Stylistics meets Cognitive Science: Style in Fiction from an inter-disciplinary perspective

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Section A: Style and Attention: "Prominence" in Leech and Short's Style in Fiction

From Leech and Short (1981) - Page 50, Figure 2.1
literary psychological statistical RELEVANCE→ PROMINENCE→ DEVIANCE (foregrounding)
<u>Key</u> – "We interpret the arrow in 'X \rightarrow Y' to mean 'all instances of X are instances of Y' But in the opposite direction, the relation does not hold." (p. 51)

[A.1] Leech and Short (1981:48), "<u>Prominence is the related psychological notion</u> [i.e. related to deviance]: Halliday defines it simply as 'the general name for the phenomenon of linguistic highlighting, whereby <u>some linguistic feature stands out in some way</u>' [Halliday (1971:340)]. We assume that prominence of various degrees and kinds provides the basis for a reader's subjective recognition of a style."

[A.2] Leech and Short (1981:49), "We presume a fairly direct relation between <u>prominence</u> (psychological saliency) and deviance (a function of textual frequency). It is reasonable to suppose that a sense of what is usual or <u>unusual or noticeable</u> in language is built up from a lifelong experience of linguistic use ..."

[A.3] Leech and Short (1981:17), "It is obviously the aesthetics of form which tends to <u>attract the</u> <u>reader's attention</u> here ..."

[A.4] Leech and Short (1981:48), "...if features can <u>register on a reader's mind</u> in his recognition of style, the degree to which they are salient will vary ..."

[A.5] Leech and Short (1981:49), "... the <u>threshold of response</u>"

[A.6] Leech and Short (1981:131), "This punctuation would have made some difference to <u>the reader's</u> <u>processing</u> of the sentence ... <u>dividing the reader's attention</u> ..."

[A.7] Leech and Short (1981:231), "The rhetoric of text, as we have considered it, is addressee-based: this means that the principles of good textual behaviour ... have functions which can be explained in terms of **the reader's needs and responses**."

Section B: "Foregrounding" in Stylistics

• Mukařovský 1964, see also van Peer (1986) and van Peer & Hakemulder (2006)

• Wales (2001:157): Foregrounding is:

(i) "the 'throwing into relief' of the linguistic sign against the background of the norms of ordinary language" and (ii) "within the literary text itself linguistic features can themselves be foregrounded, or 'highlighted', 'made prominent', for specific effects, against the (subordinated) background of the rest of the text ..."

• van Peer (1986) – "Empirical study of literature" analysis of foregrounding, building on Leech & Short (1981):

As one of his tests of foregrounding, van Peer tested memory for foregrounded items using a clozetype test – informants read four poems carefully twice, each time being presented afterwards with the same poem with cloze gaps (i.e. words deleted) for completion, e.g. in the following line from Emily Dickinson.

[**B**.1]

van Peer hypothesised that features which experts judged to be foregrounded would be remembered better, with a higher cloze completion rate.

van Peer himself evaluated his results for this memory test as contradictory and inconclusive (p.99):

"This contamination of different variables, together with the lack of experimental control over some of them, makes it impossible to dissociate the real cause(s) from concurring factors ... Further research, in which other factors influencing ease of memorability are systematically controlled by the experimenter, is needed to arrive at more conclusive evidence. In the light of what is known about the multitude of variables influencing recall, however, the design of such empirical tests will not be an easy matter."

Section C: Psychology - Depth of Processing

In current psychological theory, certain psychologists view prominence as related to **depth of processing** (e.g. Sanford & Sturt 2002), resulting in different degrees of **granularity** (Hobbs 1985) in the mental representation.

"Depth of processing" psychologists argue that we do not form a detailed, accurate mental representation of what we read. Most psychological processing of text is "**shallow**" (e.g. Sanford 2002) and the reader forms representations that are "**good enough**" for their purpose (Ferreira *et al.* 2002). Note, however, that some psychologists suggest that literary texts may be read with a greater degree of attention (Zwaan 1993).

The "Moses illusion" in psychology provides an empirical test of shallow depth of processing, readers often failing to notice that the wrong biblical character is named:

[C.1] How many animals of each sort did Moses put in the Ark?

Psychological prominence occurs on a scale - attention levels can be raised/lowered on the scale according to the linguistic form of the text.

So cleft structures raise attention levels (Bredart and Modolo 1988):

[C.2] It was Moses who put two of each sort of animal in the Ark. True or false?

and syntactic embedding lowers attention levels (Baker and Wagner 1987):

[C.3] The Ark, <u>which was built by Moses</u>, was big enough for two of each sort of animal. True or false?

Psychological prominence can be influenced by top-down factors, such as degree of scenario-fit (see Section G).

<u>Section D: Leech and Short's "multi-level" analysis in relation to the empirical</u> <u>study of "attention-controlling" devices</u>

Leech and Short (1981, Chapter 3) adopt a multi-level approach, examining stylistic features at all linguistic levels. In our empirical analysis, we examine features from different levels, as follows:

<u>Some potential attention-controlling features:</u> D.1-D.9 – potential attention-grabbers; D.10 – potential attention downgrader

[D.1] Graphical, e.g. italics:

I beg of you not to assault me if I ask you one more question: <u>Are you perfectly certain that you did not leave</u> <u>the trunk unlocked?</u>

(Agatha Christie, "The million dollar bond robbery", in *Hercule Poirot: The Complete Short Stories*, p.113, Christie's italics)

[D.2] <u>Lexical:</u>

e.g. Use of very long words and/or low frequency words

[D.3] Very short sentences:

After all, crime didn't just slowly ebb in New York as conditions gradually improved. It plummeted.

(Gladwell, The Tipping Point, p.7 (expository text))

[D.4] Sentence fragments:

Jake was flicking through the pages. I held my breath. <u>There</u>. <u>The photographs</u>. He was looking at Adam in a photograph.

(Nicci French, Killing me Softly, p.63)

[D.5] Mini-paragraphs (each containing a single sentence or fragment):

One not-so-young woman suddenly bought a bicycle, and pedalled it madly for astonishing distances, with fierce determination.

Two young women collapsed in over-hot baths. Three inexplicably tripped and fell downstairs. A number suffered from unusual gastric upsets.

(John Wyndham, The Midwich Cuckoos, p.60)

[D.6] Clefting:

It was the card that I had sent her ...

(Sarah Waters, Tipping the Velvet, p.176)

[D.7] Statements of surprise:

It was the second male prisoner who had gone in the other car, and as the light fell on his face, <u>I gave a start of surprise</u>.

(Agatha Christie, "The Kidnapped Prime Minister", in Hercule Poirot: The Complete Short Stories, p.107)

[D.8] <u>Pre-announcements:</u>

Then this happened:

(Roald Dahl, "Taste" in *The Best of Roald Dahl*, p.64)

[D.9] <u>Pre-announcement with emotion/reaction statements:</u>

I might have remained in my stupor till doomsday – I think I would have – $\underline{if \text{ something hadn't happened, at }}$ last, to rouse me out of it.

(Sarah Waters, Tipping the Velvet, p.186)

[D.10] Potential attention downgrader – syntactic complexity:

Burying information which will subsequently become plot-crucial (see Emmott (2003) and Alexander (in prep.)), e.g. the information in the example below that the two characters were alike (we later find there is an undisclosed family relation, providing a motive for the crime in the story).

The contrast between the two women struck me at once, the more so as in actual features and colouring <u>they</u> <u>were not unalike</u> – but oh, the difference!

(Agatha Christie, "The King of Clubs", in *Hercule Poirot: The Complete Short Stories*, p.34)

E: Methodology – text change blindness/detection

The text change method was developed by Glasgow psychologists (e.g. Sturt *et al.* 2004), building on change detection experiments in vision research. Psychologists use this method to compare the reading of texts occurring in versions that are linguistically different in certain key respects (as marked in bold). Participants read the texts twice. On the second occasion, a word is changed in 50% of cases and the participants are required to spot whether a change has occurred or not. The hypothesis is that when they are reading versions of the text containing potential attention grabbers they will spot changes more easily.

Sample materials

[E.1] Pre-announcement

I was travelling to a nearby village to visit friends. After driving for 15 minutes, I was approaching their cottage. <u>Then something happened</u>. A sports car drove (\rightarrow moved) out in front of me and nearly hit my car. Thankfully, no damage was done.

[E.2] Pre-announcement with emotion

I was travelling to a nearby village to visit friends. After driving for 15 minutes, I was approaching their cottage. What happened next made me furious. A sports car drove (\rightarrow moved) out in front of me and nearly hit my car. Thankfully, no damage was done.

[E.3] Neutral

I was travelling to a nearby village to visit friends. After driving for 15 minutes, I was approaching their cottage. <u>It had a thatched roof.</u> A sports car drove (\rightarrow moved) out in front of me and nearly hit my car. Thankfully, no damage was done.

Section F: Overview of results for text change experiments

Attention grabbers?

<u>Text feature</u>	Form/Detection of text changes - Statistically significantReferenceContentStatistically significantorincrease when device is used compared to control?work-in-progress*current project		
Clefting	Form	YES	Sturt et al. (2004)
Narrow focus sentence	Form	YES	Sturt <i>et al.</i> (2004); *A.J.S. Sanford <i>et al.</i> (in press)
Sentence fragments or very short sentences	Form	YES	*Emmott <i>et al</i> . (in press)
Sentence fragments or very short sentences <i>PLUS</i> mini-paragraphs	Form	YES*	*Emmott <i>et al</i> . (in press)
Italics	Form	YES	*A.J.S. Sanford et al. (in press)
Stress in spoken discourse	Form	YES	*A.J.S. Sanford et al. (in press)
Switch to very long word	Form	YES	*experiment completed
Switch to low frequency word	Form	YES	*experiment completed
Indication of surprise	Content	NO	*experiment completed
Pre-announcement	Content	NO	*experiment completed; additional test in progress
Pre-announcement plus emotion	Content	NO	* experiment completed; additional test in progress

* Mini-paragraphs, however, did not show a significant incremental effect over and above that found for the other items.

Attention downgrader?

<u>Text feature</u>	Content	Detection of text ch Statistically signific decrease when dev used compared to c	cant <u>Reference</u> vice is
Increased sentence complexity	Form	YES	Sanford <i>et al.</i> (2005)

Section G: Attention in context: Under-specification and plot salience

Leech and Short (1981:219, see also 236) provide the following example of an object which is initially not identified ("under-specified" in our terms) and then gradually disclosed:

[G.1] "She saw there <u>an object</u>. <u>That object</u> was the gallows. She was afraid of the gallows." (Joseph Conrad, *The Secret Agent*, Chapter 12, my emphasis).

"Under-specification" has been studied in literary theory (e.g. Ingarden 1973; Barthes 1974; and Iser 1978) and is currently a major topic in Cognitive Science. It has received recent attention in Stylistics and Narratology (e.g. Toolan 2004; Hardy 2005; Emmott 2006).

By withholding information, under-specification may be an "attention-grabber" or, conversely, may denote something/someone who is of minor interest. The difference seems to be due both to the extent to which other attention-grabbers are used with the under-specified item (e.g. G.2) and to the extent to which the under-specified item is treated as a scenario-dependent entity (Sanford and Garrod 1981) (e.g. G.3)

[G.2] <u>Then someone</u> walked in. <u>Someone Rebus knew</u>. <u>Dr Colquhoun</u>. He saw Rebus immediately and <u>fear</u> jumped into his face. <u>Colquhoun</u>: with his sick line to the university; his enforced holiday absence; no forwarding address. <u>Colquhoun</u>: who'd known Rebus was taking Candice to the Drinics. Rebus watched him back towards the doors. Watched him turn and run.

(Ian Rankin, *The Hanging Garden*, p.231)

[G.3] The news conference took place at the Big House, with a live feed to the inquiry room at Gayfield Square. <u>Someone</u> was trying to clean fingerprints and smears from the TV monitor with a handkerchief, while others tilted the blinds against the afternoon's sudden burst of sunshine.

(Ian Rankin, *The Falls*, p.43)

Story continuation tests

Readers are presented with a supplied sentence and asked to continue the story themselves. This tests the extent to which readers are noticing under-specified characters ("someone, somebody") in different situations by showing how far they continue to mention that character and provide further details about him/her.

[G.4] <u>Supplied sentence</u> - Robert noticed <u>someone</u> lying behind the door.

<u>Student's continuation</u> - As he got nearer, he realised that it was his girlfriend. She was dead, and covered in yellow paint. [...] He vomited. It didn't mix well with the paint. The smell was horrendous. He was overcome with the smell and grief, he died. His bodily functions gone way [sic]. A terrible mess.

[G.5] <u>Supplied sentence</u> - In the accident and emergency department, <u>somebody</u> cleaned Philip's wound.

<u>Student's continuation</u> - The pain had eased thanks to the anaesthetic. He would sleep now, peacefully.

Bibliography

Alexander, M.G. (in preparation) *Plot Structure and Perspective Indicators across Narrative Genres: A Cognitive Stylistic Analysis*, Unpublished M.Phil thesis: University of Glasgow.

Baker, L. and Wagner, J.L. (1987) "Evaluating information for truthfulness: The effects of logical subordination", *Memory and Cognition*, 15, 247-255.

Barthes, R. (1974) S/Z, New York: Hill and Wang (translated by Richard Miller).

Barton, S.B., and Sanford, A.J. (1993) "A case-study of anomaly detection: Shallow semantic processing and cohesion establishment", *Memory and Cognition* 21: 477-487.

Bredart, S. and Modolo, K. (1988) "Moses strikes again: Focalization effects on a semantic illusion", *Acta Psychologica*, 67, 135-144.

Emmott, C. (1997) Narrative Comprehension: A Discourse Perspective, Oxford: Oxford University Press.

Emmott, C. (2002) "Responding to style: Cohesion, foregrounding and thematic interpretation" in M. Louwerse and W. van Peer (eds.) *Thematics: Inter-Disciplinary Studies*, Amsterdam: Benjamins, 91-117.

Emmott, C. (2003) "Reading for pleasure: A cognitive poetic analysis of "twists in the tale" and other plot reversals in narrative texts" in J. Gavins and G. Steen (eds.) *Cognitive Poetics in Practice*, London: Routledge, 145-159.

Emmott, C. (2006) "Reference: Stylistic aspects" in K. Brown (ed.) *Encyclopedia of Language and Linguistics* (2nd edition), Volume 10, Oxford: Elsevier, 441-450.

Emmott, C., Sanford, A.J. and Morrow, L.I. (2003) "Towards a theory of reading in the age of cognitive science: Crossdisciplinary perspectives on narrative from stylistics and psychology", *Belgian Journal of English Language and Literature*, New Issue I, 17-30.

Emmott, C., Sanford, A.J. and Morrow, L.I. (2006) "Sentence fragmentation: stylistic aspects" in K. Brown (ed.) *Encyclopedia of Language and Linguistics* (2nd edition), Volume 11, Oxford: Elsevier, 241-251.

Emmott, C., Sanford, A.J. and Morrow, L.I. (in press, 2006) "Capturing the attention of readers? Stylistic and psychological perspectives on the use and effect of text fragmentation in narratives", *Journal of Literary Semantics*, 35 (1), 1-30.

Ferreira, F., Ferraro, V. and Bailey, K.G.D. (2002) "Good-enough representations in language comprehension", *Current Directions in Psychological Science*, 11, 11-15.

Halliday, M.A.K. (1971) "Linguistic function and literary style: An enquiry into William Golding's *The Inheritors*", in Chatman, S. (ed.), *Literary Style: A Symposium*, 330-365.

Hardy, D.E. (2005) "Towards a stylistic typology of narrative gaps: Knowledge gapping in Flannery O'Connor's fiction", *Language and Literature*, 14 (5), 363-376.

Hobbs, J.R. (1985) "Granularity". Paper presented at the International Joint Conference on Artificial Intelligence, 432-435.

Ingarden, R. (1973) The Literary Work of Art, Evanston: Northwestern University Press.

Iser, W. (1978) *The Act of Reading: A Theory of Aesthetic Response*, Baltimore and London: The John Hopkins University Press.

Leech, G.N., and Short, M.H. (1981) Style in Fiction: A Linguistic Introduction to English Fictional Prose, London/New York: Longman.

Mukařovský, J. (1964) "Standard language and poetic language" in (trans.) P.L. Garvin (ed.) A Prague School Reader on Esthetics, Literary Structure, and Style, Washington, D.C.: Georgetown University Press, 17-30.

Sanford, A.J. (2002) "Context, attention and depth of processing during interpretation", Mind & Language, 17, 188-206.

Sanford, A.J., and Garrod, S.C. (1981) Understanding Written Language: Explorations in Comprehension Beyond the Sentence, Chichester: John Wiley and Sons.

Sanford, A.J., and Sturt, P. (2002) "Depth of processing in language comprehension: Not noticing the evidence", *TRENDS in Cognitive Sciences* 6: 382-386.

Sanford, A.J.S, Sanford, A.J., Filik, R. and Molle, J. (2005) "Depth of lexical-semantic processing and sentential load", *Journal of Memory and Language*, 53, 378-396.

Sanford, A.J.S, Sanford, A.J., Molle, J. and Emmott, C. (in press, 2006) "Shallow processing and attention capture in written and spoken discourse", *Discourse Processes*.

Sturt, P., Sanford, A.J., Stewart, A. and Dawydiak, E. (2004) "Linguistic focus and good-enough representations: an application of the change-detection paradigm", *Psychonomic Review and Bulletin*, 11, 882-888.

Toolan, M. (2004) "Graded expectations: On the textual and structural shaping of readers' experience" in J.Pier (ed.) *The Dynamics of Narrative Form: Studies in Anglo-American Narratology*, Berlin: Walter de Gruyter, 215-237.

van Peer, W. (1986) Stylistics and Psychology: Investigations of Foregrounding. London: Croom Helm.

van Peer, W. and Hakemulder, J. (2006) "Foregrounding" in K. Brown (ed.) *Encyclopedia of Language and Linguistics* (2nd), Volume 4, Oxford: Elsevier, 546-551.

Wales, K. (2001) A Dictionary of Stylistics, London: Longman.

Zwaan, R.A. (1993) Aspects of Literary Comprehension, Amsterdam: John Benjamins.