Polarized Discourses of *Abortion* in English: A Corpus-based Study of Semantic Prosody and Discursive Salience

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Amidst ongoing global debate about reproductive rights, questions have emerged about the role of language in reinforcing stigma around termination. Amongst some 'pro-choice' groups, the use of pro-life is discouraged, and anti-abortion is recommended. In UK official documents, termination of pregnancy is generally used, and *abortion* is avoided. Lack of empirical research focused on lexis means it is difficult to draw conclusions about the role language plays in this polarized debate, however. This paper, therefore, explores whether the stigma associated with abortion may reflect negative semantic prosody. Synthesizing quantitative corpus linguistic methods and qualitative discourse analysis, it presents findings that indicate that abortion has unfavourable semantic prosody in a corpus of contemporary internet English. These findings are considered in relation to discursive salience, offering a theoretical framework and operationalization of this theory. Through this lens, the paper considers whether the discursive salience of extreme anti-abortion discourses may strengthen the negative semantic prosody of abortion. It, therefore, combines a contribution to theory around semantic prosody with a caution to those using abortion whilst unaware of its possibly unfavourable semantic prosody.

1. INTRODUCTION

Linguistic questions arose in the aftermath of the US Supreme Court's (SCOTUS) 2022 ruling that access to TOP is not a constitutional right. In the UK, a BBC *Today* programme presenter, for example, seemed to overlook the BBC News' style guide's suggestion to use *anti-abortion* to refer to those opposing the right to terminate. Amol Rajan instead used *pro-life* in segments considering SCOTUS' judgment (Bryant 2022). In the ensuing outcry, *pro-life* was implicated as a 'partisan' (Bryant 2022) linguistic variant in contemporary Anglophone societies. However, a BBC spokesperson was quoted by the *Guardian* newspaper as saying that although *anti-abortion* is 'the preferred term ... use of pro-life ... is not against the BBC's editorial guidelines' (sic, Bryant 2022). Other news outlets, such as the *Guardian* and *Associated Press*, also

encourage the use of *anti-abortion* over *pro-life*, and *pro-choice* over *pro-abortion* (Alexander 2017; Glenza 2019). Highlighting the importance of language in this context, the *Guardian*'s US editor-in-chief John Mulholland stated in 2019 that 'the language around [reproductive rights] is often motivated by politics, not science' (Glenza 2019).

Despite such strong views being aired, there remains a lack of empirical research exploring the role of language in impacting attitudes to reproductive rights. This paper is intended to begin to redress this by exploring whether stigma associated with *abortion* reflects negative semantic prosody. In Section 2, language usage on both sides of this debate in recent history will be outlined, before the methodologies and data used are delineated in Section 3. The paper's findings will be laid out in Section 4, which asks whether the discursive salience of extreme anti-abortion discourses may strengthen the negative semantic prosody of *abortion*.

2. LITERATURE REVIEW

2.1 Language and the reproductive rights debate

Despite apparently widespread belief that language in this domain can have political consequences, outlined in Section 1, there is hardly any linguistic, perceptual, or attitudinal research to support claims that *pro-life* is 'partisan' (Bryant 2022). Criticism of Rajan raises interesting questions, however, as to the role language plays in the public sphere, especially in the context of such polarizing debates.

The roots of 'right to life' discourses in the 'pro-life movement' are discussed by historian Daniel K. Williams (2016) in a monograph examining the history of anti-abortion campaigning in the USA between the 1930s and 1970s (xiii). Here, Williams (2016) charts the development of 'rights-based language' (114) on both sides of the debate. From a legal perspective, Mary Ziegler (2009) likewise examines the 'framing' of reproductive rights in the campaign for the 'right to choose'. For both Williams (2016) and Ziegler (2009), however, language is an ancillary consideration rather than a focus.

Within the medical community, debates about language have been ongoing for several decades. In 1985, a letter to *The Lancet* urged medical professionals to abandon *abortion* in relation to miscarriage, due to its distressing connotations (Beard *et al.* 1985). Recent corpus linguistic research (Malory 2022) has shown this letter to have catalysed the lexical shift from *abortion* to *miscarriage* in clinical contexts. In relation to pregnancy termination, language has likewise proven contentious for medical professionals. In 2018, for example, a debate considering such language was published in the *British Journal of Obstetrics and Gynaecology* (*BJOG*). The central question here was whether *abortion* or *termination of pregnancy* (*TOP*) should be used by healthcare professionals in patient interaction, articles, guidelines, and other documents (Kavanagh and Aiken

2018). Kavanagh and Aiken (2018) argue for the use of *abortion* and avoidance of *TOP*. They note that 'prominent reproductive journals compel authors to use [*TOP*]' and that this variant is 'reflected in official terminology used for abortion services', such as the UK's official 'Termination of pregnancy guideline', as of 2017 (Kavanagh and Aiken 2018: 1065). In arguing for the use of *abortion*, Kavanagh and Aiken (2018) focus on the respective prevalence of the linguistic variants in relevant scientific literature, their perceived merits in terms of specificity and accuracy, and their familiarity in the public sphere (1065).

In relation to scientific literature, Kavanagh and Aiken (2018) cite an 'informal poll' of their colleagues, as well as style guidance of *The British Medical Journal, The Lancet,* and *The New England Journal of Medicine*; all of which still favoured *abortion* (1065). They argue that the '[r]equired use of [*TOP*] reduces visibility and citation potential' (1065). In semantic terms, they contend that 'a live birth could also accurately be described as a TOP' (Kavanagh and Aiken 2018: 1065). Finally, they cite a study of Scottish TOP providers (Kavanagh *et al.* 2018) which indicated that *abortion* tended to be used more frequently amongst patients, and an analysis of media reports (Purcell *et al.* 2014) which indicated that *abortion* 'is most familiar to the public' (Kavanagh and Aiken 2018: 1065).

Kavanagh and Aiken (2018) also stress their belief that the euphemistic nature of *TOP* perpetuates stigma; arguing that 'euphemism ... implies there is a reason for shame' (1065). Citing a study indicating that almost twice as many British women find the word *abortion* distressing than *TOP*, Kavanagh and Aiken (2018) argue that 'a better approach would be to engage with and address this source of distress' (1065).

Arguing in the same *BJOG* debate for the continuation of a move away from *abortion* in the health sector, Steer (2018) highlights the diachronic change in the meaning of *abortion* in recent decades. As Malory (2022) shows, and as suspected previously, the shift away from the clinical use of *abortion* in the context of pregnancy loss was catalysed by Beard *et al.* (1985), in their letter to *The Lancet*. As Steer notes, prior to the legalization of termination, 'spontaneous and induced abortion ... were difficult to differentiate because women who procured an illegal termination of pregnancy (TOP) were understandably reluctant to disclose it' (2018: 1066). Steer (2018) thus argues that *abortion* continues to risk 'confusion of meaning', whereas *TOP* 'cannot [..] be confused with a spontaneous occurrence' (1066). Citing highly evaluative dictionary definitions for *abortion*, Steer (2018) also contends that 'abortion' has 'negative associations', and overtones of illegality from its historical associations with 'backstreet' TOP(1066).

The lack of empirical attitudinal linguistic data to inform this debate offers striking justification for interdisciplinary collaboration in health communication, with input from linguistic researchers and a basis in rigorous, methodologically sound empirical research. This would reduce reliance on small-scale anecdotal data, such as Kavanagh and Aiken's (2018) 'informal poll' of their colleagues (1065). It would also reduce the risk of linguistic

conclusions lacking empirical basis (and specialist expertise) being used to bolster arguments on either side of such important debates. On both sides of the 2018 BJOG debate, linguistic observations are used in this way; Kavanagh and Aiken thus conclude that one reason for retaining the older variant abortion is its familiarity (2018: 1065), whilst Steer (2018) uses dictionary entries to argue that abortion has 'negative connotations' (1066). Whilst both statements may be true, neither provides an informed or considered justification for endorsing a variant in clinical contexts. Kayanagh and Aiken's (2018) argument relates only to frequency, overlooking more nuanced considerations such as semantic prosody (c.f. Louw 1993; Stubbs 1996) or salience (Rácz 2013; Jaeger and Weatherholtz 2016; Zarcone et al. 2016). They argue, perhaps somewhat idealistically, that euphemism should not be needed, and that societal attitudes should instead be changed (1066). They fail, however, to consider whether this is a realistic prospect. In this regard, the polarized nature of the debate on reproductive rights, and entrenched attitudes, both social and linguistic, must be considered.

On the other side of the *BJOG* debate, Steer (2018) extrapolates connotation from dictionary entries, which is likely to be an unreliable linguistic methodology due to its overreliance on the attitudes of lexicographers. Both sides of the 2018 *BJOG* debate, therefore, highlight the need for research that draws upon linguistic expertise and tried and tested linguistic methodologies to explore the discourses around *abortion*, as this paper aims to do.

2.2 Semantic prosody

Semantic prosody (also known as *pragmatic, discourse,* or *evaluative* prosody; Partington 2015) has been described as the 'consistent aura of meaning with which a form is imbued by its collocates' (Louw 1993: 157). It is the affective meaning a given item derives from its typical collocates.

The concept of prosody was first suggested by Firth (1957) as a phonological phenomenon and later extended to vocabulary. Here, according to Hunston, it has come to describe meaning that 'belongs to a unit larger than the word' (Hunston 2007: 250), and the examination of such meaning using corpus linguistic approaches. Partington thus suggests that lexical items 'carry with them a set of suggestions on how to use them, [and] how they normally interact with other items' (2015: 292). As Hunt and Brookes note, 'corpus-based [approaches] offer a systematic and transparent method for [identifying] discourses instantiated across corpora in the form of collocations and semantic prosodies' (2020: 87).

Whilst corpus approaches have been instrumental in advancing the understanding of semantic prosody, there remain unanswered questions regarding the mechanisms through which it arises. Some have implicated a 'quasi-statistical' (Partington 2015: 293) accumulation of resonances, resulting from the frequency of exposure to a lexical item in a particular context. This lends itself to quantitative exploration, since the more frequent association of a given item

with negative discourses may suggest predominantly unfavourable semantic prosody. Matters of frequency and Hoey's (2005) theory of lexical priming, with its focus on accumulative contact (8) in the development of 'psychological preference' (24) have, therefore, been central to developing a body of corpus-assisted discourse-focused research on semantic prosody.

The present study will use frequency to explore the semantic prosody of abortion in a multi-genre corpus of Internet English. As will be outlined below, collocates of abortion will be identified, and concordance lines analysed, to facilitate the coding of collocates' 'evaluative polarity' (Partington 2015: 293) in relation to reproductive rights. It has been suggested (cf. Partington 2004) that 'evaluative polarity' explains why semantic prosody can be used to distinguish near-synonyms like abortion and termination.

As established above, debate about the use of language to discuss reproductive rights has been ongoing for decades, with minimal input from those with linguistic expertise and methodological wherewithal to explore discourses and language attitudes at the corpus level. In the aftermath of the SCOTUS ruling that there is no constitutional right to terminate pregnancy, questions have also arisen as to the impact that lexical selection in other paradigms has on the discussion. The purpose of this paper is to begin to explore these issues, with a focus on abortion, using methodological protocols from corpus-based discourse studies (CADS; c.f. Ancarno 2020), to explore semantic prosodies and salience of relevant lexis. Section 3 provides a brief outline of the methodologies and corpus used before the study's findings are reported in Section 4.

3 DATA AND METHODS

3.1 Corpus

The study reported here used English Web 2020 (SketchEngine 2020), a corpus of texts from the internet and accessed via SketchEngine. Part of the TenTen family of corpora, it was constructed using technology designed to exclude superfluous internet data, such as duplicated content and spam, and retain only 'linguistically valuable web content'. TenTen corpora are subdivided by genre and topic, and importantly for this study, which explores semantic prosodies across genres, they include both texts from mainstream genres, such as news websites, and non-mainstream genres, such as blogs.

The version of English Web 2020 used here contained 43 million tokens (36 million words) collected between 2019 and 2021. Sub-corpora are available, but for this study, the entire corpus was used.

3.2 Methods

As was outlined in Section 2.2, the starting point for the analysis reported in Section 4 is the examination of discourses associated with abortion in English Web 2020. Collocates of abortion were thus identified, and concordance lines analysed, to facilitate the coding of collocates according to their tendency to occur in partisan discourses pertaining to reproductive rights.

Collocates were generated using Wordsketch in Sketch Engine. This uses log-Dice score (Kilgarriff *et al.* 2014) to calculate the strength with which a node word and its collocate co-occur. A higher score indicates strong collocation, and a low score, weak collocation. In this instance, *abortion*'s 50 highest-scoring collocates were coded as outlined in Section 3.2.1. Two-hundred randomly sampled concordance lines for each of these 50 collocates were then examined, and each collocate categorized according to its predominant semantic prosody, as outlined in Section 3.2.1.

3.2.1 *Coding of collocates* Coding collocates draw on a tradition of categorizing lexical items according to their semantic prosody. Stubbs (1996), for example, argues that semantic prosody can be predominantly positive, negative, or neutral. For Partington, the general tenor of collocates and examination of concordances allows words to be categorized as having 'favourable', 'unfavourable', or 'neutral' prosodies (1998). Some, including Partington (1998), regard these categories as gradable, with words potentially having more or less favourable prosody, depending on how frequently it occurs in different contexts. For Hunston (2007), prosodies arising from consistent collocation can convey more granularity than just un/favourable attitudes. The concept of 'mixed prosody' (Wang 2016: 109) has also been introduced in developing this notion that node words can have positive and negative semantic prosodies in different contexts, and hence, to borrow Louw's (1993) framing, form a mixed semantic 'aura'.

The positive and negative categories used in Section 4 correspond roughly to Partington's (1998) categorization. They reflect attitudinal positioning in relation to termination, determined through a close reading of 200 randomly sampled concordance lines. Where 90% of sampled concordance lines for a collocate were categorized as favourable or unfavourable, that collocate was categorized accordingly.

Going beyond the favourable/unfavourable binary, the categorizations used here reflect the ideological nature of collocation which, according to Baker, indicates that 'two concepts have been linked in the minds of people and have been used again and again' (Baker 2008: 114). Where collocates and concordance lines always or predominantly (>90%) indicate favourable attitudes to reproductive rights (e.g. *legal*, *access*, *right*) are thus labelled as 'favourable'. Conversely, where collocates and concordance lines predominantly indicate negative attitudes, they are labelled as 'unfavourable' (e.g. *procure*, *murder*, *botched*).

To account for marginal cases where fewer than 90% of concordance lines exhibit clear favourable or unfavourable semantic prosody, the analysis also distinguishes between neutral and mixed prosodies. Following Partington (1998), collocates will be categorized as having 'neutral prosodies' where concordance line examination indicates neutrality. In this paper, this means not indicating either favourable or unfavourable attitudinal stances (e.g. spontaneous, pregnancy,

miscarriage). Following Wang (2020), where concordance lines indicate that *abortion* is being used in *both* favourable and unfavourable (as defined above) discursive contexts, collocates will be categorized as having mixed prosodies (e.g. *induce*, *unsafe*, *perform*).

3.2.2 Text-type and semantic transfer Given English Web 2020's diverse content, it is important to highlight disagreement as to the intertextual functionality of semantic prosody. Louw (1993) argues that semantic prosody results from a word's usual contexts, which 'imbue' it with additional meaning over time. Labelled a 'causative' understanding of semantic prosody (McEnery and Hardie 2012: 139), this has been considered problematic since it could be argued that a word's 'appearance in typically positive or typically negative contexts is as a result of rather than the cause of its semantic prosody' (139). Hunston (2007), however, argues convincingly that whilst 'a word or phrase [cannot] carry its meaning across from one text to another', semantic prosody constitutes the 'resonances of intertextuality' (266) by which 'additional attitudinal meaning [is] derived' (250). The foremost opponent of this perspective is Whitsitt (2005, 2013), who takes issue with Hunston's claim that *cause* has 'negative resonances' (2013: 108). Whitsitt argues '[t]here is simply no way that one could take cause as such, used as a node word in a concordance search, and reach the conclusion that its "resonances of intertextuality" were negative' (2013: 108).

Whilst such theoretical debates must be acknowledged, we may distinguish between the potential for 'semantic transfer' (2013: 108) of a frequent verb like *cause* and that of a highly emotive, contested noun like *abortion*. Indeed, in Section 1 it was established that many have argued that words such as *abortion* and *pro-life* have evaluative connotations that go beyond their denotative meaning (Kavanagh and Aiken 2018; Steer 2018; Bryant 2022). It, therefore, seems important to consider this issue from the perspective of semantic prosody, asking whether resonances of intertextuality play a role in public discourse around reproductive rights, given the extremity of some discourses. Thus, in Section 4.2, the concept of discursive salience in deriving additional attitudinal meaning will be operationalized. Firstly, however, in Section 4.1, the collocates of *abortion* and their sampled concordance lines will be explored to determine whether conclusions can be drawn as to the semantic prosody of *abortion*.

4 DISCOURSES OF ABORTION IN INTERNET ENGLISH

4.1 Unfavourable semantic prosody?

Both sides of the *BJOG* debate (2018) take for granted what they call the 'stigma' (1065) and 'negative connotations' (1066) of the lexical variant *abortion*. Kavanagh and Aiken (2018), however, offer justification for retaining *abortion* as the mainstream clinical variant, based on its more widespread use. The advantages of transparency and clarity accompanying a familiar

variant may conceivably be nullified, however, if lexis used to refer favourably to access to termination carries negative prosody resulting from its resonances of intertextuality. In the context of indecision as to which linguistic variants should be used in domains such as healthcare and journalism, therefore, this paper will systematically examine collocates of *abortion* in a large multi-genre corpus of contemporary international English. By analysing the concordance lines for these collocates, evidence-based conclusions can begin to be drawn as to the discursive contexts and generic categories in which these items tend to occur, and hence the semantic prosody they may carry at a corpus level.

One highly relevant characteristic of semantic prosody to this study is that it can be 'hidden, subliminal, [or] "unconscious"' (Stewart 2013: 30). Thus, according to Hunston and Thompson (2003), semantic prosody can be 'exploited by speakers to express evaluative meaning covertly' (38), and according to Partington (2004), it can be 'less evident to the naked eye' than connotation (131). One benefit of using corpus methods is that patterns across large corpora can be distilled using collocation and concordance. The flip side of the potential for speakers to exploit semantic prosody covertly, or for it to be an unintentional by-product of attitudinal stance for a language user, however, is that for some the semantic prosody will simply not be apparent. Tognini-Bonelli (2001) cites Louw's (1993) argument that semantic prosody can reveal attitudes even when the speaker tries to hide them, arguing that 'this lack of control suggests that semantic prosodies operate mainly subliminally and are not readily available to the speaker[...] at the conscious level' (112). Conceptions of semantic prosody as 'inaccessible to [...]conscious introspection' (McEnery et al. 2010: 84) raise questions as to whether semantic prosody only reveals 'underlying attitude or evaluation' (Munday 2013: 170), or can also be an unintended by-product of lexical selection. If semantic prosody can be a covert or subliminal, then how can we know that it is not apparent to some and below the level of conscious awareness for others, depending on the level of their exposure to different discourses? Kavanagh and Aiken's (2018) argument for continued use of abortion in medical contexts, due to its more widespread usage and familiarity, raises this question.

Explorations of levels of semantic prosody awareness have previously been confined to considerations of learner proficiency. Such studies have concluded that '[s]ensitivity to and awareness of such associations is an indicator of the learners' depth of vocabulary knowledge' (Dushku and Paek 2021). However, native speakers will not share equal levels of exposure to discourses with different semantic prosodies, especially in the context of highly polarized debates such as the one under discussion here. Questions must, therefore, be asked about the implications of those with avowedly favourable attitudes towards access to termination, like Kavanagh and Aiken (2018), advocating the use of lexis that may have very different semantic prosodies in different cultural spheres, and which may conceivably carry intertextual resonances between spheres.

Kavanagh and Aiken (2018) indirectly acknowledge the potentially negative semantic prosody of *abortion*; recognizing its similarity to other 'stigmatised terms' such as *fat* and *femme*. Arguing that *TOP* has 'the potential to reinforce stigma' (1065), Kavanagh and Aiken's (2018) advocate a reclamation of *abortion* that may overlook its semantic prosody in general discourse. Whilst true that in the context of other debates, activists have sought to 'reclaim' words and rid them of their negative semantic prosody, these must be considered on an individual basis, since the intra- and extra-linguistic context surrounding each one will vary significantly.

Brief consideration of those words that Kavanagh and Aiken (2018) provide as instances of successful reclamation, fat and femme, reveals their uniqueness. For fat, in considering the success or otherwise of attempts to 'reclaim the term fat and imbue it with positive rather than derogatory connotations' (Harjunen 2016: 21), its polysemy is a factor that must be considered. In English Web 2020, fat is attested not only as it functions adjectivally to denote the state of being fat (in which sense it is sometimes used pejoratively) but also the state of *substance* of fat; both as it pertains to deposition in a body and the chemical compound. In both senses, fat has been used neutrally for centuries (OED). Other uses of fat are likewise attested, including favourable idiomatic ones such as fat of the land and fat bank balance, which may play a role in laying foundations for pejorative fat to be neutralized. It has also been noted that fat is preferred by fat activists because obese pathologizes fatness, contributing to 'construction of fatness as a disease' (Harjunen 2016: 21). Its polysemy, use in additional neutral and favourable contexts, and the existence of another more unfavourable variant, therefore, distinguish fat from abortion. There are likewise differences between femme and abortion. Firstly, femme as an adjective remains a relatively esoteric lexical item, which for example does not occur at all in English Web 2020. Moreover, it too is polysemous; many instances either in French quotation or as a borrowing, as in femme fatale, are attested in English Web 2020.

This brief discussion of *fat* and *femme* highlights the need for words to be considered individually in assessing the likelihood that they can be successfully reclaimed as neutral descriptors. Whilst *abortion* may be a neutral signifier for medical professionals like Kavanagh and Aiken (2018), the following analysis of its collocational profile in English Web 2020 indicates that this is not the case in other cultural spheres. In Supplementary Table A.1 shows the 50 most frequent collocates of *abortion*, ranked by *logDice* score.

In Table 1 collocates from Supplementary Table A.1 are categorized as occurring mostly in the context of discourses that display a favourable or unfavourable attitude towards access to termination, or occur in neutral or mixed discourses. These were categorized according to qualitative examination of 200 randomly sampled 200 concordance lines for each collocate.

As Figure 1 shows, 52% (n = 26) of the top 50 statistical collocates for *abortion* by logDice score were found to occur predominantly in contexts displaying unfavourable attitudes towards access to termination. Twenty-six percent

Favourable Unfavourable Neutral Mixed outlaw clinic spontaneous induce criminalize legalize miscarriage han legal contraception pregnancy unsafe vartial-birth riaht stance vill late-term stillbirth sterilization contraceptive euthanasia provider access homosexuality perform elective illegal sex-selective restriction infanticide restrict legalization undergo opposition marriage trimester opposed oppose botched surgical partial

procure prohibit legalise mill debate advocate divorce demand murder

Table 1: Collocates of abortion, categorized by stance on access to TOP.

(n=13) of the top 50 collocates occur in the next most frequent category, that of mixed discourses, where collocates occur in both favourable and unfavourable contexts in relation to access to TOP. Only 12% (n=6) of collocates occur predominantly in favourable contexts in the samples examined, and only 10% (n=5) in neutral contexts. Table 1 lists collocates of *abortion* assigned to each of these categories.

This sampling indicates that *abortion* is most often used in contexts expressing unambiguously unfavourable attitudes towards access to termination, and is used much more rarely in contexts expressing unambiguously favourable attitudes. In terms of Hunston's theory of 'resonances of intertextuality' (2007: 266), this is a potentially significant finding. If we were to accept that semantic prosody functions intertextually to provide 'additional attitudinal meaning' (Hunston 2007: 250), then the fact that *abortion* typically occurs in contexts

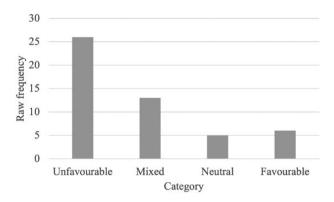


Figure 1. Collocates of abortion in English Web 2020, categorized by stance on access to termination of pregnancy.

of unfavourable discourses may mean that it conveys unfavourable attitudinal meaning even where it occurs in neutral or favourable contexts.

The highly emotive, evaluative, and even extreme nature of the discourses in which *abortion* appears in such unfavourable concordance lines may also strengthen this hypothesized unfavourable semantic prosody. Examples (1), (2), and (3) demonstrate the kinds of discourses accompanying *abortion* in such contexts. Importanly, however, (2) also highlights a tendency for such unfavourable discourses to arise in fewer mainstream genres within the corpus, such as that of the personal blog. In these and all such subsequent examples, both *abortion* as a node word and its given collocate are highlighted in bold.

- (1) These reports show how the killing of children by **abortion contraception** and sterilization lifestyles impacts on the environment (www.make-abortionhistory.org)
- (2) ... any type of murder, genocide, **abortion**, **euthanasia** or willful self-destruction (www.blogspot.com)
- (3) 'As a Christian, there's no grey area: **abortion** is **murder**', said a local priest. (www.makeeverywomancount.org)

All three examples above exhibit discourses unfavourable towards access to termination. Notably, however, not all are found in the context of wider unfavourable discourses. In (1), lifestyles involving TOP, use of contraception, and sterilization appear to be categorized as the 'killing of children'. In both (2) and (3), TOPis equated with murder. Though (1) and (2) are found in a wider context of unfavourable discourses, (3) is found in the context of favourable discourses, in which an individual professing an unfavourable attitude has been quoted. This is notable, highlighting the way unfavourable discourses can be embedded within favourable ones. The implications of this, in terms of salience, will be explored in Section 4.2.

Many concordance lines for collocates categorized as unfavourable associated TOPwith other sites of cultural and ethical debate about rights or morality. This

pattern was strongly associated with non-mainstream media, as in examples (4) and (5), as well as (2) above:

- (4) Feminism, rebellion, fornication, **abortion**, **homosexuality** all go together (www.jesus-is-savior.com)
- (5) The American church has adultery, fornication, sodomy, **divorce** and **abortion** (www.ubml.org)

The apparently pejorative grouping of *abortion* with concepts such as feminism, homosexuality, and divorce suggests, unsurprisingly, that termination is one issue amongst many that prompt disagreements between those with conservative and progressive, or right- and left-wing, political beliefs. This reflects the fact that some collocates categorized as occurring solely in discourses unfavourable to termination in the sample are strongly associated with campaigners who believe that access to termination should be stringently controlled or ceased. Reflecting the multi-genre corpus used, these tend to cluster, though by no means exclusively, in non-mainstream media. *Partial-birth, infanticide,* and *late-term* fall into this category. Associated with the 'right-to-life' campaign strategy of the anti-abortion movement (Williams 2016), these positions the foetus as a person with human rights equal to those of the pregnant individual.

Examination of concordance lines from mainstream media genres, however, revealed other unfavourable but less extreme anti-abortion collocates. For example, clinic and mill frame providers of termination in industrial terms, figuring them as capitalizing on the availability of the procedure. Mill also implies efficiency and frequency, constructing termination as a regular, routine, occurrence. Relatedly, mainstream discourses in which abortion co-occurs with elective, demand, and sex-selective position those accessing termination as consumers, framing the procedure as a luxury rather than necessity. Likewise, nominal advocate collocates with abortion solely in discourses unfavourable to the termination. It co-occurs only occasionally with abortion rights, but more often does so simply with abortion. This positions the advocates as pro-abortion, rather than as pro-access to abortion. As outlined in Section 2, Williams (2016) charts the development of 'rights-based language' (114) on both sides of the debate, and notes that both factions attempt to undermine the rights that the other asserts. The erasure of *rights* in many of the hits for *abortion [rights] advocate* reflects this trend.

Given that previous research (Williams 2016) highlights the prominence of rights-based language within this debate in the USA, it is perhaps unsurprising that discourses of rights are also in evidence in the concordance lines listed in Table 1. Williams (2016) emphasizes, however, that such language appears on both sides of the debate, and it is, therefore, notable that *rights* is among those collocates categorized as favourable, rather than unfavourable or even mixed. Contrary to Williams' (2016) contentions, concordance analysis showed that *rights* occurred predominantly in discourses framing access to TOPin terms of the right to terminate, as opposed to the rights of a foetus. This framing is mostly

achieved in the corpus, which predates the 2022 SCOTUS ruling, in relation to legal frameworks permitting termination. Thus, *outlaw*, *criminalize*, and *legal* occur mostly in the context of addressing challenges to its legality. *Right* itself appears, as does *access*, in the context of positioning reproductive rights debates in relation to the right to terminate.

Collocates categorized as having neutral semantic prosody in the concordance lines examined mostly related to so-called spontaneous abortion. As outlined above, *abortion* was the predominant lexical variant used in British medical English until the 1980s (Malory 2022). In North America, there have been calls as recently as 2011 for *abortion* not to be used in this context anymore (Silver *et al.* 2011), but the corpus data indicate that these have met with limited success internationally. Thus, collocates categorized as having neutral semantic prosody in the concordance lines were sometimes found to occur *abortion* was being used to refer to intrauterine death before a threshold for categorization as stillbirth. In such instances, *abortion* usually co-occurred with the modifier *spontaneous*, to distinguish *spontaneous abortion* from purposeful termination, or with the coordinating conjunction *and*, in phrases such as *abortion and stillbirth*. Other 'neutral' collocates clustered in healthcare information, where *miscarriage* and *pregnancy* were discussed alongside *abortion*, in the sense of termination, in non-partisan terms.

Those collocates categorized as 'mixed' in Table 1 were found in discourses expressing unfavourable *and* favourable attitudes towards termination. These appeared in strongly partisan discourses on both sides of the reproductive rights debate. Within the sampled concordance lines for *pill*, for example, favourable discourses, as in (6), and unfavourable discourses, as in (7), were observed:

- (6) But it is having tragic consequences for women in Ireland as those unable to access **abortion pills** are left without access to abortion (www.wsm. ie).
- (7) One little-known fact about the **abortion pill**, formerly called RU-486, is that it has ties to the manufacturer of the deadly gas Zyklon-B, used by the Nazis during the Holocaust (www.einnews.com)

In (6), from the news section of a left-wing political website, the perceived consequence of inability to access *abortion pills* is being highlighted, whereas in (7), from a mainstream press release distribution agency, the *abortion pill* is associated with the Holocaust. As with explicit references to genocide and murder in (2) and (3) above, (7) positions TOP in relation to atrocities. Ultimately, of course, this reinforces the central message of anti-abortion discourses, that of foetal 'right to life' (Williams 2016), by establishing some degree of parity between the deaths of those killed by the Nazis and the foetuses terminated by the 'abortion pill'.

Examination of concordance lines for the 50 collocates of *abortion* with the highest logDice scores, therefore, indicates that it is used predominantly in the context of discourses unfavourable in their attitude to termination. Indeed, more of these collocates were categorized as unfavourable than favourable,

neutral, and mixed combined. This suggests that *abortion* very often creates units of meaning unfavourable towards access to TOPin the multi-genre corpus EnTenTen20. This tendency is even more apparent when only collocates which modify *abortion* are considered. Examining such modifiers with a span of only 1 word on either side allows us to consider collocates that appear only in the first position to the left (or 'L1' position), premodifiers, or right ('R1' position), postmodifiers, of the node word, *abortion*. Hence, we can consider collocates which directly modify the node word, and may, therefore, be some of the most likely to form units of meaning.

Supplementary Table A.2 lists the top 50 modifiers of *abortion* by logDice score, whilst Figure 2 shows these collocates categorized by their favourable, unfavourable, and mixed and neutral discourses relating to TOP.

As in Figure 1, around half (n = 25) of the top 50 collocates in Figure 2 were categorized as unfavourable, following examination of random samples of 200 concordance lines for each collocate. Table 2 exhibits some degree of overlap between those collocates categorized as unfavourable here and assigned to the same category in Table 1.

In the list of modifiers shown in Table 2, however, we see greater emphasis means of terminating pregnancy, with *suction* and *dismemberment* appearing solely in unfavourable discourses (often, though not always, in non-mainstream media), and *aspiration* and *surgical* occurring in the context of mixed favourable and unfavourable discourses. The phrase *dismemberment abortion* is used in anti-abortion discourse as a means of referring to the surgical procedure Dilation and Evacuation, or D&E, usually performed after the first trimester. By contrast, *therapeutic* and *medication* appear in the left-hand column of Table 2, due to their occurrence in favourable discourses framing *abortion* as a healthcare issue.

Words relating to the effectiveness and safety of termination also appear often in the polarized discursive contexts, in both mainstream and non-mainstream

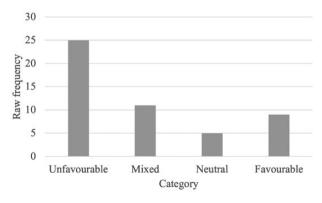


Figure 2. Modifying collocates of abortion in English Web 2020, categorized by stance on access to termination of pregnancy.

genres within EnTenTen20. Failed, attempted, and botched appear only in unfavourable contexts, which imply that termination procedures are unreliable and risky. Discourses relating to safety were also in evidence in concordance lines for back-alley, alley, safe, and clandestine in favourable discourses, and unsafe, illegal, backstreet, and septic in mixed discourses. Favourable discourses typically raised safety concerns in contexts relating to the importance of access to a safe termination, and underground provision of termination in territories where this was not assured.

In Table 2, both funded and taxpayer-funded are also categorized as unfavourable. The sampled concordance lines for these collocates indicated that they were used exclusively to challenge a state's role in termination provision, and its potential to be a financial burden.

Finally, a collocate of particular interest in the unfavourable column of Table 2 is eugenic. Like sex-selective, which also appears in this category in Table 1, and

Table 2: Modifiers of abortion, categorized by stance on access to TOP.

Favourable	Unfavourable	Neutral	Mixed
medication	partial-birth (noun)	spontaneous	unsafe
back-alley	late-term (noun),	incomplete	trimester
self-induced	sex-selective	recurrent	illegal
therapeutic	elective	Dayglo	surgical
alley	botched	habitual	first-trimester
safe	late-term (adjective)		selective
clandestine	second-trimester,		ban
legal	forced		backstreet
anti	taxpayer-funded		septic
	third-trimester		coercive
	dismemberment		aspiration
	sex-selection		
	unrestricted		
	partial-birth (adjective)		
	eugenic		
	attempted		
	funded		
	repeat		
	term		
	post-viability		
	failed		
	pro		
	suction		
	after-birth		
	post-birth		

sex-selection, this has strong moral implications, indicating a danger of termination being used to weed out undesirable traits. It is hence found mostly within discourses that frame termination as immoral, often in religious terms and in relation to the 'right to life' (Williams 2016) discourses already mentioned.

Analysis of collocates of *abortion* and their concordance lines in English Web 2020 therefore provides evidence of a strongly polarized discursive land-scape, with *abortion* rarely used neutrally. This is, perhaps, unsurprising; even Kavanagh and Aiken (2018), in arguing passionately for the retention of *abortion* within healthcare, acknowledge its status as a stigmatized lexical variant. Given that *abortion* is so rarely used neutrally, and is more often engaged in political debate and recrimination, we may reasonably conclude on the basis of this alone that it may carry the 'resonances of intertextuality' which Hunston (2007: 166) writes of, and may convey 'additional attitudinal meaning' (250) as a result.

What the findings presented here also suggest, however, over and above the polarized discourses around *abortion*, is that it seems to be used predominantly in anti-abortion discourse; both mainstream and otherwise. It thus seems likely that abortion is subject to semantic prosody, whereby 'recurrent collocations constitute textual traces of discourses because they establish particular, partial representations of phenomena that are normalized through their constant articulation' (Hunt and Brookes 2020: 87). This raises questions as to what its semantic prosody might be, and what intertextual resonances abortion carries. even when used neutrally or in favourable discourses. Attitudinal evidence from Kavanagh and Aiken (2018) and Steer (2018), of course, indicates its semantic prosody to be unfavourable. Given the evidence presented above, showing that most of its top-ranking collocates tend to be used in unfavourable contexts, this seems likely. The examples of favourable and unfavourable discourses provided above, however, show that many discourses associated with unfavourable attitudes to termination are extreme and present in non-mainstream genres, by contrast with the much more muted and unexceptional tenor of favourable discourses. In Section 4.2, the role of salience in generating and reinforcing semantic prosody will, therefore, be considered.

4.2 The discursive salience of abortion

Section 4.1 examined collocates of *abortion* in English Web 2020, showing a strongly polarized discursive landscape. Here, *abortion* was rarely found neutrally, and was found predominantly in anti-abortion discourses; some of which were non-mainstream and featured extreme content. This suggests that *abortion* carries unfavourable semantic prosody, at least in some contexts.

Discourses associated with unfavourable attitudes to termination were thus found to be much more extreme than favourable ones. Hence, unfavourable attitudes were sometimes couched in extreme discourses invoking genocide, murder, and eugenics. By contrast, more muted discourses involving legislative and medical lexis were found in discourses favourable attitudes to access to

termination. This divergence highlights the importance of exploring salience when investigating semantic prosodies in such ideologically loaded contexts.

It stands to reason that extreme discourses associated with collocates categorized as unfavourable may be more salient, but the relationship of salience to semantic prosody has yet to be fully explored. In fact, the concept of salience has been called 'maddeningly under-defined' (Meyerhoff 2011: 71) in a sociolinguistic context. Likewise, in other sub-disciplines, including cognitive linguistics, language acquisition, and semantics, the meaning and role of *salience* have been said to remain 'unclear' (Boswijk and Coler 2020). Unsurprisingly, then, although the phrase 'salient discourses' is now fairly commonplace (c.f. McNamara 2019; Brüggemann and Rödder 2020; Goh *et al.* 2020), a theory of discursive salience remains poorly defined.

The concept of discursive salience can be considered akin to the theory of perceptual distinctiveness used in the aforementioned sub-disciplines, and it is therefore to this concept which we will turn in attempting to establish a theoretical framework for considering discursive salience. According to Rácz, the linguistic salience refers to the mechanisms by which 'variation becomes highlighted for language users' (2013: 152). Studies of salience in sociolinguistics usually focus on language variation and change, with salience a 'prerequisite [for a variable] being a social marker' (Rácz 2013: 38). There are obvious parallels between this concept and discursive salience, which might be considered the mechanism by which certain *discourses* are highlighted for language users, and likewise become social markers.

The tendency for extreme unfavourable discourses to surround *abortion* may, therefore, generate the social stigma to which Kavanagh and Aiken (2018) refer, and the 'negative connotations' which Steer (2018) detects. Indeed, stigma has been discussed explicitly in relation to perceptual salience, primarily in a sociolinguistic context. Kerswill and Williams (2002), for example, stress the importance of 'stigmatisation [as] ... a sign of salience' (90). As Rácz (2013) concludes, therefore, '[t]he salience of a social variable ... lies in its social indexation' (4). In terms of discursive salience, we might conclude that certain discourses and semantic prosodies become highlighted in this way.

The mechanisms by which such salience arises are usually considered in other linguistic sub-disciplines to arise from unexpectedness. This is perhaps especially true in cognitive linguistic literature on salience, where the concept is often defined primarily with reference to predictability, or expectedness. Thus, according to Schmid, 'what is salient greatly depends on what is expected in a given context' (2020: 224). This is referred to as the concept of 'surprisal' (e.g. Rácz 2013; Jaeger and Weatherholtz 2016; Zarcone *et al.* 2016), and can straightforwardly be transferred to discourses around *abortion*. Here, the additional attitudinal meaning of units of discourse could seem striking or notable, especially where extreme opinions are being professed. Schmid's (2020) emphasis on context-dependency is particularly relevant here. In overtly conservative contexts, such as www.jesus-is-savior.com in example (4) above, extreme discourses around *abortion* as immoral may be expected.

Where extremely unfavourable discourses around TOPoccur in mainstream media, or in favourable wider contexts, however, they are likely to be unexpected and may be salient due to surprisal. For example, (7), above, shows how extreme discourses such as those linking termination to genocide, can be found in the output of a mainstream news agency. Likewise, example (3) shows how such unfavourable discourses, in this case the message 'abortion is murder', can be introduced in media associated with favourable attitudes to termination access, via quotation.

It, therefore, seems that many of the collocates of *abortion* categorized as having anti-abortion semantic prosody are likely to be more striking and have more impact in terms of unexpectedness (Rácz 2013: 39) and surprisal (Zarcone *et al.* 2016). Stigmatization may then result when, in Baker's words, 'two concepts [become] linked in the minds of people' (Baker 2008: 114). Even when, as in (6), *abortion* is used in a favourable context, it may therefore carry overtones of disapproval, or a stronger aura of homicide, genocide, or other similarly unfavourable collocates from anti-abortion discourses.

Of course, as Kerswill and Williams (2002) note, salience 'is not shared across the community' (104). In acknowledging that *abortion* is a stigmatized lexical variant, Kavanagh and Aiken (2018) advocate its reclamation as neutral, and its retention. Their 'informal poll' of colleagues, who report mostly using *abortion*, highlights the stratification of its perceptual profile. Indeed, Tables 1 and 2 provide empirical evidence that *abortion* is sometimes used in a neutral way in contemporary English. However, the corpus data also reveal that the word typically appears in anti-abortion rhetoric, and much less so in the context of pro-choice rhetoric. They also show that neutral occurrences tend to refer to pregnancy loss, rather than termination. Although salience is not shared across the community, these findings suggest that *abortion* often carries negative semantic prosody having acquired extremely unfavourable attitudinal meaning.

5. CONCLUSIONS

This study's starting point was the observation of uncertainty in the public sphere about what lexis is most appropriate or neutral for discussing reproductive rights. It was noted that *pro-life* is considered partisan since it appears to pre-suppose the 'right to life' discursive strategy of opposing access to termination (Williams 2016). In several journalistic style guides, *anti-abortion* is the suggested alternative (Alexander 2017; Glenza 2019; Bryant 2022). However, *abortion* has also been considered a problematic variant, prompting a shift in British medical usage towards *TOP* (Kavanagh and Aiken 2018). The objective of this paper was, therefore, to explore discourses around *abortion* in contemporary internet English to ascertain whether empirical evidence could be found for the stigma presupposed by Kavanagh and Aiken (2018) and Steer (2018).

The focus of this research was the semantic prosody of *abortion*, and whether it could be found consistently unfavourable, as is suggested by (inter

alia) Kavanagh and Aiken (2018), Steer (2018), and Bryant (2022). Findings reported in Section 4.1 suggest that this may, indeed, be the case. Here, it was found that *abortion* appears mostly in highly polarized discourses, which predominantly reflect unfavourable attitudes towards access to termination. It was moreover noted that unfavourable attitudes towards termination are associated with extremity, as well as non-mainstream media. This raised questions as to its salience. In the absence of a theoretical framework for establishing discursive salience, Section 4.2 offered one. This Section showed that by borrowing the concepts of markedness and surprisal from salience research in other linguistic sub-disciplines, an explanation could be offered for the discursive salience of *abortion* as a stigmatized variant that may carry intertextual resonances of unfavourability, even in neutral and favourable contexts.

The conclusions reported above are preliminary and tentative since they are limited by the scope of the research. Whilst the findings suggest that semantic prosody and discursive salience may play a role in shaping perceptions of reproductive rights in Anglophone public spheres, further research is needed to corroborate this. Such research, both corpus-assisted and experimental, is now planned, in order to replicate this study in a more focused corpus of mainstream news media and to assess language users' attitudes to lexis such as abortion and termination, as Mikołajczak and Bilewicz (2015) did with foetus and child. Both approaches are intended to circumvent the limitations of a corpus-assisted approach using a multi-genre corpus; for example, the concern that prosody and salience are not consistent between individuals and language communities. Other future research will utilize a comparative methodology, comparing English varieties and considering whether the semantic prosody of abortion is impacted by a nation's legislative status quo. In this way, the impact of challenges to the status quo in recent decades, such as challenges to Roe Vs. Wade in the USA and the campaign for legalization of termination in Ireland, can be evaluated and considered.

The findings reported here may be of practical consequence to those who value-neutral language to discuss reproductive rights, as well as groups that support access to termination. As outlined above, it is recognized that *pro-life* is avoided, and *anti-abortion* preferred, since *pro-life* presupposes a foetus' right to life. By contrast, the *anti-*prefix positions opposition campaigners as obstructive. However sound this logic may be the rhetorical strategy of avoiding *pro-life* may be being undermined by the negative semantic prosody of *abortion*. The findings reported here may even indicate that *anti-abortion* is something of a 'Trojan horse' for the pro-choice lobby, since in constructing their ideological opponents as obstructive, they may also be introducing the negative semantic prosody surrounding *abortion* into their rhetoric. This may be something that activists in favour of continued access to TOP will wish to consider. Notwithstanding its scope, therefore, it is hoped that this paper represents an important first step towards an evidence base for understanding the importance of word choice in debates about reproductive rights.

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