

Linking qualitative and quantitative analysis of metaphor in end-of-life care

Paul Rayson, Jane Demmen, Andrew Hardie, Veronika Koller, Sheila Payne, Elena Semino (Lancaster University), Zsófia Demjén (Open University), Matt Gee, Andrew Kehoe (Birmingham City University)

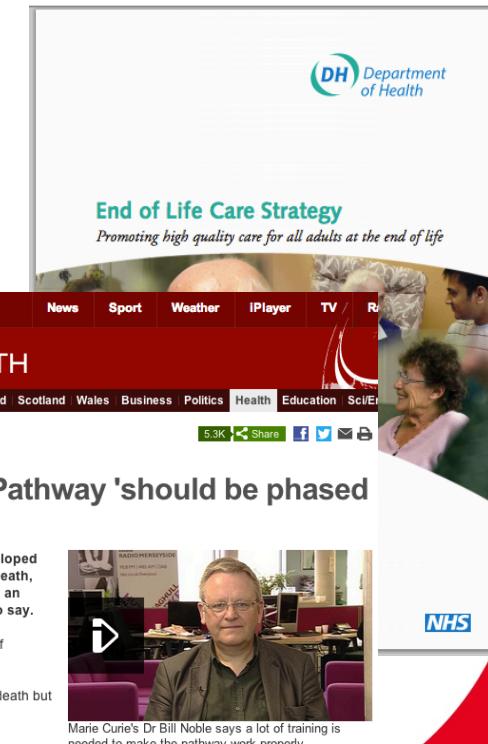
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Focus of this talk

- As part of the ESRC-funded project 'Metaphor in End of Life Care', we are using a number of techniques from corpus linguistics and natural language processing alongside manual techniques for the investigation of metaphors in large-scale data sets.
- Here, we focus on the challenges of bringing multiple methods and tools together.
- We also describe the wider context of the project as motivation for this work, and some preliminary findings.

End-of-life care strategy

- The way in which the experience of end-of-life care is talked about can shed light on people's views, needs, challenges, and emotions, as well as identify areas with a potential for increased anxiety and/or misunderstanding
- Department of Health End-of-life care strategy (2008)
- Liverpool Care Pathway (July 2013)



The image shows a composite of two web pages. The top part is the 'End of Life Care Strategy' page from the Department of Health, featuring the DH logo and a banner with the text 'Promoting high quality care for all adults at the end of life'. The bottom part is a BBC News article titled 'Liverpool Care Pathway 'should be phased out'', dated 13 July 2013. The article includes a BBC logo, a photo of a man, and a quote from Marie Curie's Dr Bill Noble. The BBC navigation bar at the top includes links for Sign In, News, Sport, Weather, IPlayer, TV, and Radio.

Aims and Research Questions

- How do members of different stakeholders groups (health professionals, patients and unpaid family carers) use metaphor to talk about their experiences, attitudes and expectations of end-of-life care (e.g. palliative treatment, preparations for dying, etc)?
- What does the use of metaphor by these stakeholder groups suggest about (a) the experiences and needs of the members of these groups and their mutual relationships, and (b) the nature of metaphor as a linguistic and cognitive phenomenon?

What is metaphor?

Talking and, potentially,
thinking about one thing
in terms of another.

Often used to
communicate about
experiences that are
subjective, complex and
sensitive, including death
and the emotions around
death (e.g. Kövecses
2000).

Metaphor

We apply a well-
established analytical
method (Pragglejaz
Group 2007) in order to
identify the metaphors
that were used in the
data.

Metaphors of journey and movement

“I guess as a professional I'd like to see them comfortable and not suffering any form of distress or agitation that the patient comfortable, the family erm at peace with the journey as it's going and where things have got to erm and that you know they can go through a natural normal grief. That to me would be a good death.”

Overall methodology

- Previous techniques for the linguistic analysis of metaphor have been largely manual and qualitative.
- Recent trend for quantitative corpus methods recognised by Charteris-Black 2004, Koller 2004, Deignan 2005, Semino 2005, Stefanowitsch and Gries 2006 using concordances of selected metaphorical expressions.
- Exploitation of larger corpora is constrained by lack of automation and using previously identified expressions. Recent interest in CL and NLP literature e.g. Meta4NLP workshop.
- We use USAS semantic tagger and adapted Wmatrix software to identify a much more comprehensive set of potential metaphorical expressions. (see previous CL conferences)

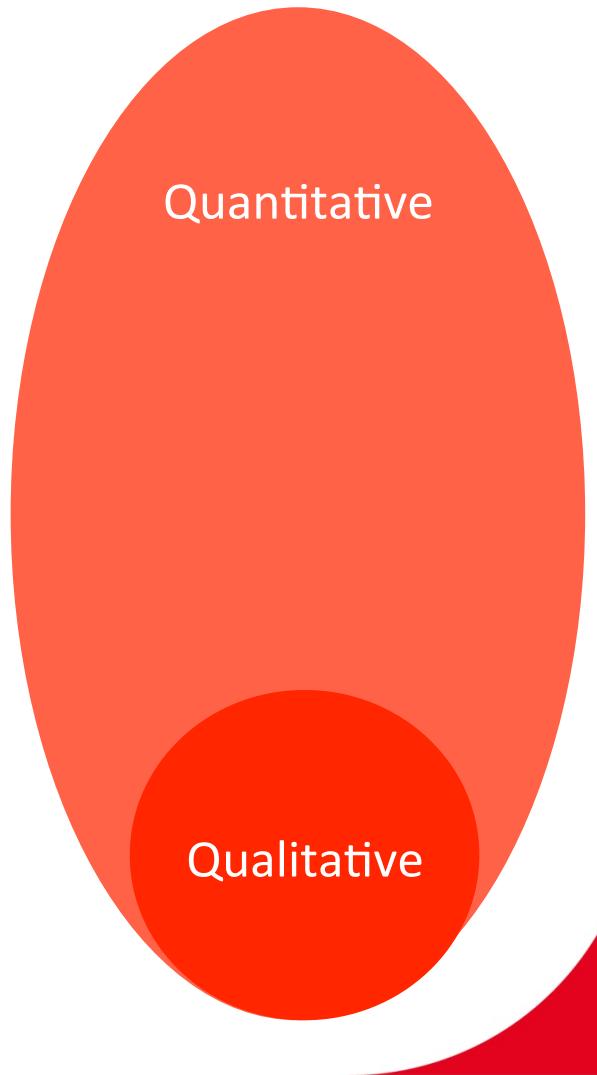
Data

1.5 million words; 90,000 manual sample

	Patients	Carers	Healthcare Professionals	Total
Semi- structured Interviews	100,000	100,000	100,000	300,000
Online forum posts	400,000	90,000	400,000	1.2 mil
Total	500,000	500,000	500,000	1.5 mil

Method

- Manual intensive analysis of 90,000-word sample:
MIP + elements of MIPVU
- Annotation using eMargin
- Automated analysis of 1.5 million words:
Wmatrix + Broad Sweep searching
 - ~ a modification to Wmatrix especially developed to facilitate corpus-based metaphor analysis
 - ~ allows us to see and explore all the semantic categories an expression can belong to, thereby capturing more metaphorical expressions



Manual analysis in eMargin

eMargin



Home

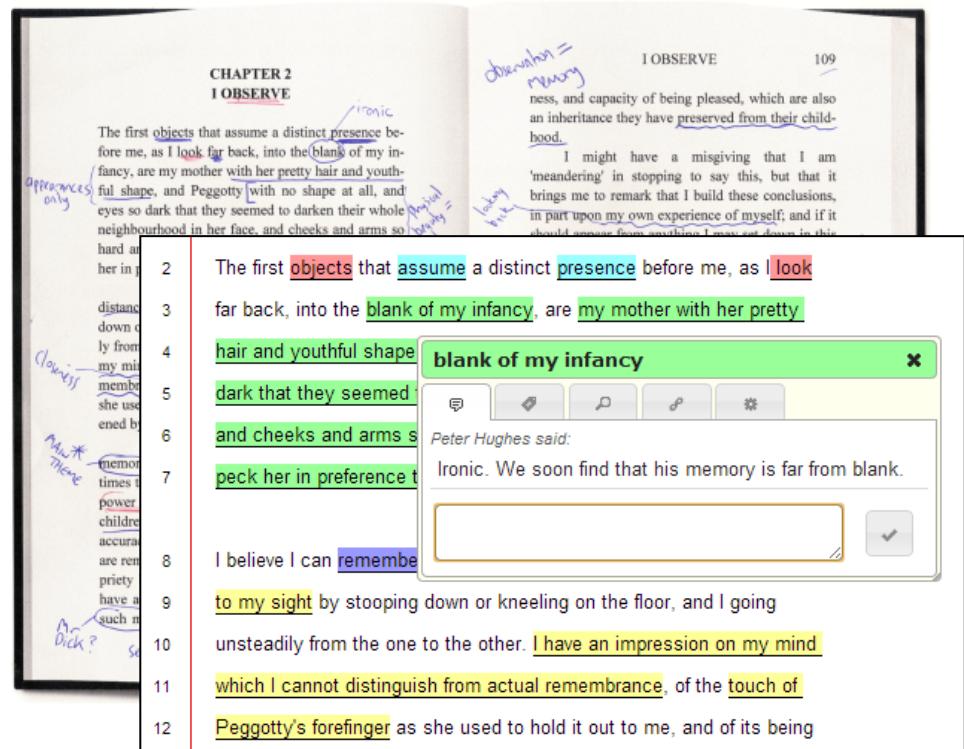


Texts



eMargin is a collaborative annotation tool. You can highlight, colour-code, write notes and assign tags to individual words or passages of a text. These annotations can be shared amongst groups online, generating discussions and allowing analyses and interpretations to be combined.

- Replicates manual annotation in a digital form
- Originally designed for the 'close-reading' of literary texts
- Since used in a variety of text-based disciplines
- Specifically designed for collaboration



eMargin - Features

- Collaborate
 - Share texts online
 - Share amongst groups
- Annotate
 - Highlight
 - View others' annotations
 - Discuss parts of a text
- Categorise
 - Colours
 - Tags / Labels
- Search



CHAPTER 2. I OBSERVE

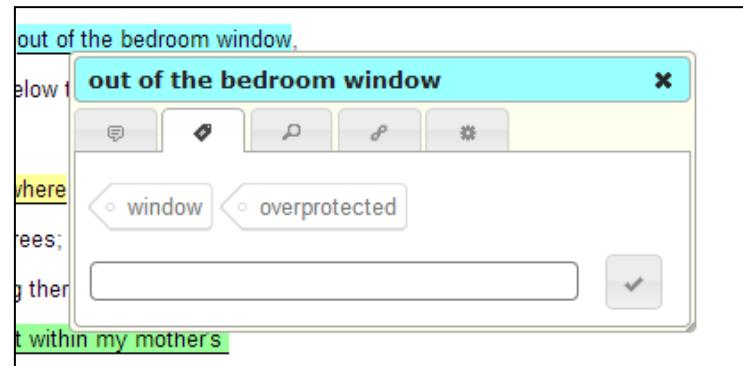
1 The first objects that assumed
2 far back, into the blank of memory.
3 hair and youthful shape, and
4 dark that they seemed to do
5 and cheeks and arms so healthy.
6 peck her in preference to any other.
7
8 I believe I can remember the
9 to my sight by stooping down
10 unsteadily from the one to the
11 which I cannot distinguish from the other.

I OBSERVE

John Thomas said:
All early chapter titles cast David in passive role: 'I am Born', 'I Observe', 'I have a Change', 'I fall into Disgrace', 'I am sent away from Home'. This changes after he is forced to leave home: 'I enlarge my Circle of Acquaintance'.

Peter Hughes said:
'I Observe' is not quite passive but I agree that David begins to play a more active role after he is forced to leave home.

Sarah Young said:
Observation and memory are closely linked throughout this chapter and throughout the novel.



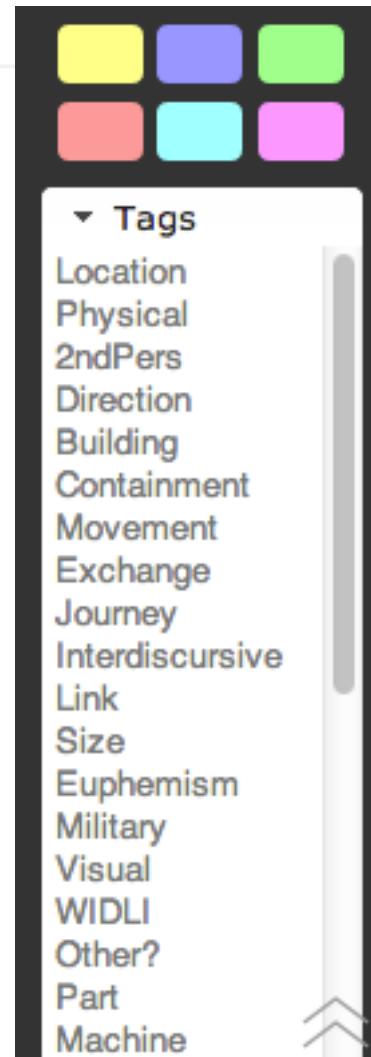
out of the bedroom window,
below the window, where
trees; and then
within my mothers' room.

out of the bedroom window

window overprotected

eMargin manual annotation

- Yellow: metaphor
- Green: metonymy
- Red: needs discussion
- Cyan: simile
- Purple: other comment



Interoperability of tools project (Feb-July 2012)

- <http://cuba.coventry.ac.uk/interoperability/about>
- Paul Rayson (Lancaster University), Serge Sharoff (University of Leeds), Hilary Nesi and Emma Moreton (Coventry University)

Increasing Interoperability between Corpus Tools #ict



This JISC-funded project runs from February to July 2012. It aims to:

1. explore possible methods of connecting web-based corpus linguistics software, and then implement and evaluate what we judge to be the best approach to interoperability with reference to four corpus tools: the *WordTree*, *Baseline*, *QPweb* and *Wmatrix*.
2. demonstrate new facilities for interaction between these four tools, all of which offer different ways of viewing and analysing corpus data.

By connecting these tools we can open up new opportunities of research, and encourage researchers to work together with those who are not based in their own university communities but are not yet familiar in their own. The prototype integration mechanisms will be demonstrated and trialled with researchers in the fields of second language acquisition, English language education, and corpus linguistics, lexicography and literary statistics. Some of these will be experienced users of one or more of the core corpus tools, and will be learning about all of them for the first time. The interaction between the corpus tool users will be encouraged to facilitate the need for researchers to move from one platform to another, and draw on the affordances of different tools to enhance research outcomes.

This document represents the results of our survey of four existing web-based corpus tools. Pages 2-13 provide an overview of each of the four tools. Early drafts of this corpus tool survey have been presented at a stakeholder meeting and a workshop and we are grateful to those who participated in these. Finally, we summarise the survey results on page 16. Appendices 1 and 2 also present similar descriptions of two further tools: eMargin and Sketch Engine.

For more information about the IICT project, see the following website:

Project blog: <http://cuba.coventry.ac.uk/interoperability>
Project overview: http://www.jisc.ac.uk/whatwe/programmes_research/research/toolsandcorpora.aspx

Emma Moreton (Coventry University)
Hilary Nesi (Coventry University)
Paul Rayson (Lancaster University)
Serge Sharoff (Leeds University)
Paul Stephen (Birmingham University)
With contributions from:
Alister Baron (Lancaster University)
Maire Geoghegan (Birmingham City University)
Cormac Stewart (Coventry University)

May 2012

Web-based corpus linguistics tools survey

1

Connecting methods and tools

eMargin



Screenshot of the MELCdb interface showing a search results table. The table has columns: ID, Colour, Tags, Head, Token, Tail, and File. The 'Tags' column shows 'yellow' for most entries. The 'Head' column contains various text snippets. The 'File' column shows file paths like 'Online Professional 2.xls'.

ID	Colour	Tags	Head	Token	Tail	File
36	yellow	Movement	be given satisfaction as they	approach	the last hours of their	Online Professional 2.xls
58	yellow	Movement	to be silent as they	pass	from one life to the	Online Professional 2.xls
59	yellow	Movement	be silent as they	from	new life in the next	Online Professional 2.xls
62	yellow	Director	they pass from one life	to	the next	Online Professional 2.xls
83	yellow	Location	aware of (not just	at	the end of life)	Online Professional 2.xls
85	yellow	Journey	(not just at the	end	of life)	Online Professional 2.xls
104	yellow	Physical	end of life)	as	the last hours of their	Online Professional 2.xls
110	yellow	SportGames	will not spark too much	competing	interest with some religious concern	Online Professional 2.xls
130	yellow	Military	I think the	interventions	among us or terminally	Online Professional 2.xls
173	yellow	Movement	some may wish not to	put	or if they are in	Online Professional 2.xls
175	yellow	Location	(they will not be in a	me	a new life in a	Online Professional 2.xls



XML export



Wmatrix

Broad sweep search

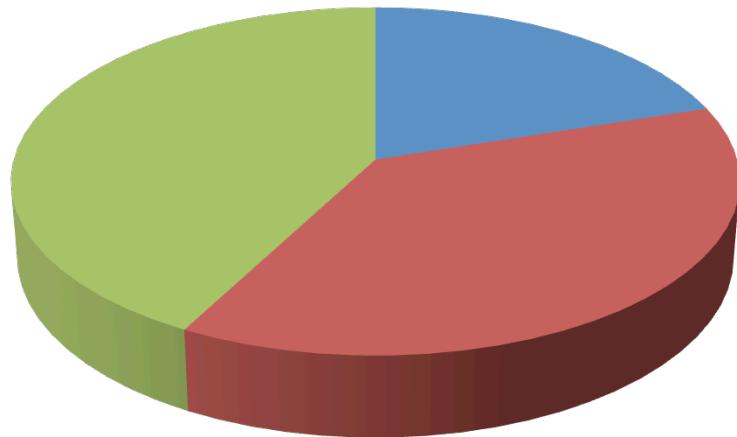
Conditionsfield: **Output**Context: POS tags: USAS tags:

Id	Color	Tags	Head	Token	Tail	File
38	yellow	Movement	be given sedatives as they	approach	the last hours of their	Online Professional 2.xml
58	yellow	Movement	to be alert as they	-----	----- life to the	Online Professional 2.xml
59	yellow	Direction	be alert as they pass	M1, A1.1.1, Q2.2	the next	Online Professional 2.xml
62	yellow	Direction	they pass from one life	to	the next .	Online Professional 2.xml
83	yellow	Location	aware of (not just	at	the end of life)	Online Professional 2.xml
85	yellow	Journey	(not just at the	end	of life) .	Online Professional 2.xml
116	yellow	Physical	topic and hopefully will not	spark	too much competing interest with	Online Professional 2.xml
119	yellow	SportGames	will not spark too much	competing	interest with some religiously concerned	Online Professional 2.xml
130	yellow	Military	I think the	Interventions	among very ill or terminally	Online Professional 2.xml
173	yellow	Movement	some may wish 'not to	put	on if they are in	Online Professional 2.xml
174	yellow	Location	may wish 'not to put	on	if they are in a	Online Professional 2.xml
178	yellow	Containment	put on if they are	In	a condition' of that .	Online Professional 2.xml

An example: ‘violence’ metaphors

- ‘Violence’ tag on eMargin
 - ‘we will all carry on fighting this shit we all face together’
- MELCdb interface shows that the expressions we tagged as ‘violence’ metaphors fall under different USAS semantic tags, including:
 - E3- ‘Violent/angry’
 - G3 ‘Warfare, defence and the army; weapons’
 - S8+ ‘Helping’

G3 metaphors in the online forum data



- carers (0.09/1,000 words)
- patients (0.17/1,000 words)
- professionals (0.19/1,000 words)

Differences between patients and professionals

- Patients tend to use G3 expressions metaphorically to talk about the individual's attempt to survive cancer:
 - 'Battle Cry: Do I wither and retreat from this weary battle? Will I surely lose this war or will the positive cries of those around me spur me to win this war.'
- Professionals tend to use G3 expressions metaphorically to talk about their profession:
 - 'We are in the Army, Dr Jones, not a nunnery and the army is the battalion of medicine with the foe being all things that contrive to sink the ship of each of us, be it disease, accident, homicide or suicide.'

Summary

- Combining qualitative and quantitative methods and techniques for the analysis of metaphorical expressions in end-of-life care
- Linking methods and tools together
- Lessons learned about software interoperability
- Project running until 2014
- More results coming soon

Thanks for your attention

- <http://ucrel.lancs.ac.uk/melc/>
- p.rayson@lancaster.ac.uk
- @perayson

- Questions, comments?

