This is a repository copy of From constellations to discursive concepts; or: the historical pragmatic construction of meaning in early modern english.

White Rose Research Online URL for this paper:
https://eprints.whiterose.ac.uk/193812/
Version: Published Version

## Article:

Fitzmaurice, S. orcid.org/0000-0002-8804-1987 (2022) From constellations to discursive concepts; or: the historical pragmatic construction of meaning in early modern english. Transactions of the Philological Society, 120 (3). pp. 489-506. ISSN 0079-1636
https://doi.org/10.1111/1467-968x. 12238

## Reuse

This article is distributed under the terms of the Creative Commons Attribution (CC BY) licence. This licence allows you to distribute, remix, tweak, and build upon the work, even commercially, as long as you credit the authors for the original work. More information and the full terms of the licence here:
https://creativecommons.org/licenses/

## Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

# FROM CONSTELLATIONS TO DISCURSIVE CONCEPTS; OR: THE HISTORICAL PRAGMATIC CONSTRUCTION OF MEANING IN EARLY MODERN ENGLISH ${ }^{1}$ 

By Susan Fitzmaurice (D)<br>University of Sheffield

(Submitted: 9 September, 2020; Accepted: 8 April, 2022)

## 1. Introduction

The overarching vision of the Linguistic DNA project was to identify the cultural and intellectual concepts marking early English modernity using computational linguistic methods. The project developed an automated system for practically generating these core concepts from a corpus of early modern English printed discourse, namely, Early English Books Online - Text Creation Partnership (EEBO-TCP). ${ }^{2}$ A major research objective was to explore the possibility of creating a bottom-up method to discover concepts prominent in a universe of early modern English discourse. The ambition was therefore to explore ways for conceptual structures to be located in early modern discourses without prior identification, thus opening up new ways to read early modern cultures, thought and practices. This paper is devoted principally to exploring these new routes opened up through the project to reading early modern worlds. Specifically, it concentrates on the nature of the assignment of meaning to the computational outputs and in doing so, sheds light on the nature of the concepts that mark this particular universe of discourses.

I first offer a brief overview of the methodology developed for computationally generating the conceptual structures in the form of co-occurrence constellations in discourse, termed linguistic concept modelling (LCM). Then I provide the relevance theoretical underpinnings of the process of mapping meaning onto these constellations, the output of LCM. The body of the paper demonstrates the detailed application of this process of discursive concept analysis of some frequent constellation quads. In conclusion, I consider how the discursive concepts fully elaborated through the analysis can illuminate the conceptual structure of early modern English discourses.

The project sought to develop a method that did not rely upon search terms as proxies for the key words considered central to intellectual and cultural history as represented in Raymond Williams's (1976) highly influential Keywords and its twenty-first century development by the Keywords Project (MacCabe \& Yanacek 2018). Instead, it aimed to avoid the

[^0]need for the pre-selection of individual terms to seed search engines and computational processes. ${ }^{3}$

The methodology that we have developed and tested and are now using, namely, the bottom-up querying of a universe of printed discourse in English as represented in EEBOTCP (1473-1700), also demanded a different perspective on the notion of a concept and its content. Fundamental to our research is the manner in which we operationalise a concept and the question of how we recognise a concept in the data. A major research question for Linguistic DNA is what conceptual matter looks like in language. We sought to examine the discursive source of concepts, thinking about a textual space in which concepts are identified. We hypothesised a concept as a discursive relationship between lexical tokens or lemmas that emerges in their contexts of use, in texts. We also hypothesised that a concept in its most essential or fundamental aspects might be discerned through the pragmatic analysis of cooccurrences of lemmas within discourse. Importantly for the intellectual outcomes of this work, we wanted to see if we could observe conceptual changes across the shifting relationships among lemmas used together in discourse, in various historical, social and cultural contexts. To give these hypotheses weight, we decided to use the term discursive concept to distinguish it from the established onomasiological notion of the concept (Fitzmaurice et al. 2017). Thus the discursive concept is not co-terminous with the word, in either a semasiological or onomasiological sense (see Geeraerts et al. 1994; Geeraerts 2010: 23). Its identification in discourse starts with the inspection of discourse.

A key outcome of this research is the argument that in order to explore the process by which a concept is captured by a lexical term, we must start out with the assumption that conceptual matter is present in discourse in linguistic form. The task of the analyst is to interpret those co-occurrence constellations as discursive concepts by matching them with their discursive contexts. For example, Fitzmaurice (in prep.) demonstrates that some of the most prominent trio co-occurrence constellations for the corpus of seventeenth-century newsbooks collected for the English civil war period (including house - committee parliament; house - report - committee; act - house - committee; etc.) could be construed as constructing seventeenth-century English discourses around parliamentary procedures and processes. Importantly, if these discourses can be captured by the term parliamentary democracy (and perhaps they cannot), then it is only by collecting and inspecting the contexts in which these co-occurrence constellations occur together that permits such an inference.

In line with the principle that context is critical to the interpretation of the co-occurrence constellations as concepts, I locate the assignment of meaning to the co-occurrence constellations within a pragmatic framework. The nature of the discursive linguistic material, i.e. the strong association between a set of different lemmas, which may defy expression as a single lexical item, means that lexical semantic routines of assigning reference alone are ineffectual tools of analysis. Instead, because discursive meaning is assigned via the pragmatic processes of inference and implicature, it is necessary to combine lexical semantic analysis with the use of pragmatic subroutines to map meaning onto co-occurrence constellations as discursive concepts (Blutner 1998, 2004; Carston 2002; Wilson 2003; Wilson \& Sperber 2004; Allan 2007; Fitzmaurice 2009).

Accordingly, in the body of this paper, I demonstrate how this novel theoretical approach to discursive concept construction is entailed and necessitated by our computational method of concept modelling in discourse. The principal goal of this paper is to explore the ways in which the pragmatic routines discussed enable the rigorous, reproducible lexical pragmatic

[^1]analysis of the discursive concepts identified in the computational output. This work involves continually testing the robustness of the analysis for the co-occurrence constellations through inspecting the discursive concepts in a series of textual contexts represented by the documents in the corpus (EEBO-TCP). This paper is part of a wider programme of publication of the results of the project, which involves demonstrating and explaining the ways in which the output of the concept modelling process can be accessed and interpreted. To lay the ground for the detailed analysis of specific quads here, I offer a brief overview of the process of concept modelling which generates the output, co-occurrence constellations, for analysis.

## 2. Linguistic concept modelling

Linguistic DNA's search for an innovative bottom-up method for identifying concepts in language required the development of a series of new research procedures. An automated processor was built to generate linguistic output that could be identified as containing conceptual matter, a process we have termed linguistic concept modelling (LCM; see Mehl, this issue). Linguistic concept modelling consists of generating co-occurrence constellations of lemmas in pairs, trios or quads for every lemma that occurs above a particular frequency threshold in every document in a corpus.

The relationship between the members of a co-occurrence constellation is not necessarily one that marks collocations (spilt milk) or n-grams (at the back of the) or multi-word phrases (above and beyond). Instead, it is a distributed syntagmatic relationship between lemmas with a strong mutual attraction in relation to a node word that occurs within a span of text, in this case, a proximity window of 50 words in running text on either side of the node word. The calculation of co-occurrence strength or mutual attraction is conducted using a local measure of mutual information (MI; cf. Mehl 2019), supplemented with Pearson chi square. This output consists, then, of lists of constellations consisting of associations between expressions within a given span or window, calculated for the whole corpus (see Mehl, this issue).

The corpus used for Linguistic DNA is the Text Creation Partnership's (2015) version of Early English Books Online (EEBO-TCP), which consists of more than 60,000 printed documents published in English or published in the British Isles between 1473 and 1700. The digital preparation of the data from our version of EEBO-TCP involved the spelling regularisation, lemmatisation and part-of-speech tagging of the corpus using MorphAdorner (Burns 2013), with additional manual error correction by the MorphAdorner team (p.c. Martin Mueller 2018).

Linguistic concept modelling (LCM) yields billions of constellations and depending upon the frequency thresholds prescribed, will produce vast lists that defy easy scrutiny. To give the reader an idea of the nature of the output of the process, Table 1 provides a sample list of highly frequent statistically significant ( $p<0.05$ ) noun-noun-noun-noun co-occurrence constellations expressed as quads, in which the node word is death. Each noun occurs at least 5,000 times in EEBO-TCP.

The set of quad constellations, provided as illustration of the output in Table 1, does not show a great deal of lexical variation. The quads vary in their frequency of occurrence within the corpus, ranging from more than 50,000 to 19,000 . What is more instructive than simple frequency of occurrence is their frequency and distribution within the documents in the corpus. For instance, the first constellation (death - life - body - soul) appears in 3,399 separate documents in the corpus. Below is an illustration of how the quad members occur in an original co-text. This is an extract from a collection of testimonies of witnesses to the virtuous death of Amariah Drewet in 1687:

Table 1. Highly frequent co-occurrence constellations with deathas node word

| Word A | Word B | Word C | Word D | Frequency | MI |
| :--- | :--- | :--- | :--- | :--- | :--- |
| death | life | body | soul | 52,626 | 5.6865 |
| death | life | law | sin | 30,658 | 5.5906 |
| death | life | sin | soul | 27,664 | 5.3490 |
| death | life | sin | sin | 23,865 | 5.0638 |
| death | law | body | spirit | 23,097 | 6.5373 |
| death | life | lord | sin | 23,098 | 4.9745 |
| death | life | righteousness | sin | 21,606 | 4.7055 |
| death | ling | body | separation | year | 20,387 |
| death | soul | 19,152 | 5.1345 |  |  |
| death |  |  | 19,136 | 5.3673 |  |

I was with him when he Departed, and I can truly say, the Lord gave me a sence of his Condition, and I travelled with him under the Pangs of Death, in a fellow-feeling of the Exercise he was in, and when Death touched his Heart, I bore a part with him, in a sympathising Spirit, and travelled in Spirit with him before the Lord for his Deliverance; and when Death was upon his Body, I felt the Resurrection of the Life of Jesus with his Soul, ready to receive him into that Heavenly Mansion of Glory, and Habitation of Rest and Peace with the Lord, which the Lord hath prepared for his People, which he had the earnest of in his Life time, even the earnest of the Spirit, that sealed to him the assurance of that Inheritance that shall never fade away, into which he is entered and gathered, into that fulness that is Incomprehensible, which God the Father, in and through Christ Jesus the Lord, had prepared for him, where Heavenly Joy and Gladness, and Divine Comfort, and Lasting Peace is and will be his Portion for evermore. ${ }^{4}$

When the quad (members highlighted in bold) is examined within a context such as the excerpt above, it is evident that they co-occur with a number of the other lexical items across the quads in Table 1 (highlighted in italics). Together, they fill the discursive frame, which provides a strong indication of the kind of discourse in which this instantiation of the constellation is put to work. Here, the Christian devout bears witness to the virtuous death of a virtuous man. This kind of information may be of use in exploring the prevalence and concentration of the constellations in the corpus and signalling the nature of the discourses they mark. The key task is to interpret these constellations to discover the discursive role they play in early modern English texts.

## 3. Assigning meaning to constellations

The interpretation of the processor's output - constellations of associated terms within a stretch of text - might be straightforward if we assumed a simple mapping between quantitative association and qualitative relationship. The constellations consist of expressions associated with one another on the basis of their strength of mutual attraction rather than strict collocation or other grammatical or semantic property. And indeed, the initial quick inspection of any one of the most prominent quads in isolation prompts an automatic, intuitive search for meaning relations among the lemmas. However, this on-the-fly process of meaning assignment is fraught with problems that basic semantic properties such as vagueness, polysemy, ambiguity and problems of reference pose (cf. Cruse 2004, Murphy

[^2]2002). In other words, intuition encourages the construction of semantic relationships between the individual lemmas but the fact that none of the lemmas has a unique or stable sense makes the exercise of assigning meaning unreliable without explicit consideration of the circumstances in which the exercise takes place. ${ }^{5}$

The assignment of meaning to the constellations of lemmas involves several steps. First, each individual lexical item in the constellation is inspected in isolation to determine the manifestations of its meanings. This step must precede the work of interrogating the relationships among the lexical items. The quad constellations are not lexical collocations in a grammatical relationship such as modifier - head: adjective - noun, e.g. 'holy man'; 'eternal life'; verb - object, e.g. 'say prayers'; 'live life'); or a noun - postmodifying prepositional phrase, e.g. 'death of the body' or 'life of the soul'; or a coordinated noun phrase head, e.g. 'life and death', 'body or soul'. So in order to assign meaning to the constellations themselves, we must examine how their members are connected in discourse. The fact that their attraction does not consist of traditional or expected grammatical relations directs us to look for a different kind of meaning relationship from the lexical semantic one, namely a pragmatic one: which is specifically discursive or encyclopaedic one (Carston 2002: 321ff).

Geeraerts's (2010) review of the theoretical antecedents of lexical semantics in the foundational historical-philological approaches of Bréal (1897) and Paul (1920) is helpful in sharpening this perspective. Geeraerts notes two key properties in this domain. The first (in Bréal) is the 'focus on the dynamism of language, by a cognitive, psychological conception of meaning, and by an interpretative methodology' (Geeraerts 2010: 14). The second (in Paul), is 'a pragmatic, usage-based theory of semantic change', whereby the dialectical relationship of language structure and language use is realised by the modulation of highly contextualised meanings into decontextualised conventional meanings and vice versa (Geeraerts 2010: 19). Of course, Antoine Meillet's (1906) use of social context in the resolution of polysemy and recognition of the importance of connotation as well as conceptual association in the communicative value of vagueness or underspecificity are important components of a semantics that focuses not on individual lexical items (via semasiology) but which needs to derive conceptual content from the discursive frame in which a constellation of associated items is embedded. As Geeraerts (2010: 42) notes the lasting theoretical influence of the concept of polysemy, he summarises the issue by asking whether 'ephemeral connotations and encyclopedic cognition' should be included in 'the very concept of lexical meaning' (Geeraerts 2010: 43). Either way, these properties are salient to understanding the discursive relationship between the lexical elements in the LDNA quads. Accordingly, the properties identified as polysemy, connotation and conceptual association or 'encyclopaedic cognition' are critical components of the method of assigning meaning to associated items in discourse outlined below and elaborated in the case study in this paper. This characterisation thus allows us to acknowledge that the stuff of the linguistic material linking the lemmas is more vague or underdetermined than strictly speaking propositional or sentential. As shorthand, we will use the term 'discursive concept' to label this stuff; the encyclopaedic approach can be operationalised more effectively as a semantic-pragmatic one.

The early modern historical English texts in which the constellations examined in this paper appear to provide additional complexity and contingency to the assignment of this encyclopaedic meaning owing both to the historical opacity and the temporal distance of the discourse from the analyst. Accordingly, we cannot assume the straightforward mapping of meaning from our own linguistic, historical and cultural repertoires onto the co-

[^3]occurrences that we witness in historical discourse. Indeed, the properties of distance and opacity require careful inspection of the cultural historical interpretation involved in assigning meaning to the constellations.

A major aid to identifying and understanding constellations as discursive concepts rather than as mere sequences in isolation is the construction of the relevant conceptual (encyclopaedic) setting that is provided by levels of context. These levels include the textual window (e.g. 100 words) in which the constellation occurs, the text itself, which, as historical discourse, is itself located in and identified with time (as expressed by the date of publication). The nested nature of these levels of context can be represented thus:

$$
\left[\left[\left[[\mathrm{X}----\mathrm{A}----\mathrm{B}----\mathrm{C}]_{\text {constellation }}\right]_{\text {window }}\right]_{\mathrm{text}}\right]_{\mathrm{date}} .
$$

### 3.1. Pragmatic routines

To arrive at satisfactory interpretation of a particular quad as a discursive concept in the early modern printed English we explore, we require a set of specific routines that can be precisely described and applied rigorously to produce results that are robust and can stand up to intersubjective analysis. More importantly, they should be reproducible. The analytical approach elaborated here is informed by relevance theory (Wilson \& Sperber 2004), as developed extensively by Carston $(2002,2010,2012,2016,2019,2021)$ and adapted for use in the pragmatic analysis of historical discourse in Fitzmaurice (2009), and now elaborated and refined for historical pragmatic work. The pragmatic subroutines are drawn from the relevance theoretic pragmatic toolbox; these include disambiguation, the resolution of reference, contextual saturation, free enrichment (e.g. Recanati 2004a, 2004b; Carston 2004) and finally, ad hoc concept construction (Barsalou 1987, 1992; Carston 2002, 2010, 2019). I adapt and adjust these subroutines to discover the pragmatic content of the strength of association between the terms in the quads in order to generate an interpretation of the discursive concept.

The first steps in meaning assignment consist of the semasiological inspection of each lemma itself first and then repeatedly in relation to the other members of the constellation in their discursive window. This procedure involves checking lexical properties - determining dictionary senses and sub-senses - by testing their robustness in the co-textual spaces between the constellation members. This work acknowledges underspecificity, underdeterminacy and vagueness at the most local discursive level: the window. In our output, for example, apparently simple expressions, such as world or soul present particular challenges to determining sense because of their radical vagueness, underspecification or underdeterminacy (Carston 2002). The procedure of resolving their vagueness and their underdeterminacy entails clarification (rather than straightforward disambiguation): selecting the most relevant sense of an expression in the discourse, depending upon contextual characteristics of the language, including the time of its production, manner and agent of production, etc. (Blutner 1998; Wilson 2003). Clarification thus results in deciding among the most relevant senses; for example, for the seventeenth century, the senses available for soul are a person or the essential immaterial or spiritual part of a person (s.v. soul n., OED Online).

The next routine is to resolve the reference of the expression by assigning an appropriate contextual value to the relevant referential expression on the surface. Let us examine an example by way of illustration. The relationship between pairs (e.g. life - death) or trios (e.g. life - death - body) within quad constellations (e.g. life - death - body - soul) might be phrasal or aphoristic in nature (as we will explore in detail below), such that the connections between particular items appear discursively stable within the text because they are cognitively salient. For example, the aphorism 'to live a laborious Life and to die an accursed Death' consists of
conjoined parallel propositions, yielding the expression of a basic antonymous pair (life; death) that is temporally stable and cognitively salient. ${ }^{6}$ The additional linguistic framing of the pair via evaluation and modification through attributive adjectives (laborious; accursed) re-introduces vagueness and indeterminacy of reference, because each of the additional terms carries its own vagueness and indeterminacy, thus destabilising the nature of the antonymy assumed to apply. The continual addition of linguistic material as co-text for the target lemmas prompts a fresh routine of clarification and specification to produce a linguistically decoded expression for pragmatic analysis. The additional lexical material then prompts the search for further contextual enrichment in order to resolve the discursive vagueness (Recanati 2004; Carston 2004).

It is at this discursive level that vagueness and underspecificity or ambivalences may become apparent yet again, and at which interpreting ellipses and dealing with other underdeterminacies of explicit content is undertaken. This process involves using appropriate contextual assumptions based upon the encyclopaedic information made available by expanding co-text to actively construct hypotheses with the goal of establishing the decoded linguistic content of the target constellation in its textual window (Carston 2002).

The interpreter then assigns pragmatic meaning to the constellation in its linguistically decoded form, actively testing interpretive hypotheses at each level, following a path of least cognitive effort in order to compute cognitive effects and so satisfy a presumption of relevance (Wilson \& Sperber 2004: 613). This pragmatic process applies iteratively, not sequentially, because in testing an interpretive hypothesis, the discursive window must be expanded in order to create the capacity for textual context to enrich inspection. A suite of contextbuilding routines is deployed to facilitate interpretation following the path of least effort. The first is the saturation of the linguistically encoded form with further textual contextual information. Next is a contextually driven process of free enrichment, 'free' because it is pragmatically rather than linguistically based (Recanati 2004b; Carston 2004). Enrichment includes narrowing, strengthening and specifying the conceptual matter encoded by the content of the constellation in the discourse to make interpretation maximally accessible. These processes of contextual saturation and free enrichment can be applied iteratively, drawing upon all the resources available for the analyst to achieve a relevant reading that is most psychologically or cognitively salient. These routines result in the resolution of underspecificity and vagueness, the determination of meaning at the level of discourse. ${ }^{7}$

The pragmatic work of reaching a satisfactory interpretation thus consists of constantly enriching the decoded linguistic meaning by saturating it with contextual encyclopaedic information, which includes temporal, historical, genre, authorial, material matter. This process of enrichment at the explicit textual level accompanies the interpreter's continual assessment of the interpretation at an implicit level, guided by the principle of optimal relevance (Wilson \& Sperber 2004: 613).

Finally, I adapt the standard notion of ad hoc concept construction, the pragmatic adjustment of a lexical concept in order to narrow, strengthen, broaden or weaken an utterance's sense in a given context (Carston 2019). Here, ad hoc discursive concept construction involves the pragmatic adjustment of the conceptual matter encoded in the quad constellation. The output of this iterative process of active hypothesis construction, testing

[^4]and revision using all the contextual resources available to the interpreter both explicitly and implicitly is the most feasible or discursively relevant pragmatic interpretation (reading).

In the course of conducting the analysis, we aim to learn about the nature of the constellations that are generated by the processor; and - perhaps - to learn something new about key concepts and dominant discourses in Early Modern English.

### 3.2. Life - death - soul - spirit

The quad constellation life - death - soul - spirit occurs 13,009 times in EEBO-TCP (for details of the LCM procedure which yields these quads, see Mehl, this issue). ${ }^{8}$ In this section, I inspect the quad in different textual windows (and in different documents) with the aim of mapping meaning onto the quad constellation to reach the most relevant or feasible discursive concept:
(1) His study is the state of Obedience, and his exercise the continuance of Prayer; his life but a passage to a better, and his death, the rest of his labours: His heart is a watch to his Eye, his wit, a doore to his Mouth, his Soule, a guard to his Spirit, and his Limmes, but labourers for his Body. In summe, hee is rauisht with Diuine Loue, hatefull to the nature of Sinne, troubled with the Vanities of the World, and longing for his Ioy but in Heauen. ${ }^{9}$

In this 94 -word stretch of text, the lemmas life, death, soule and spirit appear as quad constellation members. In order to assign discursive meaning to the quad, we apply the series of pragmatic routines described in Section 3.1, beginning with the individual lexical items in their textual window. This procedure involves selecting the most relevant or likely dictionary sense or sub-sense of each item, depending upon the immediate co-text. For example, in the period that produces the document under analysis, soul can refer to a person (cf. a humble soul), to an essential attribute of life (possibly more specifically, the 'condition or attribute of life in humans' (OED. s.v. soul (1.1)), ${ }^{10}$ or to the essential, immaterial or spiritual part of a person (OED. s.v. soul (2)). ${ }^{11}$ In this text, soul is modified by the 3 rd person possessive pronoun his, and it is reasonable to hypothesise that the noun most likely refers to an attribute or element of the individual rather than to the whole individual himself. The resolution of reference depends upon the analysis of the relationship between life and death first and then further inspection of the possible reference of spirit.

Of the several senses available for life in this passage, two are illustrated in the text. One refers to animate existence (OED s.v. life I.1); a specific material condition or possession of the subject (his life). The second is implied but not stated; it is more general and abstract as the implied anaphor is modified by the indefinite article and an adverb (a better $X$ ). In this instance, the implied life refers specifically to 'a state or condition of existence in which a

[^5]person is freed from a state of sin and made spiritually regenerate', in this case, after his or her earthly life (OED, s.v. life (3)). The particular sense of life here has to do with salvation, blessedness or regeneration. In this text, the sense most clearly associated with death is the basic simple one of the fact of dying; the end of life. The other members of the quad, death, soule and spirit, are similarly attributed to the subject via the possessive pronoun his. So each term is understood as an aspect, component or characteristic of the subject. The reference of death, soule and life in the passage can thus be inferred. Each is the subject of a definition, a basic proposition: Life is a journey to a better (life); Death ceases all labours; Soul is the guard to the spirit. However, we must attend to the reference of spirit in order to confirm the reference of soul and properly understand the last proposition.

The soul is identified as the guard to the spirit, where the noun guard may be construed either as 'protection or defence' (OED, s.v. guard (2)) or perhaps the assumption of 'guardianship or custody' (OED, s.v. guard (1.a)). Neither sense suggests that the soul is identified as the spirit. If the soul's role as guard is protection of the spirit, then spirit may refer to that 'incorporeal or immaterial being as opposed to body or matter; being or intelligence conceived as distinct from, or independent of, anything physical or material' (OED, s.v. spirit 1.d.). As for the reference of soul, it is as yet contingent; additional context is required to clarify the reference of soul (as human life or as human spirit) in relation to the other members of the quad.

The passage thus consists of a set of parallel propositions, starting with the habits of the person who is the subject, as follows:

$$
\text { Study }=\text { state of Obedience }
$$

Exercise $=$ continuing prayer.
Then the two poles of Life and Death provide a frame for enumerating a set of attributes and their functions; each attribute stands in a particular relation to another:

```
Heart = watch to eye
Wit = door to mouth
Soul = guard to spirit
Limbs = labourer for the body
```

This process of assigning the appropriate contextual value to the relevant reference expression on the surface of the text completes the resolution of reference. However, what this procedure yields is a sequence of expressions with Soul and Spirit bounded discursively by Life and Death. The order in which the items occur in the text is less important than their discursive combination. The process of construing this quad as a discursive concept requires additional pragmatic inferencing, which can only proceed in an iterative way as informed by the various details that make up the context of the text. In technical terms, the pragmatics work here involves continually saturating the linguistically decoded sequence with contextual information in order to maximise interpretation guided by the presumption of optimal relevance (Carston 2002; Sperber \& Wilson 2004).

Accordingly, we situate the short stretch of text into its discursive context by examining more text:
(2) He makes Law by the direction of life, and liues but in the mercy of Loue: he treads vpon the face of the Earth, til in the same substance he be trod vpon, though his Soule that gaue life to his senses, liue in Heauen, till the resurrection of his flesh: Hee hath an Eye to looke vpward towards Grace, while Labour is onely the punishment of sinne: his Faith is the hand of his Soule, which layeth hold on the promise of Mercy: his Patience, the Tenure of the possession of his Soule, his Charity, the rule of his life, and his hope, the Anchor of his Saluation: His study is the state of Obedience, and his exercise the continuance of Prayer; his life but a passage to a better, and his death, the rest of his labours: His heart is a watch to his Eye, his wit, a doore to his Mouth, his Soule, a guard to his Spirit, and his Limmes, but labourers for his Body. In summe, hee is rauisht with Diuine Loue, hatefull to the nature of Sinne, troubled with the Vanities of the World, and longing for his Ioy but in Heauen.

The additional text (in Example (2)) supplies the capacity to flesh out the reading of the soul in this discourse. Life expands cumulatively to be a journey towards death, a journey that ends in everlasting life, but in heaven not on earth. Note that in the added segment immediately preceding the quad we have been focusing upon, the soul is identified as a volitional force, 'that gaue life to his senses' that endures after the passive, experiential life is given up. Two key qualities, faith and patience, are made extensions of the soul to do its work; 'his Faith is the hand of his Soule, which layeth hold on the promise of Mercy'; 'his Patience, the Tenure of the possession of his Soule'. As the soul is intertwined with these qualities of faith and patience, but implicitly too, grace, mercy, charity and hope, it becomes clear that it is the soul that imbues the person (not necessarily the body) with life. As soul acquires greater discursive prominence in this text by the repetition of the noun and its repeated identification with the subject, it seems reasonable to resolve the referential vagueness of soul as the spiritual aspect of (human) life rather than as being synonymous with (human) spirit.

To assess the credibility of this interpretation, we seek to enrich the existing context by consulting the document further and considering its production in 1616. The accumulation of key Christian attributes such as Grace, Faith, Mercy, Patience, Charity, Hope, added to Obedience and Prayer, firmly locates the quad within a familiar script about the contemplative life. ${ }^{12}$ We make sense of this constellation as a discursive concept through the connection of life and death via the soul. In sum, the spiritual life of the devout is defined by (the centrality of) the soul. At a more general level, which we can test by inspecting other occurrences of the quad in the corpus, the discursive concept might be summed up thus: <through death the soul finds everlasting life as spirit>.

Additional encyclopaedic information from the broader context indicates that this text is a character sketch, 'A Holy Man', the final portrait in a list encompassing all manner of worthy and unworthy men, including knights, usurers, beggars, and cowards in a series of characters. The author, Nicholas Breton ( $1554 / 5-c$. 1626) was a poet of some note, whose work Brennan (2004) describes as follows: 'Apart from his devotional works, which were always finely tuned to the introspective and heavily morbid spirituality of the period, Breton's real skill as a prose writer lay in the production of light but entertaining miscellanies of popular aphorisms, social observations, and pithy nuggets of popular wisdom'. This observation aptly captures the place that the Holy Man sketch occupies in this miscellany, 'The good and the badde, or Descriptions of the vvorthies, and vnworthies of this age Where the best may see their graces, and the worst discerne their basenesse'.

[^6]The structure of the work sheds light on the compositional nature of the quad under inspection. The character sketch consists of definition, thus the collection of traits and characteristics of the type outlined. The other sketches are similarly constructed, so definition and repetition are the principal rhetorical methods of exposition and description. ${ }^{13}$ Naturally, then, the construction that dominates the sketch is the topic - comment form of the proposition: X is Y , where X is the topic - A Holy Man - and Y consists of an elaboration, so, as below: 'the chiefest Creature in the workemanship of the World'. The result is the concentration of definition through repetition and lexical elaboration. The additional context that the beginning of the sketch of the Holy Man provides allows the interpreter to check the extent to which the reception of the text supports the lexical pragmatic analysis of the quad life - death - soul - spirit as the discursive concept that through death the soul finds everlasting life as spirit:
(3) A Holy man is the chiefest Creature in the workemanship of the World: He is the highest in the Election of Loue, and the neerest to the Image of the humane Nature of his Maker: Hee is serued of all the creatures in the Earth, and created but for the seruice of his Creator: Hee is capable of the course of Nature, and by the rule of Obseruation, finds the Art of Reason; his senses are but seruants to his Spirit, which is guided by a power aboue himselfe: his Time is onely knowne to the Eye of the Almighty, and what hee is in his most greatnesse, is as nothing, but in his Mercy:

To test the robustness of the discursive concept yielded by the lexical pragmatic analysis rehearsed for the quad life - death - soul - spirit in the corpus, I sought other instantiations of the same quad in texts produced around the same period. In this brief (1612) memorial of a London merchant tailor, the author, Anthony Nixon, depicts the manner of the passing of his subject, Master Robert Dove, through narrative and the direct representation of his subject's speech. The following excerpt from this very different document includes the quad:
(4) Oh sweete Death thou art welcome, welcome sweete death, Neuer was there any Guest so welcome to mee as thou art; Welcome the messenger of euerlasting life: Welcome the dore and entrance into euerlasting glorie; Welcome I say, and thrice welcome: My good Iaylour, doe thine office quickly, and set my soule at libertie; Strike sweete Death, strike my heart. I feare not thy stroke: Now it is done; Father into thy blessed hands I commend my Spirite: Into thy blessed handes I commend my Soule and my bodie.

The individual members of the quad are weighted differently in discursive terms; death is the prominent member in the text, occurring three times, to two occurrences of soul and one each of life and spirit. While the repetition of death contributes to the prominence of the lemma within the discourse, its discursive proximity to the other quad members is a textual witness to its algorithmic strength of attraction to them. The relationship of death and life is constructed rhetorically via the speaker's repeated ('thrice') 'welcome' to 'sweete death'. The speaker thus

[^7]clearly identifies death as the route to everlasting life using the metaphor of a door or entrance. This text contributes a rich additional discursive and cultural context which can be used to further saturate the established reading of the quad; it provides an explicit construal of death as providing the threshold that the soul must cross to 'euerlasting glorie'. However, in addition to the rhetorical elaboration of death as the entrance to everlasting life, death is assigned different volitional roles. Not only is death a 'Guest', a temporary sojourner visiting the subject, as 'the messenger of everlasting life', death is also identified as a 'good Iaylour', a job that entails keeping prisoners locked up, yet with the authority to liberate them. A jailor is thus both threshold and the means of achieving everlasting life to the soul. ${ }^{14}$ Death is the means by which the soul finds everlasting life: death 'strike[s] my heart' and in that act 'set[s] my soule at libertie'. Accordingly, the text clarifies and amplifies the role of death in relation to everlasting life of the soul: death is the threshold of everlasting spiritual life.

The text provides an opportunity to inspect further the hypothesised relationship between soul and spirit. In contrast with the first window explored (from the Breton text, Example (1) above), the Dove memorial text (Example (2)) as a whole offers the basis for a very clear construction of the semantic relatedness of soul and spirit. At first glance, the relationship is a lexical one of synonymy. The apparent interchangeability of soul and spirit is pointed at in the parallel clauses of the performative sequence: 'Father into thy blessed hands I commend my Spirite: Into thy blessed handes I commend my Soule and my bodie'. Spirit and soule appear to be synonymous and interchangeable. The first performative statement of the pair presents a variation of Christ's dying commitment of his spirit to his father, presented in the Gospel according to St Luke (in the King James Version of the Bible) thus: 'And when Iesus had cried with a loud voice, he said, Father, into thy hands I commend my spirit: And hauing said thus, he gaue vp the ghost' (Luke, chapter 23, verse 46). ${ }^{15}$ The cultural context for the construal of spirit as synonymous with soul is compelling.

Additional co-text further supports the established reading of the conceptual connection between death and life. The text immediately preceding the window (examined above) is explicative:
(5) Hee would alwayes pray absolutely, that God would take him out of this miserable Worlde. And whē his Kinred or Friends would séeme to pray for his health (if it were the will of God) He would answere; I beseech you pray not that I should liue: For I thinke it long to bee with my God; CHRIST is to me Life, \& Death is to me aduantage; Yea, the day of death is the birth day of euerlasting life; and I cannot enter into Life, but by Death; Therefore Death is the dore, or Entrance into Euerlasting life to mee.

The repetition encountered in this excerpt (Example (5)) of the memorial text is presented in different stylistic frames. Most of the memorial document takes the form of a valedictory narrative of the virtuous life of the merchant tailor Robert Dove. In the final chapter, where the quad appears, the narrative frames the representation of Dove's own opinions as direct speech. The explanatory excerpt that elucidates the nature of the relationship of death and life in the discursive concept consists first of a short introductory narrative and then Dove's own explanation of his readiness for death because it is the door or entrance - the threshold - to everlasting life. Dove also identifies death as the 'birth day of everlasting life', amplifying further the notion that death is the beginning of life. The text in which the quad appears is

[^8]Dove's dying prayer, committing his spirit, body and soul to divine keeping through a highly conventional act of faith. Given the extensive portrait of Dove as a virtuous man, it is not surprising that the dramatic representation of his passing should discursively echo Christ's own deliverance into divine keeping (as represented in St Luke's gospel) and conclude the memorial.

The clarification of the discursive concept <death is the threshold of everlasting life for the soul/spirit> to incorporate the synonymy of soul and spirit is achieved by adjusting the hypothetical reading of the relative references of soul and spirit on the basis of continual contextual saturation and pragmatic enrichment (Recanati 2004a, 2004b; Carston 2004). The confirmation of this discursive concept for the quad death - life - soul - spirit depends upon the stability of the concept as witnessed in other texts produced in the same period. The notion of stability that I invoke here is discursive rather than lexical in nature; it is manifested in the reproduction of the concept in discourse as near quotation, as echo or as paraphrase. We will examine a few more textual instantiations of the quad in order to ascertain the degree of the concept's stability and explore the locus of that stability.

I sought instantiations of the quad from texts produced within a couple of decades of those we have examined produced by Nicholas Breton (1616) and Anthony Nixon (1612). The two for scrutiny antedate both texts; one is an anonymous anthology of funeral sermons, rich with biblical quotation and aphoristic sentiments (1607): The Best choyce a funeral sermon. As a handbook of sermons for use at the funerals of friends, this work is marked by conventional Christian tropes. The other text (1592) is a memorial of Katherine Stubbs by her widower, Phillip Stubbs, whose title fully describes the work: A christal glasse for christian vvomen containing, a most excellent discourse, of the godly life and Christian death of Mistresse Katherine Stubs, who departed this life in Burton vpon Trent, in Staffordshire the 14. day of December. 1590. With a most heauenly confession of the Christian faith, which shee made a little before her departure: as also a wonderfull combate betwixt Sathan and her soule: worthie to be imprinted in letters of golde, and are to be engrauen in the tables of euery Christian heart. Set downe word for word, as she spake it, as neere as could be gathered: by Phillip Stubbes Gent. This work promotes a sentimental and highly personal dramatic portrait of the death of a devout young woman; however, the 'most heavenly confession of the Christian faith' is highly conventional in rhetoric and as such, contributes to the concept's stability. The discursive weight of the concept in the funeral genre seems to be reflected in the frequency with which the quad appears in these texts:
(6) So are wee taught in the historie of the first mans creation. Gen. 2.7. The Lord Gad made the man of the dust of the ground, there is the body, the house of clay; and hee breathed in his face the breath of life. That is, saith Tremelius, Animam vitalem elementari corpori inspirauit: by inspiration hee placed a liuing soule in his elementarie bodie, and the man was a liuing soule, so soone as these two partes beeing ioyned together the man liueth.

And that which we cal death, is no thing else but the dissoluing of this composition, and the seperating of these two parts, that the soule may be loose and at liberty to returne vnto God, as Salomon describeth death in Ecclesiastes, 12.7. Dust returneth to earth as it was, and the spirit returnes to God that gaue it. ${ }^{16}$

The excerpt (extracted from a larger text window) in Example (6) provides elaborate contextual enrichment for the discursive concept <death is the threshold of everlasting life for the soul/spirit>. The structure of the text consists of explication supported by evidence in the

[^9]form of authoritative quotation. The first paragraph supports the hypothesis that the soul is the essential or spiritual part of a person; that it imbues the person with life. The argument that concludes the first section is that the combination of a 'living soul' and a human body produces a living man. Having established then that man is a living soul, the author proceeds to explain death as the dissolution of this essential combination (life + soul). In terms of the semantic-pragmatic space occupied by members of the quad, soul is then discursively bounded by live and death. The elaboration of the concept consists of the definition of death as above and the explanation of the fate of the soul, which is to return to God (to everlasting life). This explanation is supported by repetition through biblical quotation. The fourth member of the quad, spirit, appears in the quotation as a synonym of soul. In contrast with spirit, soul has greater discursive weight through frequent mention and stronger association with the other quad members. This semantic-pragmatic interdependency provides the basis for suggesting that it is the trio death - life - soul that underpins the discursive concept <death is the threshold of everlasting life>.

Example (7) shows a later instantiation of the quad in the text (The Best Choyce a Funerall Sermon) in an exploration of the death of the 'Christian soul' (p. 58):
(7) Such to be the desire of a true holie soule, euen by death to come vnto him, rather then by still liuing here, to be kept from him, may appeare by the words of priuate meditation, that Augustine vseth in the first chapter of his Soliloquia, saying: Cur faciem tuam abscondis? forte dices non videbit me homo \& viuet. Eia Domine, moriar vt te videā, videam vt hic moriar, nolo viuere, volo mori, dissolui cupio \& esse cu Christo, mori desidero vt vide $\bar{a}$ Christum, viuere renue vt vivam cum Christo. O Domine Iesu accipe spiritum meum, vita mea suscipe animam meam, gaudium meum attrahe cor meum. That is, why doost thou hide thy face? Thou wilt say perhaps, no man shall see me, and liue. Come on then Lord, let mee die, that I may see thee: Let mee see thee, though I die here. Oh I desire not to liue, I desire to die, I long to bee loosed that I may bee with Christ: I wish to die, that I may see Christ, I refuse to liue, that I may liue with Christ. O my Lorde Iesus receiue my spirite, O thou my life, receiue my soule, O thou my ioy, drawe my heart vnto thee.

Those which were present with this man in the time of his sicknesse, and houre of his death, know with what constant desire he waited for and desired his dissolution: therefore desiring to die, that hee might be with Christ: \& therfore desiring to be with Christ, because he knew it to be best of all.

The author again draws upon authority, this time, of Augustine, to explain how death liberates the soul to live everlasting life. The explicitly Christian inflection of this explication indicates that it is only by death that the devout may 'see' and thus live with Christ. The author characterises Augustine's act of faith as 'words of private meditation', used to cement the idea that death is the threshold, the necessary desired entrance for the 'true holie soule' to life with Christ. The subject's dying appeal and commendation are expressed as a series of parallel imperatives with the key quad members spirit and soul used in sequence with an additional term, heart. Jesus Christ is invoked as the subject's life and joy. The final appeal is sealed with a testimony to the man's desire for 'dissolution' to 'be with Christ'. This text window, very different from the earlier one from the same document (Example (6)), confirms the discursive concept hypothesis: <death is the threshold to everlasting life>, where everlasting life is the life of the soul/spirit/heart.

The second document is Stubbs's memorial to his wife, Katherine. As with other funeral and memorial texts, this is highly conventional as it draws upon a shared generic tradition and
biblical canon. The consequence is that it is possible to identify commonalities and evidence of shared antecedents in the prominent act (imitating Christ's final act of faith) of committing oneself (spirit, soul) to God in death:
(8) And further, shee desired him that hee would not mourne for her, alledging the Apostle Paul, where he saith: Brethren I would not haue you to mourn, as men without hope, for them that die in the Lord: affirming that she was not in case to be mourned for, but rather to be reioiced of: for that shee should passe (shee said) from earth to heauen: from men to holy Angels: to Cherubins and Seraphins, to holy Saintes, Patriarckes and Fathers: yea to God himselfe. After which words, very suddenly she seemed as it were greatly to reioice, and looke verie chearfully, as though she had seene some glorious sight: and lifting vp her whole bodie, and stretching forth both her armes, as though she would embrace some glorious and pleasant thing, said: I thanke my God, through Iesus Christ, he is come, hee is come, my good Iayler is come to let my soule out of prison. Oh sweete death thou art welcome, welcome sweet death, neuer was there any guest so welcome to me as thou art. Welcome, the messenger of euerlasting life: welcome the doore and entrance into euerlasting glorie: Welcome, I say, and thrise welcome, my good Iayler, do thy office quickly, and set my soule at libertie. Strike (sweet death) strike my heart, I feare not thy stroke. Now it is done. Father into thy blessed hands I commit my spirit. Sweet Iesus into thy blessed hands I commend my spirite. Blessed spirite of God, I commit my soule into thy handes. Oh most holy, blessed, and glorious Trinitie, three persons and one true and euerlasting God, into thy blessed hands I commit both my soule and my bodie, at which words her breath stayed, and so neither moouing hand nor foote, she slept sweetly in the Lord. ${ }^{17}$

This text provides a narrative frame for Katherine's performance of death and her soul's entry into everlasting life, preparing the reader for her dramatic and joyful surrender. Her final prayer thanks God for the advent of the 'Iayler' to liberate her soul from the prison of earthly life. The text of the final act of faith clearly draws upon a formula for the subject to invite death as the guest to deliver the soul to God and everlasting life that is identical to Nixon's (1612) depiction of Robert Dove's own final committal of his soul to God. The effect is to cement the weight and stability of the discursive concept. Interestingly, in this text (Example (8)), spirit has two references; the first is the subject's own soul ('Father into thy blessed hands I commit my spirit. Sweet Iesus into thy blessed hands I commend my spirite') and is thus synonymous with soul. The second is the 'blessed spirite of God', a much more precise reference, which might invite the inference that it applies to the altogether more complex notion of the Trinity. In consequence, the synonymous relationship of soul and spirit seems sufficiently well established and stable for the interpreter to distinguish it from the precise use of spirit as part of the Christian nomenclature for the deity. Clearly, the ability to distinguish between these referents of spirit, assigning one to the discursive concept (<death is the threshold of the everlasting life of the soul>) and the other to Christian nomenclature (The spirit of God) depends upon resources beyond the texts, publication dates and genres in which the lexical items occur. The distinction is in part the product of a decision formed by the

[^10]encyclopaedic knowledge gained through the cultural, historical and religious resources upon which the interpreter can draw in the hypothesis testing (Carston 2002).

The cumulative impact of the continual process of contextual enrichment and saturation through the inspection of more and different (more or less) contemporaneous texts in which the quad appears is confirmation of the most feasible reading or interpretation of the discursive concept that maps onto the quad. This iterative contextual analysis also yields the accumulation of enough contextual information to allow the interpreter to evaluate the integrity of the discursive concept and the extent to which the quad members are critical to the final reading. The fact that the quad death - life - soul - life can be construed as a highly cohesive and stable discursive concept that can be identified in many documents in EEBOTCP demonstrates the efficacy of the method of historical pragmatic analysis. The resulting concept can be captured succinctly as <death is the threshold of everlasting life> for the early modern English discursive context because it bears the implication that this concept holds for the Christian soul.

## 4. Coda: The stability of discursive concepts

The pragmatic method of analysis applied to map meaning onto a constellation produced by the linguistic concept modelling process may also be used to interrogate the density of the relationship within different kinds of constellations: a pair, a trio and a quad, expressed as the relative strength of attraction within a node (item, pair, trio) and between that node and the additional term (see Mehl, this issue, for details of the processor output). Our analysis reveals that the predominant semantic-pragmatic density of the discursive concept under examination is located in the relationship within the trio (death - life - soul). The iterative contextual enrichment indicated that the fourth member of the quad, spirit, is connected to the other members of the quad via a lexical relationship with the third member, soul. This might be taken to suggest that the trio death - life - soul is the critical or ideal constellation from which to derive the discursive concept.

Post-analysis, it seems obvious that the pair death - life is really the core of the concept <death is the threshold to everlasting life>. However, it is arguable that extracting numerous textual instantiations of the co-occurrence of life with death in the meaning mapping process would not yield this concept. The analysis suggested that the trio is critical to the development of the interpretation of the concept. In fact, in hindsight, the third and fourth members of the constellation, soul and spirit, are critical in focusing the discursive contexts in which the meaning mapped from quad to discursive concept as specifically Christian scripts. Clearly, the continual addition of contexts in the analysis enables the interpreter to resolve queries about the nature of the relationship between the quad members. In the case of death - life - soul spirit, it is the nature of the relationship between soul and spirit that poses questions. Once this can be ascertained, it is possible to stabilise the concept itself. The value of the fourth member in creating a quad of lemmas that exhibit strong attraction within a textual window is that the quad's textual instantiations provide contexts that are rich enough to allow the hypothesis testing that is central to the analysis. In contrast, the pair death - life is insufficiently informative for the relevance-based, contextually developed construction of the discursive relationship between death and life as facilitative in a context of faith that the body's death releases the soul. The pair alone is thus a poor basis upon which to build an account of discursive or encyclopaedic meaning.

The work of mapping meaning from constellations to discursive concepts consists of discovering the semantic-pragmatic content of the strength of association between the quad members in order to develop an interpretation. The processes involved are drawn from the pragmatics toolkit developed and enhanced within a relevance theoretical framework
(Carston 2002; Sperber \& Wilson 2004, and others) and include work at lexical, phrasal and discursive levels designed to clarify indeterminacies and resolve underspecificity and vagueness of the linguistic meaning attributed to the quad. Crucial to developing feasible readings is the application of context-building routines, including contextual saturation and free enrichment, using all the encyclopaedic information available to the interpreter, including historical, literary, cultural knowledge and other clues. This context-dependent work supports the assessment of the reading reached as optimally relevant or salient as it consists of repeatedly testing the hypothetical reading using as much context as is required. The result is a discursive concept contextually conditioned, for example, by time as well as by genre (see Fitzmaurice \& Mehl 2022, for the analysis of secularisation of early modern English discourse). The stability of a discursive concept can be explored through closer inspection of the discourses in which its quad is instantiated. ${ }^{18}$

Accordingly, in what we have explored, the stability of the discursive concept signified by the death - life - soul - spirit quad is evidenced in the rhetorical work it is recruited to perform in particular scripts (for example, dying prayers, memorials) and discourses of salvation. These discourses have modern points of reference in terms of their genres and frames despite the concept itself being grounded in Christian literary traditions that predate early English modernity. In the larger programme of publication of which this study is a part, we explore the stability and integrity of discursive concepts associated with quads and sets of quads over time and across genres. This work will permit us to ascertain the extent to which we can distinguish among temporally sensitive concepts that shift according to the rhetorical work they are deployed in in particular discourses. We will also seek to identify concepts that announce modernity as they work in early modern English discourses, creating a discursive echo that can be tracked across genres and across time.

## Correspondence

Susan Fitzmaurice
University of Sheffield
Email: s.fitzmaurice@sheffield.ac.uk

## References

Allan, Keith, 2007. ‘The pragmatics of connotation', Journal of Pragmatics 39(2007). 1047-1057.
Bréal, Michel, 1897. Essai de sémantique: Science des significations. Paris: Hachette.
Brennan, Michael G., 2004. Nicholas Breton [Britton] (1554/5-c. 1626). Dictionary of national biography. https://doi-org.sheffield.idm.oclc.org/10.1093/ref:odnb/3341 (23 September 2004).
Barsalou, Laurence, 1987. 'The instability of graded structure: Implications for the nature of concepts', in Ulrich Neisser (ed.) Concepts and conceptual development. Cambridge: Cambridge University Press. 101-140.
Barsalou, Laurence, 1992. 'Frames, concepts, and conceptual fields', in Eva Kittay \& Adrienne Lehrer (eds.), Frames, fields, and contrasts: Relevance and lexical pragmatics. Hillsdale NJ: Lawrence Erlbaum. 21-74.
Blutner, Reinhard, 1998. 'Lexical pragmatics', Journal of Semantics 15(2). 115-162.
Blutner, Reinhard, 2004. 'Pragmatics and the lexicon', in Laurence R. Horn \& Gregory Ward (eds.), Handbook of pragmatics. Blackwell. Oxford. 488-514.
Burns, Philip R., 2013. MorphAdorner v1: A Java library for the morphological adornment of English language texts. Evanston, IL: Northwestern University, https://morphadorner.northwestern.edu/morphadorner/download/ morphadorner.pdf. (29 November 2016).
Carston, Robyn, 2002. Thoughts and utterances. The pragmatics of explicit communication. London: Blackwell.
Carston, Robyn, 2004. 'Relevance theory and the saying/implicating distinction'. in Laurence R Horn \& Gregory Ward (eds.), Handbook of pragmatics. Oxford: Blackwell, 633-656.
Carston, Robyn, 2010. 'Metaphor: Ad hoc concepts, literal meaning and mental images', Proceedings of the Aristotelian Society CX(3). 295-321.
${ }^{18}$ The textual corpus of the quad death - life - soul - spirit and its discursive concept <death is the threshold of everlasting life> consists of a cluster of related genres: from funeral sermons and elegies, to death narratives and witnesses, to prayer books and epistles.

Carston, Robyn, 2012. 'Word meaning and concept expressed', The Linguistic Review 29(4). 607-623.
Carston, Robyn, 2016. 'The heterogeneity of procedural meaning', Lingua 175-176. (May-June) 154-166.
Carston, Robyn, 2019. 'Ad hoc concepts, polysemy and the lexicon'., in Kate Scott, Billy Clark \& Robyn Carston (eds.), Relevance, pragmatics and interpretation. Cambridge: Cambridge University Press. 150-162.
Carston, Robyn, 2021. 'Polysemy: Pragmatics and sense conventions', Language and Mind 36(1). 108-133.
Cruse, Alan, 2004. Meaning in language. A introduction to semantics and pragmatics (2 ${ }^{\text {nd }} \mathrm{edn}$ ). Oxford: Oxford University Press.
Fitzmaurice, Susan, 2009. 'The sociopragmatics of a lovers' spat: The case of the eighteenth-century courtship letters of Mary Pierrepont and Edward Wortley', Journal of Historical Pragmatics 10(2). 215-237. Reprinted in J. Culpeper (ed.), 2011. Historical sociopragmatics. Amsterdam: John Benjamins.
Fitzmaurice, Susan, 2010. 'Coalitions, networks, and discourse communities in Augustan England: The Spectator and the early eighteenth-century essay', in Raymond Hickey (ed.) Eighteenth-Century English: Ideology and change. Cambridge: Cambridge University Press. 106-132.
Fitzmaurice, Susan, In preparation. Reading the signs of the times: Seeking meaning in historical news genres.
Fitzmaurice, Susan, Forthcoming. 'Looking for Concepts in Early Modern English: Hypothesis building and the uses of encyclopaedic knowledge and pragmatic work', Journal of Historical Pragmatics.
Fitzmaurice, Susan \& Seth Mehl, 2022. 'Volatile discursive concepts: Co-occurrence quads as indicators of semantic and pragmatic change in Early Modern English’, International Journal of Corpus Linguistics.
Fitzmaurice, Susan, Justyna A. Robinson, Marc Alexander, Iona C. Hine, Seth Mehl, \& Fraser Dallachy, 2017. Linguistic DNA: Investigating conceptual change in early modern English discourse', Studia Neophilologica 89. 21-38.

Geeraerts, Dirk, 2010. Theories of lexical semantics. Oxford: Oxford University Press.
Geeraerts, Dirk, Stefan Grondelaers \& Peter Bakema 1994. The structure of lexical variation: Meaning, naming and context, Berlin: De Gruyter Mouton.
King James Bible (1611). 1611. THE HOLY BIBLE, Conteyning the Old Testament, AND THE NEW: Newly Translated Out of the Originall Tongues: \& with the Former Translations Diligently Compared and Reuised by His Maiesties Speciall Comandement Appointed to be Read in Churches. London. https://www-proquest-com.sheffield. idm.oclc.org/docview/2138583024 (17 March, 2022).
MacCabe, Colin \& Holly Yanacek (eds.). 2018. Keywords for today: a 21 st century vocabulary. The Keywords Project. New York: Oxford University Press.
Mehl, Seth, 2019. 'Measuring lexical co-occurrence statistics against a part-of-speech baseline', in Hanna Parviainen, Mark Kaunisto \& Päivi Pahta (eds), Corpus approaches into world Englishes and language contrasts, VARIENG eseries vol. 20, Helsinki: VARIENG, http://www.helsinki.fi/varieng/series/volumes/20/mehl/ ( 1 September 2020).
Meillet, Antoine, 1906. 'Comment les mots changent de sens', Année Sociologique 9. 1-38. Repr. in Antoine Meillet, Linguistique historique et linguistique générale. Paris: Champion, 1921. 230-271.
Murphy, Gregory L., 2002. The big book of concepts. Cambridge, MA: MIT Press.
Paul, Hermann, 1920. Prinzipien der sprachgeschichte (5th edn). Halle: Niemeyer.
Recanati, François, 2004a. 'Pragmatics and semantics', in Laurence R. Horn \& Gregory Ward (eds.) The handbook of pragmatics. London: Blackwell Publishing. 442-462.
Recanati, François, 2004b. Literal Meanings. Cambridge: Cambridge University Press.
Williams, Raymond, 1976. Keywords: A vocabulary of culture and society. Cambridge: Cambridge University Press. Wilson, Deirdre, 2003. 'Relevance and lexical pragmatics', Rivista di Linguistica, 15. 2273-2291.
Wilson, Deirdre \& Dan Sperber, 2004. 'Relevance theory', in Laurence R. Horn \& Gregory Ward (eds.) The Handbook of Pragmatics. London: Blackwell Publishing. 607-632.


[^0]:    ${ }^{1}$ I am very grateful to the participants of the workshop 'Computational approaches to investigating meaning in the history of the English language: The challenge to theories of historical semantics' held at ICEHL 18, Edinburgh 2018, for their excellent discussion and intellectual generosity. I thank Seth Mehl in particular for productive and challenging feedback as well as for supporting the development of the historical semantic-pragmatic analysis.
    ${ }^{2}$ Linguistic DNA: Modelling concepts and semantic change in English 1500-1800 (AHRC AH/M00614X/1), is a collaborative research project (2015-2018). The Principal Investigator was Susan Fitzmaurice (Sheffield), with CoInvestigators Michael Pidd (The DHI | Sheffield), Justyna Robinson (Sussex) and Marc Alexander (Glasgow) assisted by three research associates: Fraser Dallachy (Glasgow), Iona Hine and Seth Mehl (Sheffield); technical development was carried out by Matthew Groves and Katherine Rogers (Sheffield) and Brian Aitken (Glasgow). Further details available from: http://linguisticdna.org/

[^1]:    ${ }^{3}$ Of course, keywords - as statistically unusual words - are prevalent in the analysis of lexical and syntactic patterns in corpus linguistics (e.g. Fitzmaurice, 2010). These are distinct from the key words used for automated discovery procedures in search engines.

[^2]:    ${ }^{4}$ A52031 Some Testimonies of the Life, Death and Sufferings OF Amariah Drewet, of Cirencester, in Gloucestershire, lately Deceased; and To the way of Life wherein he walked. Whose Living Words upon his Dying Bed are worthy to be had in Remembrance. LONDON, Printed, by Andrew Sowle, in the Year 1687.

[^3]:    ${ }^{5}$ However, see Fitzmaurice (forthcoming) for an evaluation of early hypothesis building in the interpretation of quads as concept models. Different kinds of quads may be more amenable to on-the-fly meaning assignment than others.

[^4]:    ${ }^{6}$ A59884. A sermon preached at the funeral of the Reverend Richard Meggot D. D. ....by William Sherlock 1693. Indeed, the most frequently occurring quad in the corpus containing both death and life is death - die - life - live $(63,582)$.
    ${ }^{7}$ Our process - discursive determination - applies at the level of discourse, whereas in much corpus linguistics and cognitive linguistics, attention has been paid to the understanding of semantic determination at the level of the phrase. Cruse (2004: 217-18) acknowledges the difference between determining meaning at discourse level and at phrasal level in the distinction between what he calls 'discourse interaction' and 'syntagmatic interaction' but does not discuss it.

[^5]:    ${ }^{8}$ MI: 5.2394; 13,009 occurrences. Prominent constellation (i.e. quad appears in the top bands (4-5 out of 5) for frequency and for MI score). Quad is attested in 2,000+ documents in EEBO-TCP.
    ${ }^{9}$ The good and the badde, or Descriptions of the vvorthies, and vnworthies of this age Where the best may see their graces, and the worst discerne their basenesse. Bibliographic name/number: Murphy, G. Bib. of Eng. characterbooks, p. 27; STC (2nd ed.) / 3656. Breton, Nicholas, 1545?-1626?.[46] p. London: Printed by George Purslowe for Iohn Budge, and are to be sold at the great south-dore of Paules, and at Brittaines Bursse, 1616. A16748 The good and the badde, or Descriptions of the vvorthies, and vnworthies of this age Where the best may see their graces, and the worst discerne their basenesse. (Breton, Nicholas, 1545?-1626?) 1616.
    ${ }^{10}$ Illustrative quotations from the OED Online for this sense are: 1611 Bible (King James) Gen. xxxv. 18 As her soule was in departing, (for she died). 1651 T. Hobbes Leviathan iII. Xxxviii. 241 Soule and Life in the Scripture, do usually signify the same thing.
    ${ }^{11}$ 2. a. The principle of intelligence, thought, or action in a person (or occasionally an animal), typically regarded as an entity distinct from the body; the essential, immaterial, or spiritual part of a person or animal, as opposed to the physical. OED Online.

[^6]:    ${ }^{12}$ Such scripts, scenarios (Carston, 2002: 321) or discourses are critical components of the different kinds of knowledge that comprise the encyclopaedic information critical to the hypothesis-building work in mapping meaning onto quads.

[^7]:    ${ }^{13}$ From the same set of sketches, a coward, which precedes this of the Holy Man: A Coward. A Coward is the childe of feare, was begotten in colde bloud, when Nature had much adoe to make vp a Creature like a man: his life is a kinde of sicknesse, which breeds a kinde of palsey in the ioynts, and his death the terror of his conscience, with the extreme weakenesse of his faith: hee loues Peace as his life, for he feares a sword in his soule: if he cut his finger, hee looketh presently for the signe, and if his head ake, he is ready to make his will: a report of a cannon strikes him flat on his face, and a clap of thunder makes him a strange Metamorphosis: rather then he will fight, he will be beaten, and if his legges will helpe him, he will put his armes to no trouble: he makes loue commonly with his purse, and brags most of his Mayden-head, he will not marry but into a quiet family, and not too faire a wife, to auoide quarrels: if his wife frowne vpon him, he sighes, and if shee giue him an vnkinde word, he weepes: hee loues not the hornes of a Bull, nor the pawes of a Beare: and if a dogge barke, he will not come neere the house: if hee be rich, he is afraide of Theeues, and if he be poore he will be slaue to a Begger. In summe, hee is the shame of man-hood, the disgrace of Nature, the skorne of Reason, and the hate of honour.

[^8]:    ${ }^{14} 1642$ T. Fuller Holy State Iv. xxi. 352 A slavish fear, the jaylour of the soul. (jailor s.v. OED online).
    ${ }^{15}$ The source of Christ's cry is Psalm 31: 5: Into thine hand I commit my spirit: thou hast redeemed me, O Lord God of truth. The Bible: Psalm 31. in Robert Carroll and Stephen Prickett (eds), The Bible: Authorized King James Version. Published in print: 1998; Published online: September 2012 (King James Bible 1611). https://www-oxfordscholarlyeditions-com.sheffield.idm.oclc.org/view/instance. 00016818 ? milestones $=$ Ps. 31 DOI of this work: https://dx-doi-org.sheffield.idm.oclc.org/10.1093/oseo/instance. 00016818

[^9]:    ${ }^{16}$ Pp. 9-11, A18615. The Best Choyce a Funerall Sermon / Published at the Desire of some of the Friends of the Dead 1607. London, Printed for C.B. dwelling at the Swan in Pauls Church-yard. https://search-proquest-com.sheffield. idm.oclc.org/docview/2240927539.

[^10]:    ${ }^{17}$ Stubbes, Phillip. 1592. A Christal Glasse for Christian Vvomen Containing, a most Excellent Discourse, of the Godly Life and Christian Death of Mistresse Katherine Stubs, Who Departed this Life in Burton Vpon Trent, in Staffordshire the 14. Day of December. 1590. with a most Heauenly Confession of the Christian Faith, which Shee made a Little before Her Departure: As also a Wonderfull Combate Betwixt Sathan and Her Soule: Worthie to be Imprinted in Letters of Golde, and are to be Engrauen in the Tables of Euery Christian Heart. Set Downe Word for Word, as She Spake it, as Neere as could be Gathered: By Phillip Stubbes Gent London, By T. Orwin for] Richard Ihones, at the signe of the Rose and Crowne, neere Holborne bridge. https://search-proquest-com.sheffield.idm.oclc.org/docview/ 2240894022

