

Fictional Narrative Comprehension:
Structuring the Deictic Center

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Abstract

An analysis of the structure of sentences found in fictional text, and the interpretation that one gives to them has led to the proposal that all fictional text is written from a perspective within the fictional world of the story. In a like manner, readers read the story from a similar perspective. The author "pretends" that he is in the story by locating an image of herself somewhere within the space-time of the story (even at times within characters of the story) and creates the sentences from that vantagepoint. The story and its sentences must contain cues so that readers can use the text to discover the perspectival sources of the sentences. They can then pretend that they are "in" the story and can read it from those perspectives. The perspective from which the sentences are read is called the "Deictic Center." This proposal is associated with ongoing research to implement a cognitive model which reads fictional text according to these principles.

Over the past several years I and my colleagues in the Narrative Comprehension Research Group at the University at Buffalo (SUNY) have been studying narrative text using a theoretical frame that we now call the Deictic Shift Theory (Bruder et al., 1986; Rapaport et al., 1989; Galbraith, 1989) This model assumes that a reader comprehends many of the sentences in a fictional narrative by shifting an image of himself to locations in the story world. These locations, serve as the source points for the interpretation of the sentences of the text. The reader uses specific linguistic devices found in the text to control shifting from one source point to another.

In this paper I use logical argument and linguistic examples to support the Deictic Shift Theory. I start by introducing the deictic nature of tense in conversation and then I attempt show how it has been applied to fictional text. The Deictic Shift Theory is then presented as an attempt to resolve the difficulties identified.

Contextualization. Fillmore (1981) showed that certain text requires a particular contextual frame in order for it to be uttered and understood in a conventional manner. This example he used from Hemingway's "The Killers" is best understood by reading it from a perspective inside Henry's lunchroom.

(1) "The door of Henry's lunchroom opened and two men came in."

Fillmore states:

It seems to me that the discourse grammarian's most important task is that of characterizing, on the basis of the linguistic material contained in the discourse under examination, the set of worlds in which the discourse could play a role, together with the set of possible worlds compatible with the message content of the discourse. (1981, p. 149)

This analytic process he calls "contextualization." Fillmore shows that certain text is meaningfully uttered only in certain situations. If our goal is the representation of the process of comprehension, we need to incorporate the idea of contextualization in our models; that is, we need to articulate a mechanism which generates and modifies the contextual frame as the sentences are being comprehended.

The Deictic Shift Theory is based on a generalized application of the principle that certain terms are "token reflexive" (Reichenbach, 1947) and thus comprehension is constrained by the situation (Barwise & Perry 1983). Most obviously, certain words such as here, now, today, this, I, you, ago, etc. are referenced as a function of the specific time and place of the utterance rather than simply as a function of their meaning. Obviously deictic terms play an important role in everyday discourse. They play an important role in how we use our language to talk of the objects and events around us.

Tense. Reichenbach (1947) included verb tense in his class of deictic terms. Many sentences are to be understood as applying to a particular event which occurs at a particular place at a particular time. The time of the event is usually identified in relation to the act of utterance rather than by some context independent description. In most discourse, if an event precedes the utterance which describes it, it would be described in a past tense. If the time of the event is simultaneous with the time of its description it would be described in a present tense. If the description is of a predicted or expected event a future tense would be used.

Reichenbach's (1947) explanation of different tenses was in terms of three variable points or ranges on a time line which passes through the time at which the utterance is made. These points are speech time, reference time, and event time, S, E, and R, respectively. Different tenses are used dependent upon the order on the time line of these three points. Consider the event E <John eat>. If his eating took place before R, some other time of significance which also has already taken place, and I am expressing this fact now, S. The sentence uttered would be in the past perfect, (2) John had eaten, and the relevant times could be diagrammed this way

(2) --|-----|-----|---> t past perfect
 E R S

The horizontal line represents the passage of time, the vertical bars represent the points on the line that the three events take place. The

bar above the S represents an image of me on the time line, when I am speaking the sentence John has eaten. Reichenbach proposed that these three factors were all involved in all tenses. If the simple past were used, (3) John ate, the relevant reference time is the same as the event time.

(3) --|-----|----> t simple past
 E,R S

The present perfect, (4) John has eaten, differs from the past in that reference time is the same as speech time.

(4) --|-----|----> t present perfect
 E R,S

Other basic tenses, present, (5) John eats, future, (6) John shall eat, and future perfect (7) John shall have eaten, are also defined by the three points on the time line,

(5) --|---> t present (6) --|-----|--> t future
 S,E,R S,R E

(7) --|-----|-----|--> t future perfect
 S R E

For multiple clauses in the same sentence R remains constant. Thus the two clauses in (8) John had eaten when Mary entered share R, the time that Mary entered. Reichenbach's approach has been discussed, clarified, and extended by many researchers (cf. Schopf, 1987, 1989), but with few exceptions, such as Casparis's (1975) argument that tense does not mark temporal relations, his basic premise that tense marks relations on a time line which deictically redounds back to the speaker tends to be accepted.

Reichenbach's analysis was on the deictic nature of tense, but he described it entirely in terms of the speaker. Deixis is not solely an issue of the speaker of the sentence, but also of the hearer (reader, addressee, etc.) If one of our interests is that of comprehension, we must consider where and when the hearer or reader is when the communication is being received.

If deictic terms are being used, the hearer must be cognizant of the situation in order to interpret those terms correctly. In the normal unmarked form, and for the above cases, we can assume that the hearer's location on the time-line is simultaneous with the speaker's. Although if the text is written, one might assume on logical grounds that the reader's situational context does not correspond to the writer's, but occurs at a later time and in an unspecified place. How shall deixis be comprehended in such cases? Deictic terms are used quite extensively in written narrative text, particularly fictional text.

Fiction. In English the primary tense of a fictional narrative is usually past, although the present is occasionally used (Casparis, 1975). This is true regardless of the temporal relation to the author or

the reader. (It is argued by Buhler (1934) that in fiction the events can never be based on the author's spatial or temporal coordinates.) Past tenses may be used whether the narrative is about some prehistoric events which are purported to have occurred 30,000 years ago, or is science fiction which describes events that may occur 30,000 years in the future. Moreover, the primary tense usually remains the same throughout the text. Regardless of this fact, temporal relationships among the events are maintained and understood. Obviously the time of the author or reader is not directly relevant to the way that tense maintains the temporal interpretation of the textual events. Thus tense in narrative is not token reflexive in the Reichenbachian way. If tense in fiction is deictic at all, it has to be differently contextualized. We need to identify a substitute for the utterance situation in fictional narrative.

One semantic explanation for certain of the narrative uses of tense is through the invention of a fictional speaker or narrator who tells the story. The fictional time line, *tf*, in this analysis goes through *Sn*, the narrator's "speech time." If the narrative is in the past tense then the fictional narrator is telling the story at some time after the event that is described. If in the present tense the narrator describes events which are concurrent to his fictional telling. (9) represents John ate as told by a narrator of a fictional story; and (10) represents a narrator asserting John eats in what is usually called the 'historical present' tense.

(9) ---|-----|---> *tf* narration (10) ---|---> *tf* narration
 E,R *Sn* past *Sn,E,R* present

A fictional narrator is a major component of the poetics of fiction. There are many fictional narratives in which a narrator is explicitly included in the text (cf. Booth, 1983). Most narrative theorists, however, include a fictional narrator even when the text does not explicitly identify one (eg. Genette, 1988; McHale, 1983; Cohn, 1978).

This analysis seems to solve many problems. The hypothesis that a fictional narrator utters the sentences of the text meaningfully contextualizes the sentences in the fiction. The fictional events were witnessed by the fictional narrator. The narrator is "in the fiction" where s/he can ground the deictic references and where s/he may have "witnessed" the story events and thus can epistemologically justify the events described. However, it addresses neither the role of the 'real' author nor that of the 'real' reader. They exist on a time line and in a situation which have no obvious connection with those in the fictional story world.

(9') -----|-----|--->*tn*
 E,R *Sn* *tn* ≠ *t* for all *t*.
 -----|-----|----->*t*
 author reader

The ontological problem of what it means to have a story told by a fictional narrator tends not to be explored, although Hamburger (1973) rejects inventing fictional narrators partially on ontological grounds.

In addition to the ontological ones, there are among others, cognitive and linguistic problems with the assumption that a fictional narrator tells the story. Often the syntactic structure of narrative sentences cannot be grammatically tied to a narrator; how are these sentences to be understood? How do readers interpret deictic terms designed to be used in their presence such as here and now? Why is it that some sentences are not syntactically an assertion, or not even complete sentences? How do we comprehend them? Why should a narrator telling a story use such linguistic forms? These are seen to mark expressive elements (Banfield, 1982), and often they do not seem to be expressions of the narrator.

I think that the role of the author in writing fiction is important in understanding its comprehension. One view on authors is that of Searle (1975a) who analyzed fictional text with the focus on understanding the author's speech act in generating the text. He proposed that authors pretend to use standard dialogic speech acts (cf. Searle, 1969, 1975b). For the most part they pretend to assert the propositions in the text, and they pretend to refer to the objects. This may seem to be a "clean" proposal ontologically, but it gives no mechanism to account for either the semantic coherence of the text or the grammatical structure of its sentences.

If one simply pretends to do something it is not clear that there is any structural residue from the pretense. There is nothing in a pretense that would connect the events on the author's time-line with any events in the fiction. Even Searle (1975a) agrees that after fictional narrative is written, there are fictional characters and ordered fictional events created by the author which can be referred to in a discussion of the fiction. The author must have done something instead of merely pretended to do something. What she has done is created the fiction, that is, created a possible world which has space, time, events, existents, characters, etc. (Chatman, 1978).

Fictional Narrative Text. Either simultaneous with the creation of the fiction or subsequent to it, the author writes sentences which express some components of this fiction. If she uses sentences with finite verbs, to the extent that the verbs are deictic, the author linguistically puts an image of the creator of the sentences somewhere on the fictional time line. By generating those sentences the author "pretends" that she is somewhere in the fictional world. This claim is consistent with Searle (1975a). After quoting from Sherlock Holmes a passage in which Watson is beginning to tell of an adventure, Searle writes, "Sir Arthur is not simply pretending to make assertions, but he is pretending to be John Watson, M.D...making assertions" (p. 328, Searle's emphasis). Watson is on the fictional time line, and if Sir Arthur is pretending to be him, he projects an image of himself into Watson. In that way Sir Arthur can meaningfully contextualize the sentences ostensibly uttered by Watson.

Any sentence telling or presenting the story, by the nature of the language, must be expressed from somewhere along the time-line of the story. This is done by the author contextualizing the sentence from

somewhere within the world of the story. A point somewhere on that fictional time-line serves as the temporal source of the sentence. Where on that line, is one of the constraints on the selection of tense and other text. The sentences of the text cannot be contextualized as a story without being on the time-line somewhere. Note that this is a requirement that the sentences are contextualized from within the text, not that they are expressed by a fictional narrator.

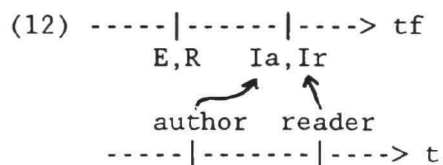
The Reader. The role and location of the reader of fiction has to be clarified. Although speech act theory has generally identified the participants of a speech act as speaker and hearer, the hearer has usually been conceived of as the addressee (cf. Clark & Carlson, 1982). Clark and Carlson have argued that there are participants in receiving language besides the addressee, and that an informative is one component of all speech acts. There is evidence that language is often constructed for participants other than direct addressees. Jimmy Swaggart addressed the confession of his sins directly to God before several million people on television. Conversations over mass media are designed to be heard by non-addressees. Clark and Carlson give the example

(11) Othello, to Desdemona, in front of Iago and Roderigo: Come Desdemona

Iago and Roderigo were informed of the request, as are millions of readers and viewers of Othello.

There are a few sentences in fictional narrative in which the author uses sentences which are directed at the reader, but most sentences are not. The reader is often a silent participant, seeing the sentences, but not being addressed by them (cf. Banfield, 1982).

The author neither has to write through a narrator nor to address the reader in constructing the sentences of the story. She simply has to present the story in the form of text from a position within the story world. The sentences are thus contextualized from a particular position in that world. The reader, in order to understand the set of relations expressed, must also be deictically connected to the text. He can best do that by assuming a location on the time-line and in the story world identical to or near that from which the sentences are contextualized. He does this by shifting his Deictic Center conceptually to this point. As the author writes by pretending that she is at a particular contextual location in the story, the reader reads by pretending that he is at the same place. Since the reader understands the story from the perspective of his image in the world of the story, it does not matter where he "really" is situationally. The same holds true for the author. What matters is where they are imaginally or conceptually. Diagrammatically, a fictional past-tense sentence may exhibit these structural relations:



The image of the author and the image of the reader may be at the same place and time fictionally, regardless of their temporal and spatial relationship in the real world.

Applications. This construal can incorporate much of the work done in the analysis of fictional text and suggests a direction for solving many of its conceptual problems. Hamburger (1973), Cohn (1978), Genette (1980), Banfield (1982), Wiebe (1989), and many others, have shown that many sentences in fictional text are often presented using personal or expressive references to characters and other expressions of feelings, knowledge and belief which can only come from the subjectivity of the characters themselves. Weibe (1989; Weibe & Rapaport, 1988) has developed an algorithm that identifies "subjective contexts." These are contexts which cue the reader that the sentences following are to be contextualized in the subjectivity of a character which is currently on the top of a stack. Thus the reader understands the sentences by locating an image of himself within the subjective space of the character.

There are many discussions of tense. Casparis (1975) finds many examples of the present tense in fiction. However, his model requires a narrator, and often no narrator is at the scene, so Casparis argues that tense does not mark time. Since the Deictic Shift Model give the author an ability to establish a source anywhere within the story she can be located at the time of the scene to express the sentences from that perspective.

Almeida (1987) has written a developed a model which understands the temporal continuity of fictional discourse by showing how the NOW of the text is often sequentially updated so that the sentences that successively appear in the text, even though they are not structurally tied can be seen to be integrated temporally. This is done by establishing the reader on the fictional time line of the narrative.

This paper is an informal presentation of the idea that all fiction is deictic. This idea seems very rich in its possibilities, although there are many problems to be solved, some of which may turn out to be traps.

References

- Banfield, A. (1982). Unspeakable Sentences: Narration and Representation in the Language of Fiction. Boston: Routledge & Kegan Paul.
- Barwise, J. and Perry, J. (1983). Situations and Attitudes. Cambridge, MA: MIT Press.
- Booth, W. (1983). The Rhetoric of Fiction, 2 ed. Chicago: University of Chicago Press.
- Bruder, G.A., Duchan, J.F., Rapaport, W.J., Segal, E.M., Shapiro, S.C., and Zubin, D.A. (1986) Deictic Centers in Narrative: An interdisciplinary Cognitive-Science Project, Tech. Report 86-20, Buffalo: SUNY Buffalo Dept. of Computer Science.

- Buhler, K. (1934/1982). The deictic field of language and deictic words
In R.J. Jarvella and W. Klein (Eds.) Speech, Place and Action:
Studies in Deixis and Related Topics. Chichester, England: Wiley.
- Casparis, C. P. (1975). Tense Without Time: The Present Tense in
Narration. Zurich: Francke Verlag Bern.
- Chatman, S. (1978). Story and Discourse. Ithaca: Cornell University
Press.
- Clark, H.H. and Carlson, T.B. (1982). Hearers and speech acts,
Language, 58, 332-373.
- Cohn, D. (1978). Transparent Minds, Princeton: Princeton University
Press.
- Fillmore, C.J. (1981). Pragmatics and the description of discourse. In
P. Cole (Ed.) Radical Pragmatics, New York: Academic Press.
- Galbraith, M. (1989). Subjectivity in the Novel: A Phenomenological and
Linguistic Approach to the Narration of Childhood Self.
Unpublished Ph.D. Dissertation, SUNY Buffalo.
- Genette, G. (1980). Narrative Discourse: An Essay in Method, translated
by J.E. Lewin, Ithaca: Cornell University Press.
- Genette, G. (1988). Narrative Discourse Revisited, translated by J.E.
Lewin, Ithaca: Cornell University Press.
- Hamburger, K. (1973). The Logic of Literature, translated by M.J. Rose,
Bloomington: Indiana University Press.
- McHale, B. (1983). Unspeakable sentences, unnatural acts, linguistics
and poetics revisited, Poetics Today, 4, 17-45.
- Rapaport et al., (1989). Deictic Centers and the Cognitive Structure of
Narrative Comprehension, Tech. Report 89-01, Buffalo: SUNY Buffalo
Dept. of Computer Science.
- Reichenbach, H. (1947) Elements of Symbolic Logic, New York: Dover.
- Schopf, A. (Ed.) (1987, 1989) Essays on Tensing in English, (Two
Volumes) Tübingen: Niemeyer.
- Searle J. (1969). Speech Acts, Cambridge: Cambridge University Press.
- Searle J. (1975a). The logical status of fictional discourse, New
Literary History, 6, 319-332.
- Searle J. (1975b). A taxonomy of illocutionary acts. In K. Gunderson
(Ed.) Language, Mind, and Knowledge, Minnesota Studies in
Philosophy of Science, Vol. VII. Minneapolis: University of
Minnesota Press.
- Wiebe, J.M. (1989). Recognizing Character's Thoughts and Perceptions: A
Computational Investigation of Narrative Text, Unpublished Ph.D.
Dissertation, SUNY Buffalo.
- Wiebe, J. and Rapaport, W.J. (1988). A computational theory of
perspective and reference in narrative, Proc. 26th Annual Meeting
of the Association of Computational Linguistics, 131-138.