New Blackfriars

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# Lex orandi est lex credendi? The God of Anglican liturgy

Margaret Elizabeth

It has been said that the ways in which we pray establish the ways in which we believe. Part of prayer are the words used to address the divine to whom we pray. While private prayer is difficult to examine objectively there are rich resources of public prayer. I have chosen to examine the communion liturgies of the Church of England as a set of words in which the divine is addressed and spoken of. Accepting that prayer is linked to belief, there will be insights into belief by looking at the God addressed in prayer. I chose the communion liturgies because they have been and are influential in the lives of communities and individuals within and beyond those who actively belong to the Anglican communion. To examine the texts I have used tools from the discipline of psycholinguistics, the study of the processing of language. Language processing occurs rapidly, fluidly and with complex and dynamic interconnections and so writing about these processes by separating them under headings is inevitably artificial. In examining a corpus of words it is also a way of making information and results accessible and so I offer a few of the ways of looking at how language is processed. I give examples of my findings from looking at Common Worship with Thanksgiving Prayer A although the detail is similar across the texts of Common Worship and also the Book of Common Prayer.

## Semantic Processing/Semantic Networks

Semantics - 'meaning' - is a word that sends philosophers, linguists, psychologists, computer scientists and psycholinguists running in all sorts of directions. However, this article will use the term 'semantic processing' to be the ways in which language comprehension occurs, meaning is understood and the options for language expression occur, via, but not depending wholly upon, linguistic structures. The term 'semantic network' here refers to the psycholinguistic model, rather than neural networks in brain structures (although these are linked). In a semantic network each word is linked to other words. The discipline has a theoretical model to describe networks more fully but it is the concept of networks that is useful to this article rather than detailed modelling of how they function.

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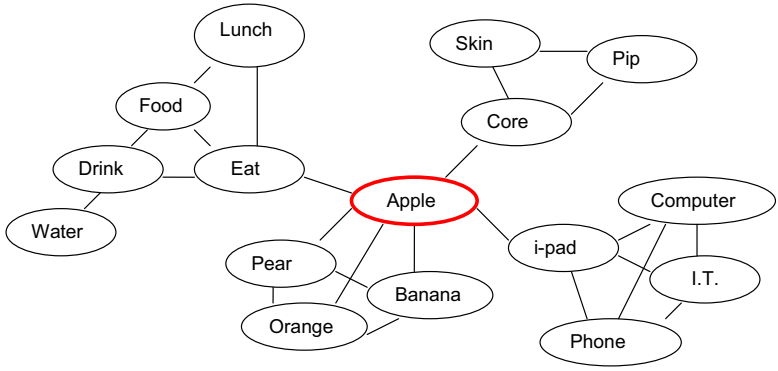
Semantic networks are organised using semantic similarity (words in categories: food/furniture/sports etc) and using association (words that appear together frequently). Here is a very much simplified version of a semantic network from the word 'apple'




The majority of words here are nouns although verbs are given and adjectives and other grammatical elements are part of extending the network. As apple is linked to orange, orange also has a network and so on. It has also been found that when heard frequently, multi-word phrases can come to be processed in ways similar to single words and become part of the networks[1]. There are varieties of links in networks, for example between categories and the words within them such as 'I.T.' and 'i-pad'. Or from the word to the categories above them in the semantic hierarchy (Braeburn to apple to fruit to food). And as 'apple' is linked to 'core' there are links between features that then lead on to other words. There are a variety of ways of looking at semantic relationships and so the kinds of networks that can be created are potentially vast and vastly complex. Thinking of them in detail can be somewhat overwhelming but can also be slightly good fun (and I recognise that such a statement might say more about me than about semantic networks).

In 1975 a seminal article[2] posited that the activation of one word will spread through the semantic network at a variety of speeds and with a variety of strengths. This theory continues to occupy a central place in psycholinguistic modelling.

We share our semantic networks with others in the communities of which we are a part and this aspect of semantic networks is significant and will be explored in more detail shortly. We cannot have a semantic network that is not shared.

[1] N Janssen and H Barber 'Phrase Frequency Effects in Language Production' *PLoS ONE* 7: 3 (2012) e33404 pp1-11.

[2] Allan Collins & Elizabeth Loftus 'A Spreading-Activation Theory of Semantic Processing' *Psychological Review* 82: 6 (1975) pp407-428.

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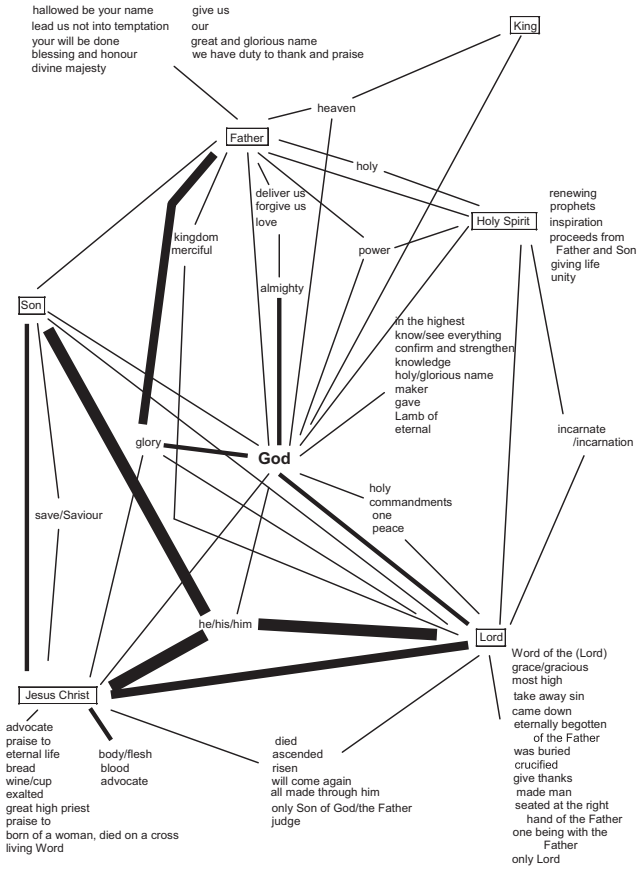
## Semantic Networks and the liturgy

While personal semantic networks can only be discovered through significant experimental work a representation of the semantic network for words to and for the divine as given by a liturgical text can be created. The grammar of the text(s) indicate that 'God' should be the word around which the other words are clustered. Associations are included because evidence indicates their relevance[3]. The explorations of frequency and association, about to be discussed, will shed further light on this network. (A small point: while the word 'liturgy' meant a public work and was initially used in that sense by the early church, it came to mean public worship. It has now often come to mean worship following a particular written form and this is the sense in which the word will be used in this article, hence the communion liturgies - in their written forms - of the Church of England.)




[3] T Griffiths, M Steyvers, J Tenenbaum 'Topics in semantic representation' *Psychological Review* 114: 2 (2007) pp211-244.

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Each person coming to the liturgical texts - as priest or member of the congregation - will have, to some extent, their own semantic network for each of the words to and for the divine. These personal semantic networks will largely be shared with other members of the congregation but may have some differences because we tend not to belong only to one community. For example, a member of a congregation using the liturgy who is also influenced by writers in the mystical tradition will have the links from public worship, but because of their personal prayer/reading/thinking, may also have strong associations with words other than those in the liturgy (eg. 'darkness', 'unknowing', 'Christ our mother'). All the links in our semantic networks will be shared somewhere with someone (even if with a virtual community).

In the network the thicker lines show the words that occur together most frequently (proportionally to the number of times the association is made explicitly in the text). There are few semantic links in this network - God is not linked to Goddess, or King to Queen, Father to Mother or Son to Daughter. There is a close semantic link between Father and Son and a semantic link between King and Lord. The link between God and father is only by association. There are a range of grammatical elements and there are also multi-word phrases since research shows that when heard often enough these come to be processed as individual linguistic units.

## Spreading Activation

To return to our seminal article by Collins and Loftus and the phrase 'spreading activation'. At this point I alert readers familiar with the discipline to the evident fact that I am only drawing from this set of theories what is most relevant to my question - space precludes further discussion - and alerting newcomers to the discipline that there are indeed (many) more elements to psycholinguistics than I describe. Spreading activation refers to the theory that as one word is activated by a spoken/written/thought word the activation will spread to other words in the network. The spread of activation is said to be determined by the strength of the link between the words. To use our small example above, apple and orange are semantically linked and are also associatively linked. The strong link continues the spread of activation through the network.

It is worth noting here that the theory as described in the 1975 article allows for individual and for community variation in the network and therefore in the words activated by a particular stimulus.

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### Spreading Activation and the liturgy

The spread of activity through the network "is automatic in that it is obligatory and outside of conscious awareness and control"[4] so by being present within a church community that uses liturgy regularly the links in the network will be formed. It is not possible to 'unform' or delete the links while being part of the community. It is possible (because of the inherent creativity of the language processing system and in terms of personal associations) to form stronger and therefore quicker links than those given by the liturgical texts, but the links in the texts will remain within the network of each person who attends when the liturgy is used.

## Frequency

Frequency is the notion that some words occur in language more often than others. This is of interest because of the impact on language processing. As Knobel[5] puts it, "Essentially, the more often one encounters a stimulus the more quickly and easily one is able to process it." This is attested multiply. Context also affects processing partly because there will be more associations[6]. It is postulated that high frequency words have automatic neural pathways that ease processing[7].

### Frequency and the liturgy

Since words heard frequently are more quickly and easily processed, even to the point of being automatically processed, it is worth noticing which words are heard/said most often in the liturgy. Frequently heard words are more likely to be the words selected for personal use and so public prayer influences private prayer. Looking at the words used and used frequently will begin to give us a sense of the God that is prayed to and therefore, if we accept the lex orandi principle, the God believed in. This is a table showing how often each word to and for the divine occurs in the text. Where two or more words are used synonymously I have combined the numbers. The male pronouns stand for another word for the divine and rather than counting each

[4] J Silkes and M Rogers 'Masked Priming Effects in Aphasia: Evidence of Altered Automatic Spreading Activation'Journal of Speech, Language and Hearing Research 55 (2012) pp1613-1625 p1613.

[5] M Knobel, M Finkbeiner, A Caramazza 'The many places of frequency: evidence for a novel locus of the lexical frequency effect in word production' *Cognitive Neuropsychology* 25: 2 (2008) pp 256-286 p256-7.

[6] R Diana and L Reder 'The low-frequency encoding disadvantage: Word frequency affects processing demands'Journal of Experimental Psychology: Learning, Memory and Cognition 32: 4 (2006) pp 805-815.

[7] R Heredia and T Blumentritt 'On-line Processing of Social Stereotypes During Spoken Language Comprehension' *Experimental Psychology* 49: 3 (2002) pp208-221.

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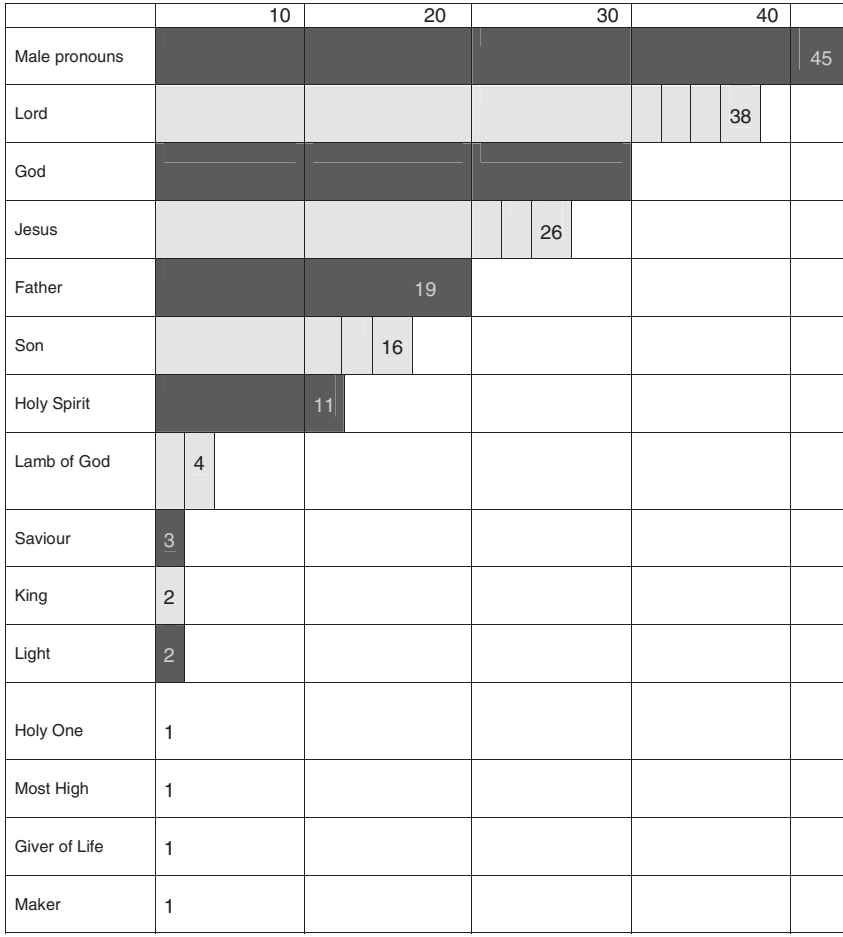
occurrence of ‘he’, ‘his’, ‘him’ and ‘himself’ I have combined these numbers:




It is worth noting that the analysis I offer relates to the liturgical text as if it is an individual event. Clearly this is not the case in terms of the life of a priest or member of a congregation using the text. The liturgy is repeated many times and so while the data can be examined as if the text is used on one occasion, the other significant aspect of frequency for liturgical texts is the number of times a text is used during a lifetime. It is not possible to represent this but is to be remembered when assessing the impact of frequent word use.

From other analysis there are few differences among the liturgical texts.

When these words for the divine are heard in the context of a church service they will be accessed quickly and automatically along

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with their associations (which, as the next section shows are as influential to language processing as frequency). If the postulation of automatic pathways is correct it would give a reason why it is demanding to consciously reflect on our understanding of highly frequent words because it is 'obvious' that, for example, God is father - the link is frequent and strong.

## Association

From experiences in conversation to games played among children or on the radio it seems that some words elicit other words. It turns out that this is not only a 'seeming' but is borne out in research[8]. This is to do with the aspect of semantic networks noted above, that one sort of link are to associated words. Associations are as important to processing as frequency and give insight into semantic networks, hence the use of associations in the network above[9].

A variety of experiments have been carried out looking at how associations influence language processing and as has already been noted there is a demonstrable link between context or community use and the associations that are formed. Groups of people develop their own associations for specific words and these associations can be particularly linked to the community - they might not have high probability in terms of other uses of the language. The language system we each have is flexible and there seem to be cohorts of words for different semantic contexts, enabling faster access of appropriate words for each specific context[10].

### Association and the liturgy

Since the literature shows that frequency of associations is relevant, I have examined how often associations occur as well as what they are in the liturgical texts. I have combined the numbers for synonyms[11]. I recognise that from a theological perspective the words 'body' and 'flesh' may have different associations but from a psycholinguistic perspective these words are used in similar ways in the texts and as psycholinguistic tools are being used, the words have been combined. Since multi-word phrases can be processed in similar ways to individual words there are some multi-word phrases in the data.

[8] D Nelson, C McEvoy, L Pointer 'Spreading activation or spooky action at a distance?' *Journal of Experimental Psychology: Learning, Memory, and Cognition* 29: 1 (2003) pp42-52.

[9] Griffiths et al 2007.

[10] R Rahman and A Melinger 'Semantic context effects in language production: A swinging lexical network proposal and a review' *Language and Cognitive Processes* 24: 5 (2009) pp713-734.

[11] ie giver of life and life-giving; everlasting and ever living; body and flesh; die, died and death; save and saviour; Jesus Christ, Jesus and Christ; Holy Spirit and Spirit.

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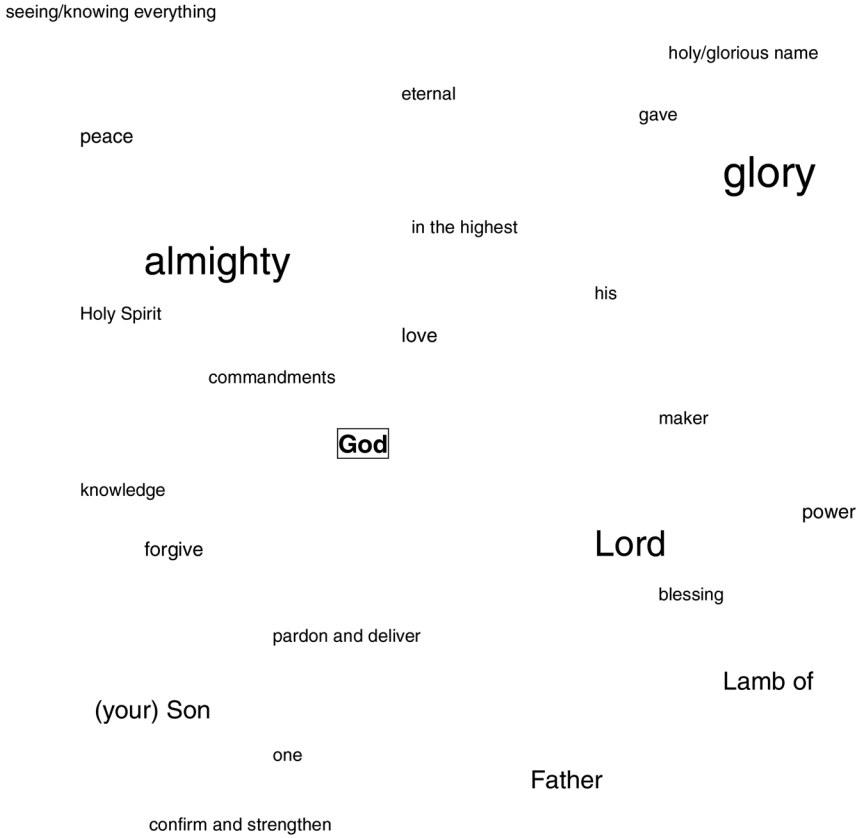
I have created a set of 'scattergrams' showing the associations from words to and for the divine to the words with which they are associated with font size indicating frequency. The word to/for the divine can be found in the box:

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glory

take away sin

kingdom

Jesus Christ

in the name of

one

merciful

came down

Word (of the Lord)

incarnate

Holy One

everything made through him

with the Holy Spirit

to judge

peace

Lord

grace

crucified, died, buried,

only Lord

eternally begotten of the Father

commandment

made man

true God

your Son

rose

one being with the Father

ascended

he/his/him

seated at the right hand of the Father

with you

will come again

give thanks

Most High

only Son of God

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give us

merciful

Holy Spirit

Our

(your) Son

hallowed be your name

kingdom

almighty

your will be done

forgive us

lead us not into temptation

deliver us

glory

power

**Father**

heaven

holy

we have duty and joy to give thanks and praise

God

great and glorious name

in the name of

divine majesty

love

praise

blessing, honour

---

power

Lord

inspiration

prophets

incarnation

renewing

**Holy Spirit**

giver of life

in the name of the

proceeds from

Father and Son

holy

unity

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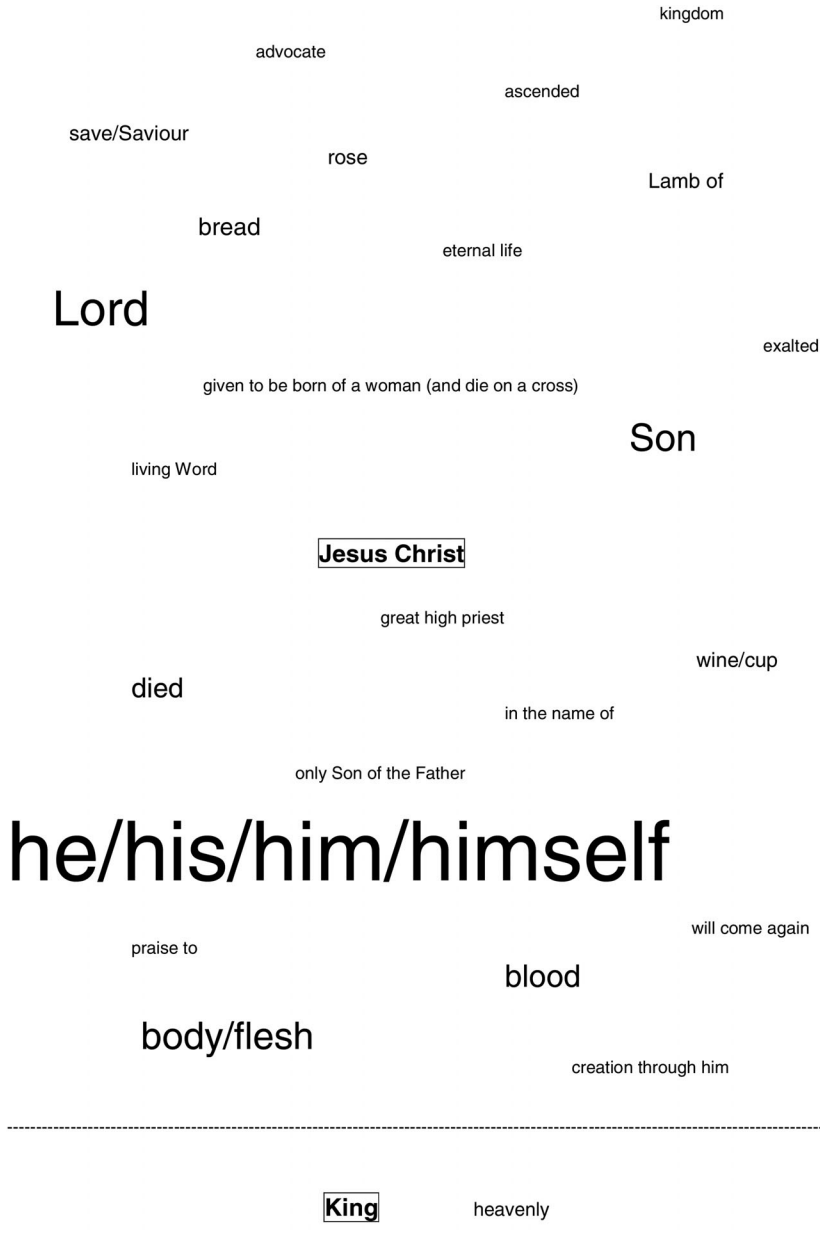


While not discussed within the psycholinguistic literature, associations are of two varieties: there are associations that modify a word for example '*Our* Father' or '*Almighty* God' or '*Heavenly* King'. And then there are words that are often linked - for example, Father is linked with Son and Holy Spirit (as in the opening sentence of each

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of the Common Worship texts) and Lord is linked to God, Father, Jesus Christ, Son and Holy Spirit.

The most frequently occurring associations (therefore those that are most influential), with modifying associations in italics are:

God - *glory, almighty* and Lord,
Father - *glory, heaven, kingdom, power* and God,
Jesus - *he/his/him/himself*, Lord, Son, *body, blood* and *died*
Lord - *he/his/him/himself*, Jesus, God and Holy One
Son - *he/his/him/himself*, and Jesus Christ
Holy Spirit - Father and Son.

This builds the picture of the God to whom prayers are offered in this influential form of public worship.

## Context

There have already been several allusions to the significance of context - in terms of both the broad community and a variety of more specific contexts, on various aspects of language processing. Very early in psycholinguistic explorations Dennis et al commented "in order to understand the meaning of a word a person uses, one must understand the context within which the word is used."[12]; a comment that finds resonances in Wittgenstein's *Philosophical Investigations*[13]. Work has been prompted in neurolinguistics which suggests that global contextual factors set up expectations of words that will be used and speed up the processing of those words with routes in the brain formed as a result[14]. This has resonances with lived experience: if we are not familiar with a specific context, particularly if the community using the context is not familiar, then even the use of known words for which we have a semantic network in other contexts can leave us perplexed.

### Context and the liturgy

The place of context is very evident in considering the liturgical texts. When heard in the context of family the word 'father' elicits 'mother', 'son', 'daughter' and other family words. When heard in the context of liturgy, the word 'father' elicits 'god', 'son', 'heaven' and 'our' etc. The word 'king' in the liturgy does not elicit 'queen', nor does the word 'lord' elicit 'lady'. The associations are particular to the liturgy but for people who are familiar with this context there

[12] R Dennis, C Dennis, L Jobe 'The Meaning of Frequency Words in Different Contexts' *Language and Speech* 19: 4 (1976) pp 343-349 p348.

[13] Ludwig Wittgenstein *Philosophical Investigations* (Oxford: Blackwell Publishing Ltd 2009 4th Edition).

[14] S Coulson 'Constructing Meaning' *Metaphor and Symbol* 21: 4 (2006) pp 245-266.

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will be no attention paid to this particularity. Familiar words to and for the divine are processed quickly and easily and almost without users of the words noticing them. This means that reflection upon the words and what is being said becomes challenging.

## Speed of processing

We have touched upon the factors that affecting speed of processing. I am interested in this for two reasons. The first is that easy/swift processing allows more cognitive availability for other work. The second is that for someone who is used to processing words in a particular context, if new words are introduced more time will be needed for processing, there may be sub-conscious (ie, the hearer is not aware of it) recognition of the extra work that is required, shaping the reaction to the words used, as well as reducing the time for other processing to occur.

When the literature refers to the speed of processing there is evidence that as little as 150 milliseconds is sufficient for initial processing[15]. This links to Stenberg et al[16] who say that some processing occurs without awareness.

Recency[17] also affects processing speed. This is relevant because of the proposal that we learn to pray by joining in with others and that public prayer will influence our personal prayer. Since Christians are encouraged to make prayer part of every day life it is expected that words to the divine will be used regularly. This links to the finding of de Groot[18] that retrieval speed is increased if there is production of words as well as hearing of them.

Logan[19] made the point that automaticity has been thought of as a relinquishing of control but he suggests that it is a different form of control, enabling an interruption of the automatic pathway. This is supported by Heredia and Blumentritt[20] who looked at the processing

[15] L Wurm, D Vakoch, S Seaman 'Recognition of Spoken Words: Semantic Effects in Lexical Access' *Language and Speech* 47: 2 (2004) pp175-204 p177.

[16] G Stenberg, M Lindgren, M Johansson, A Olssen, I Rosén, 'Semantic processing without conscious identification: Evidence from event-related potentials' *Journal of Experimental Psychology: Learning, Memory, and Cognition* 26: 4 (2000) pp973-1004.

[17] D Scarborough, C Cortese, H Scarborough 'Frequency and Repetition Effects in Lexical Memory' *Journal of Experimental Psychology: Human Perception and Performance* 3: 1 (1977) pp 1-17.

[18] A de Groot 'Representational Aspects of Word Imageability and Word Frequency as Assessed Through Word Association' *Journal of Experimental Psychology: Learning, Memory and Cognition* 15: 5 (1989) pp824-845.

[19] G Logan 'On the Ability to Inhibit Complex Movements: A Stop-Signal Study of Typewriting' *Journal of Experimental Psychology: Human Perception and Performance* 8: 6 (1982) pp 778-792.

[20] Heredia and Blumentritt 2002.

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of stereotyped language. They found that in some circumstances the automatic activation could be moderated.

### Speed of processing and the liturgy

If the words to/for the divine are processed quickly, even automatically, there is more cognitive availability for other processing work. Members of the congregation may engage deeply, prayerfully, with the words and examine themselves in relation to the words to and for the divine; or concentrate on other aspects of the text because the words to and for the divine are so familiar and 'given'; or question the associations in their semantic network, perhaps from the text, perhaps from other areas of life; or participate at a more automatic level while concentrating in part on something else.

The finding that retrieval speeds increase when words are used as well as heard is relevant for hearing people within the congregation. (It is likely that signing and seeing signing will work in the same way although I am not aware of research exploring this.) As private prayer is influenced by participation in public worship, if words from the liturgy are used in private prayer speed of processing in public worship will increase. If we have used words to and for the divine in public worship we will be more likely to use these words in private prayer and having used them in private prayer we will recognise them more quickly in public worship. The work around moderating automaticity suggests that if the Christian church is ever to use new words to and for the divine in public settings, language processing does not create a barrier to this.

## Metaphor

As outlined by Soskice[21] some theologians have expressed the idea that language to and for the divine is primarily metaphorical and inevitably so. A special issue of *Brain and Language* was dedicated to the exploration of metaphor and the editorial article traces understandings of the place of metaphor across history. In this issue Giora[22] shows how from the time of Aristotle at least, metaphors have been seen as a special case within word use but that more recent advances reverse this. Bowdle and Gentner note that "Traditionally, metaphors have been treated as both rare in comparison to literal language and largely ornamental in nature. Current research suggests precisely the opposite."[23] If we notice use of metaphors in the religious uses of

[21] Janet Martin Soskice *Metaphor and Religious Language* (Oxford: Clarendon Press 1985).

[22] R Giora 'Is metaphor special?' *Brain and Language* 100: 2 (2007) pp111-114.

[23] B Bowdle and D Gentner 'The career of metaphor' *Psychological Review* 112: 1 (2005) pp193-216 p193.

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language this is not a feature of religion but an inevitability because of the use of metaphor in all use of language. "The use of metaphor is pervasive in both mass communication and everyday linguistic exchanges"[24]. This is reflected in *Metaphors We Live By*[25].

So much for the presence of metaphors within language, what of the processing of them? Let us acknowledge, with Prat et al[26] that the processing of metaphor is a complex cognitive task and by nature dynamic. Research shows that "the processes involved in comprehending literal and metaphoric language are essentially the same"[27]. Also that the ease and therefore speed of processing metaphor does not differ from the ease and speed of processing literal language[28].

Giora notes that "not all metaphors are alike"[29]. One distinction explored in psycholinguistics is that between conventional and novel metaphors. Apt novel metaphors can be interpreted quickly but conventional metaphors are more easily, even automatically understood[30]. Novel metaphors make greater computational demands on the language processing system although having experience of contexts in which meaningful links are drawn that relate to later metaphor use can facilitate word processing[31]. Novel metaphors need their sense to be created whereas conventional metaphors only require the retrieval of an already established sense and it is noted that "the degree of conventionality of any given metaphor will vary across speakers and contexts at any given point in time"[32] because of the importance of context.

Some metaphors work with only one word order and some can be reversed, for example *A book is an adventure* does not make sense when reversed whereas *The ballerina was a butterfly* works as *The butterfly was a ballerina*. In this literature terminology is not fixed - when speaking about metaphors there are a number of terms used for the elements. I use base and target. Metaphors work because pertinent features of the base are mapped onto the target.

[24] V Ottati, S Rhoads, A Garesser 'The Effect of Metaphor on Processing Style in a Persuasion Task: A Motivational Resonance Model' *Journal of Personality and Social Psychology* 77: 4 (1999) pp688-697 p688.

[25] George Lakoff and Mark Johnson *The Metaphors We Live By* (Chicago: The University of Chicago Press 2003 First pub 1980).

[26] C Prat, R Mason R, M Just M 'An fMRI investigation of analogical mapping in metaphor comprehension: the influence of context and individual cognitive capacities on processing demands' *Journal of Experimental Psychology: Learning, Memory and Cognition* 38: 2 (2012) pp282-294.

[27] Bowdle and Gentner 2005 p211.

[28] S Glucksberg 'The psycholinguistics of metaphor' *Trends in Cognitive Sciences* 7: 2 (2002) pp92-96.

[29] Giora 2007 p112.

[30] Bowdle and Gentner 2005.

[31] Prat et al 2012.

[32] Bowdle and Gentner 2005 p209.

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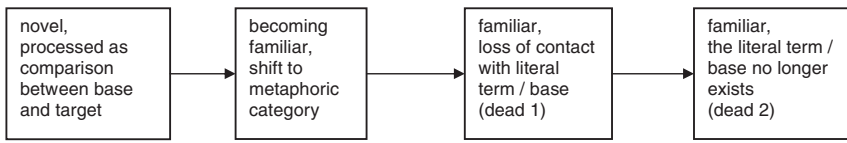
Glucksberg's insight is that metaphors can, in one sense, be interpreted literally. He says that metaphors create categorical assertions - the shared features of the base and target create (assert) a new category. His example is "When I say that 'my job is a jail', in a sense I mean it literally. I do not mean that my job is merely like a jail, but that it actually is a member of the category of situations that are extremely unpleasant, confining and difficult to escape from."[33].

Now to the final aspect of metaphor processing - the perspectives I am using from this discipline are nearly exhausted. (Which sort of metaphor would that be?) This develops further the earlier point that metaphors are processed differently depending on whether they are novel or conventional. If novel metaphors become regularly used Glucksberg claims that "their metaphorical senses enter into our dictionaries"[34] hence, they become conventional. This difference between the processing of novel and conventional metaphors led Bowdle and Gentner to propose a new hypothesis for understanding metaphor - one they called 'the career of metaphor'[35]. They propose that over time there is a gradual shift - a continuum which could be represented thus:




The metaphoric category is created from the base, not in terms of comparing base and target but more, as suggested by Glucksberg, in terms of creation of a categorical assertion. The target then gains meaning from the category rather than directly from the base. At this time there is still contact with the literal meaning of the base but over time this literal meaning becomes irrelevant. It may still exist in the language but is not recognised as the base for the metaphor. Bowdle and Gentner call this the death of the metaphor which can be either when the base is not recognised as having literal meaning (dead 1) or when the literal meaning of the base no longer exists at all (dead 2) ie the base has lost any connection to its original semantic network, its original use. For example the word *blockbuster* now has no connection to bombs.

[33] Glucksberg 2002 p96.
[34] *Ibid*.
[35] Bowdle and Gentner 2005.

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## Metaphor and the liturgy

For psycholinguistics it is evident that the majority of words to and for the divine are metaphors - they are non-literal word use that in the case of liturgy are conventional - at least when in context. Much attention has been paid to the possibilities that exist for speaking of the divine and in his review of this subject Ross says that metaphors are a subset of analogy - the analogy of proportionality[36]. Be that as it may, it is valid to explore metaphors within the liturgy in pursuit of the God we say we believe in. The metaphors in the liturgy are so conventional that users of the words may not recognise them as metaphors[37]. The value of experience for processing metaphors raises questions for those attending church services for the first time. There is no barrier to the processing of words to and for the divine because they are conventional metaphors used in expected ways. (If novel metaphors were offered for the divine, time for processing would be needed, as well as expecting reactions to the change to semantic networks.) The grammatical form for words to and for the divine is not of the '. . . . is a . . . . . ' form which is easily recognised as metaphorical. The words God, Father, Lord, King, Son, have become so conventional that they are used as if they are names or direct descriptions for the divine. If we follow Glucksberg, what, in his use, 'literal' sense can be gained from the categorical assertions created? There are a range of metaphors used and I suggest that the categorical assertions are a place of discovery in terms of what we are saying about the divine. Clearly it is difficult to determine what were intended to be the shared associations when the terms were first used. Given the Jewish concern about the sacred and 'unspeakable' nature of the name for the divine the Judaeo-Christian tradition has always used other words. Care must also be taken in asserting what is now understood. Given the overlapping communities with whom word use is shared I can at best offer my intuitions towards what our metaphors tell us. It could be argued that some of what I am about to do fits best in the section on Associations and I would accept that critique. I have chosen to expand here for two reasons. Firstly, language processing is dynamic - we do not process the associations separately from the fact that the words with which we are making associations are largely metaphors. Secondly I am responding to the significance of metaphor for religious uses of language and especially

[36] Ross James 'Religious language' in Brian Davies OP (Ed) *Philosophy: A Guide to the subject of Religion* (London: Cassell 1998) pp106-135.

[37] Here I am inclined to agree with the eminent linguist David Crystal: "people should be better informed about the language(s) they use;" 'Language and Religion' In: Sheppard, Lancelot (Ed.): *Twentieth century Catholicism* (New York: Hawthorn Books 1966) pp11-28 p14.

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words to/for the divine. I will offer the associations formed in my communities when I use the bases of the metaphors in other contexts. I do this because of the insights from semantic networks: when a word has a strong association in its network to another word we are not able to prevent the activation from spreading to linked networks and these will be part of forming the contextually specific networks.

When associations from related semantic networks are made conscious there may well be an element of surprise because automaticity of processing means that associations may not be noticed. In terms of the words to and for the divine this is particularly relevant because the pair Father and Son and the pair King and Lord are semantically linked with each other and then frequently associated with God giving extra speed to the spread of activation. I will suggest possible categorical assertions by recognising the shared associations in the liturgy between the target God and the different bases brought to that word. It may be of value to notice that occasionally metaphors are added to the metaphors for the divine (eg. 'living Word'). My investigation into categorical assertions in the liturgy here is not an empirical study and research could set up an experiment to examine the associations people have with the words to and for the divine and then notice the shared associations. This would discover the categorical assertions held for the metaphors used.

In the liturgical texts God is the target for the metaphors. The semantic network from p4 demonstrates what is detailed here:

- God is said to be Lord. In Western history a lord is a male ruler of an indeterminate number of people who is responsible for their wellbeing while exacting service and obedience. In other, current circumstances the word Lord is applied to members of the House of Lords - men and now women of authority who can influence the law that is made by government. It is also used as a term of respect for certain members of the judiciary and continues to be a term used to indicate a rank among the aristocracy and church hierarchy. In the liturgy, associations from which the categorical assertions would be drawn are distinctly he/his/him (although the assumption until very recently in history would not doubt the maleness of a Lord - and of course women Lords in the Upper Chamber are known as Lady and so do not share the title except in the collective, with the exception of the Lord Mayor of London 2013–14, Fiona Woolf). The other strong link in the liturgy is to Jesus Christ and many of the associations with Lord are also associations with Jesus Christ. Lord is the only Lord who is most high, eternal, at the right hand of the Father, of one being with the Father, through whom everything was made, who is gracious, came down, was made man, died, was buried, rose, ascended and will come again, who takes away sin and judges us. (In the Book

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of Common Prayer, Lord is also a judge - a metaphor applied to a metaphor. In Common Worship the word judge is used as a verb rather than a noun) The associations shared between God and Lord are glory, he/his/him, holy, one, giver of commandments and peace.

- God is said to be Father. The associations for Father in the family use of the word is of an older male, directly responsible for the creation of another, and he may or may not love, cherish, discipline, be angry with, guide, befriend, protect that other. In conventional use of language for the divine there is often a focus on the positive associations - love, guidance, protection but there can also be a sense of one who requires obedience and who may be angry. The associations in the liturgy show us a Father who is powerful to the point of being almighty, who is in heaven, has a kingdom, gives commandments, whose very name is great and glorious, who is majestic, worthy of blessing and honour, one we can petition for what we need and for protection, and who is merciful and loves us (although these two words do not appear often). The associations in the liturgy that are shared between the words Father and God are heaven, power, almighty, glory, holy, Son, love, forgive and deliver. In the context of family, offspring is necessary for a male to be known as father and in the liturgy the word Son is associated with Father, which further strengthens the link between the semantic network for family and the semantic network for the divine. These two semantic networks are distinct but overlap significantly and therefore affect each other.

- God is said to be Son. In an echo of the explorations of Father, the word Son immediately links to the family network of a male child who may have siblings or not, who can be in some sense defined by being the son of his parents although his parents may or may not be alive. The modifying association with Son from the liturgy is Saviour - another metaphor - (shared, unsurprisingly, with Jesus) and the other links are to Father, Jesus Christ and Lord which are also shared with God.

- NB God is said to be Holy Spirit but for psycholinguistics this is a technical term within the context, not a metaphor[38], and so not for examination here.

[38] The term 'Holy Spirit' is not taken from another context and applied to God - God is not said to be Holy Spirit in the way that God is said to be Father or Lord and so the term metaphor is not applicable.

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- God is said to be King. The common use of this word gives us a man who is usually head of a royal family as well as the head of nation or state. In some literature the king carries a sense of supreme authority over the people he commands, has power over life and death for his subjects, might command his armies to go to war against other kings. In current politics kings tend to have a more ceremonial function but retain a sense of being respected, honoured and having influence over life at some level. In the liturgy the association with King is heaven and this is shared with God.

- God is linked with Jesus Christ but Jesus is a name of a human being and Christ is a title given as a technical term in the context and so this is not a metaphor for God.

The categorical assertions created by the use of the given metaphors fall into two areas: a male family member with authority (either directly or by representation) and power, who saves us and is occasionally spoke of as being loving; and a male ruler with authority and power who is holy, glorious, above us in heaven and gives us peace. The psycholinguistic evidence suggests reasons for the prevalence of the pictures (in which Wittgenstein might suggest that we have got 'stuck') - our processing of the words is quick and automatic and therefore easy to accept as 'the way it is'.

As noted above, the metaphors used for God within the liturgical context are all conventional. There is an argument for saying, at least in some communities that the metaphor 'Lord' is dying. The literal sense of lord has changed significantly and bears little resemblance to the term as it was understood within Hebrew Scriptures and the New Testament.

I acknowledged earlier that the metaphors for God are not of the 'God is a ....' structure and alongside the intensely conventional nature of the words within the context, they can be difficult to recognise as metaphors. Sometimes only the base is used because the target (God) is assumed. The opening sentence of Common Worship texts offers three bases but because they are theological terms of God as trinity their metaphorical nature is not easy to recognise. Lord is a ubiquitous term acting as a sign of fluidity among the words to and for the divine and so hiding the linguistic fact that it is a metaphor. Jesus Christ is called the 'only Son of God'; grammatically this functions as a description and within a psycholinguistic reading of the text could easily be mistaken for literal word use. In the third prayer of penitence we find God being modified or described by the adjective 'Almighty' and then the metaphor Father which is itself modified by the phrase 'our heavenly' and could be seen as one of the list of ways of referring to God. The fact that this is a metaphor

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has to be understood by wider knowledge rather than by grammatical structure. When Lord is used next to God it looks like a compound noun (such as Lord Mayor) but Lord is a base acting on the target God, just as the subsequently used King and Father are doing. Wondering about reversibility often shows the emphasis that is wanted. Within the context of the liturgy it would not be done to speak of 'God Lord', or of 'Almighty Father, our heavenly God', confirming that God is both the target for all the metaphors and also the central word for the semantic network. I recognise that there are orders that could be reversed - 'Almighty God' could be 'God Almighty', and still be acceptable within the form of life of the liturgy and 'Jesus Christ our Lord' is used within the text as is 'our Lord Jesus Christ'.

## Emotional Valence

The final insight that I would like to offer from psycholinguistics is the work on the emotional valence of words - the reactions given to words. It has been shown that emotion is tied in to our word processing, that "Conscious perception depends on both cognition and affect"[39]. This has received more attention recently and evidence shows that words from politics and religion are among the sets of words receiving the widest variety of reactions[40]. It is suggested that this is may be due to the "inherent controversy" of these topics[41]. Statistical information demonstrates the diversity whereas words for buildings or animals or sports gain more uniformity. While there will be community differences, as shown by Son et al[42] there will also be differences that depend on personal experiences. Kuperman et al[43] found that the more personally negative a word, the greater a reaction there will be in the language processing system, bringing the word to consciousness for examination.

[39] S Kitayama 'Interaction Between Affect and Cognition in Word Perception' *Journal of Personality and Social Psychology* 58: 2 (1990) pp 209-217 p210.

[40] I Kloumann, C Danforth, K Harris, C Bliss, P Dodds 'Positivity of the English Language' *Open Access Article PLos ONE* 7: 1 (2012) pp1 - 7; A Warriner, V Kuperman, M Brysbaert 'Norms of valence, arousal and dominance for 13,915 English lemmas'*Behaviour Research Methods* 45: 4 (2013) pp1191-1207.

[41] I Kloumann et al 2012 p5.

[42] J-S Son, V Do, K-O Kim, T Suwonsichon, D Valentin 'Understanding the effect of culture on food representations using word associations: The case of "rice" and "good rice"'*Food Quality and Preference* 31 (2014) pp38-48.

[43] V Kuperman, Z Estes, M Brysbaert, A Warriner 'Emotion and Language: Valence and Arousal Affect Word Recognition' *Journal of Experimental Psychology: General* Advance online publication (2014) pp1-17.

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If words in religion elicit a wide variety of emotional reactions it can be expected that words in the liturgy will have a range of emotions attached to them by the different people attending and may even form part of the reason for some people not attending.

## Conclusion

In reflecting on my faith as I live out my life I have become intrigued by the relationships between belief and action. As part of this well rehearsed question I have been looking at the one we call divine and the words used (what else do we have) to express belief in the divine. More specifically still I have considered the words used to and for the divine in prayer/worship. In order to consider these I have taken the public worship of the Church of England as exemplified in the communion liturgies. One of the sets of tools I have used for examining these words are taken from the discipline of psycholinguistics. Through this article I have shown ways in which tools from psycholinguistics lay out and so illuminate the words we use. The principle stated in the title parallels prayer and belief. The formulation, probably of Prosper of Aquitaine, *lex supplicandi legem statuat credendi* highlights the formative, establishing nature of prayer for belief. Whether this is the direction of the dynamic we accept or whether we prefer, with Pope Pius XII[44], to say that doctrine forms prayer, we are faced with a question about our belief. A significant insight from psycholinguistics is that the words used in prayer will create/maintain belief - simply through the mechanisms of language processing. A psycholinguistic reading of the communion texts gives us an almighty, male, patriarchal God who demands obedience.

Is this the God we want?

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[44] Pope Pius XII *Mediator Dei* http://w2.vatican.va/content/piusxii/en/encyclicals/documents/hf_pxii_enc_20111947_mediator-dei.html Accessed 23.4.15.

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