* (8), *clear* (7), *small* (7), and *big* (7). As the figures show, none of these was very frequent overall. Of this top 10, only *pale* and *golden* were typical of fiction, occurring in such examples as (10) and (11):

(10) It was another *golden* day. (BNC-Baby: CB5)

(11) Daniel looked at the pink sky, the twisted trunks, the silvery leaves, the rhythmic earth streaked with yellow ochre, with pink, with *pale* blue, with red-brown.

Most of the MRW nouns in fiction involved very general or 'empty' nouns such as *thing, point, way* and *end* (emphasis added):

(12) 'What a funny *thing*,' said Lewis. 'We had ham salad that day too.' (BNC-Baby: CDB)

(13) 'I shall have to get in touch with the police. No two *ways* about it, I shall have to get in touch with them.' (BNC-Baby: CDB)

(14) Sometimes he felt that he was the person he was because of them and acted the *way* he did because of their effects. (BNC-Baby: CDB)

(15) At some *point* Rufus himself had taken the things out of the fridge and left the door open to defrost it. (BNC-Baby: CDB)

(16) She took the *point* eagerly. 'My dear, I know.' (BNC-Baby: FET)

Of the 1016 MRW nouns in fiction, the top 10 consisted of *thing* (45 instances), *way* (32), *model* (18), *point* (14), *plan* (13), *world* (12), *end* (11), *sergeant* (11) *hell* (10), and *back* (9). None of the most frequently used MRW nouns were typically literary, though, interestingly, swearwords – such as the nouns *hell* (10) and *bastard* (9) and the adjective *bloody* (6) – were used most often in fiction, specifically in the dialogues, rather than in actual conversations.

The majority of the MRW verbs in fiction concerned delexicalized verbs such as *have, give, make, take, come* and *go* (emphasis added):

(17) 'We have never *had* a problem.' (BNC-Baby: FPB)

(18) 'Can I *have* a little time to think it over?' (BNC-Baby: BMW)

(19) 'Tell him that I am very sorry but I cannot *make* exceptions.' (BNC-Baby: FAJ)

(20) 'I can't *make* plans,' he said sharply. (BNC-Baby: CB5)

(21) She *took* the point eagerly. (BNC-Baby: FET)

(22) Though she thought sleep would never *come*, eventually it did *come*. (BNC-Baby: CB5)

(23) 'How many times must I tell you that if you let things *go* too far, nobody can stop what will undoubtedly happen?' (BNC-Baby: FPB)

Of the 1555 MRW verbs in fiction, the top 10 consisted of *have* (116 instances), *make* (72), *take* (65), *get* (56), *give* (40), *feel* (37), *come* (32), *go* (31), *see* (31), and *catch* (18). In comparison to the most frequently used MRW nouns and adjectives, these MRW verbs are much more frequent. Together, these 10 verbs make up 32% of the MRW verbs in fiction.

Although a more detailed analysis of these patterns is unfortunately outside the scope of this article (but see Dorst, 2011a), the results of analysis 1 indicate that as far as the different relations to metaphor are concerned, fiction is not the register that has the most metaphor-related words. Contrary to common expectations, fiction is situated in between academic discourse and news on the one hand, and conversation on the other. In addition, borderline cases and metaphor signals were both found to be rare, though the signals were shown to be functionally important, as fiction was the only register that contained more metaphor signals than expected by chance. This suggests that direct expressions of metaphor (such as simile) may also be typical of fiction, as has been claimed in the literature (e.g. Goatly, 1997; Lodge, 1977; Sayce, 1953). Therefore, it may very well be that fiction does not contain more metaphors than the other registers, but rather, different ones. This issue is now further investigated in Section 4.

4 Analysis 2: Different types of metaphor in fiction

MIPVU not only distinguishes between four different relations to metaphor, but also between three different types of metaphor-related words, namely indirect MRWs, direct MRWs and implicit MRWs. The distinction between these different types of metaphor provides insight into the competition between different forms of linguistic metaphor, in particular between metaphor proper (indirect MRW in MIPVU) and simile (direct MRW in MIPVU). This traditional distinction between the metaphor and simile forms plays a central role in psycholinguistic models of metaphor comprehension (e.g. Aisenman, 1999; Bowdle and Gentner, 2005; Chiappe and Kennedy, 2000, 2001; Chiappe et al., 2003; Gentner and Bowdle, 2001, 2008; Glucksberg, 2001, 2008; Glucksberg and Haught, 2006; Kennedy and Chiappe, 1999), but empirical evidence for the actual occurrence of these opposing rhetorical forms in authentic discourse is lacking. The results in

Table 2. Frequencies and percentages of the four metaphor types per register.

Register	Non-MRW and MFlag	Indirect	Implicit	Direct	Total
		MRW	MRW	MRW	
Academic	40,194 (81.5%)	8961 (18.2%)	119 (0.2%)	40 (0.1%)	49,314 (100%)
News	37,450 (83.6%)	7145 (16.0%)	85 (0.2%)	112 (0.3%)	44,792 (100%)
Fiction	39,355 (88.1%)	5074 (11.4%)	54 (0.1%)	165 (0.4%)	44,648 (100%)
Conversation	44,247 (92.3%)	3637 (7.6%)	31 (0.1%)	19 (0.0%)	47,934 (100%)
Total	161,246 (86.4%)	24,817 (13.3%)	289 (0.2%)	336 (0.2%)	186,688 (100%)

the next section therefore offer new insights into the distribution and use of these different types of metaphor in the four registers. Given the traditional assumption that simile is typical of literature, it was expected that fiction contains a larger number of direct metaphors than the other registers.

As analysis 1 showed that there were no significant differences between the four registers in the distribution of borderline cases, analysis 2 combines the clear and borderline MRWs into one group – the MRWs – which is further divided into the three types of metaphor: indirect MRW, direct MRW, and implicit MRW. In addition, the Mflags have been combined with the non-MRWs, as they are markers of metaphor rather than MRWs themselves.

4.1 Results

Table 2 presents the frequencies and percentages of the four metaphor types across the different registers. As the previous analysis showed that there was a cline in frequency from academic discourse through news and fiction to conversation, Table 2 has been ordered to reflect this frequency distribution to reveal whether the three types of metaphor follow the same pattern.

A chi-square analysis showed that there was a significant association between register and metaphor type, though the effect size was again small: $\chi^2(9) = 3{,}044.84$, $p < 0.001$; Cramer's $V = 0.07$. Table 2 shows that the majority of the metaphor-related words were of the indirect type. Indirect metaphor accounted for 13.3% of all data and 97.5% of all MRWs. This means that the group of indirect MRWs is almost completely responsible for the complementary distribution pattern between MRWs and non-MRWs observed in Analysis 1. Both the group of direct MRWs and the group of implicit MRWs were small, each accounting for less than 0.5% of the MRWs within each register.

Of the 24,817 indirect MRWs in the entire corpus, 36.1% occurred in academic discourse, 28.8% in news, 20.4% in fiction and 14.7% in conversation. The implicit MRWs followed the same pattern as the indirect MRWs, with most of the implicit MRWs occurring in academic discourse (41.2%), followed by news (29.4%), then fiction (18.7%), then conversation (10.7%). The direct MRWs, on the other hand, clearly followed a different pattern from the indirect and implicit MRWs, with fiction containing the most direct MRWs (49.1%), then news (33.3%), then academic discourse (11.9%) and finally conversation (5.7%). This shows that almost half of all the direct MRWs in the corpus

occurred in the fiction sample, while fiction accounted for only approximately 20% of the indirect and implicit MRWs.

The chi-square analysis showed that both fiction and news contained significantly more direct MRWs than expected by chance (st. res. +9.4 and +3.5 respectively). Both academic discourse and conversation contained significantly fewer direct MRWs than expected by chance (st. res. −5.2 and −7.2 respectively). Conversely, fiction contained significantly fewer indirect MRWs than expected by chance (st. res. −11.2), as did conversation (st. res. −34.3), while both news (st. res. +15.4) and academic discourse (st. res. +29.7) contained significantly more indirect MRWs than expected by chance. Finally, the implicit MRWs in fiction and news did not contribute to the interaction between relation to metaphor and register (st. res. −1.9 and +1.8 respectively), while they occurred less often than expected by chance in conversation (st. res. −5.1) and more often than expected by chance in academic discourse (st. res. +5.0).

4.2 Discussion

The observed pattern for direct metaphor in fiction corresponds to the earlier observation that MFlags were typical of fiction. In fiction, both metaphor signals and direct expressions of metaphor occurred more often than expected by chance. In news, direct metaphor also occurred more often than expected by chance, and it was signalled fairly often, but the MFlags in news did not contribute to the interaction between register and the relations to metaphor. In conversation and academic discourse, direct metaphor and MFlags were not as frequent as might be expected. These patterns reveal that the different metaphor types each have their own roles to play in the different registers, and that direct and implicit metaphor, though small categories, contribute significantly to the different register profiles. In fiction, the implicit metaphors were patterned like the indirect metaphors, and both occurred less frequently than expected by chance. The direct metaphors, on the other hand, demonstrated the opposite pattern and occurred more frequently than expected by chance.

The results show that each register had its own distinctive pattern when it comes to the different metaphor types. It should be noted that almost 98% of all the metaphor-related words in the entire corpus were classic cases of metaphorically used words, in other words, metaphor that was expressed indirectly; implicit MRWs and direct MRWs were extremely rare. In terms of their distribution, the implicit MRWs followed the same pattern as indirect MRWs, with a highest proportion in academic texts, then news, then fiction, then conversation. The direct MRWs, on the other hand, were distributed differently, and almost 50% of all of the cases of directly expressed metaphor in the corpus were found in the fiction texts. Moreover, the direct metaphors in news only occurred in the 'soft' news sections, namely arts and leisure, not in commerce or natural science, which suggests that journalists may consider the use of such direct metaphor inappropriate for serious news reporting. Direct metaphor, though infrequent, clearly has a separate role to fulfil in the four registers and is most typical of fiction. The quantitative data therefore support the traditional assumption that simile is typical of literature, though they reveal that it is by no means frequent.

One reason why direct metaphors are more strongly associated with fiction and news may be their more conspicuous status. Since similes are typically explicitly signalled (by

MFlags), their status as metaphorical expressions that invite the reader to compare two domains is more likely to be deliberate and they are more likely to be consciously recognized as metaphorical expressions (see Steen, 2008). If such similes also involve more than one lexical item, it is likely that their rhetorical weight and noticeability is increased even further. This rhetorical weight and the noticeability of similes makes them more suitable to texts that involve openly creative and persuasive uses of metaphor (e.g. Charteris-Black, 2004; Lakoff and Turner, 1989; Semino, 2008). If the function of direct metaphor is to draw attention to the metaphor itself and signal its creativity, then this could contribute to a belief that using such expressions would be over-exaggerated in most casual conversations, and inappropriate in more serious news texts or scientific writing.

The observed overall low frequencies for direct MRWs in the corpus can be related to a number of studies on similes by Low (1997, 2008, 2010; Low et al., 2008). Whereas Cameron (2003) and Carter (2004) had found many examples of similes in their conversation data, Low (2010) found hardly any similes in his university lectures, though the similes that did occur were mostly found in the more conversational-style lectures. Moreover, Low found that there were hardly any similes that could be described as imaginative, non-conventional or attention grabbing (2010: 304–305), which suggests that the speakers felt they either already had the attention of the audience or that they preferred metaphor over simile to get the audience's attention (Low, 2010; Low et al., 2008). Low points out that these findings contradict Carter's (2004: 125) suggestion that 'simile is more frequent than metaphor in everyday speech', a claim which is clearly also not supported by the findings of analyses 1 and 2 given earlier. In fact, the low number of similes in Low's lectures sharply contrasted with the proportions of metaphorically used words (i.e. indirect MRWs) that were found, which ranged from 10% to 15%, similar to the quantitative findings reported earlier in this article.

Unlike Low's similes, the similes in the fiction sample often were imaginative, attention-grabbing and non-conventional, as well as quite elaborate, as in examples (24), (25) and (26) (emphasis added):

(24) Only once had he returned after they all left and that had been bad enough, *like a dream* – no, *like stepping into the set and scenario of some frightening film, a Hitchcock movie perhaps*. (BNC-Baby: CDB)

(25) The light in the sky is there by courtesy of the vanished sun, but the tops of the mountains are still golden, *as though honey had been poured lightly over them*. (BNC-Baby: FAJ)

(26) He paused, *reminding* McLeish irresistibly *of a Labrador wondering how best to approach an acquaintance*. (BNC-Baby: AB9)

Moreover, these direct expressions of metaphor are sometimes combined with indirect expressions to create even more elaborate metaphors, such as in examples (27) and (28) (emphasis added).

(27) Now the nearest tree is an enormous trunk, struck by lightning and sawed-off. But one side branch shoots up very high and lets fall an avalanche of dark green pine needles. This *sombre giant – like a defeated proud man* – contrasts, when considered in the nature of a living creature, with the *pale smile* of a last rose on the fading bush in front of him. (BNC-Baby: FET)

(28) At the top they came out into uncompromising, bright grey light, the bleak, hedgeless lane, the flat meadows where here and there stunted trees *squatted like old men in cloaks*. (BNC-Baby: CDB)

In (27) the tree is first compared indirectly to a *sombre giant*, which is then compared directly to *a defeated proud man* and then contrasted indirectly with the *pale smile* of a rose. This combination of indirect and direct metaphorical expressions sets up a complex personification of the tree and rose in terms of human appearances, emotions and behaviour. In (28) the direct expression *like old men in cloaks* is used to illustrate the indirect expression *squatted*. While this novel verbal metaphor may be difficult to interpret in isolation, the imagery of *old men in cloaks* makes its use in the context of trees clear. In fact, personification proved to be one of the dominant types of metaphor in fiction and it was found to involve a complex interaction between linguistic forms, conceptual structures and communicative functions (see Dorst, 2011a, 2011b).

Closer, more qualitative analysis of the direct metaphors in fiction also revealed that most of the similes in the fiction corpus involve comparisons between two concrete domains (rather than between a concrete source domain and an abstract target domain) and that two mappings stand out in particular, namely PEOPLE ARE ANIMALS (22%, i.e. one in five), and PEOPLE ARE PEOPLE (14%, i.e. one in seven). Since these domains are concrete, familiar, and rich in connotations and associations, this results in the evocation of rich scenarios with vivid imagery and emotional impact, as in examples (29) and (30) (emphasis added).

(29) They briefly appeared on deck for lunch; a meal which Rickie hardly touched, while Robin-Anne, despite her apparent frailty, *attacked the sandwiches and salad with the savagery of a starving bear*. (*BNC-Baby*: *CCW*)

(30) 'I feel *like a Maharajah waiting for the tiger to pounce on the tied-up goat*,' Forster grinned. (*BNC-Baby*: *BPA*)

One obvious direction for further research is therefore to see whether the similes in the other registers also predominantly draw on these mappings, with the same visualisation potential, or whether they involve other types of domains, and use similes for other purposes.

5 General discussion

Studies of literary metaphor have traditionally focused on qualitative analyses of specific literary works, authors or types of metaphor, while quantitative and comparative studies are rare (cf. Goatly, 1997). The analyses in this article have provided new insights into the actual occurrence and distribution of metaphor in fiction, and of the quantitative differences between fiction, news, academic discourse and conversation. While it was expected that fiction – being the only literary register – would have more metaphor-related words than the other three registers, it was in fact situated between academic discourse and news on the one hand and conversation on the other. The division of the metaphor-related words into different types of metaphor revealed that this pattern was mainly the result of the

distribution of indirect metaphor, the classic form of metaphor in discourse: indirect metaphor accounted for 98% of the data and showed a clear cline from academic texts (18.2%) and news texts (16.0%) to fiction (11.4%) and conversation (7.6%).

However, in the case of the direct metaphors, a different pattern emerged, with fiction containing the highest proportion. Though the number of words that occurred in direct expressions of metaphor such as similes, analogies and comparisons was extremely low, they were in fact most typical of fiction: almost half of all the direct MRWs in the corpus was found in fiction (49.1%), followed by news (33.3%), academic discourse (11.9%) and conversation (5.7%). Such direct metaphors may have the typical communicative function of intentionally and explicitly instructing the addressee to set up a cross-domain comparison. As pointed out by Steen (2008) and Dorst (2011a), direct metaphor is almost by definition deliberate as it is virtually impossible to interpret such expressions without using some form of comparative processing and without postulating some intention on the part of the assumed sender to use the metaphor. Indirect metaphor, on the other hand, may typically be non-deliberate. Psycholinguists have argued that indirect metaphor may often be understood by categorization rather than comparison (Bowdle and Gentner, 2005; Gentner and Bowdle, 2001, 2008; Glucksberg, 2001, 2008), especially when such expressions are conventional.

The popular belief that fiction is typically metaphorical may therefore be based on the association of fiction with deliberate metaphors, typically in the form of simile, which may have drawn more attention to their status as metaphors more often than in any other register. These issues concerning the deliberate versus non-deliberate use of metaphor, and its relation to the indirect or direct expression of metaphor, provide interesting ways in which to further investigate the quantitative patterns presented in this article. As the annotations in the *Metaphor in Discourse* project did not distinguish between novel and conventional linguistic expressions, or between deliberate and non-deliberate uses, no specific quantitative evidence for their occurrence can as yet be given. In subsequent studies, such additional information may provide new insights into possible differences between the registers in the occurrence of novel, creative or deliberate metaphor; it may very well be that fiction then turns out to have the highest incidence after all. However, it should be emphasized again that the occurrence of novel and creative metaphor in the corpus was extremely rare. The preference to focus on such forms of metaphor in literary texts may inadvertently have created the wrong impression that they are frequent or even the dominant form of metaphor in fiction.

Due to its quantitative focus, this article has had little room for more extensive qualitative analyses of examples or stretches of text. As a result, it has not presented the kind of qualitative analyses that most literary analysts are used to, or offered detailed discussions of the use of metaphor in any particular text or by any particular author. Although there is clearly a need for further research, it is hoped that the analyses presented in this article provide a valuable contribution to the study of metaphor in fiction and literary texts more generally by demonstrating the value of a quantitative, corpus-based approach to studying metaphor in literary texts, and its unexpected results. The importance of directly expressed metaphors in fiction suggests that fiction may be characterized by a higher incidence of deliberate and creative metaphors than the other registers, though in terms of absolute frequencies such deliberate and creative uses of metaphor are rare. The

bulk of metaphor in fiction is expressed indirectly and relates to conventional patterns of metaphor in general language use. However, one interesting direction for further research may be to compare the present findings of these predominantly popular fiction novels to examples of 'high' literature using the same explicit identification method.

As is clear from these suggestions, various theoretical and empirical issues remain that have not yet been investigated or that deserve more attention. Addressing these issues is certainly worthwhile, as it may help to fill gaps in the theory or suggest improvements in the practice of analysing metaphor in literary texts. Fiction may not be the register with the most metaphors, but it certainly has interesting ones.

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2. The identifier codes of the files in the BNC-Baby corpus are listed in Section 2.2.
3. This is being done by Gudrun Reijnierse in an NWO-funded project entitled 'The value of deliberate metaphor': supervisor: Professor GJ Steen.

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Author biography

Aletta G Dorst completed her PhD project on *Metaphor in Fiction: Language, Thought and Communication* at VU University Amsterdam in 2011. Her thesis investigated the frequency, forms and functions of metaphors in fiction, offering a cross-register comparison with news, academic discourse and conversation. The results showed that fiction did not necessarily contain more metaphor-related words (as identified by MIPVU) than the other registers, but it did contain more

direct expressions of metaphor (similes), personifications, and other linguistically marked forms of metaphor that attract the reader's attention. Lettie now works as an assistant professor at Leiden University, where she teaches courses on academic writing, translation English-Dutch-English, stylistics, and metaphor studies. Recent publications include: (with B Weltens and Hannay M) *Van tekst naar text: Taal- en vertaalvaardigheid Engels* [in Dutch; *From text to text: English language and translation skills*]. Bussum: Coutinho (2014) and (with WG Reijnierse and G Venhuizen) One small step for MIP towards automated metaphor identification? Formulating general rules to determine basic meanings in large-scale approaches to metaphor. *Metaphor and the Social World* 3(1): 77–99 (2013).