# Opinion Piece: How People Structure Representations of Discourse

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## Abstract

Mental models or situation models include representations of people, but much of the literature about such models focuses on the representation of eventualities (events, states, and processes) or (small-scale) situations. In the well-known event-indexing model of Zwaan, Langston, and Graesser (1995), for example, protagonists are just one of five dimensions on which situation models are indexed. They are not given any additional special status. Consideration of longer narratives, and the ways in which readers or listeners relate to them, suggest that people have a more central status in the way we think about texts, and hence in discourse representations, Indeed, such considerations suggest that discourse representations are organised around (the representations of) central characters. This paper develops the idea of the centrality of main characters in representations of longer texts, by considering the way in which information is presented in novels, with *L'Éducation Sentimentale* by Gustav Flaubert as a case study. Conclusions are also drawn about the role of representations of people in the representation of other types of text. Other approaches to discourse and dialogue, and behaviour more generally, are considered in relation to the question of whether they account adequately for the central role of protagonists.

**Keywords:** mental model, situation model, discourse/text representation, protagonist

## 1. Introduction

The notion of a mental model of discourse (Johnson-Laird & Garnham, 1980), which developed from earlier ideas outlined by Johnson- Laird (1970), has proved a crucial one in the psychology of language. Johnson-Laird and Garnham stressed the importance of a representation of not only part of a real or imaginary world being talked about, but also of the knowledge of the other participants in the discourse. This latter aspect of discourse models has received relatively little attention, at least in the psycholinguistic literature. The former aspect – the representation of situations in the real world and in imaginary words – has become a staple of psycholinguistic research, under the heads of mental models (e.g., Johnson-Laird, 1983; Garnham, 1987, 2001) or situation models (e.g. van Dijk & Kintsch, 1983; Zwaan & Radvansky, 1998). Indeed, it has been argued (Garnham, 1996) that, in a general sense, the notion of a mental (or situation) model as the representation of the content of discourse follows from a Marrian task analysis of discourse comprehension, which shows that its function is, at least in part, to convey or receive information about parts of the real world, imaginary worlds, or abstract domains. Garnham (1996) further

contrasts the domain of language with that of reasoning, where, in considering the task to be performed, it would appear that either model-based or rule-based processes could underlie reasoning from what is known, or assumed, to what in some sense (depending on the type of reasoning under consideration) follows from it.

It is sometimes suggested, though more often informally than formally, that the notion of a mental model or situation model is an unclear one. I do not believe that this claim can still be justified. Formal semanticists are broadly agreed on the semantic types needed to analyse the meanings of natural language utterances: entities, truth-values, eventualities, relations, and properties of various kinds (properties of objects, properties of eventualities, etc.). There have been disputes about which of these are basic, and there are different notions of what is meant by basic. In the parsimonious semantic landscape of Richard Montague (Thomason, 1974) only entities and truth values are basic semantic types, whereas there are arguments for admitting other types, such as events, as basic (e.g. Davidson, 1967; Parsons, 1990). Furthermore, psychological approaches to the question of what is basic may not produce the same answers as philosophical analyses. Nevertheless, the broad principles of how to determine semantic types, and of how representations of situations (eventualities) might be constructed from the core semantics (including semantic types) of words, and the syntax of phrases and clauses is reasonably clear.

Mental models are more than just representations of the content of individual clauses. A key issue in mental models theory, traceable to its precursor in the work of Bransford (e.g., Bransford & Franks, 1971), is the integration of information from different parts of a text (see, Garnham, 2020 for a recent discussion). Within both psycholinguistics and formal semantics there has been considerable progress in understanding how local relations between clauses or utterances are computed. These relations fall into two broad categories. First, anaphoric relations determine identities of either sense or reference between expressions of various kinds, primarily NPs and VPs. Second, coherence relations, which may be signalled by clausal connectives (such as, "because", "but", "although"), or sometimes suggested by world knowledge, determine relations among the eventualities denoted by clauses. Whether there is a specific set of coherence relations, or whether such relations are examples of more general types of relation (spatial, temporal, logical, causal, intentional, and moral, Miller & Johnson-Laird, 1976) is a matter of debate (Garnham, 1991). Temporal relations, which are sometimes determined by connectives and sometimes by sequence of tenses (including aspectual information), share properties of both anaphoric and coherence relations.

Thus it has become clear since the 1960s that the primary purpose of text and discourse comprehension is not to produce a representation of the semantic structure of sentences in a text or utterances in a dialogue, but to extract information about situations in a world that the semantic structure encodes. So, in interpreting a text such as (1) two eventualities are recognized.

(1)  Max confessed to Bill because he wanted a reduced sentence.

The first is an act of confession, with a male person Max as the confessor and another male person Bill as the person confessed to. The second is a state of desire (wanting). The person wanting is a male and the object of his desire is a reduced sentence. The state of wanting is presented as the cause of the confession. Knowledge of the world suggests that sentence (1) is about someone charged with a crime and either about to plead guilty or who thinks he will be convicted for some other reason. This knowledge suggests that the male person wanting the reduced sentence is Max. It also helps to disambiguate the word "sentence". In this example the implicit causal bias (Garvey & Caramazza, 1974) of the verb "confess to" also supports the idea that it is Max and not Bill who wants the reduced sentence. "Confess to" is a so-called NP1 verb, which suggests that the subject of a simple active sentence containing the verb will be the primary cause of the eventuality it describes.

The above account appears to be basically correct, as far as it goes, though many details are lacking. The exact mechanism by which implicit causality has its effect and its relation to world knowledge remains to be clarified, for example (see, e.g., Crinean & Garnham, 2006; Garnham, Child, & Hutton, 2020). Another major issue, which I will return to indirectly later, is the extent to which representations are complete (Oakhill, Garnham, & Vonk, 1989; Ferreira, Ferraro, & Bailey, 2002; Sanford & Sturt, 2002). However, the basic idea that readers or listeners determine, from processing a text or discourse, the eventualities being presented and the relations between them, seems a good starting point for a theory of discourse comprehension.

However, even if it is a good starting point, it does not seem to be a good finishing point, or even a satisfactory stopping off place. The reason for making this claim comes from an extension of the kind of Marrian task analysis (Marr, 1982) proposed by Garnham (1996). At the local level, where information in single clauses is processed, and the relations among pieces of information in nearby clauses are computed, the account appears sound. However, if we ask what people are doing, or trying to do, when they process the kinds of text that they encounter in everyday life or enter into everyday conversations, it is immediately clear that they have a wide variety of purposes, which can be difficult to specify, but which clearly go beyond the who-did-what-to whom analysis of individual clauses and local relations between them. Just as Marr found in the case of vision, it is easier to specify the functions of lower levels of analysis than those of higher levels. For example, the function of word recognition, a lower level process, is to map a visual or auditory pattern, separated from the rest of the current visual or auditory input - perhaps in part by the process of word recognition itself - onto one of the words that one knows in the language currently in use. However, by beginning to think about some of the higher-level processes in language comprehension, it is possible to draw some conclusions about lower or intermediate levels. In particular, where readers or listeners may have strategic control over intermediate mechanisms, consideration of higher levels may shed light on how that strategic control is exercised.

To be more specific, it is difficult not to recognize a clearly spoken or clearly printed word in one's native language, unless one is deaf or blind, or one blocks one's ears or closes one's eyes or averts one's gaze. In some sense, which we probably do not have an adequate handle on, the processes of word identification are automatic. Processes of model building are subject to more subtle strategic control. For example, one can skim a text for an answer to a specific question and largely ignore parts of the text that are deemed irrelevant on the basis of rather superficial processing. Furthermore, textual cues, such as (psychological) focusing, can be used by speakers and writers to guide listeners' and readers' attention to the most important parts of a text. Of course, these general points may simply suggest that some parts of a text are processed more thoroughly than others, with the result that some parts of an overall situation model are better encoded and hence probably better remembered. Other considerations, however, suggest that something more systematic is happening.

## 2. The Central Role of Protagonists[1]

In this section I will present an impressionistic account of the central role of protagonists, particularly in novels, and I will then consider whether accounts of dialogue and discourse processing, particularly where they consider structure above that of clauses and local relations

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[1] The term "protagonist" is used in a number of related ways in this paper. An individual protagonist is clearly an entity. To say that protagonist is a dimension of situations, as is done in situation theory, is not to talk of individual protagonists, but to say that relations of some kind between individual protagonists in different eventualities can be used to connect those eventualities. Situation model theory does not specify what relations allow eventualities to be linked via indices. However, for the protagonist index the most common relation is clearly that the same person in different eventualities can be used to link those eventualities.

between them, properly explain this idea. I will then point out that other disciplines at least acknowledge this central role, even if they do not explain it. The crucial issue is not to establish that people are important in how we think about the world – of course they are, and it is not surprising that this idea is implicit in, for example, theories in social psychology. The question is why theories of dialogue and discourse do not properly incorporate this fact.

There are potential dangers in focusing on particular types of text when developing a general theory of comprehension, as experience with story grammars showed (Garnham, 1983). Nevertheless, general considerations, from both common sense and from parts of psychology outside of psycholinguistics, suggest that what is important to most people most of the time is other people and not situations, or at least not situations for their own sake, but only because of people's involvement in them. This general point suggests that representations of many types of texts, but perhaps most importantly texts such as narratives and newscasts, will be centred on representations of people. Indeed, many such texts are naturally regarded as being "about" certain people.

Of course, in the case of a long and complex text, such as a novel, one cannot talk of the representation of the text, for a variety of reasons, most of which are obvious. However, in thinking about the representation of the content of an extended narrative that a reader maintains from one reading session to the next, and may use in thinking, in the meanwhile, about the narrative, it is natural to consider person-centred representations. By this claim, I do not simply mean that characters from texts are represented in situation models. All situation model theorists recognize this fact. For example, Zwaan, Langston, and Graesser (1995) explicitly list protagonist as one of the five dimensions on which situation models are indexed – along with time, space, causality, and intentionality, and indices allow the creation of links within models. Space has been particularly important in the history of situation model theory, largely because it was in spatial domains that it was easiest to show that situation models had different structures from the sentences describing them (Potts, 1974, and many subsequent papers). However, purely spatial relations appear to be difficult to encode and may sometimes not be encoded at all (see below). Time has fewer dimensions, and is linguistically more complex, but again there are profound differences between the linguistic and model-based representations of time and temporal relations (e.g., Kamp, 1979; Kamp & Rohrer, 1983). Causality, again, has been widely researched, though it is not always clearly differentiated from intentionality. Intentionality is closely tied to people and their reasons for action or inaction.

My general claim is that much of our thinking about the world is people-centred rather than situation-centred, and that this aspect of our thinking naturally carries over to the descriptions of the real or imaginary worlds we produce or describe in fiction, newscasts, everyday conversations and a variety of other forms of text and discourse. So, protagonists in narratives do not just provide one of five indices of situations. They are a central organizing feature of (persisting) mental representations of the content of texts. Furthermore, existing theories of discourse representation do not do justice to this fact. My initial evidence for the centrality of protagonists will not be primarily experimental, though I will return later to other types of evidence that lead to, or at least are consistent with, the same conclusion. My initial evidence derives from a task analysis of narrative comprehension and from a consideration of the nature of texts, how people approach them, and what they hope or intend to get out of them (to use a deliberately neutral phrase – "learn", for example, is too specific).

## 2.1 Novels

It is no coincidence that many novels are named after their principal protagonists, though there are numerous other ways of naming novels, for example via allusions to other literary works (Wikipedia, 2020). Indeed, there are precedents for naming after protagonists in earlier literature. Homer's *Odyssey* almost falls into this category, though interestingly the *Iliad*'s title derives, in a similar way, from a place name (Ilium or Troy). Virgil's *Aeneid* has a title, which like that of the

Odyssey, derives directly from that of the principal protagonist, Aeneas. Other early works with names derived from their principal characters include *Beowulf* and the Epic of *Gilgamesh,* and the Catalan works, *Blanquerna* (Llull, 1283) and *Tirant lo Blanc* (Martorell, 1490). In more modern times, where the term "novel" is more clearly appropriate we have, among others, Cervantes' *Don Quixote* (1605), Madame de la Fayette's *La Princesse de Clèves* (1678), Defoe's *Robinson Crusoe* (1719), Prévost's *Manon Lescaut* (1732), Richardson's *Pamela* (1740), Cleland's *Fanny Hill* (1749), Fielding's *Tom Jones* (1749), Voltaire's *Candide* (1759), Goethe's *Die Leiden des jungen Werthers (1774)*, and, somewhat tongue in cheek, given the late appearance of the eponymous "hero", Sterne's *Tristram Shandy* (1759-1767). In the 19th Century, many Dickens novels have eponymous heroes, as do works by Jane Austen (*Emma*), George Eliot (*Adam Bede*, *Silas Marner, Felix Holt, Daniel Deronda*) and Trollope (*The Warden, Dr Thorne, Phineas Finn*), along with French works by Balzac, Flaubert, Zola, and others, Russian works, including Pushkin's verse novel *Eugene Onegin* (1833), *Oblomov* (1858), *Anna Karenina* (1877). Occasionally two protagonists give their name to a work, as in *Sir Gawain and the Green Knight*, Rabelais' *Gargantua and Pantagruel* (1532*)*, Flaubert's *Bouvard et Pécuchet* (1881) or, more recently Julian Barnes' *Arthur and George* (2005).

Many of the names above are shortened versions of the full titles of the books, but they are the names by which those books are commonly known. For example, the full title of *Robinson Crusoe* is *The Life and Strange Surprising Adventures of Robinson Crusoe of York, Mariner: who lived Eight and Twenty Years, all alone in an uninhabited Island on the coast of America, near the Mouth of the Great River of Oroonoque; Having been cast on Shore by Shipwreck, wherein all the Men perished but himself. With An Account how he was at last as strangely deliver'd by Pirates. Written by Himself.*

Most of the books mentioned above, and many others, some named after principal characters, some not, are explicitly structured around the exploits of one individual. The rest of this section examines the implications of this idea, together with notions of what readers expect to take away (again, "learn" is both too strong and too weak a term) from their engagement with narrative texts, focusing on one novel in particular. It concludes by considering the implications of these ideas for the comprehension of texts of other kinds.

## 2.2 Flaubert's L'Éducation Sentimentale

I will focus on one text, Gustav Flaubert's *L'Éducation Sentimentale* (1869) best known in English through its translation, *Sentimental Education*, by Robert Baldick (1964), for Penguin Classics (re-edited by Geoffrey Wall, 2004). Though not named after its main character – and I will return to the title later – the action of the novel clearly centres on the exploits of Frédéric Moreau, if "action" and "exploits" are the correct terms for such an akratic character as Frédéric.

Frédéric is returning from Paris to his home in Nogent-sur-Seine when he encounters, and falls in love with, an older married woman, Marie Arnoux. This love, or perhaps infatuation is a better word, remains with him through the rest of the book, though its intensity fluctuates. Frédéric returns to Paris and cements his relations with Mme Arnoux's husband, a man with a rather dubious business sense, in order to maintain contact with her. His various schemes for occupying himself mainly come to nothing, particularly after his receives an inheritance on the death of his uncle. The other women in his life are the courtesan Rosanette Bron ("the Marshal"), Louise Roque, the daughter of a landowner in Nogent, and Madame Dambreuse, the wife of a Parisian banker.

The novel plays out mainly in Paris before and after the 1848 uprising. Frédéric moves among a group of less clearly defined characters, friends and acquaintances with a variety of professions and political views. These characters are not entirely at ease with, and do not fully understand, the social and political changes they are living through. Flaubert was deeply committed to making the historical, social and physical background to the novel as accurate as possible and at times the detail is almost overwhelming – a point I will return to later in relation to the model building of a reader

of the novel.  In a much-repeated quote, Flaubert wrote in an 1864 letter to Mademoiselle Leroyer de Chantepie:

> "I want to write the moral history of the men of my generation-- or, more accurately, the history of their feelings. It's a book about love, about passion; but passion such as can exist nowadays--that is to say, inactive."

Flaubert clearly disapproves of much of what he sees in the society around him, but he eschews didacticism in favour of presenting the detailed and realistic account referred to above. At the end of the novel, in an ending that has generated much controversy, Frédéric and his friend Deslauriers, while reminiscing, decide that the best time of their lives was when they were first visiting a brothel in Nogent. This ending raises, but does not answer, the question of whether Frédéric has gained any insight from the education his sentiments have received since that time, or whether it is the reader who is intended to benefit from a sentimental education.

In the course of reading *Sentimental Education* and in thinking about the book both during and after reading it, it is clear that a major strand of the representation centres on the fact that the book is, in some sense, about Frédéric and presents his story. He is the prime example, in the book, of a man of Flaubert's generation, and although, as I have already said, there is no trace of didacticism in Flaubert's approach, the reader is clearly led to consider Frédéric as representing a certain class of men in mid-19th century Paris, and is presented with a very detailed view of one such man. In considering *Sentimental Education*, one does not think primarily of situations, and of Frédéric being in them, but rather of Frédéric and the situations he is in. Or, rather, of Frédéric and his relations to the other characters and to the events happening around him. None of the other people in the novel is characterized at the same level of detail as Frédéric, and these other characters are mainly defined, in the reader's mind, by their relationships to him. One does not think of them primarily according to the situations in which they find themselves, but in terms of their relations to Frédéric. Another important theme is how Frédéric and (some of) the other characters change or do not change in response to the social and political upheaval around them. But again, it is natural to think of these changes in a character-focused way, and not by taking situations as the primary focus of change, with their effects on the characters as secondary. Nevertheless, it was undoubtedly Flaubert's intention to present a detailed picture of Paris in the mid nineteenth century.

It is interesting to consider the comprehension of a text such as *Sentimental Education* from the perspective of Zwaan et al.'s (1995) event-indexing model. As Zwaan himself has shown (Zwaan & van Oostendorp, 1993), readers do not form strong representations of spatial information when reading naturalistic texts unless they are given special instructions. This finding fits with a least one reader's (the present author's) intuitions about what information is extracted from *Sentimental Education* and mentally represented. It also fits with the (incidental) finding of Morrow's research on spatial mental models (e.g., Morrow, Greenspan, & Bower, 1987; Morrow, Bower, & Greenspan, 1989) that learning spatial layouts is a difficult, time consuming process. There is a great deal of spatial detail in *Sentimental Education,* details of the layout of apartments and houses occupied by Rosanette Bron, the Dambreuses, and the Arnouxes, among others. And there are details of where in Paris certain events happen. However, the overwhelming impression is that the details add to the texture of the narrative, rather than being encoded as spatial relations. It is almost never crucial to the action of the novel that exact spatial relationships are computed. In the case of locations within the city, if one knows these locations, one can map the events onto one's mental map of Paris, but otherwise it is not at all clear that they are encoded.

As far as time is concerned, the narrative of *Sentimental Education* for the most part moves forward, unlike in some other novels, where the author is what Zwaan (1996) calls deliberately inconsiderate and uses techniques such as flashback. There are gaps in the narrative, particularly the famous one at the beginning of Part III Chapter V1, which begins "He travelled". After Frédéric quarrels with Rosanette, loses contact with Madame Arnoux, rejects Madame Dambreuse, finds

that Sophie has married Deslauriers, and sees one of his old set of friends and acquaintances kill another, he leaves Paris in peripatetic mode. In another place, Flaubert moves time forwards and, surprisingly given his meticulous attention to detail, extends Rosanette's pregnancy to 25 months. The fact that most readers fail to notice this error, suggests that temporal relations are not always encoded in detail, just as spatial ones are not. However, Zwaan, Radvansky, Hilliard, and Curiel (1998) found that temporal relations are better encoded than spatial ones, in that temporal discontinuities are detected more easily than spatial ones.

The causal and intentional indices of the event-indexing model are closely related to issues about the representation of protagonists. As mentioned earlier, in the psychological literature the distinction between causes and intentions is not always clearly made. In any case, in narratives, psychological causation (Frédéric's encounter with Madame Arnoux on the steamer Ville-de-Montereau was the cause, or part of the cause, of his falling in love with her) is usually more important than physical causation. Causes and intentions are almost certainly represented in relation to the characters that have them (intentions) or are affected by them (causes). They help us, as readers, to understand how those characters behave. Furthermore, causes and intentions are likely to be represented more strongly in relation to main characters than in relation to subsidiary characters.

Another interesting aspect of main characters in narratives is how they define perspectives on the events of the narrative. The fact that they do so, again suggests that the representation is primarily character-based. Narrative theory distinguishes between two aspects of perspective: narration and focalization (Genette, 1980). Narration is concerned with who is telling the story. *Sentimental Education* has an external narrator, who might be dubbed, albeit controversially, the author. Most of its events, however, are seen, to a greater or lesser extent, from the point of view of Frédéric, the main focalizer. There are also issues about the extent to which readers might or might not agree with Frédéric's apprehension of (or psychological point of view on) events. Readers do not necessarily find him a sympathetic character, and do not always empathize with him. To some extent his actions are conditioned by his social context, but this context is not always seen as excusing his akrasia (though see the quote, above, from Flaubert).

## 2.3 Entertainment and Edification

So far, I have presented mainly impressionistic evidence for the idea that large-scale, longer-term representations of narrative text are character centred. I stated earlier that this conclusion also follows from a Marrian task analysis of narrative comprehension, though it is the content of the task analysis that is crucial, not the fact that a task analysis has been performed. Marr found that task analysis was easier at lower levels of vision, since the construction of high-level representations of the world around one can have many purposes, not all of which impact directly on visual processes. Similarly, it is easier to give a task analysis of word recognition than of high-level narrative comprehension. Nevertheless, the primary reason why people read narratives (rather than secondary reasons such as the academic study of such texts) can be loosely glossed under two general heads: entertainment and edification, though these categories are neither clearly distinct nor mutually exclusive. Entertainment, and here I am thinking not just of written text, but of film, television, radio and other media, typically involves portraying people in what are often called "situations", though these situations are not the situations of situation model theory. They are part of the context against which the text is understood, like mid nineteenth century Paris, in *Sentimental Education*. Situation comedies, for example, often present a set of characters who live together, as a family or otherwise (the general situation in which the characters find themselves), and in each episode a more specific situation is explored. Often the characters are unsubtly drawn, and they may be based on archetypal characters, and the individual episodes may be based on stock plots. Archetypal characters and stock plots also appear in entertainment films, such as *Star Wars*. How do people represent the content, in the broadest sense, of texts, discourses, and items in other media

that they have read, listened to or watched, partially or primarily for entertainment? On what do they base their conversations with family, friends, and colleagues about an episode of a situation comedy they have just seen, or that they saw last night? The characters are clearly important, as is the situation (in the broad sense). Such situations can be glossed very broadly. For example, older versions of the Wikipedia page on situation comedies (Wikipedia, 2007) gives a list of plot formulas), which includes such examples as:

- Attempts to hide egregious mistakes or acts of weakness.
- Attempts to protect friends and family members from bad news.

Smaller incidents, which may be closer to the situations of situation model theory, can make an impact on a person's representation of an episode of a situation comedy, but these incidents are not the primary organizing factors in a person's memory representation.

"Texts" produced or consumed for edification are likely to be less crudely drawn. So, even if Frédéric Moreau is, in some sense, a representative figure, he is not an archetype or a stereotype. Nevertheless, the primary memory representation for such text is likely to be similarly based on characters and context. It may be that the main difference between entertainment and edification is how deeply and subtly one (author, reader, or both) tries to relate the content of the text to other matters. And here we re-encounter one of the primary tenets of mental models theory: that the representations derived from texts and those derived from more direct observations, of various kinds, of the real world, are similar in form, and can easily be related to one another.

## 2.4 Other Types of Text

So far, I have talked about narrative text, primarily novels and, indeed, primarily a single novel, Gustav Flaubert's *Sentimental Education*. But what of other types of text? As mentioned earlier, part, but only part, of the problem with the story grammar approach to the analysis and processing of texts was that it focused specifically on one type of text and did not readily generalize to other types. For example, some texts are not about people at all, so it is hardly likely that their long-term mental representations are person-centred.

Newscasts are often about situations, in the broad sense described above, rather than individuals, though these situations may be more or less specific ("the situation in the Middle East", "the situation in the Palestinian territories", "the situation in Hebron"). Nevertheless, some news stories are about individuals, and others are transformed, at least in some people's minds, into stories about individuals (the oft-heard complaint that modern politics is about personalities rather than policies). Note that the reverse rarely happens, which is further evidence for the primacy of people in representations of the content of text and of what happens in the world. Furthermore, in much of what used to be the news media – newspapers that can no longer compete for speed of delivery of information with broadcast media and the internet – stories about individuals abound. These stories often appear to be about people whose primary role is to be a person about whom stories are written (a certain type of "celebrity").

What other types of text do people encounter in their day-to-day lives? Biographies and autobiographies are, by definition, about individuals. And many other popular, or semi-popular, non-fiction titles focus on individuals. Books on art may be about a particular artist, for example, and popular science books often devote a substantial number of pages to anecdotes about individual scientists, many of whom are interesting characters. History books may take their titles from specific historical figures. And so on. Indeed, often books of these types either are narratives, or contain substantial narrative elements. There are, however, some types of text that are not narratives, equipment manuals, for example, which are notoriously difficult to write and interpret, though good examples can be found. Such texts frequently need to supplement written material

with pictures and diagrams. And although they are not about people, they should take account, and have to take account if they are to be good, of how people interact with pieces of equipment whose functions they are reasonably familiar with, but whose operational details are not known to them. So, manuals for initial installation should, in conjunction with ways of packing and disabling equipment, try to prevent new owners from making their own, usually incorrect, assumptions about how a piece of equipment is going to work. And manuals for operation should be clearly organized around the functions that a piece of equipment has, and the internal structure of that set of functions.

Academics read abstract texts in the course of their work, as do many other professionals. Some texts, such as reports of experiments, have highly and perhaps over-prescribed structures. On one level, these texts are not about people at all, and they only mention people in so far as they are associated with theories or studies relevant to those in the paper in which they are referenced. On another level, it is commonly said that the point of the Methods section of an experimental report is to ensure that the study can be replicated by an independent person. To this end it should be written so it can be used as a series of (implicit) instructions on how to re-perform the experiment. It, therefore, needs to take account of what its intended audience will need to know and what can be assumed about what that audience already knows. And the general form of the Methods section should have been designed (but perhaps was not) to take account of what we know about how people follow instructions. Similarly, a recipe is a set of instructions for preparing a dish, and the structure of good recipes should reflect human thought processes and sensible working practices. For example, all the ingredients should be listed at the beginning, because this format makes it easy for the cook to make sure they have assembled, or know the location of, all the ingredients before they start cooking.

Presentations of theories are more removed from the kinds of text we have been talking about. They are about abstract entities – the theories and the theoretical constructs from which they are put together. Comparatively little has been written about abstract texts in the situation models literature. However, abstract objects are not so different from concrete objects, except that they are abstract, and it is a reasonable assumption that human thought is primarily geared to concrete situations. Thinking abstractly is generally difficult – abstract objects do not impinge on us in the same direct, immediate way that, in particular, other people (who are concrete objects in this sense) do. Linguistically, abstract objects behave similarly to concrete ones. If I use the term "the law" in a particular context, I may be referring to a specific law, probably in my case one that is in force in England and Wales. In different contexts, I will be referring to different law. Or I could be using the term "the law" in a related sense to mean the body of law. I can follow "the law" with an identity of reference anaphoric pronoun "it" to refer to the same law again (in the same context), just as I can follow "the table" with "it". Some abstract objects are individual abstract objects (Baddeley & Hitch's, 1974, Theory of Working Memory, for example), but so are many concrete objects (Nelson's Column in Trafalgar Square, London, for example).

## 3. Protagonists and Models of Dialogue and Discourse

From what has been said so far, the failure to accommodate properly the role of main protagonists appears to be a phenomenon specific to the study of dialogue and discourse, and indeed one specific corner of this discipline – the theory of mental models or situation models (see Section 4 for people-centred representations in other disciplines). In my own discipline of psycholinguistics there is a focus on comprehension rather than production. So, in the case of discourse models, the primary accounts are of how such models are built up during reading or listening. As we have seen, information in a clause leads to the representation of an eventuality (event, state, or process), a process that can be conceived of in a standard compositional framework, such as that of Discourse Representation Theory (DRT, Kamp & Reyle, 1993) or File Change Semantics (Heim, 1983). Alternatively, and perhaps related to the use of the term "situation model", it can be thought of in the more loosely defined framework of Barwise and Perry's (1983) Situation Semantics.

It is, of course, widely recognized that dialogue and discourse has structure above the level of eventualities, and it would be natural to look for an account of the importance of main characters at this higher level. Indeed, DRT and File Change Semantics specifically address some issues about (anaphorically) relating references to entities in different eventualities. Furthermore, and again as mentioned above, the different eventualities in a discourse must be related to one another as eventualities, at what can be regarded as a higher level of structure. The most common approach is to identify a set of relations that can hold between them. One view, consistent with the mental models doctrine that discourse models have the same general structure as models of the world constructed in other ways (e.g. from personal experience), is that there is a set of types of relation among eventualities, (spatial, temporal, logical, causal, intentional, and moral, Miller & Johnson-Laird, 1976). Another view, exemplified for example in Mann and Thompson's (1986) Rhetorical Structure Theory (RST), is that there is a fixed set of specific relations that connect usually contiguous eventualities. In this context the relations are often referred to a holding between textual elements, called text spans or discourse segments.

Attempts to integrate these two levels of structure (eventualities and the relations among them) in a single framework have been attempted, most notable in Asher and Lascarides's (2003) Segmented Discourse Representation Theory (SDRT). However, whether integrated with clause-level structure or not, approaches based on discourse relations do not directly address the idea that protagonists are central in representations of (some) discourses, largely because they focus only on local relations between eventualities. Of course, DRT and File Change Semantics specifically address questions of co-referential anaphora. And some approaches to discourse coherence, particularly that of Hobbs (1983) and those that derive from it (e.g. Kehler et al., 2008), claim that co-reference is often established as a "side effect" of establishing coherence. Nevertheless, there is no notion, in either of these approaches, that reference to the same person in multiple adjacent clauses has any special status. And clearly, a sequence of sentences (or utterances) and, hence, eventualities that have one or more entities in common between adjacent utterances does not necessarily form an interesting, or even a coherent discourse. It should also be noted that the general Marrian approach, mentioned above, of carrying out a task analysis of discourse comprehension, does not of itself lead to the conclusion that protagonists have a special importance. It would be the result of carrying out the task analysis, not the fact that it is carried out, that would be the source of the solution. In other words, it must be independently assumed (or argued) that, at least in many cases, what is meant by conveying or receiving information about some world is writing or reading (or speaking or hearing) a story centred upon a central character.

Part, but not all, of what it means to be a central character is that there will be repeated reference to that person. Related to this fact, pronouns, and NP-anaphora more generally, are crucial in connecting discourse. A first step in going beyond individual anaphoric links is found in Centering Theory (Grosz, Joshi, & Weinstein, 1995). Centering Theory's Rule 2, "sequences of continuation are preferred over sequences of retaining; and sequences of retaining are to be preferred over sequences of shifting" (Grosz et al, 1995: 17) reflects the notion that repeated reference to the same person is expected, with that person remaining the focus of attention (continuation vs. retention). However, this notion far from fully captures the centrality of main characters over longer stretches of text.

Grosz (see, Grosz & Sidner, 1986) incorporated ideas that had already been developed in unpublished work on Centering Theory into an account of discourse structure that made use of the notions of attention and intention. Centering Theory provided mechanisms for local attention and particularly the search for referents for pronouns. The importance of intentions is that participants in a discourse are trying to achieve certain effects in each segment of the discourse. This idea is loosely related to the notion of performative utterances developed by Austin (1962), which led to Searle's (1969) notion of speech acts. However, while Grosz's work, and subsequent work on dialogue inspired by it (e.g. Rich & Sidner, 1998; Lochbaum, 1998; Kraus, 2001; Hirschberg & Nakatani,1996) gives a key role to participants, and the intentions that they have in their roles as

agents in dialogue, in explaining its structure, and indeed in the understanding of the purpose of dialogues, the questions addressed in these theories are rather different from the ones about central characters in extended narratives addressed here. Indeed, they are more akin to issues about the relation between writers and readers of novels.

Interestingly, and from a quite different perspective, that of conversation analysis, Sacks (1995, Vol. 2, Part VII, Lectures 9 -12, pp.470-494) makes a series of observations about how jokes (or one particular joke) is structured to take account of its recipient (the partner in the dialogue in which the joke is told, and, in some sense, regarded as an agent) but also about other aspects of how the joke is structured around protagonists in the story that constitutes the joke. However, insightful though these observations are, they do not resolve the issue of the central role of protagonists in stories.

A different set of approaches to higher level structure in "stories" has its origins in structuralism. As the term "structuralist" suggests, these approaches, which vary considerably in tone and orientation, are only indirectly concerned with central characters. One such approach, which inspired psycholinguistic work on story grammars, is Propp's (1928/1968) *Morphology of the folk tale*. In his analysis, Propp identifies the roles of hero and villain in folk tales, though these are only two out of seven abstract character functions (villain, dispatcher, helper, prize/princess (or her father), donor, hero, false hero) that Propp identifies as occurring in folktales. Propp's work provides a direct analysis of a narrow class of texts, though the structures he identifies can clearly have reflexes in more complex texts. Indeed, Propp focuses on Russian folktales – perhaps folktales from different cultures have different characteristics.

Related to the analysis of folktales, but again with limited application to only some types of narrative text, is the idea of the monomyth or hero's journey, discussed by Campbell (1949), which clearly does focus on an individual character – the hero. The hero's journey, with its (up to) 17 stages, is now generally thought of as an analysis, albeit a somewhat controversial and outdated one, within the broader discipline of narratology, though that term itself was not coined until much later (Todorov, 1969). Narratology draws on ideas from semiotics, and there has been a debate about whether a syntagmatic or a paradigmatic approach to the structure of narratives is the most fruitful one, a debate that has carried over into the psychological literature on story structure and story grammars. Todorov's approach was syntagmatic, and hence related to syntactic approaches to story grammar, whereas others (e.g. Levi-Strauss, 1958/1963) have suggested that a paradigmatic approach is more appropriate for understanding narratives. Narratology has also spawned a computational branch (Cavazza & Pizzi, 2006), influenced by AI work on story generation and comprehension, for example the work on plot units by Lehnert (1981).

There are many other analyses within narratology and literary theory that identify high-level structure in discourses of certain kinds, for example the three-act analysis (setup, confrontation, resolution, sometimes satirized as beginning, middle and end) of plays and films, which can be traced back Aristotle's *Poetics*. However, none of these approaches are specifically concerned with explaining the role of central characters, even though most, probably all, of them accommodate the idea that there are such characters.

## 4. Other Lines of Evidence

So far, I have done two things. On the one hand, I have presented impressionistic evidence that characters or protagonists have a central role in the mental representation of discourse and text. On the other hand, I have argued that attempts to identify structure in discourse above the level of the information conveyed by single clauses have not concerned themselves with explaining this idea, though it is unlikely that students of lengthy narratives would deny its truth. I now turn to other kinds of evidence, largely from other disciplines and other sub-disciplines of psychology that appear to embrace the idea more directly. I then ask how mental models or situation models theory may have to be modified to accommodate the claim. My point is not that the claim needs to be

established, for example because it is controversial in some sense. More likely it is so obvious to those studying discourse that the need to explain it has been overlooked. So, I do not intend to go into detail about how it has been established in other disciplines. Rather, I want to underline the fact that it is, and should be, obvious, and that there needs to be a clear place for it in theories of discourse representation.

One of the central ideas underlying the mental models/situation models approach to discourse comprehension is that understanding events described in text or dialogue is essentially like understanding events that are directly experienced. An extension to this idea, related to our everyday experience, is that we think about both individual events and more complex sets of interrelated events primarily in terms of the people involved in them. This everyday observation is reflected in approaches to understanding the world in certain parts of psychology, perhaps more directly in social psychology than in the psychology of language.

One particularly relevant subarea of social psychology is social perception, sometimes tellingly referred to as person perception, and within social perception, impression formation and attribution theory. Research in person perception emphasizes the importance of people in how we construe the world, and the complexities of our perceptions of, and hence our representations of, people. Ideas about impression formation have informed thinking about literary character in literary theory, and its interplay with cognitive psychology. Marilynn Brewer's (1988) dual-process theory of impression formation influenced Gerrig and Allbritton's (1990) work on literary character, considered from the perspective of cognitive psychology. And this work in turn influenced that of Ralf Schneider (2001), who incorporated ideas from mental models/situation models theory into his account of literary character. Schneider's conclusion (2001: 610) that "readers of novels focus their attention predominantly on psychological traits, emotions, and aims of characters that are more abstract and less dependent on the immediate circumstantial conditions of individual situations" is clearly consistent with the claims made this paper. The importance of "literary character" in various literary genres and in other media, such as film, poetry, and comic books, is further emphasized in the collection of papers by Eder, Jannidis, and Schneider (2010).

However, interesting though this work is, particularly in the distinction that it indirectly draws attention to between the highly elaborated representations of characters that we encounter in books and other media in which we become engrossed, and the almost certainly sparser representations typically developed by participants reading brief texts in psycholinguistic experiments, the question of how elaborated our representations of characters become is at least to some extent orthogonal to the question, central to the current paper, of why the protagonist index appears to behave differently from other indices in the event-indexing model of Zwaan et al. (1995).

A second aspect of social perception, attribution theory, focuses on the importance of people's characteristics and dispositions in explaining their behavior. And although attribution theory was developed independently of considerations about discourse and text, its ideas are clearly relevant to understanding texts of many kinds. Furthermore, one of the key ideas in attribution theory is that we tend, at least in the case of other people, to overemphasize the role of personal characteristics, as opposed to external factors, in explaining behavior (Jones & Harris, 1967), a tendency that was dubbed the fundamental attribution error by Lee Ross (1977). The fundamental attribution error reinforces the idea that people are particularly important in the way we understand the world. It is an indication that we like to explain things in terms of (people's) dispositions, not the situations they find themselves in, and it reflects the fact that we think in terms of people. Interestingly, however, there are differences in attributions between individualistic and collective cultures (e.g. Miller, 1984), including differences in the fundamental attribution error (e.g., Choi, Nisbett, & Norenzayan, 1999, Koenig & Dean, 2010). In an example more directly related to narration, Marcus, Uchida, Omorigie, Townsend, and Kitayama (2006) showed that Japanese reports on Olympic success were less focused on characteristics of the successful athletes (dispositional attributions) than reports in the United States, and more on context. These differences, and their relation to psychological theories of discourse comprehension, would be well worth pursuing in

another context. However, the focus on contextual explanations of behavior is not, of itself, at odds with the idea that stories are organized around central characters, and indeed many important works of literature from collectivist cultures are either named after central characters or at least focus on them. For example the sixteenth century Ming dynasty "novels" *Xiyouji*, usually translated as *Journey to the West*, and *Jinpingmei*, *The Golden Lotus*, are about the Buddhist monk Xuanzang and about Hsi Men (and his six wives) respectively. And the title of the seventeenth century Japanese "floating world" novel, *The Life of an Amorous Man*, clearly indicates its focus on a main protagonist.

There is also work that is more central to the psychology of language that points in the same direction as the observations made above about the importance of main characters in discourse processing. For example, although much psychological work on the comprehension of stories became embroiled in an unilluminating debate (see Garnham, 1983) about whether stories have a structure similar to sentences, it is clear from discussions of what, from a psychological point of view, constitutes a story (e.g., Stein, 1982) that protagonists are central. In addition, work with much shorter texts (e.g., Anderson, Garrod, & Sanford, 1983) suggest that it is principal characters, like Frederic in *L'Education Sentimentale*, that are crucial in the memory representations of narratives, and that peripheral characters are processed much less deeply. It might also be thought that the approach of Centering Theory (e.g., Gordon, Grosz, & Gilliom, 1983), with its single backward-looking center and its Rule 2 about the relations between forward-looking centers in adjacent utterances (see above), supports this idea. Finally, work by Radvansky, Spieler, & Zacks (1993) used the fan effect – the effect of the number of associations that a concept has (Anderson, 1974) – to provide support for a person-based, rather than a location-based, representation of information derived from a text about different people in different locations. However, these observations simply point out the centrality of people (or of a main protagonist) in text representation, rather than providing an explanation of why they are central, or details of what such representations look like.

More generally, in their review of situation models, Zwaan and Radvansky (1998) make a number of allusions to the importance of main characters, but without explaining how those claims inform situation models theory and its account of event indexing. For example, they describe protagonists and objects as "meat" on a "backbone" of goal structures (1998: 173), which depend on the intentional and causal indices. And they later state (1998: 179) that "main protagonists are a crucial component of situation models. Most narratives, ranging from The Odyssey to the short passages used in psycholinguistic experiments, describe the goals and actions of a main protagonist.". Furthermore, they note that although in other types of text "objects can also function as a central element of situation models, for example, in a textbook chapter about the heart or a printer manual." (1988: 179), "readers appear to be intensively engaged in keeping track of protagonists during comprehension whereas the amount of focus on objects appears to be more dependent on contextual cues." (1988:173). However, despite these observations, protagonist remains just one of the five indices of the theory.

## 5. Modifications to Mental Models/Situation Models Theory

The event-indexing model's focus on events is consistent with the claim that events are primitives in natural language semantics (Davidson, 1967; Parsons, 1990). The model is also correct that there are certain aspects of events ("indices") that allow them to be linked to other events, and that the linking of events is essential in coming to an understanding of a wider situation, whether directly experienced in the world or described in a dialogue or text. However, the different indices play different roles, which partly depend on the type of text. For example, in instruction manuals spatial relations may play a crucial role. But, interestingly, such manuals often include diagrams and photos, as spatial information is notoriously difficult to convey purely verbally (Morrow et al., 1987; Morrow et al., 1989). In narratives, novels, biographies and so on, people (protagonists) are

more central, as I have been arguing. Also, as Miller & Johnson-Laird's (1976) list of types of relation between events (which excludes protagonist) indicates, the way that the protagonist index in situation model theory works (via anaphora) is at least superficially different from the way other indices work, though tense and aspect, used in establishing temporal links between events, have anaphoric properties (Partee, 1973).

Although the situation models literature in general, and Zwann and Radvansky's (1998) review in particular, have many useful insights into the role of central characters in the construction of text representations, these insights have remained dissociated from the core ideas of the theory of situation models. They have not been directly reflected in developments of the theory and its related event indexing model, or of mental models theory. Indeed, it may appear that the problem with the event-indexing model is that it treats protagonist as just one of five types of index on events (time, space, cause, intention, protagonist), and hence loses sight of the more central role of protagonists. However, this conclusion is misleading, because of a difference between the protagonist index and the other indices. Miller & Johnson-Laird (1976) identified six types of relations between events: spatial, temporal, logical, causal, intentional, and moral. Protagonist is not among them - four correspond to four of the five indices in the event-indexing model. Of the other two, logical corresponds to a type of relation that is relatively rarely important in stories, perhaps with exceptions such as Sherlock Holmes stories, but which reflects Johnson-Laird's interest in reasoning. Moral is, perhaps, an omission from the event-indexing theory, but proponents of that theory are open to the idea of additional indices. As noted in the Introduction, these types of relation correspond to what are known in other literatures as (local) coherence relations (though temporal relations have some properties of coherence relations and some properties of anaphoric relations). Links between characters in the different events described in a text are not in Miller & Johnson-Laird's list but are established via anaphoric processing and sometimes by inference. Anaphoric processes have received more attention within the mental models framework (e.g., Garnham, 2001) than in the situation models framework. However, like coherence relations, anaphoric relations typically establish local links in a text. Main characters in extended text do not just provide links between eventualities mentioned close together. They provide links across broader spans of text. It is for this reason that the event-indexing model fails to say anything about them. And neither do the accounts of anaphoric processes in mental models theory.

From this broader perspective protagonists, at least in stories, behave differently from other things that are linked by indices. Indices provide local links between events that are mentioned close together in a text. But across a wider stretch of text, there may be a series of links, in a broader sense, all involving the same text character. Furthermore, the links based on the other indices are, in a clear sense, subsidiary to the protagonist links. Spatial links exist because the same character is in different places. We do not (usually) see a chain of references to one or more characters subserving the need to present a set of places with a particular spatial relations to one another. Similarly, the links created using temporal, causal and intentional indices are there because of a story about one or more individuals with temporal, causal and intentional properties.

As just mentioned (see, also, Garnham, 1991), Miller and Johnson-Laird's spatial, temporal, logical, causal, intentional and moral relations between events are the basis of the (local) coherence relations, which have been analyzed in differing ways in different theories of text structure (e.g., Hobbs, 1983; Mann & Thompson, 1986). And the event-indexing model gives a handle on the properties of event representations that allow these links to be made. However, discourses have a structure sitting on top of these local coherence relations, and it is within this higher-level structure that the importance of central characters should be explained. Many suggestions have been made about what this structure is (see above). Perhaps the most important ones come out of the literature on stories, but this literature became embroiled in two issues that distracted attention from attempts to give a proper account of the structure of texts. The first arose from the idea that stories formed a distinct category from other texts, so that lessons about stories could not necessarily be generalized to other types of text. The second derived from the notion that the structure of stories mirrored that

of sentences. However, a more intuitive idea about the structure of stories, or a least of a minimal story, is what Nancy Stein appears to be searching for in her 1982 article, though her arguments are buried amongst forays against those attacking story grammars. A clearer statement of what Stein takes to be a minimal story appears in Stein & Glenn (1979), and it includes the idea of a central protagonist. However, the thrust of the current paper is that its claims are not specific to stories, in the narrow sense of the story grammar literature, so Stein's insight needs to be reassessed from this perspective. How do we account for the fact that a wide a range of texts are organized around the idea of a central character, or perhaps a small group of central characters? A further issue for stories, that of whether an affective response is crucial to their definition, and whether it is a response of the characters (Stein & Glenn, 1979; Mandler & Johnson, 1977) or of the reader (Brewer & Lichtenstein, 1982) or both, is less directly relevant to the current paper, but needs careful consideration in a general theory of narrative.

A different idea about global structure in text, one that is more closely related to situation model theory, is that of casual chains (Trabasso & van den Broek, 1985; van den Broek & Trabasso, 1986). As mentioned above, causal chains are said to provide the "backbone" of situation models. However, two related points should be made in connection with this idea. First, event indexing produces local cause-effect links, but causal chains need to show global coherence. Second, as already argued, it is not chains of causes (including causes of intentional actions) per se that are important. The characters that form the "meat" of the models sit on these chains, and causal chains should reflect coherent sets of actions that people, or often a single main character, engage in and that are worth narrating.

While it is clear that texts have structure above that of local coherence (and anaphoric) relations, it is not easy to give a definitive account of what that structure is. It includes plot structure, but plots are not as stereotyped as those suggested by story grammars, so flexibility is required in how plots are specified. It also includes major, recurring characters and the relations among them. These characters are linked to the eventualities and small-scale situations that they are involved in. Their representations are likely to develop into complex character models (e.g., Rapp, Gerrig, & Prentice, 2001). These character models contain components that occur in the representation of individual eventualities – an eventuality may ascribe a property to an individual, for example. It is simply that these character models are much richer than representations that can be derived from individual eventualities. However, the combinations of properties and relations in character models are likely to give rise to complex inferences about characters and their behaviour, including their interactions with other characters, that will not follow from the information in a single clause. They determine our reactions, as readers, to those characters. And they determine those characters reactions to each other, including the whole range of affective reactions seen in everyday life (see also the comments about affect and stories, above). Protagonists often serve as focalizers, in the sense of Genette (1980), as with Frédéric in *Sentimental Education*, and the narrator must present the story from the point of view of the focalizer. The relation between the narrator and the focalizer is likely represented at this level, and the content of this representation reflects Johnson-Laird and Garnham's (1980) claim, mentioned at the beginning of this paper, that discourse models need to represent what participants in discourse, and by extension characters in or around the narrator of the discourse, know about each other. The narrator's understanding of what the focalizer perceives and knows allows the narrator to tell the story from the focalizer's point of view.

## 6. Conclusions

The basic insight of the theory of mental models (or situation models) is correct. At a local level, information in text is about eventualities, and it is encoded in a "who did what to whom, where, when and how" format. Eventualities described in clauses close together have relations to one another such as Cause-Effect, or Evidence-Assertion, sometimes signalled textually (e.g. by conjunctions, such as "because") and sometimes suggested by knowledge about the world, and

these relations must be computed in order to make sense of the text. Indexing is part of what makes these links possible. Eventualities may primarily involve only one entity, or they may present relations between two or more entities. At any point in a text, one or more of these entities is likely to be important ("salient", "psychologically focused"). In a narrative text, and not by coincidence, this entity is likely to be a person, and the same person is likely to be the most important entity at many points in the same text. Eventualities mentioned close together often involve the same entity, and the identity of the entity between events must be computed, via anaphoric and inferential processes, which might be described as a process based on indexing. From a broader perspective, repeated reference to an entity (usually a person) across larger stretches of a text happens because the text is about that person, or partly about that person, or about that person as one of a small group of central characters. And our representations, as readers, of the content of such texts are structured by our representations of the central character or characters. Part of the reason is that we relate easily but significantly to other people. We can be entertained by their exploits, and we can be edified by their successes and failures.

By saying "or characters" I am acknowledging that texts do not necessarily have a central character, and that any other character must be necessarily subsidiary, though some like *Sentimental Education* do. Stories can have more than one central character – two protagonists, for example, or a protagonist and an antagonist (Othello and Iago; Harry Potter and Voldemort), although some literary analyses claim that separate protagonists, unless they are part of a group, should each be associated with their own story. Alternatively, of two apparent main characters, one may be more important than the other. At the level of representation at which the central character or the set of important characters (there are said to be 15 major characters in Tolstoy's *War and Peace,* for example) is represented, so must at least some of the relations among them. The relation between the narrator and the focalizer (see above) may also represented at this level. However, these observations about multiple characters, though interesting in themselves, are not crucial to the arguments of this paper, and so I will not develop them further. Representations of central or major characters, and the relations between them, are at a level above the representation of eventualities and the local relations between them, and our representations of text content tend to be organised around them.

People structure representations of texts. And they do so at a level above that of local coherence. This claim is true directly of narratives, whether fictional or about the real world. It is also true more indirectly for other types of text. Recipes, for example, should be written with a user in mind. Situations, in a broader sense than that implied by the term "situation model", are also crucial in the longer-term representation of text content. Sometimes, in some newscasts for example, such situations are where our interests lie, rather than in the plights of individuals caught up in those situations. At other times, we can only understand the actions of people (or characters in fiction) in relation to the situations they find themselves in.

I am not claiming that forming people-centred representations is all there is to the representation of texts and discourse, or even of narrative text. Many other considerations apply, some discussed at length in texts on narrative comprehension, such as Emmott (1997). I am however, claiming, that we need to go beyond situation model theory, as it now stands, and consider more global levels of text structure and text comprehension, to have a proper psychological account of the understanding of discourse and text. The exact nature of these higher levels of text structure remains to be determined.

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