

Significant Patterns of APPRAISAL in Online Debates

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Abstract

This study aims to shed some light on the role of evaluative language in the process of persuasion in the newly emerging genre of ‘online debate’. Drawing on the APPRAISAL framework within Systemic Functional Linguistics, this study investigates the distributional patterns of APPRAISAL choices and co-choices in a corpus of widely viewed online debate texts (ODTs). Based on the voting results of each ODT, textual parts of the corpus were segmented into two main categories: ‘more persuasive’ and ‘less persuasive’ debaters. Supported by two specially designed software tools, the ODT corpus was manually annotated for APPRAISAL features, and frequencies of choices and co-choices were extracted automatically. In line with previous research, the findings of this study revealed significant APPRAISAL patterns associated with the ODT debaters, in addition to unique co-patterns characteristic of the ‘more persuasive’ and ‘less persuasive’ debaters. These findings are discussed in terms of potential implications, limitations and directions for future research.

Keywords: Systemic functional linguistics, Appraisal, Evaluative language, Persuasion, Online debate, Coupling, Discourse analysis, Rhetorical language

1. Introduction

Fedrizzi and Ellis (2010, p. 4) define a debate as a formal “oral confrontation between two individuals, teams, or groups to argue...for and against a set position” and in which “persuasion, which appeals to emotional responses, is a key element”. This definition highlights three important factors of the ‘debating’ genre: i) the medium through which debating takes place, ii) the social purpose of debating and iii) the method by which this social purpose is accomplished. The traditional medium of a debate since Ancient Greece and Egypt is oral speech (Paine, 1999), although some debates were often recorded in writing as in Plato’s Dialogues. The social purpose of debating is to argue for or against a controversial

issue (or motion), attempting to convince an audience of a certain position, mainly by means of ‘persuasion’ (Haney, 1965). Interestingly, these three factors of debating have not changed much since antiquity (e.g. Cameron & Gaul, 2017). In the current digital era, ‘online debates’ have recently emerged to complement traditional oral face-to-face debates. They are formally structured as traditional debates (Wu, 2010), and typically invoke “the debate tradition of ancient Athens as its model” (Tumposky, 2004, p. 53). While its medium has changed –from oral, face-to-face to online interaction- the social purpose of online debate is the same: to argue for/against a position with persuasion as the primary tool (Durmus & Cardie, 2018; Ehniger & Brockriede, 2008).

The close relationship between persuasion and evaluative (emotional, affective, or rhetorical) language was observed by ancient orators, rhetoricians and philosophers. Aristotle (322 BC), for instance, identified emotional appeals (or *pathos*) as a key device in his model of persuasion (Duke, 1990). The Roman orator Marcus Tullius Cicero (43 BC) asserted that appeals to emotions were as important in argumentation as appeals to logic (Wisse, 1989). On this account, several linguistic theories, models and frameworks have been proposed to investigate the linguistic resources through which writers and speakers appeal to emotions or pathos in order to persuade and impact their audience (for a recent survey of these models and frameworks, see Benamara, Taboada, and Mathieu (2017)). One notable framework of evaluative language that has attracted the attention of recent research is appraisal theory, developed by Martin and his colleagues (a sufficiently detailed review of appraisal is provided in section 2 below). Since its initial development in the late 1990s, appraisal (Note 1) has been used extensively in many studies as the primary analytical framework of evaluative and emotional language in the context of persuasion and argumentation. Most of this research, however, focuses on APPRAISAL in newspaper argumentative writing (e.g. Bednarek, 2006; Feez, Iedema, & White, 2008; Iedema, Feez, & White, 1994; White, 1998), academic argumentative writing (e.g. Banari, Memari, & Asadi, 2017; Hood, 2004; Hood, 2006, 2010; Lam & Crosthwaite, 2018; Lancaster, 2011; Lee, 2015; X. Liu, 2013), and persuasion in political discourse (e.g. Aloy Mayo & Taboada, 2017; Qi, 2017; Simon-Vandenberg, White, & Aijmer, 2007).

Thus far, few studies have been conducted to analyse APPRAISAL in the ‘debating’ genre. Most notably, Miller (2004) analyses the use of judgment (a subtype of APPRAISAL as detailed in section 2.1 below) to evaluate the President’s behaviour vis-à-vis “truth-telling” in Congressional debates. Miller and Johnson (2009) focus, from a corpus perspective, on certain phraseologies of judgment regarding evaluations of “the war on Iraq” in a relatively large corpus of Congressional debates. Miller and Johnson (2013, 2014), from a similar perspective, analyse frequencies of certain lexical phraseologies (e.g. *it is * time to*) in relation to specific instances of affect (subtype of APPRAISAL) in Congressional debate. Bevitori (2005) explores combinations of attributive formulations (subtype of ENGAGEMENT) and rhetorical devices in parliamentary debates. Jakaza (2013) investigates, in relatively more depth, the use of APPRAISAL in a corpus of Zimbabwean parliamentary debates within the period 2009-2010. Mardiana (2018) studies the distribution of APPRAISAL resources in a

relatively small corpus of competitive debates by senior high school students. The key findings of these studies will be considered, where appropriate, in section 5 of this study.

To the best of the author's knowledge, no study to date has been conducted to investigate the persuasive use of APPRAISAL resources in the emerging 'online debate' genre. Aiming to contribute to filling this gap, this study analyses APPRAISAL in a corpus of online debates (or ODTs for short) culled from a large online database (as detailed in section 3 below). The study combines both qualitative and quantitative methods to extend the previous research by analysing APPRAISAL choices (couplings of choices and interaction between APPRAISAL sub-systems) at multiple levels of instantiation and of different categories of debaters (instantiation and coupling will be briefly reviewed in section 2.2). The broad, overarching objective of this study is to address the "substantial lack of knowledge about some important aspects of the relationship between language and persuasion" (Hosman, 2002, p. 385), by shedding some light on how online debaters deploy APPRAISAL (and couplings of APPRAISAL choices) to argue for or against a motion, with varying degrees of successful persuasion. To this end and more specifically, this study aims to answer the following three questions:

1. What are the statistically significant APPRAISAL patterns in the ODT corpus?
2. What are the statistically significant APPRAISAL patterns of choices and co-choices (or couplings) that are characteristic of the 'more persuasive' debaters in the ODT corpus?
3. What are the statistically significant APPRAISAL patterns of choices and co-choices (or couplings) that are characteristic of the 'less persuasive' debaters in the ODT corpus?

2. Theoretical Foundations

2.1 APPRAISAL Framework

The APPRAISAL framework has recently emerged from research conducted by James R. Martin and his colleagues on narratives, secondary school discourse, and media discourse (e.g. Iedema et al., 1994; Martin, 1995; Martin & Plum, 1997; Martin & Veel, 1998). Located within Systemic Functional Linguistics (hereafter SFL), APPRAISAL encompasses fine-grained and richly detailed, descriptive systems of the linguistic resources for evaluation. It aims to shift our analytical focus from the interpersonal, lexico-grammatical systems of SPEECH FUNCTION and NEGOTIATION to the personal lexis of emotions, and to the extent to which this personal lexis contributes to the texture and coherence of a text (Hood & Martin, 2007; Martin, 2004).

Situated above lexico-grammar, at the discourse semantics stratum of the stratification hierarchy, APPRAISAL is mainly concerned with 'gradable' lexis, and it can be conceived as "a grading system, a cline from negative to positive" (Thornbury & Slade, 2006, p. 69). More specifically, APPRAISAL provides a framework for investigating the "subjective presence of writers/speakers in texts as they adopt stances", as they "approve and disapprove, enthuse and abhor, applaud and criticise", and as "they position their readers... to do likewise" through

“linguistic mechanisms for the sharing of emotions, tastes and normative assessments” (Martin & White, 2005, p. 1). In pursuance of this investigation, APPRAISAL complements non-SFL notions of subjectivity (Banfield, 1982; Stein & Wright, 2005), epistemic stance (Biber & Finegan, 1989), attitudinal stance (Biber & Finegan, 1988), intensity (Labov, 1984), modality (Palmer, 1986), affect (Batson, Shaw, & Oleson, 1992), evidentiality (Chafe & Nichols, 1986), interpersonal meta-discourse markers (Crismore, Markkanen, & Steffenson, 1993; Hyland, 1998; Ifantidou, 2005), and the recently emerging sentiment analysis (B. Liu, 2012; Minsky, 2006; Picard, 1997; Poria, Hussain, & Cambria, 2018), to name but a few.

As a discourse semantics resource, APPRAISAL describes evaluative meaning in terms of three major subsystems: ATTITUDE, ENGAGEMENT and GRADUATION. ATTITUDE is concerned with linguistic resources for evaluating people, including ourselves, and things, and it categorises these resources into three subtypes: AFFECT, JUDGMENT and APPRECIATION. AFFECT covers evaluations of our internal mental states through feelings and emotions. JUDGMENT covers resources for evaluating people’s character, behaviour, morality, and rationality. APPRECIATION is concerned with evaluations of things, phenomena, including their quality, usefulness, worth, complexity and impact. As noted by Martin (2000, p. 147), both JUDGMENT and APPRECIATION can be construed as ‘recontextualisations’ of AFFECT, and the difference, as remarked by White and Don (2012), is that AFFECT is oriented towards the appraiser (i.e. ‘Emoter’ rather than the trigger of emotion), whereas JUDGMENT and APPRECIATION are oriented towards the appraised (people or things).

The three sub-types of ATTITUDE are cross-classified according to three dimensions: POLARITY, EXPLICITNESS and TYPE. POLARITY intuitively classifies instances of ATTITUDE into either positive (e.g. *brave, love, happy, useful*) or negative (e.g. *coward, hate, sad, useless*). EXPLICITNESS modulates the degree of attitudinal ‘commitment’, differentiating between **inscribed** attitudes and **invoked** attitudes. Inscribed attitudes are construed explicitly (e.g. *sad, hate, smart, amazing*). Invoked attitudes are realised indirectly by ideational tokens (**invite**), and particularly if graded (**flag**), or by certain types of lexical metaphor and idiomatic expressions (**provoke**) (Hood & Martin, 2007; Martin & White, 2005). The TYPE system enables access to more ‘delicate’ (fine-grained) choices of ATTITUDE, as AFFECT is extended into four categories: satisfaction, inclination, happiness and security; JUDGMENT into normality, capacity, tenacity, veracity and propriety; and APPRECIATION into reaction, composition and valuation. These three dimensions of ATTITUDE are outlined in Figure below.

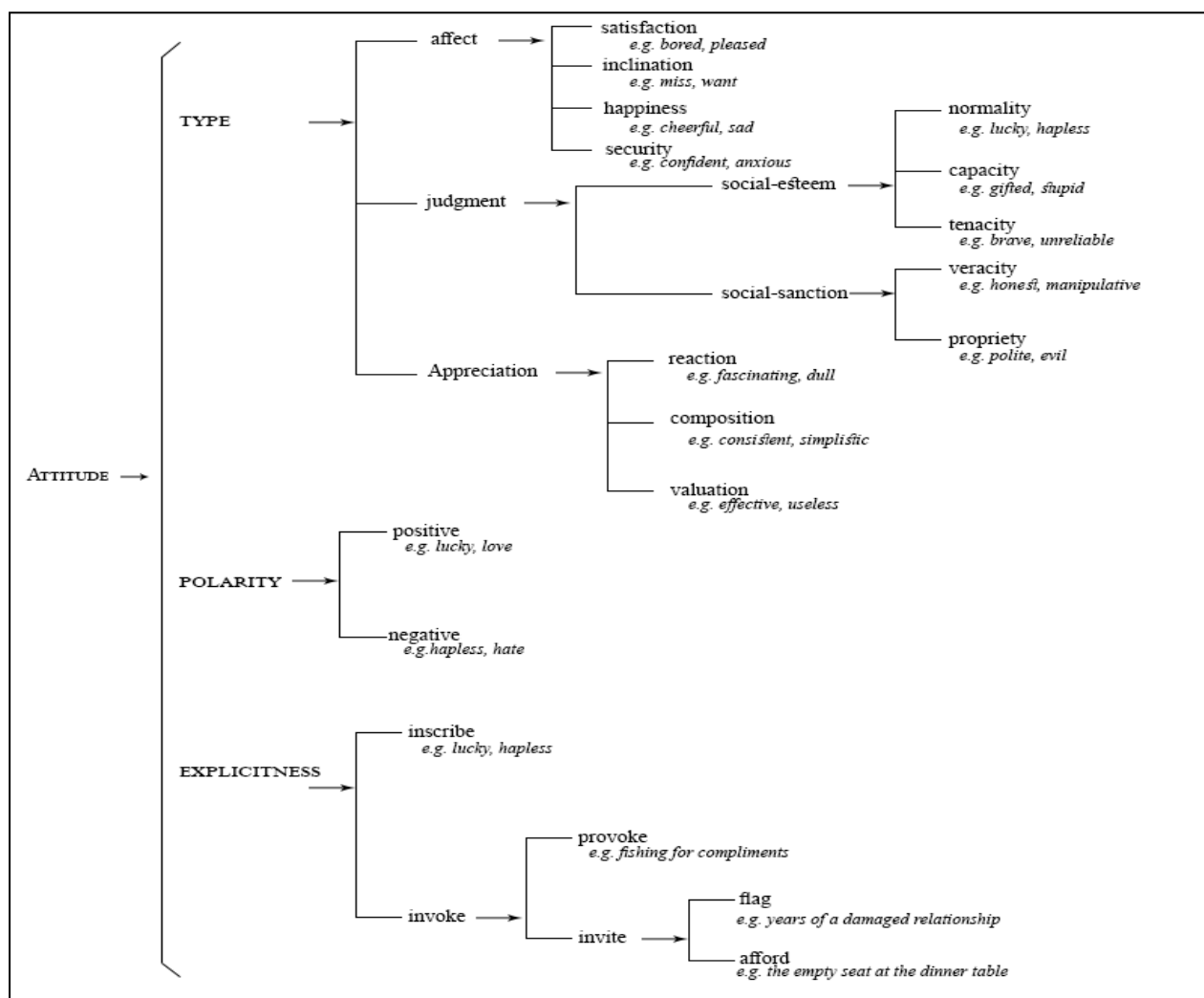


Figure 1. ATTITUDE systems (adapted from Martin and White (2005))

Whereas ATTITUDE is about our evaluations of people and things, ENGAGEMENT is concerned with linguistic resources for evaluating **propositions** and **proposals**, as well as their sources and the potential intersubjective positions towards them. As pointed out by White (2000, 2003), ENGAGEMENT is theoretically informed by Mikhail Bakhtin’s notions of dialogism and heteroglossia (see e.g. Bakhtin, 1981). For Bakhtin, all linguistic utterances are ‘intrinsically’ dialogic “in that to speak or write is always to refer to, or to take up in some way what has been said/written before, and simultaneously to anticipate the responses of actual, potential or imagined readers/listeners” (White, 2003, p. 261). At the least **delicate** level (i.e. less detailed and more general), ENGAGEMENT distinguishes between bare assertions that do not overtly recognize or make reference to other voices and viewpoints (**monoglossia**), and **heteroglossic** utterances which acknowledge, to varying degrees, the existence of other voices. Monoglossic propositions are presented as given, non-negotiable, taken-for-granted ‘facts’ (Martin & White, 2005, p. 100). Functionally and contextually, monoglossic utterances construe an ideal reader who is “assumed to operate with the same knowledge, beliefs and values as those relied upon by the proposition” (White, 2003, p. 263), and,

therefore, the authorial ‘monoglossic’ voice “assumes sufficient status or moral authority to be able to exclude alternative viewpoints” (Miller, 2004, p. 45).

Heteroglossic engagement, on the other hand, opens the dialogic space and allows for alternative viewpoints and positions. Heteroglossic resources fall into two categories: **contraction** and **expansion**. Contraction includes wordings and formulations through which authors narrow down the dialogic space “by excluding certain dialogic alternatives” or by “constraining the scope of these alternatives” (Martin & White, 2005, p. 117). Contractive ENGAGEMENT is further sub-classified into **disclaim** and **proclaim**. Disclaim ENGAGEMENT provides formulations through which alternative viewpoints are recognised but either explicitly rejected (**deny**) or superseded by better alternatives (**counter**). Denying ENGAGEMENT is typically expressed through grammatical negation (e.g. *not, don’t, haven’t, no, never, none, nobody, no one, nothing*), and it signifies authorial disalignments with the alternative view. In other words, denials present the authorial voice as an expert “acting to correct ... misunderstandings or misconceptions on the addressee’s part” (Martin & White, 2005, p. 120). Countering ENGAGEMENT, by contrast, does not explicitly rule out alternative voices, but rather manifests the authorial position as a more valid alternative. Countering is lexically realised by some conjunctions, certain comment adjuncts and discourse continuatives (e.g. *but, however, although, yet, amazingly, surprisingly, even, still*). (see e.g. Martin & Rose, 2007, p. 141).

Contractive proclamations include formulations which overtly restrict the dialogic space for alternative voices, mainly through “some authorial interpolation, emphasis or intervention” (Martin & White, 2005, p. 118). Proclamations are classified into three sub-types: **concurrence**, **endorsement** and **pronouncement**. Concurrences are lexically encoded in such a way that the authorial voice is overtly presented as “agreeing with and sharing the same view as the addressee” (White, 2012, p. 64). Lexically, concurrence is typically realised by locutions such as *admittedly, certainly, naturally, of course, obviously, undoubtedly, not surprisingly* and so forth. Grammatically, concurrence can be conveyed through a certain type of **rhetorical questions**, referred to as ‘leading’ or ‘conductive’ questions (i.e. questions that suggest one inevitable answer e.g. *Would you send your children to die in Iraq?*) (see e.g. Ilie, 1994). Concurrences are sometimes combined with counters to form a rhetorical pair or sequence ‘**concede**’ (e.g. *admittedly...but, of course...however*), in order to maximize the degree of authorial commitment to the engaged proposition (Martin & White, 2005, p. 125).

In endorsed proclamations, a proposition is attributed to an external source with a covert authorial intervention (White, 2012). Such authorial interventions are expressed by a subclass of verbs known as ‘factive’ verbs (e.g. *show, demonstrate, find, confirm, reveal, observe*). Through endorsed engagement, the responsibility for the validity of a proposition is delegated from the external source to the author. As observed by White (2003, p. 270), this responsibility can be further delegated or maximized by combining (or coupling) endorsements with attitudes as in e.g. *X convincingly argues, X compellingly show, the writer successfully explains*. In pronounced proclamations, by comparison, delegation of responsibility is not as overtly explicit and the authorial voice accepts full responsibility for their viewpoint through a subjective “interpolation...to assert or insist upon the value or

warrantability of the proposition” (Martin & White, 2005, p. 128). Pronouncements are lexically realised by expressions such as *you must agree that, I content, we can only conclude, we know that, the facts of the matter are, it is absolutely clear to me that, we have to admit that, needless to say that* etc.

At more delicate levels, dialogically expansive engagement is sub-classified into: **entertain** and **attribute**. Entertained propositions are presented as possible alternatives, typically through wordings that are traditionally discussed under the headings of ‘evidential’ or ‘epistemic’ modality and certain types of pragmatic hedges or ‘shields’ (Brown & Levinson, 1978; Lakoff, 1973; Lyons, 1977; Palmer, 1986). In SFL, implicit and explicit modality (e.g. *it’s probable, possibly, could, must, may, I think, I believe* etc.) fall under entertaining engagement. Martin and White (2005) also regard as realizations of entertained expansion, evidentials (e.g. *it seems, apparently*), authorial hearsays (e.g. *I hear*), and certain types of rhetorical questions referred to as ‘expository questions’ (i.e. questions that “the writer himself goes on to answer” see e.g. Goatly (2000, p. 89)). Attributing engagement includes “formulations that disassociate the proposition from the text’s internal voice by attributing it to some external source” (Martin & White, 2005, p. 111). Common realizations of attribution are reporting verbs (e.g. *X says, claims, argues, believes*), their nominalisations (e.g. *X’s statement, assertion, belief*), and what Halliday (1994, p. 151) refers to as ‘circumstances of angle’ (e.g. *according to X, in the view of X*). Attributing engagement is further classified on the basis of whether the author’s position towards the quoted material is tacit (**‘acknowledge’** e.g. *X says, X argues*) or the authorial voice explicitly distances itself from the external sources (**‘distance’** e.g. *scare quotes as in Bush’s so-called ‘war on terrorism’, X claims that, alleges that, X’s allegations that, only a small number of studies state that*). The ENGAGEMENT system of APPRAISAL is outlined in Figure 2 below.

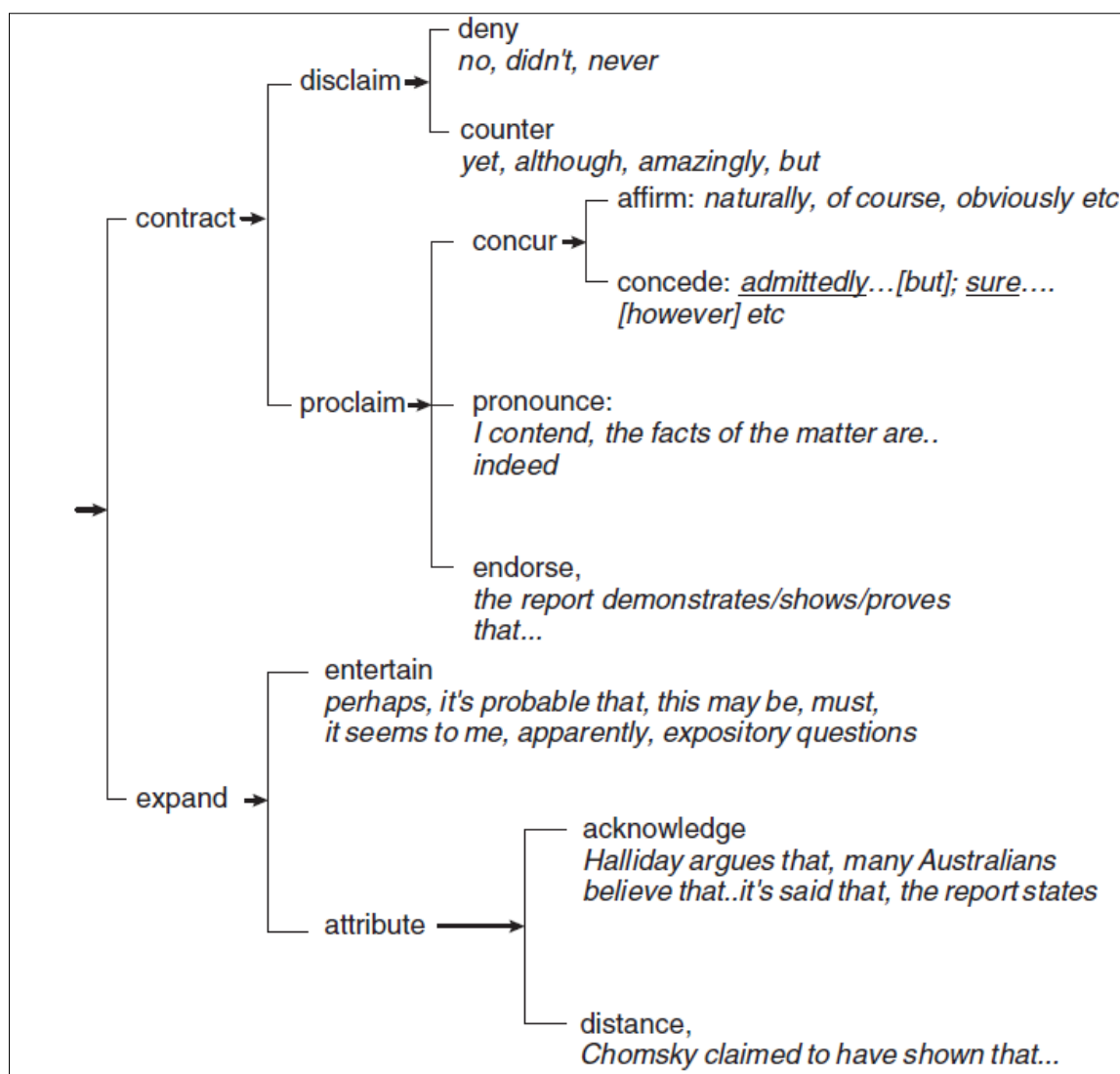


Figure 2. The ENGAGEMENT system (Martin & White, 2005:134)

Both ATTITUDE and ENGAGEMENT are in fact “domains of graduation” as they exhibit ‘gradability’ (Martin & White, 2005, p. 136). This central feature of ‘gradability’ is captured in the GRADUATION system of APPRAISAL, which includes linguistic resources for scaling up or down ATTITUDE and ENGAGEMENT instances. GRADUATION organizes these resources through two systems: TYPE and FORCE. The TYPE dimension classifies graduations into: **force** and **focus**. Graduating force is concerned with resources for **intensifying** and **quantifying** meanings, which are traditionally discussed under the headings of amplifiers, boosters, approximators, diminishers, minimizers etc. (see e.g. Quirk, Greenbaum, Leech, & Svartvik, 1985, p. 567). Intensification includes formulations for increasing or decreasing the intensity of either **quality** (e.g. *slightly greedy*) or **process** (e.g. *love him dearly*). Quantification, on the other hand, is lexically encoded by either **number** (e.g. *many, a few*), **mass** (e.g. *small, large, huge*), or **extent** (e.g. *e.g. recent, ancient, long-lasting, distant, narrowly-based*). Both quantification and intensification can be of many ‘modes’. **Isolation** is probably the most common mode in which “the up-scaling or down-scaling is realised by an isolated...item

which solely...performs the function of setting the level of intensity” (Martin & White, 2005, p. 141) (e.g. *very, too, extremely, somewhat*). If the isolated item conveys the maximum intensity, number or extent (e.g. *utterly miserable, perfectly happy, completely wrong*), then it is categorised as an instance of **maximization**. And if the isolated item is lexical rather than grammatical (as in e.g. *ice cold, crystal clear, ridiculously easy*), then it is classified as an instance of **lexicalisation**. Furthermore, force can be realised by the **repetition** of attitudinal items (e.g. *those who were judged to be attractive were also more likely to be rated intelligent, kind, happy, flexible, interesting, confident, friendly, modest, and successful* [from ODT7 in Appendix 1]). Alternatively, force can be conveyed by a certain degree of up-scaling or down-scaling **infused** meaning in a single lexical item (e.g. *kill vs. slay, cry vs. scream, a stream of Xs, a throng of Xs*). It should be noted here that all these modes of graduation can be realised either **non-figuratively** (e.g. *very beautiful, absolutely necessary*), or **figuratively**. As noted by Martin and White (2005, p. 148), figurative realizations of graduation can occur under isolation (e.g. *He came out like a jack in a box*), or infusion (e.g. *prices have sky-rocketed, a crystal clear dialogue*).

The second main type of graduation (‘focus’) operates upon non-attitudinal, non-gradable meanings in order to make “something that is inherently non-gradable gradable” (Martin & Rose, 2007, p. 46) by “fine-tuning the valeur of experiential meanings – either to strengthen [**sharpen**] or weaken [**soften**] categorization” (Martin, 2004, p. 326). In other words, focus modulates an entity ‘prototypicality’: scaling up or down the extent to which an entity belongs to an ‘experiential’ category. Focus sharpening construes an entity as highly prototypical. For example, in *X is a true friend, X is a real man* etc. X is construed as a true, real etc. prototype of the categories *friends, men*, respectively. Focus softening has an opposite effect as the entity is re-construed as “lying on the outer margin of the category” (Martin & White, 2005, p. 137), and is presented as an atypical case of its category (as in e.g. *an apology of some sort, X tastes more apple-ish*). (Martin & Rose, 2007) remark that GRADUATION focus interacts with ATTITUDE as sharpening can invoke positive attitudes (e.g. *a true guitarist, a real man*) and softening can invoke negative attitudes (e.g. *an expert of sorts*). The range of GRADUATION options is illustrated in Figure 3 below.

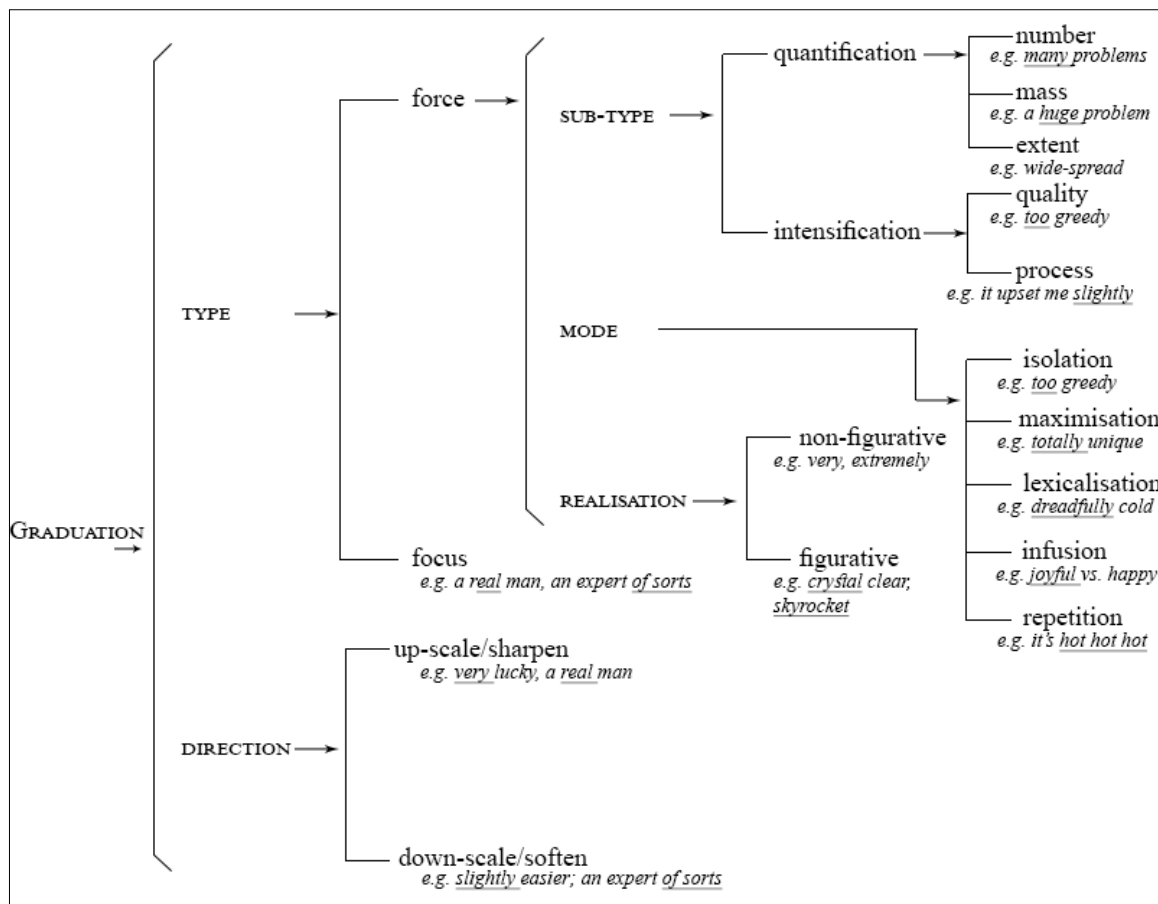


Figure 3. The GRADUATION system (adapted from Martin & White, 2005)

2.2 Instantiation, Metafunction and the Notion of ‘Coupling’

A relatively recent notion in SFL, and key to this study, is ‘**coupling**’ (or ‘systemic intersection’) (Halliday, 1991; Martin, 2000, 2008, 2010; Matthiessen, 2006; Nesbitt & Plum, 1988). Coupling refers to “the ways in which meanings combine, as pairs, triplets, quadruplets or any number of coordinated choices from system networks” (Martin, 2008, p. 39). Martin (2010) points out that ‘coupling’ is closely related to the SFL concepts of ‘**metafunction**’ and ‘**instantiation**’. In SFL, language as a system (and structure) is organised according to three metafunctions, namely **ideational**, **interpersonal** and **textual**. According to Halliday, the ideational metafunction construes our experience of the real (internal and external) world, experientially “where we represent experience directly in terms of happenings...entities that participate in these happenings” and logically “where we represent experience indirectly in terms of certain fundamental logical relations in natural language” (Halliday, 1979, p. 59). The interpersonal metafunction establishes our social relations and roles, by expressing attitudes, delimiting social groups and reinforcing individuality and personality (Halliday, 1970, p. 175). The textual metafunction enables language users “to construct texts and connected passages of discourse that are situationally relevant” (Halliday, 1970, p. 175). All systems in SFL (in all strata) are mapped onto these three metafunctions. At the lexico-grammatical stratum, ‘transitivity’ structures encode ideational meanings, ‘mood’ structures encode interpersonal meanings, and

‘theme-information’ structures encode textual meanings. At the (discourse) semantics stratum, Halliday and Hasan (1976) treats non-structural cohesive resources such as reference and conjunction as textual resources. Halliday and Matthiessen (2004) place taxis and logico-semantic relations (resources for linking clauses together) under ideational resources. Martin (1992) and Martin and Rose (2007) situate CONJUNCTION under ideational meanings, APPRAISAL and NEGOTIATION under interpersonal meanings, IDENTIFICATION and PERIODICITY under textual meanings.

Coupling is not restricted metafunctionally. That is, systemic features ‘within and across’ systems can interact and ‘couple’. For instance, features within the ATTITUDE system (discussed in section 2.1 above) can interact and combine to form a (potentially huge) number of ‘**intra-systemic**’ couplings (e.g. positive γ affect, or negative γ flag γ judgment (Note 2)). Further, systemic features in ATTITUDE, ENGAGEMENT and GRADUATION systems can **intra-metafunctionally** interact to form **inter-systemic** couplings (e.g. deny γ positive γ affect, or entertain γ up-scale γ negative γ capacity). Similarly, features can **inter-metafunctionally** ‘couple’ across systems and strata. A notable example of inter-metafunctional couplings is the coupling of ATTITUDE instances with ideational participants in transitivity roles to create communal ‘bonds’ of affiliation (Knight, 2010; Martin & Stenglin, 2007). Another example is the inter-metafunctional coupling of periodicity structures of discourse (i.e. hyper-Themes and hyper-News) and ENGAGEMENT choices to construct preferred dialogic positions (Tan, 2010).

Zappavigna, Dwyer, and Martin (2008) emphasise that significant variations in coupling patterns are dependent on whether these patterns are examined from the system perspective or the text perspective; more technically, on the level of generalisation or **instantiation**. Instantiation is a defining characteristic of SFL theory and it describes the relationship between language as a system and language as a text (or instance). For Halliday (e.g. 1992), system and text are a single phenomenon, looked from different levels of generalisation. Here, Halliday’s useful analogy (e.g. 1992) is that system to text is as climate to weather. Climate is the long-term trends of weather events, and weather is an actual instance of climate. Similarly, *mutatis mutandis*, language as a system is the long-term patterns of textual instances, and text ‘instantiates’ system. Between system and text, there exist several intermediate linguistic patterns (sub-potentials, registers, text-types etc.). This analogy automatically allows for **probabilistic** interpretations of linguistic patterns (including couplings). More specifically, frequency of systemic choices “in texts is the instantiation of probability in the system” and average frequencies of systemic choices within a group of similar texts define a text-type (or register) (Halliday, 1991, p. 42). From the instance pole of instantiation, every text ‘perturbs’ the local probabilities of the register it belongs to, and, eventually “perturbs the overall probabilities of the system, to an infinitesimal extent” (Halliday, 1992, p. 76), as illustrated in Figure 4 below.

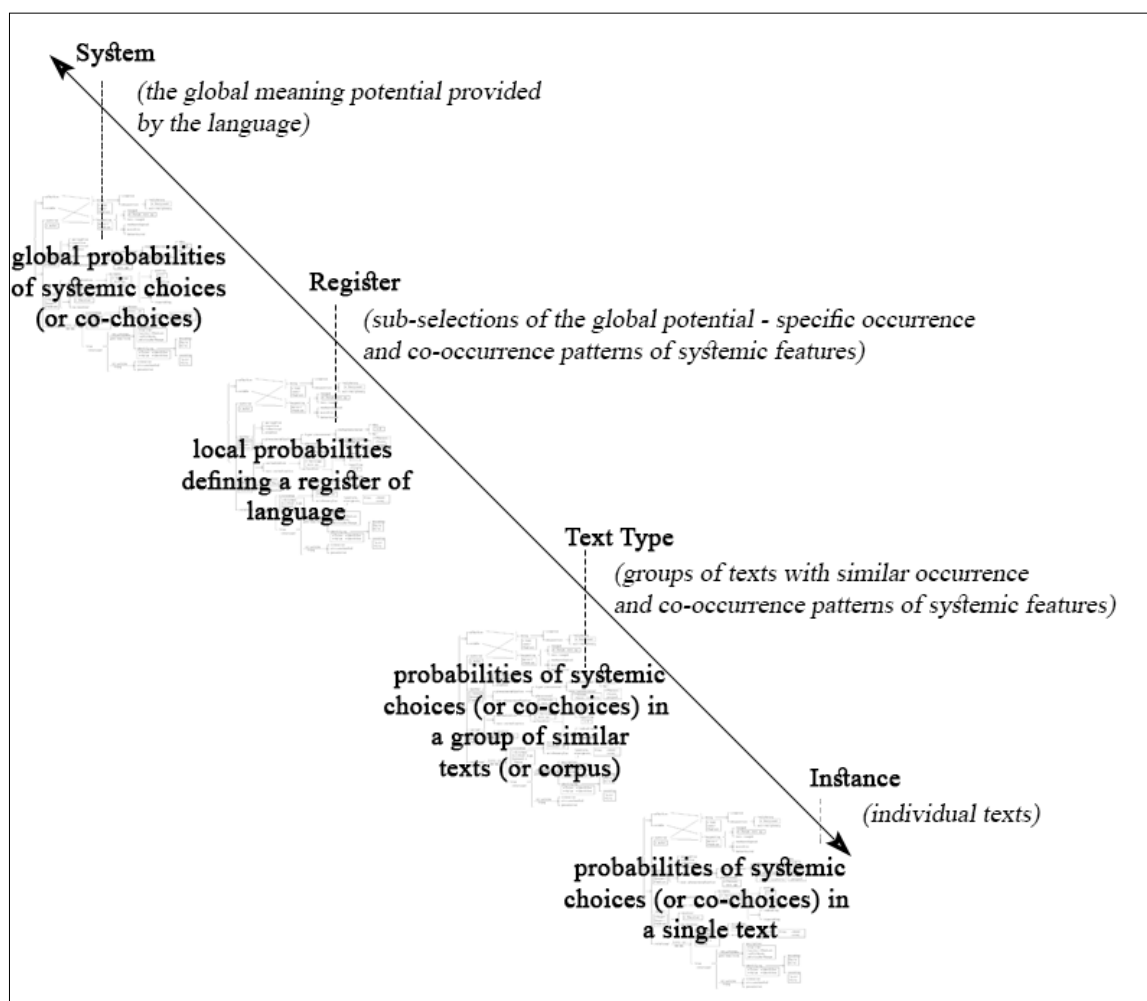


Figure 4. The cline of instantiation in SFL (adapted from several sources e.g. Halliday, 1991 & 1992; Halliday & Matthiessen, 2004; Martin, 2000; Martin & White, 2005)

Along the same lines, coupling (and coupling patterns) can be interpreted probabilistically by evaluating the relative frequency profiles of co-choices in systems as they are actualized in a text or corpus (as in e.g. Matthiessen, 2006). Zappavigna et al. (2008) put forth that choices in linguistic systems are arbitrarily ‘free’ to couple. If we take the attitude system as an example, co-choices of POLARITY, TYPE and EXPLICITNESS are equally likely to occur. For instance, the coupling (positive γ inscribed γ judgment) has a potentially equal probability of occurrence as the coupling (negative γ inscribed γ appreciation). Halliday (e.g. 1991, p. 48) hypothesises that, from the system potential of instantiation, choices (and co-choices thereof) are either equiprobable or maximally skewed. He considers the three choices ‘material/mental/relational’ in the transitivity system of PROCESS TYPE as potentially equiprobable, and the two choices ‘positive/negative’ of clause POLARITY as maximally skewed towards the ‘positive’. As we move down the cline of instantiation, “local probabilities, for a given situation type, may differ significantly from the global ones” and this frequency profile of local probabilities of occurrence and co-occurrence is what “characterizes functional (register) variation in language” and by which “people recognize

the context of situation of a text” (Halliday, 1995, p. 21). Therefore, as Halliday (1995) argues, it is very useful to model language “in probabilistic terms”. Martin and White (2005), for instance, demonstrate how the probability profiles of intra-metafunctional couplings across APPRAISAL systems identify journalistic genres. In particular, they show that hard news articles are ‘registerially’ distinguishable by a supposedly unbiased ‘reporter’ voice which is statistically correlated with attributed, inscribed judgment. By contrast, newspaper opinion articles are ‘registerially’ characterised by a highly subjective “commentator” voice which is statistically correlated, inter alia, with the coupling (monoglossic γ inscribed γ judgment). In the following section, I shall discuss the statistical methods used in measuring salient correlations between APPRAISAL choices, and, hence, in determining the statistical significance of coupling patterns in the online debate corpus.

3. Data and Methodology

3.1 Corpus of Online Debates

The corpus compiled for this study consists of eight online debate texts (or ODTs for short), where the average length of each text is \approx 3000 words. The texts are drawn from the IDEA’s database (The International Debate Education Association). IDEA includes “over seven hundred debates mostly written by experienced debaters... on all sorts of themes including politics, economics, religion, culture, science and society” (“IDEA,” 2019). The eight ODTs are selected from the top 100 debates according to two criteria. First, the total number of views must be 150,000 or more. Second, there must be a significant shift in voting results, i.e. a substantial increase/decrease in the percentages of the five categories (*strongly against*, *strongly for*, *mildly against*, *mildly for*, *don’t know*) after debate. Both criteria divide the ODT corpus into two sets (or sub-corpora): ODTs where the ‘**proposition side**’ is apparently more persuasive, and ODTs where the ‘**opposition side**’ is seemingly more persuasive. Persuasiveness is measured by radical shifts in the ‘strongly for’ and ‘strongly against’. That is, the ‘proposition side’ is determined to be more persuasive, if there is a large increase in the % of ‘strongly for’ votes after the debate. The ‘opposition side’ is determined to be more persuasive if there is a substantial increase in the % of ‘strongly against’ votes after the debate. In ODT1, for instance, the ‘opposition side’ is decided to be more persuasive as the % of ‘strongly against’ votes increases from 37% to 47%, and the % of ‘strongly for’ votes decreases from 9% to 4%, after the debate. (Details of the ODT corpus used in this paper are provided in Appendix 1).

All ODTs are structured the same way. An ODT begins with a ‘debate motion’ stage followed by an abstract (or an introduction). The Points For stages (written by the proposition side) and Points Against (written by the opposition side) are grouped separately. Every Point consists of a Title, Content and Counterpoint. The Title and Point Content are written by the proposition side in case of Points For, or the opposition side in case of Points Against. The Point For Counterpoints are written by the opposition side, whereas the Points Against Counterpoints are written by the proposition side. That is, both proposition and opposition voices are present in all ODT Points. An ODT is concluded with two bar charts showing the voting results before and after the debate.

The ODT corpus is qualitatively analysed for APPRAISAL features. Lexical items are annotated manually for ATTITUDE, GRADUATION and ENGAGEMENT realisations. The coding, annotation and calculation processes are managed by two specifically-designed software tools: ODT Coding and ODT Exploring. These tools are reviewed briefly in the following section.

3.2 ODT Coding and ODT Exploring Tools

To simplify handling and storage of annotations and reduce calculation errors, I designed two software tools for this study. The ODT Coding tool greatly facilitates the storing and annotating processes. ODTs are stored in a way compatible with their structures as shown in Figure 5. The tool includes three built-in system networks (ATTITUDE, ENGAGEMENT and GRADUATION) that pop-up automatically when a textual selection is made. Furthermore, system networks are provided with auto-completion lists through which the annotator can choose the ‘appraising’ and ‘appraised’ ideational entities. APPRAISAL annotations are also stored separately, along with the voting results of each ODT, in order to aid the automatic classification of APPRAISAL features into the ‘more persuasive’ and ‘less persuasive’ categories.

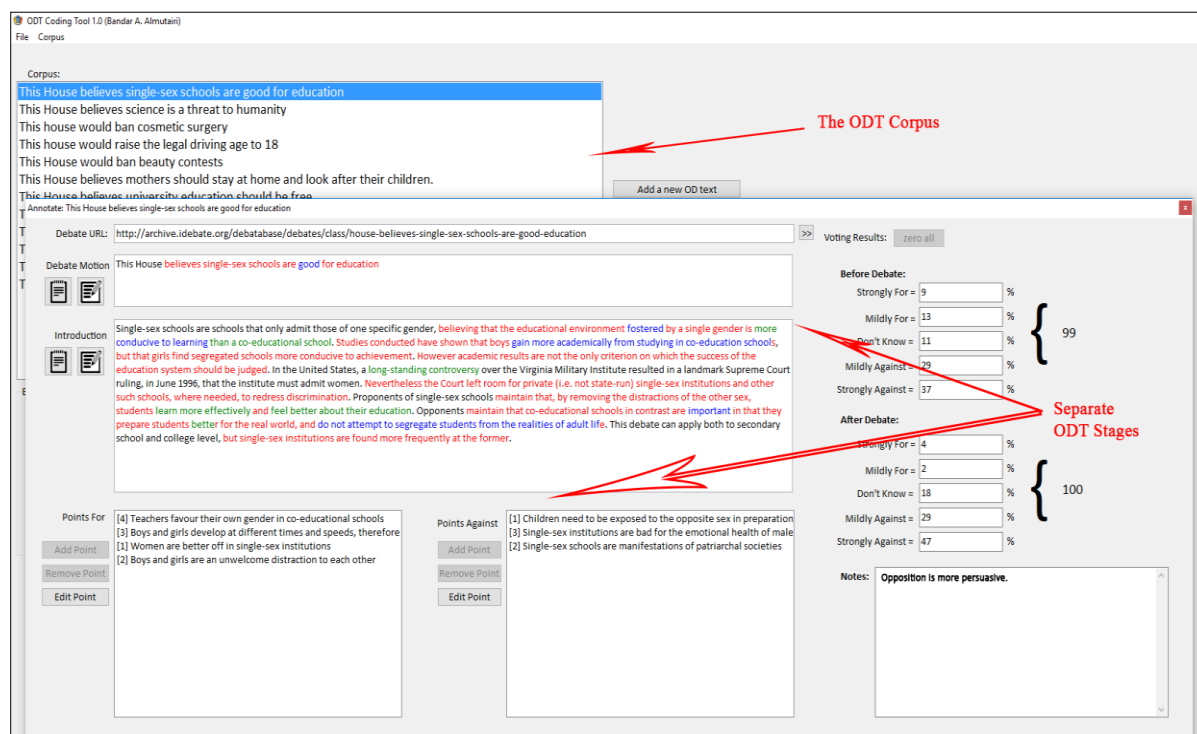


Figure 5. The ODT coding tool

The Exploring tool complements the Coding tool by offering a number of functionalities. First and foremost, it automatically extracts and calculates the relative frequencies of annotated features associated with various categories, most importantly, the ‘more persuasive’ and ‘less persuasive’ categories. Relative frequencies of extracted APPRAISAL features are mainly presented in contingency tables which are used later as input for the statistical processing discussed in the following section. The Exploring tool is capable of calculating (and generating) twelve types of two-way contingency tables, as the user can select from four

types of rows and three types of columns. The four types of contingency row are subcorpus, texts, part of text (i.e. ODT stages), and DSC (short for discourse semantics categories). The three types of contingency column are DSC, coupling, and sequencing. Combinations of row and column types generate useful contingency tables for this study. For instance, a subcorpus-DSC contingency table shows the number of occurrences of specific APPRAISAL features in two (or more) groups of texts as exemplified in Figure 1 below.

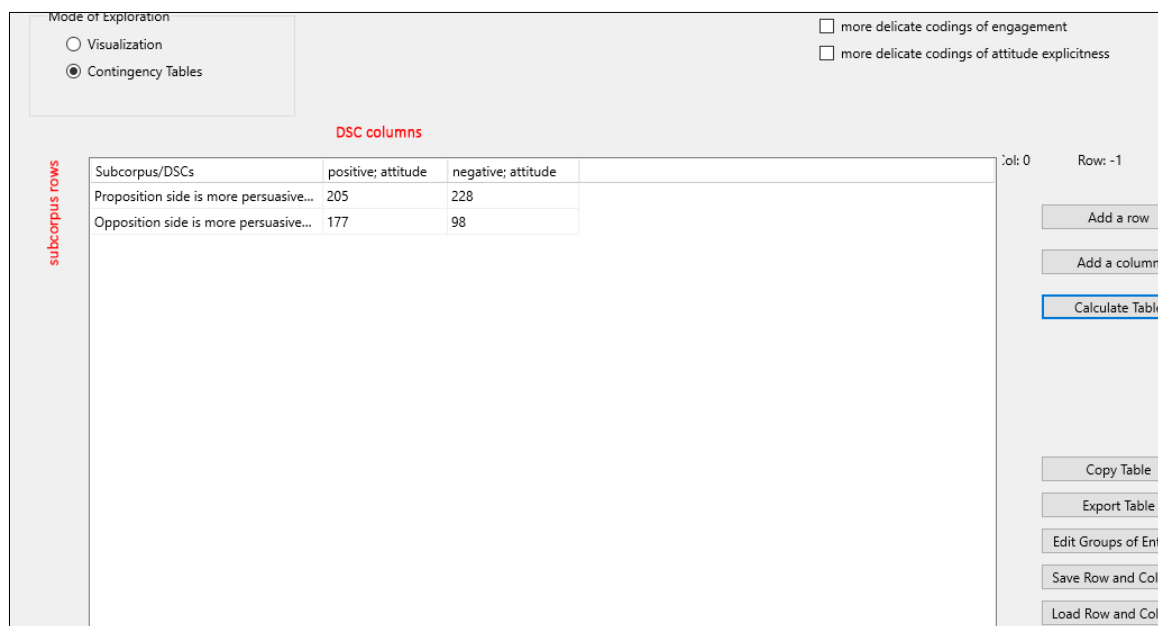


Figure 1. Example of a Subcorpus-DSC contingency table generated automatically by the ODT Exploring tool

The subcorpora in this example include two groups of texts: ODTs where proposition side is decided to be more persuasive, and ODTs where opposition side is decided to be more persuasive. DSCs in this example include two basic features: positive attitudes and negative attitudes.

DSC-DSC contingency tables are essential for testing the statistical significance of couplings. The Exploring tool offers two modes of the automatic extraction of APPRAISAL couplings, namely inclusion and intersection, as shown in Figure 7 below. In the inclusion mode, which is adopted in this paper, a feature that occurs within the boundaries of another feature will be counted as a co-occurrence. This means there has to be a systematic way of annotating APPRAISAL instances. For the analysis performed in this paper, whole clauses are annotated as instances of ENGAGEMENT, and ATTITUDE instances are annotated in such a way that they are included within ENGAGEMENT clauses and enclose GRADUATION instances. For example, in “*Technology is not [very] necessary for a fulfilling life*” (ODT2 in Appendix 1), the whole clause will be annotated as an instance of engagement:deny, the expression “*very necessary*” should be annotated as an instance of positive appreciation, and the graduation:up-scale:isolation instance “*very*” will be annotated as part of the positive appreciation instance. When features are extracted from this example sentence, the inclusion

mode will count this as an instance of the co-occurrence (up-scale:isolation γ positive γ appreciation γ deny) or the co-occurrence (positive γ appreciation γ disclaim) and so forth. Nevertheless, mere co-occurrences will not be considered as couplings unless they are statistically significant as detailed in the following section.

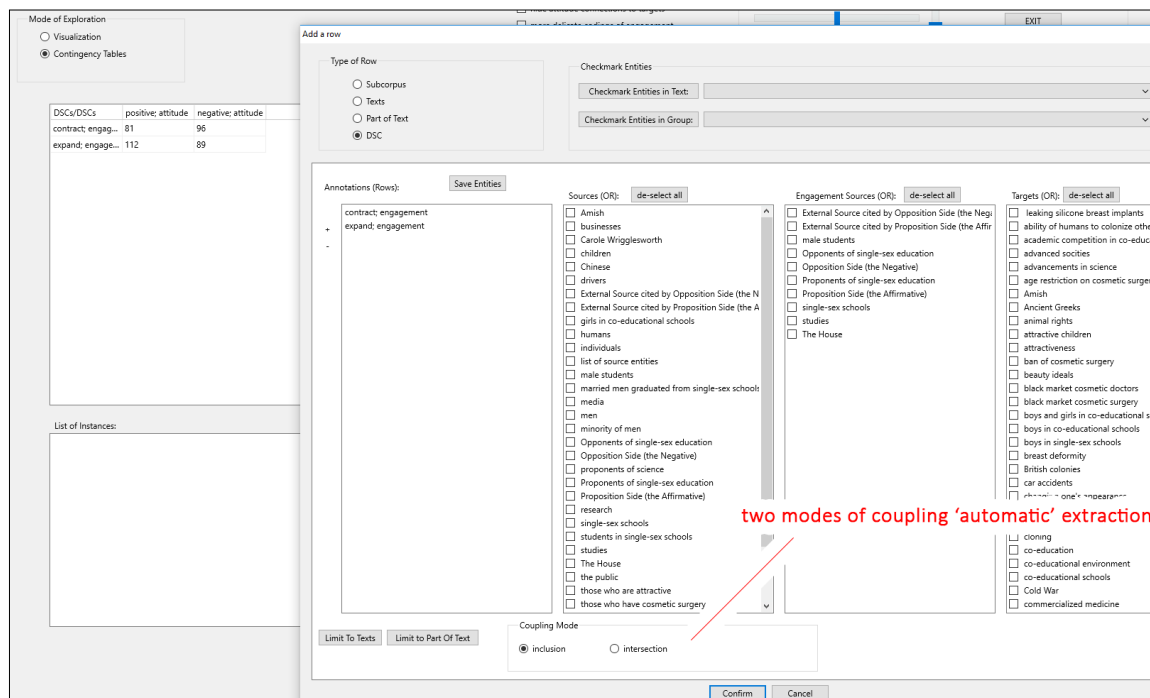


Figure 7. Modes of automatic extraction of couplings in the exploring tool

3.3 Measuring Significance of Coupling Patterns

Zappavigna et al. (2008, p. 174) remark that “something is strongly coupled if it frequently co-occurs and loosely coupled” if it does not. In this paper, the strength of a coupling is determined not only by joint “frequencies” but also by the statistical significance of those frequencies. In corpus linguistics, common measures of association between lexical items (e.g. collocations) such as pointwise Mutual Information and the t-score (e.g. Church & Hanks, 1990) are not found to be highly effective for measuring the strength of couplings in the context of this study, for several reasons. Most importantly, the output score of these measures requires “a threshold estimated experimentally” in order to reject the null hypothesis of independence or negative association (Kolesnikova, 2016). Such threshold value cannot be determined without a point of reference, although some corpus linguists propose certain thresholds of ‘significance’ (e.g. Hunston, 2002). For example, it has been observed, as will be further discussed in the following section, that the ‘more persuasive’ category in the ODT corpus is strongly associated with the coupling (engagement:deny γ attitude:positive). The calculated MI score for this co-occurrence is 0.644, so the question is, given this score, how significant this coupling is? According to the threshold proposed by Hunston (2002, p. 71), a Mutual Information score of 0.644 is far below 3.0, and thus, the co-occurrence would be forthwith considered insignificant. However, when the frequencies of other relevant co-occurrences are taken into consideration, and more elaborated tests of

independence are applied, a strong association is evident between (attitude:positive) and (engagement:deny) in the ‘more persuasive’ (as compared to the ‘less persuasive’) parts of the ODT.

These elaborated tests are primarily based on various categorical statistics of the contingency tables. The first step to determine whether a co-occurrence is a significant coupling is to carry out multiple tests of independence on the relevant contingency tables, including chi-square χ^2 , Fisher’s Exact, and Wilks’ G^2 , while taking into consideration the conditions of each test (for more on these tests, see e.g. Agresti, 2007; Pedersen, 1996). For example, Table 1 below shows two contingency tables of APPRAISAL co-occurrences in the ‘more persuasive’ parts of the ODT corpus. Here, the null hypothesis H_0 can be formulated (with $\alpha=0.05$) as: “the rows and columns of the table are independent”, “there is no association between the row variable and the column variable”, “the co-occurrences are randomly distributed”, “the co-occurrences are not statistically significant” and so forth. As far as table (a) is concerned, the p-values for all tests are far less than $\alpha=0.05$. Accordingly, the null hypothesis can be safely rejected, and the alternative hypothesis H_a would be accepted as the engagement categories (deny and counter) are strongly associated with the attitude categories (positive and negative) in the relevant subcorpus. For table (b), on the other hand, all the p-values are far greater than $\alpha=0.05$, and hence, the null hypothesis should be accepted as the risk to reject it while it is true is somewhere between 71.5% and 83.1%.

Table 1. Two contingency tables of APPRAISAL co-occurrences

Category	Contingency Tables			Tests of Independence/Association
<i>more persuasive</i>	(a)			Chi-square p-value: <0.0001 Fisher’s Exact p-value: <0.0001 Wilks’ G^2 p-value: <0.0001
		positive	negative	
	deny	23	6	
	counter	11	27	
<i>more persuasive</i>	(b)			Chi-square p-value: 0.715 Fisher’s Exact p-value: 0.831 Wilks’ G^2 p-value: 0.715
		positive	negative	
	entertain	22	30	
	attribute	18	21	

Once H_a is accepted, the next step is to investigate the (co-) associations between the categories of the rows and columns, with the purpose of identifying strongly dependent co-occurrences as ‘significant’ couplings. In 2x2 tables, this step is fairly straightforward. For instance, in the first table (in Table 1 above), it is not onerous to see, given the joint frequencies, that ENGAGEMENT:deny is more associated with ATTITUDE:positive whereas ENGAGEMENT:counter is highly associated with ATTITUDE:negative. But in larger tables, with multiple column and row categories (e.g. five categories of ENGAGEMENT and six categories of ATTITUDE), co-associations would be difficult to detect. Therefore, as a second step, Correspondence Analysis is performed to test the co-associations between potentially significant features.

Correspondence Analysis, which is first proposed by Hirschfeld (1935) and later developed by Benz éri (1969), is probably the most sophisticated and versatile statistical method for the analysis (and visualization) of multidimensional, categorical data (Greenacre, 2010, p. 79). In linguistics, mainly in corpus linguistics, Correspondence Analysis is the preferred statistical method to detect correlations between linguistic categories in a growing number of studies (e.g. Abe & Tono, 2005; Goto, 2006; Linmans, 1995; Nakamura & Sinclair, 1995; Wilson, 2005). The motivation for applying Correspondence Analysis in this paper is twofold. First, it is originally and essentially developed for the analysis of two-way contingency tables of categorical data (Abdi & Williams, 2010); the dominant type of tables used in this paper to represent frequencies of co-occurrences within the ‘more persuasive’ and ‘less persuasive’ categories. Second, statistical packages (Note 3) that perform Correspondence Analysis often represent its numerical output graphically in symmetric 2-D (or 3-D) plots, making it more convenient to visually detect co-associations between categorical features. For example, Figure 2 shows a Correspondence Analysis plot of table (a) (in Table 1 above). Visually, the spatial patterns of the APPRAISAL features indicate strong co-associations between, on the one hand, engagement:deny and attitude:positive, and, on the other hand, engagement:counter and attitude:negative (more on these co-associations in the following section).

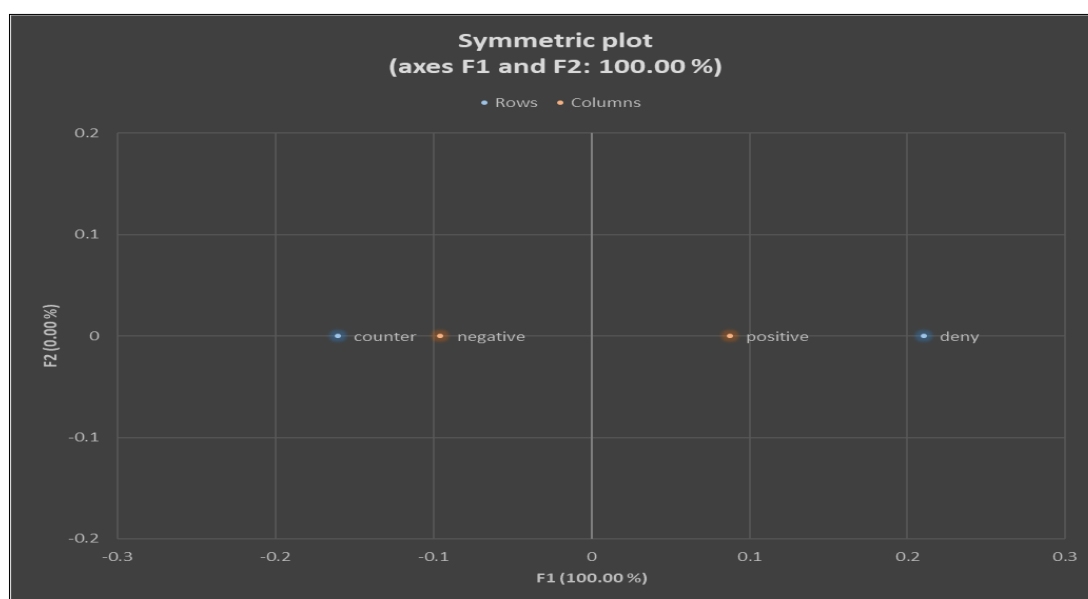


Figure 2. Correspondence Analysis 2-D plot of the first table (in Table 2 above), indicating two significant couplings (deny γ positive) and (counter γ negative)

4. Analysis of APPRAISAL Patterns in the ODT Corpus

4.1 General Patterns of APPRAISAL in the ODT Corpus

The summary distribution of ATTITUDE instances in the ODT corpus is given in Table 2 (a) below. Noticeably, appreciation is the dominant type of attitude deployed by all the debaters in the ODT corpus, with a relative frequency of 62%. Over 86% of appreciation choices are of the ‘valuations’ subtype targeting the ideational entities directly relevant to the main theme of the debate, as in, for example:

<i>The dangers involved in elective surgery are not <u>worth</u> the risk</i>	Target: elective surgery	Main Theme of Debate: cosmetic surgery	Text: ODT7
<i>Cosmetic surgery with its high cost and risks certainly does not seem like a <u>rational</u> option.</i>	Target: cosmetic surgery	Main Theme of Debate: cosmetic surgery	Text: ODT7
<i>Science enables much greater <u>destruction</u>.</i>	Target: science	Main Theme of Debate: science	Text: ODT2
<i>Science <u>saves and improves</u> lives</i>	Target: science	Main Theme of Debate: science	Text: ODT2
<i>Maintaining a system of free university education leads to an <u>inefficient allocation</u> of state resources</i>	Target: free university education	Main Theme of Debate: free university education	Text: ODT4
<i>Single-sex schools are <u>manifestations of patriarchal</u> societies</i>	Target: Single-sex schools	Main Theme of Debate: Single-sex education	Text: ODT1
<i>Single-sex institutions are <u>bad</u> for the emotional health of males</i>	Target: Single-sex schools	Main Theme of Debate: Single-sex education	Text: ODT1

Table 2. Distribution of ATTITUDE instances in the ODT corpus

(a) Distribution of attitude instances in the whole ODT corpus			
	affect	judgment	appreciation
# of instances	53	217	440
% of instances	7.5%	30.5%	62%
(b) Distribution of attitude instances according to the More Persuasive and Less Persuasive categories			
	affect	judgment	appreciation
More Persuasive	18	95	225
Less Persuasive	35	122	215
Chi-Square p-value = 0.024; Wilks' G ² p-value = 0.023			
(c) Distribution of positive and negative attitudes according the two ODT categories			
	positive	negative	
More Persuasive	122	214	
Less Persuasive	249	112	
Chi-square p-value = 0.0001 Fisher's Exact p-value = 0.0001 Wilks' G ² p-value = 0.0001			

However, a closer look at the frequencies of ATTITUDE associated with the 'more persuasive' and 'less persuasive' categories indicates two preferences (or tendencies). First, there is a slight tendency among the 'less persuasive' debaters to deploy affect resources, as noted in

Table 2 (b) above. Over 54% of affect associated with the ‘less persuasive’ category is of the ‘security’ subtype, as exemplified in the following sentences,

<i>Academic competition between the sexes is unhealthy and only adds to unhappiness and <u>anxiety</u> among weaker students</i>	Part: Points For (vote: less persuasive)	Text: ODT1
<i>I feel sexier, more <u>confident</u> and extremely proud of my body</i>	Part: Counterpoints (vote: less persuasive)	Text: ODT7

Second, negative attitudes are more associated with the ‘more persuasive’ category whereas positive attitudes are more frequently used by the ‘less persuasive’ debaters. These associations are statistically significant as indicated by the remarkably low p-values in Table 2 (c).

The distribution of ENGAGEMENT patterns in the ODT corpus is represented in Table 2 below. It can be seen that there are no statistically significant preferences in terms of how each category of debaters use ENGAGEMENT resources (as indicated by the large p-values of Chi-square and Wilks’ G^2 tests). That is, both ‘more persuasive’ and ‘less persuasive’ debaters mark their intersubjective positioning by relying most frequently on disclaiming (38%) and entertaining propositions (33%), as in e.g.:

<i>The proposition does <u>not</u> suggest living as a hunter-gatherer from the prehistoric era</i>	Engagement: disclaim	Text: ODT2
<i>In the case of university education, <u>however</u>, there is a great deal of disparity between countries’ education policies</i>	Engagement: disclaim	Text: ODT4
<i>...women go to try and look good are indeed <u>not</u> rational</i>	Engagement: disclaim	Text: ODT7
<i>On the other hand, it <u>could be argued</u> that instead of giving into this reality</i>	Engagement: entertain	Text: ODT7
<i>In this debate it <u>can</u> be understood to be the development</i>	Engagement: entertain	Text: ODT2
<i>therefore they <u>should</u> be taught separately</i>	Engagement: entertain	Text: ODT1

Table 2. Distribution of ENGAGEMENT choices in the ODT corpus

	disclaim	proclaim	entertain	attribute
More Persuasive	59	19	47	24
Less Persuasive	48	16	45	24
Chi-square p-value= 0.913 Wilks' G ² p-value = 0.908				
Total in the ODT Corpus	107	35	92	48
%	38%	12%	33%	17%
One-way Chi-Square p-value < 0.0001				

The frequency distributions of GRADUATION choices in the ODT corpus, presented in Table (a) below, indicate that ‘force’ instances are far more frequent than ‘focus’ instances. At more delicate levels, instances of force:intensification and force:quantification are roughly equally distributed in the corpus (54% for intensification and 46% for quantification, as shown in Table b). However, when the frequencies of intensification and quantification are considered vis-à-vis the ‘more persuasive’ and ‘less persuasive’ categories, they show notable correlations between ‘intensification’ and the ‘less persuasive’, on the one hand, and ‘quantification’ and the ‘more persuasive’, on the other. As indicated in Table (c), this correlation is statistically significant as the p-values are far less than $\alpha=0.05$, and as confirmed by the Correspondence Analysis plot in Table (d). The use of ‘quantified’ and ‘intensified’ graduations by the two categories of debaters is exemplified in the following sentences:

Science has produced the means for more suffering in an almost infinite capacity

Quantification: **Text:**
by more **ODT2**
persuasive

If anything, cosmetic surgery is the latest phenomenon in the long history of the objectification of women in society

Quantification: **Text:**
by more **ODT7**
persuasive

Independence is by its very nature unsupervised

Intensification: **Text:**
by less **ODT8**
persuasive

By executing convicts, the government is effectively condoning murder

Intensification: **Text:**
by less **ODT3**
persuasive

Finally, the statistical analysis does not highlight particular preferences among debaters regarding the five modes of graduation or the two directions of graduation, as all debaters tend to rely on ‘isolation’ (with a frequency of over 68%), and ‘up-scaled’ resources (with a frequency of over 91%). This is further confirmed by the relatively high p-values of the relevant contingency tables, as summarized in Table (e) and (f) below.

Table 4. Frequency distributions of GRADUATION resources in the ODT corpus

(a) Distribution of ‘force’ and ‘focus’ graduations in the ODT corpus					
	force	focus			
# of instances	220	7			
% of instances	97%	3%			
One-way Chi-Square p-value < 0.0001					
(b) Distribution of intensification and quantification instances in the ODT corpus					
	intensification	quantification			
# of instances	120	100			
% of instances	54%	46%			
One-way Chi-Square p-value = 0.177					
(c) Distribution of intensification and quantification in terms of the two ODT categories of debaters					
	intensification	quantification			
More Persuasive	45	56			
Less Persuasive	75	44			
Chi-square p-value = 0.006 Fisher’s Exact p-value = 0.007 Wilks’ G ² p-value = 0.006					
(d) Correspondence Analysis: symmetric plot of table (c)					
<p style="text-align: center;">Symmetric plot (axes F1 and F2: 100.00 %)</p> <p style="text-align: center;">• Rows • Columns</p>					
(e) Distribution of the five modes of graduation in the ODT corpus					
	isolation	maximisation	lexicalisation	infusion	repetition
More Persuasive	69	3	7	15	7
Less Persuasive	81	1	13	10	13
Chi-Square p-value = 0.26 Wilks’ G ² p-value = 0.253					
(f) Distribution of the two directions of graduation in the ODT corpus					
	up-scale	down-scale	Chi-Square p-value = 0.214 Fisher’s Exact p-value = 0.229 Wilks’ G ² p-value = 0.213		
More Persuasive	94	11			
Less Persuasive	111	7			

4.2 Significant Coupling Patterns in the ODT Corpus

As put forth in section 2.2 above, the potential number of possible APPRAISAL couplings is fairly large as features in a system (or sub-system) can ‘freely’ couple with features in other systems (or sub-systems) both intra- and inter-metafunctionally. It would go beyond the scope of this paper to explore all potential couplings; hence, the focus here will be on coupling patterns that are statistically significant in light of the general patterns outlined in section 4.1 above.

To begin with, as noted earlier, negative attitudes are statistically more associated with the ‘more persuasive’ debaters whereas positive attitudes are statistically more correlated with the ‘less persuasive’. In addition to confirming these associations, the joint frequencies of intra-systemic co-selections between the ATTITUDE subsystems further indicate an ‘order of preference’, so to speak, in terms of POLARITY and EXPLICITNESS co-choices. More specifically, the ‘more persuasive’ category is strongly associated with the two couplings: negative γ flag and negative γ inscribe, whereas the ‘less persuasive’ category is more associated with: positive γ flag and positive γ inscribe, respectively. These associations are statistically significant couplings given that the p-values are far below $\alpha=0.05$, as shown in Table 5 (a) and visualised in the Correspondence Analysis plot in Table 5 (b). Examples of these couplings in the ODT corpus are given in the following sentences.

<i>enabling <u>killing to occur much more rapidly</u></i>	flagynegative by more persuasive	Text: ODT2
<i>The Internet is a <u>threat to privacy</u></i>	inscrynegative: by more persuasive	Text: ODT5
<i><u>gives individuals many opportunities that will serve them enormously</u></i>	flagypositive by less persuasive	Text: ODT4
<i>Young people are generally more technologically <u>capable</u></i>	inscrypositive: by less persuasive	Text: ODT6

Table 5. Distribution of co-selections of EXPLICITNESS and POLARITY in the ODT corpus

(a) Distribution of co-selections of EXPLICITNESS and POLARITY in the two categories of debaters								
	posyinsc	negyinsc	posyprovok	negyprovok	posyflag	negyflag	posyafford	negyafford
More Persuasive	52	62	5	17	19	62	57	72
Less Persuasive	93	32	15	8	72	13	88	56
Chi-square p-value < 0.0001				Wilks' G ² p-value < 0.0001				

(b) Correspondence Analysis symmetric plot of table (a)

Moreover, it has been observed in the previous section that the dominant subtype of ATTITUDE in the ODT corpus is appreciation. Nonetheless, when intra-systemic co-selections within the ATTITUDE system (reviewed in section 2.1 above) are taken into account, certain couplings can be identified as statistically significant. More specifically, the intra-systemic co-selections of TYPE, POLARITY and EXPLICITNESS by the two categories of debaters are given in Table 6 (a), and visualised in the Correspondence Analysis plot in Table 6 (b). Based on this plot, the spatial distribution of co-selections in the two categories indicates that the ‘more persuasive’ category is strongly associated with the four couplings: negative γ appreciation γ inscribe, negative γ appreciation γ invoke, negative γ judgment γ invoke, and negative γ affect γ invoke. The ‘less persuasive’ category is more associated with other positive counterparts, in addition to the two couplings: negative γ affect γ inscribe, negative γ judgment γ inscribe. These couplings vis-à-vis the two ODT categories are statistically significant in the corpus as the p-values in Table 6 (a) are far less than $\alpha=0.05$.

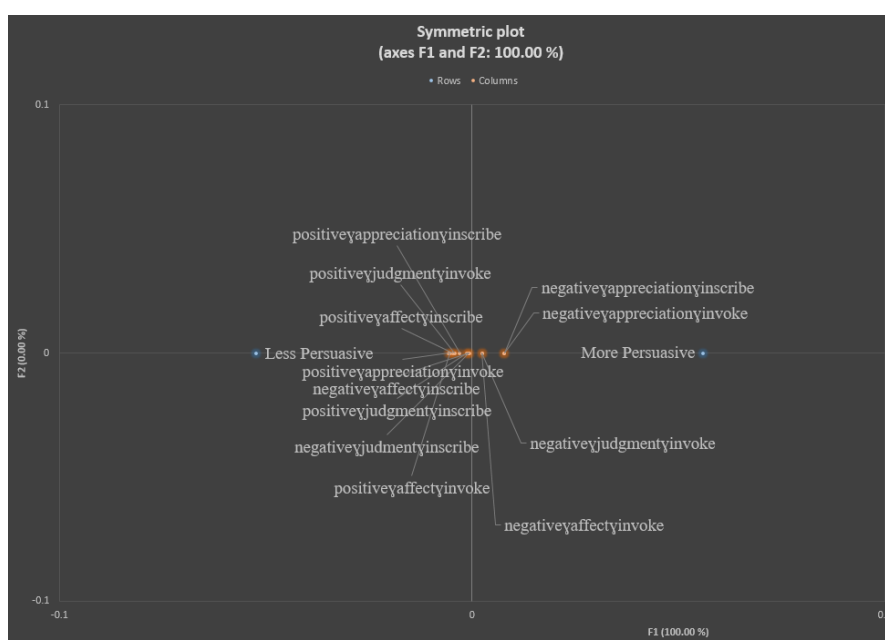
Table 6. Distribution of co-selections of TYPE, EXPLICITNESS and POLARITY in the two ODT categories of debaters

(a) Distribution of co-selections of TYPE, EXPLICITNESS and POLARITY in the two categories of debaters

	posyaffyins	negyaffyins	posyaffyinv	negyaffyinv	posyjudyins	negyjudyins	posyjudyinv	negyjudyinv	posyappyins	negyappyins	posyappyinv	negyappyinv
More Persuasive	4	5	0	9	16	10	26	43	31	47	58	98
Less Persuasive	18	7	6	4	22	13	52	32	51	12	110	44

Chi-square p-value < 0.0001 Wilks' G² p-value < 0.0001

(b) Correspondence Analysis symmetric plot of table (a)



Finally, it has been shown in section 4.1 above that ‘disclaim’ is the most frequent type of ENGAGEMENT in the ODT corpus, with no particular associations between the two ODT categories of debaters and other choices of ENGAGEMENT. However, the analysis of intra-metaphunctional co-selections of ENGAGEMENT and ATTITUDE (more specifically, of POLARITY and ‘disclaim’ choices) indicate four notable couplings. As illustrated in Table 3 (b) below, the ‘more persuasive’ category is highly correlated with the couplings: deny γ positive and counter γ negative. The ‘less persuasive’ category, by contrast, is more correlated with the two couplings: deny γ negative and counter γ positive. These four couplings are statistically significant as confirmed by the p-values ($\alpha=0.05$) in Table 3 (a). Examples of the four couplings in the ODT corpus are underlined in the following sentences:

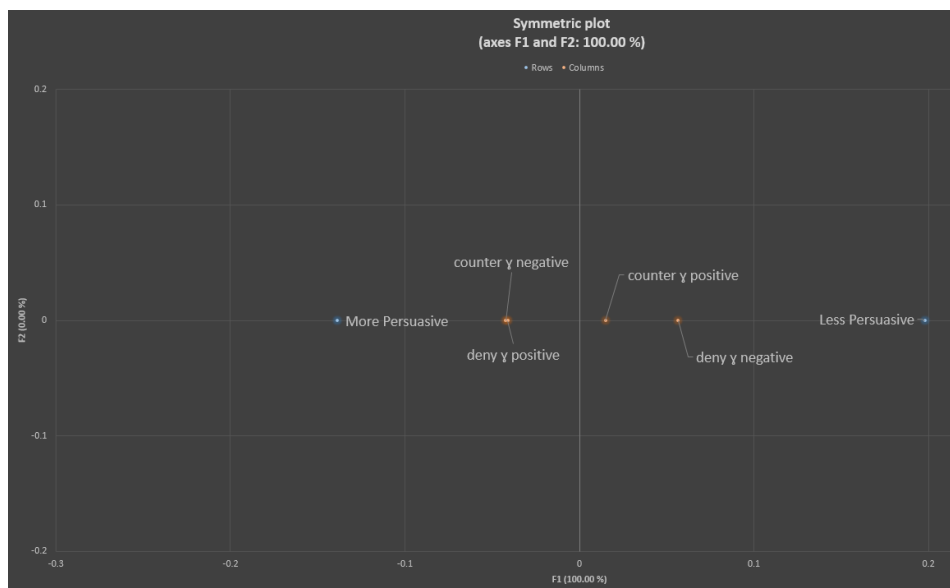
<i>...half a century of research has <u>not</u> shown any dramatic or consistent advantages for...</i>	deny y positive by more persuasive	Text: ODT1
<i><u>but the risk of nuclear weaponry is now so great...</u></i>	counter y negative: by more persuasive	Text: ODT2
<i>Plenty of people make a good living from normal medicine and they are <u>not criticised</u>, the same should be true for privately provided medicine</i>	deny y negative by less persuasive	Text: ODT7
<i><u>but necessary in order to obtain vital medical advances</u></i>	counter y positive by less persuasive	Text: ODT2

Table 3. Distribution of co-selections of ATTITUDE POLARITY and disclaim features in the ODT corpus

(a) Distribution of co-selections of POLARITY and engagement:disclaim in the two categories of debaters

	deny y positive	deny y negative	counter y positive	counter y negative
More Persuasive	23	6	11	27
Less Persuasive	3	27	13	4
Chi-square p-value < 0.0001		Wilks' G ² p-value < 0.0001		

(b) Correspondence Analysis symmetric plot of table (a)



5. Discussion and Conclusion

This study addresses three questions concerning patterns of APPRAISAL in the ODT corpus:

1. What are the statistically significant APPRAISAL patterns in the ODT corpus?
2. What are the statistically significant APPRAISAL patterns of choices and co-choices (or couplings) that are characteristic of the ‘more persuasive’ debaters in the ODT corpus?
3. What are the statistically significant APPRAISAL patterns of choices and co-choices (or couplings) that are characteristic of the ‘less persuasive’ debaters in the ODT corpus?

In answer to the first question, the statistical analysis presented in the previous section shows a number of significant usage patterns of APPRAISAL in the ODT corpus. **First**, both categories of debaters rely primarily on ‘appreciation’ as the main attitudinal resource for evaluating the issue at debate and for taking a stance towards or against the motion. This confirms the findings of Mardiana (2018) on student competitive debates, (Qi, 2017) on political argumentative speeches, X. Liu (2013) and Lee (2015) on student argumentative writing, Hood (2004, 2006) on academic writing, and Jakaza (2013) on parliamentary debates. By the frequent reliance on appreciation, rather than affect and judgment, the ODT debaters attempt to sound “more appreciative than personal and emotional” (X. Liu, 2013, p. 5), as “expressions of appreciation shift feelings or emotions from a personal to an institutional framework” (Hood, 2010, p. 111). (Miller, 2004, p. 286) notes that appreciation, rather than judgment, has a similar ‘objectifying’ persuasive effect in the U.S. Congressional debates.

Second, both categories of debaters rely more frequently on ‘disclaiming’ ENGAGEMENT as the primary intersubjective resource for dialogistic positioning of authorial and non-authorial viewpoints. High frequency of ‘disclaim’ is also a common pattern in student debates (Mardiana, 2018), parliamentary debates (Jakaza, 2013), political speeches (Qi, 2017), argumentative academic writing (Banari et al., 2017), and highly-graded argumentative essays (Lancaster, 2011). Through ‘disclaimed’ propositions, the ODT debaters aim to construct a stance (on the motion) that is “authorial and adversarial”, and, at the same time, “aware of alternative views” (Lancaster, 2011, p. 18). Such a stance seems to be highly compatible with the social purpose of debating as a debater must clearly and explicitly choose a (‘proposition’ or ‘opposition’) side and contract the dialogic space for the other side by directly reject it, replace it, correct it or refute it (Ehninger & Brockriede, 2008, p. 380).

Third, the findings reported in section 4 above reaffirm Mardiana’s (2018) observation that the subtype of GRADUATION mostly preferred by debaters is ‘force’. This preference is also compatible with the ‘debating’ voice. Through ‘force’ graduations, debaters construe themselves unambiguously as either maximally committed to the value positions they promote in support of the motion or minimally committed to the value positions they hold against it. Force, rather than focus, as remarked by X. Liu (2013), Mardiana (2018), and Lam and Crosthwaite (2018), enriches the argumentative prosody and builds up persuasive power.

This effect is minimal or not as straightforward with focus formulations as noted by Martin and White (2005, p. 139).

As far as the second and third questions are concerned, the statistical results highlight several patterns of APPRAISAL characteristic of both ODT categories of debaters. **First and foremost**, while the ‘more persuasive’ debaters frequently base their persuasion on negative attitudes, the ‘less persuasive’ debaters mainly prefer positive attitudes. Interestingly, the ‘more persuasive’ debaters effectively exploit what is known in psychology and communication literature as the ‘negativity bias’ or ‘negativity effect’ (see e.g. Fiske, 1980; Steiner, 1979). Negativity bias is the notion that “negative information attracts more attention than positive information, and it is more likely to be selected” (Meffert, Chung, Joiner, Waks, & Garst, 2006, p. 29). In the context of persuasion, and debating for that matter, “bad is stronger than good” as i) “bad emotions ... impressions...are quicker to form and more resistant to disconfirmation than good ones” (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001, p. 323) and as ii) the impact of the negative on audience perception and attention occurs automatically and subconsciously (Pratto & John, 1991). Hence, Allen and Burrell (2002, p. 83) propose that people are likely “to be more persuaded by the negative... than the positive”. Even when the ‘more persuasive’ stance (on the motion) involves a combination of positive and negative evaluations, the negative predominates and tend to “yield evaluations that are more negative” (Rozin & Royzman, 2001, p. 296).

It should be noted, however, that such dominant negativity in the ‘more persuasive’ category vis-à-vis the ‘less persuasive’ is not arbitrary, haphazard or intuitive, which leads us to the **second** significant difference between the two categories in the ODT corpus. As confirmed by the statistical analysis presented earlier, the ‘more persuasive’ mostly rely on inscribed negative appreciation in order to keep the focus on evaluating the phenomena at issue, rather than the people and emotions involved. Even when the ‘more persuasive’ stance involves negative emotions and evaluations of people, it does so with low commitment through invoked, rather than inscribed, affect and judgment (a pattern similar to that observed in Congressional debates by Miller and Johnson (2014)). The ‘less persuasive’ debaters, on the other hand, strongly rely on combinations of positive attitudes and inscribed negative affect and judgment. In other words, the ‘less persuasive’ stance sound more emotional and explicitly judgmental; a pattern commonly associated with ‘novice’ argumentative writing (see e.g. Hood, 2006; Jalilifar & Hemmati, 2013; X. Liu & Thompson, 2009; Yang, 2016).

The **third** cluster of patterns evident in the statistical analysis is concerned with levels of attitudinal EXPLICITNESS, POLARITY and GRADUATION. It has been found that the most preferred couplings by the ‘less persuasive’ debaters are flagged positive, inscribed positive, and afforded positive, respectively; whereas the ‘more persuasive’ are more likely to opt for flagged negative, inscribed negative, and afforded negative, in that order of preference. Flagging, by definition, always involves a coupling of GRADUATION and ATTITUDE (as pointed out in section 2 above). For the ‘more persuasive’ debaters, flagging is mainly formulated by coupling attitude with ‘force:quantification’ rather than ‘force:intensification’. Quantifying attitudes, as noted by (Hood, 2004, p. 90), “construes processes or attributes as things” and, hence, conveys a ‘less personal stance’. This, in turn, emphasises the above

mentioned observation that the ‘more persuasive’ debaters attempt to sound less judgmental, less emotional and more focused on the issue at debate. By flagging attitudes through intensification, the ‘less persuasive’ debaters, by contrast, re-construe the issues at debate as attributes, qualities and processes, which further maximises their commitment to the emotional and judgmental stance.

The **fourth** significant co-pattern distinguishing between the ‘more persuasive’ and the ‘less persuasive’ categories concerns the way in which ENGAGEMENT interacts with ATTITUDE. The results reported in the previous section indicate that the ‘more persuasive’ debaters tend to deny positive attitudes and counter with the negative, whereas the ‘less persuasive’ prefer to deny the negative and counter with the positive. Dialogistically, then, the ‘more persuasive’ introduce the positive position into the debate in order to explicitly reject it (deny), and constantly replace it or supplant it with a negative alternative (counter). So, although the ‘more persuasive’ debaters rely mainly on dominant negativity, they carefully acknowledge the existence of positive positions in a maximally contracted dialogic space. Further, they present the negative in “direct contradistinction with” positive expectations, construing the debater “as just as surprised as it is assumed [the audience] will be” by the negative values (Martin & White, 2005, p. 121). This authorial ‘surprise’ (or ‘counter-expectation’) towards the negative is fairly consistent with the observation that the ‘negative’ is the ‘marked’ case of attitude in many cultures (including the Western), as pointed out by Taboada, Trnavac, and Goddard (2017). The ‘less persuasive’ debaters, by contrast, seem to inconsistently couple their authorial ‘surprise’ with the unmarked case (i.e. positive attitudes), possibly unaware of the risk that their audience may not find the ‘unmarked’ as surprising.

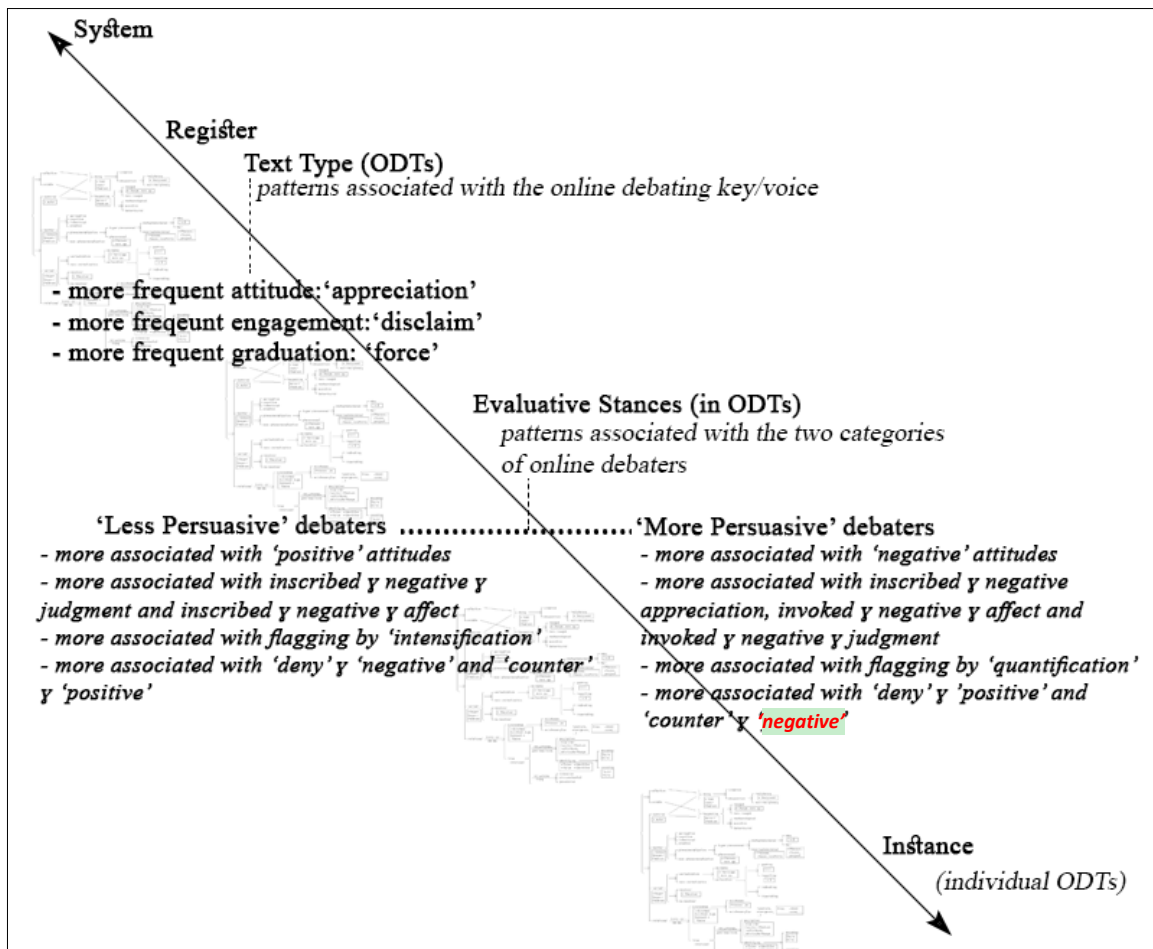


Figure 3. Significant ODT Patterns of APPRAISAL on the instantiation cline

Figure 3 **summarises** the key patterns of APPRAISAL discussed in this section in relation to the instantiation cline (reviewed in section 2). While previous research has primarily focused on APPRAISAL choices in debates at the upper levels of instantiation, this study has investigated choices and co-choices of APPRAISAL features at both upper and lower levels, making several contributions to current understanding of the debate genre. In addition to confirming previous literature’s findings, this study has taken a step further to provide key insights into how APPRAISAL resources are deployed and coupled: i) at text-type levels in order to highlight patterns shared by all ODT debaters, and ii) at lower instantiation levels in order to foreground patterns associated with the ‘more persuasive’ and ‘less persuasive’ debaters. By identifying the significant evaluative patterning and coupling deployed by both categories of debaters, this study contributes to the ongoing endeavour to identify elements of effective persuasion, providing possible **implications** for rhetoric and argumentation theories, as well as applied linguistics. For instance, findings of this study can be of potential use in the context of persuasive and argumentative writing instruction (as in e.g. Simmons, 2016) to help students i) learn how to effectively deploy evaluative, rhetorical language to argue, persuade, dissuade and take a stance on controversial issues, and ii) be aware of certain linguistic patterns that may weaken (or hinder) their persuasive force.

The results of this paper also contribute to our understanding of intra-metafunctional coupling within the APPRAISAL system in the debate texts. Nonetheless, there are various potential avenues for **future investigation**. One possible direction is to examine inter-metafunctional co-patterning of APPRAISAL and ideational entities, in order to shed some light on how online debaters construct multiple identities and personae in relation to ideology and the recently developed hierarchies in SFL: individuation and affiliation. Another fruitful direction is to extend the corpus to include more annotated ODTs which should improve the representativeness of the sample and further validate the generalisability of the findings. A more representative sample should readily reveal more similarities and differences between the debate genre and other argumentative genres in terms of APPRAISAL intra- and inter-metafunctional co-selections. Furthermore, the current study has looked at APPRAISAL patterning from a “synoptic perspective”; that is, it has focused on how APPRAISAL features co-pattern in the corpus “temporally as a [static] product emerging from the potential” (Matthiessen, Teruya, & Lam, 2010, p. 211). Hence, there is a wide scope for future work on how APPRAISAL choices co-pattern in the debate texts dynamically as unfolding processes of co-selections from the linguistic potentials available for both categories of debaters.

References

- Abdi, H., & Williams, L. J. (2010). Correspondence analysis. In N. Salkind (Ed.), *Encyclopedia of Research Design* (Vol. 1, pp. 267-278). Thousand Oaks: Sage Publications Inc.
- Abe, M., & Tono, Y. (2005). *Variations in L2 spoken and written English: investigating patterns of grammatical errors a cross proficiency levels*. Paper presented at the Corpus Linguistics 2005 Conference, Birmingham.
- Agresti, A. (2007). *An Introduction to Categorical Data Analysis* (3rd ed.). Hoboken, New Jersey: JohnWiley & Sons, Inc.
- Allen, M., & Burrell, N. (2002). The negativity effect in political advertising: a meta-analysis. In J. P. Dillard & M. Pfau (Eds.), *The Persuasion Handbook: Developments in Theory and Practice* (pp. 83-96). Thousand Oaks, California: SAGE Publications, Inc.
- Aloy Mayo, M., & Taboada, M. (2017). Evaluation in political discourse addressed to women: Appraisal analysis of Cosmopolitan’s online coverage of the 2014 US midterm elections. *Discourse, Context & Media*, 18, 40-48. <https://doi.org/10.1016/j.dcm.2017.06.003>
- Bakhtin, M. M. (1981). *The dialogic imagination: four essays* (C. Emerson & M. Holquist, Trans.). Austin; London: University of Texas Press.
- Banari, R., Memari, M., & Asadi, B. (2017). A comparative study of dialogistic language employed by English and Persian writers in academic writing. *Journal of Research in Applied Linguistics*, 8, 136-149. <https://doi.org/10.22055/ral.2017.12918>
- Banfield, A. (1982). *Unspeakable sentences*. Boston: Routledge, Chapman & Hall, Inc.

- Batson, C. D., Shaw, L. L., & Oleson, K. C. (1992). Differentiating affect, mood, and emotion: Toward functionally based conceptual distinctions. In *Emotion* (pp. 294-326). Thousand Oaks, CA, US: Sage Publications, Inc.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is Stronger than Good. *Review of General Psychology*, 5(4), 323-370. <https://doi.org/10.1037/1089-2680.5.4.323>
- Bednarek, M. (2006). *Evaluation in media discourse: analysis of a newspaper corpus*. London; New York: Continuum.
- Benamara, F., Taboada, M., & Mathieu, Y. (2017). Evaluative Language Beyond Bags of Words: Linguistic Insights and Computational Applications. *Computational Linguistics*, 43(1), 201-264. https://doi.org/10.1162/COLI_a_00278
- Benz écri, J. P. (1969). Statistical analysis as a tool to make patterns emerge from data. In S. Watanabe (Ed.), *Methodologies of pattern recognition* (pp. 35-74). New York: Academic Press.
- Bevitori, C. (2005). Attribution as evaluation: a corpus-based investigation of quotations in parliamentary discourse. *ESP Across Cultures*, 2.
- Biber, D., & Finegan, E. (1988). Adverbial stance types in English. *Discourse Processes*, 11(1), 1-34. <https://doi.org/10.1080/01638538809544689>
- Biber, D., & Finegan, E. (1989). Styles of Stance in English: Lexical and Grammatical Marking of Evidentiality and Affect. *Text*, 9(1), 93-124.
- Brown, P., & Levinson, S. (1978). Universals in Language usage: politeness phenomena. In E. Goody (Ed.), *Questions and politeness: Strategies in social interaction* (pp. 56-310). Cambridge: Cambridge University Press.
- Cameron, A., & Gaul, N. (2017). *Dialogues and Debates from Late Antiquity to Late Byzantium* (A. Cameron & N. Gaul Eds.). New York: Taylor & Francis.
- Chafe, W. L., & Nichols, J. (1986). *Evidentiality: the linguistic coding of epistemology*. Norwood, NJ: Ablex.
- Church, K. W., & Hanks, P. (1990). Word association norms, mutual information, and lexicography. *Comput. Linguist.*, 16(1), 22-29.
- Crismore, A., Markkanen, R., & Steffenson, M. (1993). Metadiscourse in persuasive writing: a study of texts written by American and Finish university students. *Written Communication*, 10(1), 39-71.
- Duke, R. K. (1990). *The Persuasive Appeal of the Chronicler: A Rhetorical Analysis*. Sheffield: The Almond Press.
- Durmus, E., & Cardie, C. (2018). Exploring the Role of Prior Beliefs for Argument Persuasion. In M. A. Walker, H. Ji, & A. Stent (Eds.), *Proceedings of the 2018 Conference of*

the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (Vol. 1, pp. 1035-1045). New Orleans, Louisiana: Association for Computational Linguistics.

Ehninger, D., & Brockriede, W. (2008). *Decision by Debate*. New York: International Debate Education Association.

Fedrizzi, M., & Ellis, R. (2010). *Debate, Student Edition*. Mason, OH: Cengage Learning.

Feez, S., Iedema, R., & White, P. (2008). *Media literacy*. N.S.W.: the NSW Adult Migrant Education Service.

Fiske, S. (1980). Attention and Weight in Person Perception: The Impact of Negative and Extreme Behavior. *Journal of Personality and Social Psychology*, 38(6), 889-906. <https://doi.org/10.1037/0022-3514.38.6.889>

Goatly, A. (2000). *Critical Reading and Writing: An Introductory Coursebook*. London: Routledge.

Goto, K. (2006). Exploring the Possibility of a New Approach to Text Classification. *English Corpus Studies*, 13, 107-122.

Greenacre, M. J. (2010). *Biplots in Practice*. Bilbao: Fundación BBVA.

Halliday, M. A. (1970). Language Structure and Language Function. In J. Lyons (Ed.), *New horizons in linguistics* (pp. 140-165). Harmondsworth: Penguin Books.

Halliday, M. A. (1979). Modes of meaning and modes of expression: Types of grammatical structure, and their determination by different semantic functions. In D. J. Allerton, E. Carney, & D. Holdcroft (Eds.), *Function and Context in Linguistic Analysis: Essays Offered to William Haas* (pp. 57-79). Cambridge: Cambridge University Press.

Halliday, M. A. (1991). Towards probabilistic interpretations. In E. Ventola (Ed.), *Functional and Systemic Linguistics: Approaches and Uses* (pp. 39-62). Berlin & New York: Walter de Gruyter.

Halliday, M. A. (1992). Language as System and Language as Instance: the corpus as a theoretical construct. In J. Svartvik (Ed.), *Directions in Corpus Linguistics: Proceedings of Nobel Symposium 82 Stockholm, 4-8 August 1991* (pp. 61-78). Berlin: Mouton De Gruyter.

Halliday, M. A. (1994). *An Introduction to Functional Grammar* (2nd ed.). London: Arnold.

Halliday, M. A. (1995, 20-24 March 1995). *Fuzzy grammatics: a systemic functional approach to fuzziness in natural language*. Paper presented at the Proceedings of 1995 IEEE International Conference on Fuzzy Systems.

Halliday, M. A., & Hasan, R. (1976). *Cohesion in English*. London: Longman.

Halliday, M. A., & Matthiessen, C. M. I. M. (2004). *An Introduction to Functional Grammar* (3rd ed.). London: A Hodder Arnold Publication.

- Haney, T. K. (1965). *An Introduction to Debate*. Boston: Ginn & Co.
- Hirschfeld, H. O. (1935). A Connection between Correlation and Contingency. *Mathematical Proceedings of the Cambridge Philosophical Society*, 31(4), 520-524.
- Hood, S. (2004). *Appraising Research: Taking a stance in academic writing*. (Doctor of Philosophy), University of Technology, Sydney, Sydney.
- Hood, S. (2006). The persuasive power of prosodies: Radiating values in academic writing. *Journal of English for Academic Purposes*, 5, 37-49.
- Hood, S. (2010). *Appraising Research: Evaluation in Academic Writing*. Basingstoke: Palgrave Macmillan.
- Hood, S., & Martin, J. R. (2007). Invoking Attitude: The Play of Graduation in Appraising Discourse. In R. Hasan, C. Matthiessen, & J. Webster (Eds.), *Continuing Discourse on Language: A Functional Perspective* (Vol. 2, pp. 737-762). London; Oakville: Equinox.
- Hosman, L. A. (2002). Language and persuasion. In J. P. Dillard & L. Shen (Eds.), *The Persuasion Handbook: Developments in Theory and Practice* (2nd ed., pp. 371-390). California: Sage Publications Inc.
- Hunston, S. (2002). *Corpora in Applied Linguistics*. Cambridge, UK: Cambridge University Press.
- Hyland, K. (1998). Exploring corporate rhetoric: metadiscourse in the CEO's letter. *Journal of Business Communication*, 35(2), 224-245.
- Iedema, R., Feez, S., & White, P. (1994). *Stage two: Media literacy. A report for the Write it Right Literacy in Industry Research Project by the Disadvantaged Schools Program* (D. o. S. Education Ed.). NSW: Department of School Education.
- Ifantidou, E. (2005). The semantics and pragmatics of metadiscourse. *Journal of Pragmatics*, 37(9), 1325-1353. <https://doi.org/10.1016/j.pragma.2004.11.006>
- Ilie, C. (1994). *What else can I tell you?: a pragmatic study of English rhetorical questions as discursive and argumentative acts*. Stockholm: Almqvist & Wiksell International.
- Jakaza, E. (2013). *Appraisal and evaluation in zimbabwean parliamentary discourse and its representation in newspaper articles*. (PhD), Stellenbosch University, Stellenbosch.
- Jalilifar, A., & Hemmati, A. (2013). Construction of Evaluative Meanings by Kurdish Speaking Learners of English: A Comparison of High- and Low-Graded Argumentative Essays. *Issues in Language Teaching (ILT)*, 2(2), 57-84.
- Knight, N. K. (2010). Wrinkling Complexity: Concepts of Identity and Affiliation in Humour. In M. Bednarek & J. R. Martin (Eds.), *New Discourse on Language: Functional Perspectives on Multimodality, Identity, and Affiliation* (pp. 35-58). London; New York: Continuum.
- Kolesnikova, O. (2016). *Survey of Word Co-occurrence Measures for Collocation Detection* (Vol. 20).

- Labov, W. (1984). Intensity. In D. Schiffrin (Ed.), *Meaning, form, and use in context: linguistic applications* (pp. 43-70). Washington, D.C.: Georgetown University Press.
- Lakoff, G. (1973). Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts. *Journal of Philosophical Logic*, 2(4), 458-508.
- Lam, S. L., & Crosthwaite, P. (2018). APPRAISAL resources in L1 and L2 argumentative essays: A contrastive learner corpus-informed study of evaluative stance. *Journal of Corpora and Discourse Studies*, 1(1), 8-35.
- Lancaster, Z. (2011). Interpersonal Stance in L1 and L2 Students' Argumentative Writing in Economics: Implications for Faculty Development in WAC/WID Programs. *Across the Disciplines*, 8(Special Issue: WAC and Second Language Writing).
- Lee, S. H. (2015). Evaluative stances in persuasive essays by undergraduate students: Focusing on APPRECIATION resources. *Text & Talk*, 35(1), 49-76.
- Linmans, A. J. M. (1995). Correspondence Analysis of the Synoptic Gospels. *Literary and Linguistic Computing*, 10(3), 171-182.
- Liu, B. (2012). *Sentiment Analysis and Opinion Mining*: Morgan & Claypool Publishers.
- Liu, X. (2013). Evaluation in Chinese University EFL Students' English Argumentative Writing: An APPRAISAL Study. *Electronic Journal of Foreign Language Teaching*, 10(1), 40-53.
- Liu, X., & Thompson, P. (2009). Attitude in Students' Argumentative Writing: A Contrastive Perspective. *Language Studies Working Papers*, 1, 3-15.
- Lyons, J. (1977). *Semantics: Introduction: some basic terms and concepts* (Vol. 1). Cambridge: Cambridge University Press.
- Mardiana, M. (2018). The Use of Appraisal and Debate Structure in English Debate Competition of Senior High School Students. *English Education Journal*, 8(3), 403-410.
- Martin, J. R. (1992). *English Text: System and Structure*. Amsterdam: John Benjamin B.V.
- Martin, J. R. (1995). Interpersonal meaning, persuasion and public discourse: Packing semiotic punch. *Australian Journal of Linguistics*, 15(1), 33-67. <https://doi.org/10.1080/07268609508599515>
- Martin, J. R. (2000). Beyond Exchange: Appraisal Systems in English. In S. Hunston & G. Thompson (Eds.), *Evaluation in text: authorial stance and the construction of discourse* (pp. 142-175). New York: Oxford University Press.
- Martin, J. R. (2004). Mourning: how we get aligned. *Discourse and Society*, 15(2-3), 321-344.
- Martin, J. R. (2008). Innocence: Realisation, Instantiation and Individuation. In A. Mahboob & N. Knight (Eds.), *Questioning Linguistics* (pp. 32-76). Newcastle: Cambridge Scholars Publishing.

- Martin, J. R. (2010). Introduction: Semantic Variation. In M. Bednarek & J. R. Martin (Eds.), *New Discourse on Language: Functional Perspectives on Multimodality, Identity, and Affiliation* (pp. 1-34). London & New York: Continuum.
- Martin, J. R., & Plum, G. A. (1997). Construing Experience: Some Story Genre. *Journal of Narrative and Life History*, 7(1-4), 299-308.
- Martin, J. R., & Rose, D. (2007). *Working With Discourse: Meaning Beyond the Clause* (2nd ed.). London; New York: Continuum.
- Martin, J. R., & Stenglin, M. (2007). Materializing Reconciliation: Negotiating Difference in a Transcolonial Exhibition. In T. D. Royce & W. L. Bowcher (Eds.), *New Directions in the Analysis of Multimodal Discourse* (pp. 215-238). New Jersey: Lawrence Erlbaum Associates.
- Martin, J. R., & Veel, R. (Eds.) (1998). *Reading science: critical and functional perspectives on discourses of science*. London: Routledge.
- Martin, J. R., & White, P. (2005). *Language of Evaluation: Appraisal in English*. Hampshire: Palgrave Macmillan.
- Matthiessen, C. M. I. M. (2006). Frequency Profiles of Some Basic Grammatical Systems. In G. Thompson & S. Hunston (Eds.), *System and Corpus: exploring connections* (pp. 103-142). London; Oakville: Equinox Publishing Ltd.
- Matthiessen, C. M. I. M., Teruya, K., & Lam, M. (2010). *Key Terms in Systemic Functional Linguistics*. London; New York: Continuum.
- Meffert, M. F., Chung, S., Joiner, A. J., Waks, L., & Garst, J. (2006). The Effects of Negativity and Motivated Information Processing During a Political Campaign. *Journal of Communication*, 56(1), 27-51. <https://doi.org/10.1111/j.1460-2466.2006.00003.x>
- Miller, D. (2004). 'Truth, Justice and the American Way': The APPRAISAL SYSTEM of JUDGEMENT in the U.S. House debate on the impeachment of the President, 1998. In P. Bayley (Ed.), *Cross-cultural perspectives on parliamentary discourse* (pp. 271-300). Amsterdam & Philadelphia: John Benjamins.
- Miller, D., & Johnson, J. H. (2009). Strict vs. Nurturant Parents? A Corpus-Assisted Study of Congressional Positioning on the War in Iraq. In J. Morley & P. Bayley (Eds.), *Corpus-Assisted Discourse Studies on the Iraq Conflict: Wording the War*. London: Routledge.
- Miller, D., & Johnson, J. H. (2013). Evaluative choice as 'register--idiosyncratic' meaning? A corpus assisted comparative study of Congressional debate. In L. Fontaine, T. Bartlett, & G. O'Grady (Eds.), *Systemic Functional Linguistics: Exploring Choice* (pp. 432-453). Cambridge: Cambridge University Press.
- Miller, D., & Johnson, J. H. (2014). Evaluative phraseological choice and speaker party/gender: A corpus-assisted comparative study of 'register-idiosyncratic' meaning in

- Congressional debate. In G. Thompson & L. Alba-Juez (Eds.), *Evaluation in Context* (pp. 345-366). Amsterdam & Philadelphia: John Benjamins.
- Minsky, M. (2006). *The Emotion Machine: Commonsense Thinking, Artificial Intelligence, and the Future of the Human Mind*: Simon & Schuster, Inc.
- Nakamura, J., & Sinclair, J. (1995). The World of Woman in the Bank of English: Internal Criteria for the Classification of Corpora. *Literary & Linguistic Computing*, 10(2), 99-110.
- Nesbitt, C., & Plum, G. (1988). *Probabilities in a systemic-functional grammar: The clause complex in English* (Vol. 2).
- Paine, C. (1999). *The Resistant Writer: Rhetoric as Immunity, 1850 to the Present*. Albany: State University of New York Press.
- Palmer, F. R. (1986). *Mood and Modality*. Cambridge: Cambridge University Press.
- Pedersen, T. (1996). *Fishing for Exactness*.
- Picard, R. W. (1997). *Affective computing*. MIT Press.
- Poria, S., Hussain, A., & Cambria, E. (2018). *Multimodal Sentiment Analysis*. Cham, Switzerland: Springer.
- Pratto, F., & John, O. P. (1991). Automatic Vigilance: The Attention-Grabbing Power of Negative Social Information. *Journal of Personality and Social Psychology*, 61(3), 380-391. <https://doi.org/10.1037//0022-3514.61.3.380>
- Qi, L. (2017). Positive Discourse Analysis of Hillary Clinton's Concession Address. *Journal of Literature and Art Studies*, 7(10), 1326-1330
- Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A Comprehensive Grammar of The English Language*. London; New York: Longman Group Limited.
- Rozin, P., & Royzman, E. B. (2001). Negativity Bias, Negativity Dominance, and Contagion. *Personality and Social Psychology Review*, 5(4), 296-320. https://doi.org/10.1207/s15327957pspr0504_2
- Simmons, A. M. (2016). Supporting Critical Literacy in High School English by Using Systemic Functional Linguistics to Analyze Fantasy, Canonical, and Nonfiction Texts. *Critical Inquiry in Language Studies*, 13(3), 183-209. <https://doi.org/10.1080/15427587.2016.1152475>
- Simon-Vandenberg, A.-M., White, P., & Aijmer, K. (2007). Presupposition and 'taking-for-granted' in mass communicated political argument An illustration from British, Flemish and Swedish political colloquy. In A. Fetzer & G. E. Lauerbach (Eds.), *Political discourse in the media: Cross-cultural perspectives (Pragmatics and Beyond New Series, v. 160)* (pp. 31-74). Amsterdam & Philadelphia: John Benjamins.
- Stein, D., & Wright, S. (Eds.) (2005). *Subjectivity and Subjectivisation: Linguistic Perspectives*. Cambridge: Cambridge University Press.

- Steiner, J. E. (1979). Human Facial Expressions in Response to Taste and Smell Stimulation. In H. W. Reese & L. P. Lipsitt (Eds.), *Advances in Child Development and Behavior* (Vol. 13, pp. 257-295). JAI.
- Taboada, M., Trnavac, R., & Goddard, C. (2017). On Being Negative. *Corpus Pragmatics*, 1(1), 57-76.
- Tan, S. (2010). Modelling engagement in a web-based advertising campaign. *Visual Communication*, 9(1), 91-115. <https://doi.org/10.1177/1470357209352949>
- Thornbury, S., & Slade, D. (2006). *Conversation: From Description to Pedagogy*. Cambridge: Cambridge University Press.
- Tumposky, N. R. (2004). The Debate Debate. *The Clearing House*, 78(2), 52-55.
- White, P. (1998). *Telling Media Tales: the news story as rhetoric*. (PhD), University of Sydney, Sydney.
- White, P. (2000). Dialogue and Inter-Subjectivity: Reinterpreting the Semantics of Modality and Hedging. In P. White, M. Coulthard, J. Cotterill, & F. Rock (Eds.), *Dialogue Analysis VII: Working with Dialogue* (pp. 67-80). Tübingen: Max Niemeyer Verlag.
- White, P. (2003). Beyond modality and hedging: A dialogic view of the language of intersubjective stance. *Text - Interdisciplinary Journal for the Study of Discourse*, 23(2), 259-284.
- White, P. (2012). Exploring the axiological workings of 'reporter voice' news stories-Attribution and attitudinal positioning. *Discourse, Context & Media*, 1(2-3), 57-67. <https://doi.org/10.1016/j.dcm.2012.10.004>
- White, P., & Don, A. (2012). Appraisal Guide: Attitude/Appreciation. Retrieved from <http://grammatics.com/appraisal/AppraisalGuide/UnFramed/Stage3-Attitude-Appreciation.htm>
- Wilson, A. (2005). Modal verbs in written Indian English: a quantitative analysis of the Kolhapur corpus using correspondence analysis. *ICAME Journal*, 29, 151-170.
- Wisse, J. (1989). *Ethos and Pathos: from Aristotle to Cicero*. Amsterdam: Hakkert.
- Wu, M. (2010). Debating China-India relations on the internet: Netizens' dialogue for constructive international politics. *Global Media and Communication*, 6(3), 383-389.
- Yang, Y. (2016). Appraisal Resources in Chinese College Students' English Argumentative Writing. *Journal of Language Teaching and Research*, 7(5), 1002-1013.
- Zappavigna, M., Dwyer, P., & Martin, J. R. (2008). Syndromes of meaning: exploring patterned coupling in a NSW youth justice conference. In A. Mahboob & N. Knight (Eds.), *Questioning Linguistics* (pp. 164-185). Newcastle-upon-Tyne: Cambridge Scholars Publishing.

Appendix

Appendix 1. The ODT corpus

Text ID	Views	Debate Motion	URL	Persuasiveness and Voting Results
ODT1	684,007	This House believes single-sex schools are good for education	http://archive.idebate.org/debatabase/debates/class/house-believe-s-single-sex-schools-are-good-education	Before ‘Strongly for’: 9% Before ‘Strongly against’: 37% After ‘Strongly for’: 4% After ‘Strongly against’: 47% Decision: opposition side is more persuasive
ODT2	200,789	This House believes science is a threat to humanity	http://archive.idebate.org/debatabase/debates/science-technology/science/house-believes-science-threat-humanity	Before ‘Strongly for’: 2% Before ‘Strongly against’: 73% After ‘Strongly for’: 14% After ‘Strongly against’:

				64%
				Decision: proposition side is more persuasive
ODT3	396,628	This House supports the death penalty	http://archive.idebate.org/debatabase/debates/capital-punishment/ house-supports-death-penalty	Before ‘Strongly for’: 27% Before ‘Strongly against’: 31% After ‘Strongly for’: 48% After ‘Strongly against’: 25% Decision: proposition side is more persuasive
ODT4	375,269	This House believes university education should be free	http://archive.idebate.org/debatabase/debates/funding/house-belie ves-university-education-should-be-free	Before ‘Strongly for’: 35% Before ‘Strongly against’: 16% After ‘Strongly for’: 19% After ‘Strongly against’: 38% Decision:

				opposition side is more persuasive
ODT5	340,901	This House believes the internet brings more harm than good	http://archive.idebate.org/debatabase/debates/science-technology/house-believes-internet-brings-more-harm-good	<p>Before ‘Strongly for’: 10%</p> <p>Before ‘Strongly against’: 49%</p> <p>After ‘Strongly for’: 20%</p> <p>After ‘Strongly against’: 40%</p> <p>Decision: proposition side is more persuasive</p>
ODT6	308,020	This house would raise the legal driving age to 18	http://archive.idebate.org/debatabase/debates/law-crime/house-would-raise-legal-driving-age-18	<p>Before ‘Strongly for’: 14%</p> <p>Before ‘Strongly against’: 30%</p> <p>After ‘Strongly for’: 0%</p> <p>After ‘Strongly against’: 44%</p> <p>Decision: opposition side is more persuasive</p>

				persuasive
ODT7	243,875	This house would ban cosmetic surgery	http://archive.idebate.org/debatabase/debates/health/house-would-ban-cosmetic-surgery	Before ‘Strongly for’: 16% Before ‘Strongly against’: 32% After ‘Strongly for’: 44% After ‘Strongly against’: 44% Decision: proposition side is more persuasive
ODT8	233,578	This House believes that children should be allowed to own and use mobile phones.	http://archive.idebate.org/debatabase/debates/science-technology/house-believes-children-should-be-allowed-own-and-use-mobile-phones	Before ‘Strongly for’: 38% Before ‘Strongly against’: 16% After ‘Strongly for’: 50% After ‘Strongly against’: 0% Decision: proposition side is more persuasive

Notes

Note 1. When referring to APPRAISAL as a linguistic system, the term is conventionally printed in small capitals.

Note 2. Often the plus sign ‘+’ is used to denote coupling (as in e.g. Zappavigna, Dwyer & Martin, 2008), in addition to denoting ‘positive’ polarity. To avoid confusion, the Greek letter gamma ‘ γ ’ will be used henceforth in this paper to denote ‘coupling’.

Note 3. Such as XLSTAT in Excel; the statistical package used in this paper to perform tests on the contingency tables generated by the Exploring tool.

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