

Adjective complementation patterns and judgement

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Adjective complementation patterns and JUDGEMENT: Aligning lexical-grammatical and discourse-semantic approaches in appraisal research

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Abstract: This study takes a lexical-grammatical approach to exploring the evaluation of human behaviour and/or character. It uses adjective complementation patterns as the starting point to examine the lexical-grammatical resources at risk in the appraisal system of JUDGEMENT, aiming to explore the extent to which we can arrive at the same categorization of the resources realizing JUDGEMENT if a formal or lexical-grammatical approach, rather than a discourse-semantic one, is taken. Using a corpus compiled of texts categorized as ‘Biography’ in the British National Corpus, the study, on the one hand, shows that most of the items identified can be very satisfactorily classified in terms posited in the JUDGEMENT system, suggesting that the nomenclature from that model is useful. On the other hand, a considerable number of items have also been identified which construe attitudes towards emotional types of personality traits, leading to the proposal of a potentially useful new judgement category and further an adjusted system of JUDGEMENT. The heuristic potential of aligning the lexical-grammatical and discourse-semantic approaches to appraisal is further discussed.

Keyword: evaluation, appraisal, JUDGEMENT, adjective complementation pattern, discourse-semantics

1 Introduction

This study takes a lexical-grammatical approach to exploring the evaluation of human behaviour and/or character; in other words, it studies some of the lexical-grammatical resources at risk in the appraisal system of JUDGEMENT¹ (Martin 2000; Martin and White 2005). To note briefly, the term ‘lexical-grammatical’ is used rather than the more usual ‘lexicogrammatical’ because we intend to indicate that we take an approach that views lexis and grammar as one (Hunston and Francis 2000), but that is distinct from the Hallidayan approach. While it draws on insights from, and is to a large extent based on, APPRAISAL, the study takes form, specifically adjective complementation patterns (Francis et al. 1998), as its starting point. The objectives of the study are to identify the occurrences of adjective-in-pattern exemplars (e.g. *good at*, *brave about*) that exemplify JUDGEMENT in a corpus selected from the British National Corpus and, further, to explore the extent to which we can arrive at the same categorization of the resources realizing JUDGEMENT if a lexical-grammatical approach, rather than a discourse-semantic one, is taken (cf. Martin 2017).

As indicated above, the APPRAISAL systems represent discourse-semantic categories and are therefore quite unlike the systems of lexicogrammar proposed by Halliday, in which, as Halliday (1994: xix) notes, a proposed distinction between categories must be evidenced by a ‘lexicogrammatical reflex of the difference’.² Given this difference in approach, it may seem odd to ask whether similar lexical-grammatical reflexes can support the semantic distinctions

¹ Small caps are used to indicate systems of appraisal.

² A good example discussed in Halliday (1994: 172–174) is that distinguishing between process types requires some justification on the basis of form. For example, mental and material processes may be distinguished by their prototypical forms of tense: the default form of a material process is the progressive (*I am watching a movie* is more canonical, and more frequent, than *I watch a movie*) whereas that of a mental process is the simple present (*I believe these ideas are worth pursuing* is more canonical, and more frequent, than *I am believing these ideas are worth pursuing*).

made in relation to appraisal, (sub)types of attitudes in particular. There are a number of reasons for doing so. The first is that when human intuition is applied to some of the observations arising from a corpus study, the distinctions made are parallel to those found in APPRAISAL, and the nomenclature from that model proves useful. For example, the adjectives in English that are complemented by prepositional phrases beginning with *at* fall into two groups: the ‘(un)skilled at’ group, where evaluation of the clause subject is performed (*she is good at maths*); and the ‘reaction at’ group, where evaluation of the entity in the prepositional phrase by the clause subject is reported (*Archbishop Fisher was very pleased at what Ramsey did for the conference*). The APPRAISAL system teaches us that the first of these is an example of ‘judgement: capacity’ while the second is an example of ‘affect: happiness’. Secondly, it is increasingly common to apply methods derived from the study of large-scale corpora as a complement to fine-grained discourse studies. Examples range from the investigations of topics derived from critical discourse analysis (Baker et al. 2008; Baker and Levon 2015) to the study of forms frequently associated with attitude or ideology (Bednarek 2009; Hunston 2013). Finally, while lexical-grammatical distinctions could not be considered as having priority over discourse-semantic ones, for the reasons noted above, issues of form can have a useful exploratory and didactic value (see, for example, Martin and White’s [2005: 58–61] discussion). This certainly raises the possibility that explorations of form might both reinforce and challenge the categories posited in APPRAISAL.

The present study therefore investigates the extent to which a categorization of judgement resources derived from a lexical-grammatical approach can be aligned with that derived from a discourse-semantic one. The investigation appears to offer evidence for an alternative framework of JUDGEMENT. Research questions that guide the investigation thus are:

- 1) How that alternative framework is developed and can be subsequently modelled;

- 2) What lexical-grammatical evidence there is to support this alternative framework;
- 3) What insights an alignment of the lexical-grammatical and discourse-semantic approaches can offer into appraisal research.

In the following we will first discuss the context of JUDGEMENT system (Section 2) and then amendments that have been made to the ATTITUDE system in appraisal (Section 3). The corpus and methodology used in the present study will be noted in Section 4, followed by Section 5 in which we discuss the adjusted system network of JUDGEMENT and present the lexical-grammatical evidence to support the suggested amendments. Section 6 concludes the study with a discussion on the heuristic potential of aligning the lexical-grammatical and discourse-semantic approaches to appraisal.

2 The context of the JUDGEMENT system

Evaluative language has been shown to be important in, for example, maintaining interpersonal relationships and organizing discourse (Thompson and Hunston 2000: 5; Bednarek 2006: 4–5); as such, evaluative language has been extensively investigated (see Su and Bednarek [2018] for an updated and comprehensive bibliography for research on appraisal/evaluation). It has been argued that, of all the approaches to evaluation, Systemic Functional Linguistics includes the one most comprehensively theorized: “it is within Systemic Functional Linguistics that the investigation of the systems of evaluative choices available to language users and of their function in discourse has been carried farthest” (Thompson 2014: 48). This approach to evaluation is APPRAISAL developed by Martin and his colleagues (e.g. Martin 2000; Martin and White 2005; White 2004, 2011).

In APPRAISAL, evaluative resources are regionalized into three semantic systems: ATTITUDE (which deals with the construal of emotion and opinion); GRADUATION (which is concerned with how attitude is upgraded or downgraded); and ENGAGEMENT (which is related

to intersubjectivity). Each system is further divided; for instance, the ATTITUDE system has three subsystems – AFFECT (the construal of feelings); JUDGEMENT (ethical evaluation of human behaviour and/or character); and APPRECIATION (aesthetic evaluation of things and/or products) (see Martin and White [2005] for more detailed discussion of APPRAISAL).

This paper pays special attention to the JUDGEMENT system. JUDGEMENT is selected for study because, as will be noted below, it is relatively under-researched compared with the other two parts of the ATTITUDE system, i.e. AFFECT and APPRECIATION. In addition, assessments of how human beings behave are a crucial part of everyday life, as in career promotion for example (Hyon 2011). As modelled by Martin and White (2005), judgement deals with resources used to evaluate a person's behaviour and/or character traits according to social norms or principles; for example,

- (1) He is renowned for having a hot temper.
- (2) She is excellent at getting people to do things.

Within JUDGEMENT, Martin and White (2005: 52) propose a distinction between what they term 'social esteem' and 'social sanction', each of which is then further subdivided. 'Sanction' suggests adherence to socially prescribed norms, with the subdivisions 'veracity' (how truthful someone is) and 'propriety' (how ethical someone is). 'Esteem', on the other hand, suggests a judgement against a more personal set of criteria and has the subcategories 'normality' (how unusual someone is), 'capacity' (how capable they are) and 'tenacity' (how resolute they are). The system network of JUDGEMENT as discussed in Martin and White (2005) is shown in Table 1. The table includes the adjectives suggested by them that are intended to illustrate rather than delimit each subcategory.

[Insert Table 1 about here]

3 Amendments to the ATTITUDE system

Martin and White (2005: 46) comment that their proposed categories of AFFECT, JUDGEMENT and APPRECIATION “have to be treated at this stage as hypotheses about the organisation of the relevant meanings – offered as ... a reference point for those with alternative classifications”. Responding to this invitation for revision, appraisal researchers have proposed amendments to the model, focusing particularly on the ATTITUDE system. In some cases more delicate categories of APPRECIATION have been developed to address the concerns of specific discourse domains. For example, Lee (2015) extends ‘appreciation: valuation’ to include *sociability valuation*, *maintenance valuation*, *salience valuation* and *validity valuation* as categories for analyzing persuasive essays, whereas Hommerberg and Don (2015) propose a different set of subcategories for ‘appreciation: valuation’ to account for the discourse of wine appreciation, including *uniqueness*, *typicality*, *naturalness*, *affordability*, *location*, *durability*, *potential-to-develop* and *miscellaneous*.

For the purposes of this paper, however, it is the proposed modifications to the AFFECT system, especially those proposed by Bednarek (2008)³, that are most relevant, because they attempt an alignment between semantics and lexicogrammar. In APPRAISAL, AFFECT is modelled as a semantic system concerning the construal of emotions and is divided into three subcategories: ‘un/happiness’, ‘in/security’, and ‘dis/satisfaction’ (Martin and White 2005: 45–52). Bednarek (2008: 154–172) proposes an adjusted AFFECT system drawing upon the experience of mapping a large inventory of evaluative forms, derived from a corpus study, on to the system. Basically, Bednarek (2008) suggests that ‘dis/inclination’ and ‘surprise’ should be considered as separate subtypes of affect, standing independently alongside un/happiness, dis/satisfaction, and in/security.

Bednarek (2008: 169) compares Martin and White’s (2005: 45–52) version of AFFECT with her modified one, as shown in Table 2.

³ For another recent study modifying the taxonomy of AFFECT see Benítez-Castro & Hidalgo-Tenorio (2019).

[Insert Table 2 about here]

Thompson (2010: 402) comments that, although Bednarek (2008) has only made small alterations to the original model of AFFECT, “it looks as though her revised categories will be easier to apply”. We have also found this to be the case (though see Martin [2017: 34–37] for a critique). One change in particular is relevant to the study of JUDGEMENT reported here. As well as adding the ‘surprise’ category, and therefore making an adjustment to the ‘insecurity’ category, Bednarek (2008: 161) has replaced the gloss ‘confident’ with that of ‘quiet’. She suggests that ‘confident’ can be “subsumed under the more general (technical) terms of *quiet*, having to do with emotional calm”.

In our view, Bednarek (2008) is right to question the choice of categorizing lexical resources realizing ‘confident’ as a subtype of AFFECT, but we propose a more radical solution. Rather than representing ‘confident’ as a construal of an emotional state, we suggest that these resources perform the function of evaluating a character trait. We further argue that items such as *confident*, *arrogant*, *complacent* and many others alike can construe judgements about “emotional types of personality traits” (Johnson-Laird and Oatley 1989: 97), especially when they occur in complementation patterns, and in those circumstances should be accounted for by the JUDGEMENT system rather than by AFFECT (see also Thompson 2014), as will be further discussed below.

This raises a further significant point about the modelling of JUDGEMENT. It is notable that whereas JUDGEMENT and APPRECIATION are distinguished to a large extent by the kind of entity they evaluate (‘behaviour’ as opposed to ‘things’), the subdivisions within JUDGEMENT are motivated by the different evaluation criteria they draw on. We highlight, however, that JUDGEMENT itself can be said to encompass two kinds of evaluated entity: behaviour and character. White’s (2011: 22–23) explanation would seem to be consistent with this: “JUDGEMENT is the domain of meanings by which attitudes are construed with respect to

human *behaviour* – approval/disapproval of human behaviour by reference to social acceptability/social norms; assessments of a person’s *character* or how they ‘measure up’ to social requirements of expectations” (our emphasis). We shall argue in Section 5 that this distinction could be taken into account in mapping JUDGEMENT, at least if formal evidence is accepted.

To recapitulate, the main argument made above (and throughout this study) is that there are alternative ways of modelling the evaluation of human character, in particular the evaluation of emotional types of character traits, and that a specific account of these could be accommodated within the JUDGEMENT system. Our arguments are based on a study of the lexical-grammatical resources involved in such evaluations. While we acknowledge that this is not the accepted way of deriving system networks based on discourse semantics, we suggest that doing so contributes usefully to debate about those networks.

4 Corpus, methodology, and analysis

The corpus used in the present study is compiled of those texts categorized as ‘Biography’ in the British National Corpus (<http://bncweb.lancs.ac.uk/>). These texts were selected because biography constitutes not only a narrative of the subject’s life experiences, but also an assessment of his/her achievements, character and/or behaviour. It is, then, reasonably certain that biographical discourse will include numerous examples of APPRAISAL, in particular examples of JUDGEMENT, and so constitutes suitable data for the investigation of JUDGEMENT. The compiled Corpus of Biography (hereafter CoB) consists of 100 texts and is about 3.5 million tokens in size; the corpus was accessed using the BNC*web*–CQP edition (Hoffman et al. 2008).

As noted earlier, the starting point of this study is form, specifically, adjective complementation patterns. These are patterns where an adjective is complemented by either a

prepositional phrase or finite or non-finite clause (see below for examples). There are two reasons for this choice of starting point. First, adjectives are agreed to be the word class most frequently associated with evaluative meanings (Martin and White 2005: 58) and, second, “[t]he importance of pattern to evaluative meaning is illustrated most clearly in the case of adjectives” (Hunston 2011: 129). This suggests that adjectives and their complementation patterns constitute a promising starting point for the investigation of evaluative language in a corpus, as has been shown in, for example, Hunston and Su (2017) and Su and Hunston (in press).

In addition, the analysis focuses on adjective-in-pattern exemplars rather than individual adjectives. This is because words in isolation have meaning potential only, but do not have specific meanings (Sinclair 1991, 2004; Hunston and Francis 2000). For example, the adjective *guilty* occurring with the pattern **ADJ about** reports emotions, meaning being unhappy about or disapproving of one’s own behaviour, as in *I feel mildly guilty about accepting such hospitality*, whereas *guilty* occurring with the pattern **ADJ of** has legal associations, meaning that someone is legally responsible for a crime or an offence, as in *they were both guilty of a criminal offence* (see Teubert 2004 for a fuller account of the two meanings). In terms of APPRAISAL, *guilty* in **ADJ about** is most likely to realize AFFECT whereas *guilty* in **ADJ of** is most likely to realize JUDGEMENT. This raises an interesting point about adopting a lexical-grammatical approach to APPRAISAL: lists of words cannot be taken as defining a category and are shown in Martin and White (2005) for illustrative purposes only; on the other hand, word-in-pattern exemplars are an important step forward in offering an alignment of form and meaning that might facilitate the categorization of attitudinal resources.

To simplify nomenclature, in the following discussion the combination of an adjective and its associated pattern, i.e. adjective-in-pattern exemplar, will be referred to as a ‘lexical

item'. Thus, each of *annoyed that*, *easy to*, *glad about*, and *adept at* constitutes one lexical item (so 4 lexical items in total). In order to identify the lexical items expressing attitudinal meaning in the CoB, a comprehensive list of adjective patterns was consulted, in which a total of 20 adjective complementation patterns were identified (Francis et al. 1998: 400–480⁴), as illustrated in examples 3 – 6.

- (3) He was annoyed that no meal was available.
- (4) The printing is bold and easy to read.
- (5) I'm glad about that.
- (6) Kempe was adept at selecting and training young designers.

Examples 3 to 6 are instances instantiating patterns **ADJ *that***, **ADJ *to-inf***, **ADJ *about*** and **ADJ *at***. Additionally, it should be noted that those patterns were not considered for further examination which have fewer than five *evaluative* lexical items (referring to type, not token) occurring with them in the CoB; this criterion excluded **ADJ *against***, **ADJ *as***, **ADJ *as to wh***, **ADJ *between pl-n***, **ADJ *wh-clause***, and **ADJ *-ing***.

Corpus queries were performed of the other 14 patterns: **ADJ *about***, **ADJ *at***, **ADJ *by***, **ADJ *for***, **ADJ *from***, **ADJ *in***, **ADJ *of***, **ADJ *on***, **ADJ *over***, **ADJ *to n***, **ADJ *towards n***, **ADJ *with***, **ADJ *to-inf.***, and **ADJ *that***. The composed script for searching adjective complementation patterns can be generalized as “_AJ0 _PRP/TO0/CJT”.⁵ For example, by specifying the preposition as *at*, i.e. searching “_AJ0 at_PRP”, all instances are obtained containing the sequence where an adjective is followed by the preposition *at*. Next, the embedded function of ‘frequency breakdown’ in BNCweb helps to produce a table which

⁴ The *Grammar Pattern* books are out of print but their contents have recently been made available online at <https://grammar.collinsdictionary.com/grammar>.

⁵ AJ0 stands for the tag of general adjectives, PRP for prepositions, TO0 for to-infinitive clauses, and CJT for that-clauses. Detailed description of the tagset used in the BNC can be found at <http://ucrel.lancs.ac.uk/bnc2/bnc2guide.htm#tagset>.

lists all the examples containing ‘*adjective + at*’ sequence and gives the quantitative information about the number of occurrences and the ratio between the occurrences of one particular example and the total number of the hits returned, as shown in Figure 1.

[Insert Fig. 1 about here]

Clicking an item (e.g. *good at*) gives a set of concordance lines in which this item occurs as node; this enables the analyst to examine whether or not a sequence of words is in fact an instance of a pattern as opposed to a chance sequence, thus eliminating false positives (e.g. *a yield of 500% looks good at first sight*). Moreover, taking into consideration the analogical or creative uses of language and the massive number of lexical items that can instantiate a given pattern, it is practical to further limit the data to those which occur at least twice in the CoB. This explains why lexical items like *terrified at* (1 occurrence), *incompetent at* (1 occurrence), *skilful at* (1 occurrence) are excluded, though they do instantiate the pattern **ADJ at** and express evaluative meanings. A total of 855 lexical items were identified as meeting all these criteria, and were subject to further analysis.

Concordances of these lexical items are then analyzed with respect to the ATTITUDE system. To illustrate the analytic process, the analyses of three adjective complementation patterns are discussed below. The first pattern is **ADJ at**. The examination of the hits returned by the query of this pattern identifies 34 lexical items realizing AFFECT and 11 realizing JUDGEMENT (Table 3).

The analysis is not always as clear-cut as this, however. Some lexical items (e.g. *famous for*, *notorious for*) can realize both JUDGEMENT and APPRECIATION, depending on the type of the target that is being evaluated. Lexical items like these were grouped into both systems, as shown by the bold face items in Table 4.

[Insert Tables 3 and 4 about here]

Another scenario is that some lexical items are indeterminate between AFFECT and JUDGEMENT. These will be discussed in more detail below, but they include items such as *confident of*, *complacent about* which both report a feeling and perform an evaluation of that feeling (Millar and Hunston 2015: 303). Several items in the **ADJ of** pattern fall into this hybrid category. In Table 5 they are treated temporarily as an ‘Unclassified’ set. Section 5 mostly deals with how they are best analyzed. It will be argued there that the distinctive feature of these items is that they construe an evaluation of “emotional types of personality traits” (Johnson-Laird and Oatley 1989) and that therefore they are appropriately accounted for using a new judgement category.

[Insert Table 5 about here]

The above discussion has demonstrated the analytic process that applies throughout the study. Space constraints do not allow us to present the analyses of all the 14 adjective complementation patterns, but the results of the analyses of other patterns can be made available upon request. An overview of the distribution of the evaluative items identified in the CoB is presented in Table 6.

[Insert Table 6 about here]

5 Towards an adjusted system network of JUDGEMENT

5.1 ‘emotionality’ as a subcategory of judgement

This section considers how to deal with those items labelled ‘Unclassified’ throughout the analyses. Two aspects of the set of lexical items under discussion need to be stressed, using examples 7–16 as illustration.

(7) Ramsey was abnormally shy about meeting the upper class.

- (8) I began to get very complacent in my guitar playing.
- (9) The painters were envious of Zbo's life.
- (10) I emerged confident on all but the maths.
- (11) he was optimistic over the prospects for a sale.
- (12) He became impatient with the pace of work there.
- (13) she was extremely sympathetic to our aims as well.
- (14) Modigliani was ... considerate towards the older woman.
- (15) Helen was confident that her love would remove all doubts.
- (16) Everyone, ..., was very impatient to see the prisoners.

Firstly, as noted above, these items simultaneously report an emotion (shyness, complacency etc) towards a target (the upper class, guitar playing etc) and perform an evaluation of that emotion, either negative (*shy about, complacent in, envious of*) or positive (*sympathetic to, considerate towards, confident that*). This leads to a possible dual classification as affect – how someone reacts to a situation – and as judgement – how appropriate that reaction is (see also Hunston 2011: 140; Thompson 2014: 54). Secondly, when adopting the judgement perspective, what is being evaluated is not behaviour but emotion or character. This is consistent with Johnson-Laird and Oatley's (1989) discussion in particular. Specifically, when examining the set of words Fehr and Russell (1984) obtained by asking participants to write down emotion terms, Johnson-Laird and Oatley (1989: 87–88) observe that “[m]any of the subjects' responses denoted, not emotions *per se*, but expressions of emotions..., *personality traits related to emotion* (e.g. outgoingness, gentleness, sensitive, stubbornness, hardness, vulnerability, hyperactive)” (our emphasis). They further argue that “[c]ertain terms refer to [...] an even longer-term state – a disposition of the personality towards feeling that emotion. [...]. What our theory predicts is that *basic emotion terms can be used to refer to moods or to emotional types of personality*” (Johnson-Laird and Oatley 1989: 97, our emphasis).

To summarize Johnson-Laird and Oatley's (1989) discussion, emotion terms can be used to describe personality or character traits. Since it is the JUDGEMENT system in APPRAISAL that is concerned with the evaluation of character traits, Johnson-Laird and Oatley's (1989) discussion lends support to our argument that items which construe attitudes towards emotional types of personality traits should be characterized as judgement resources.

It becomes clear that some emotional terms (e.g. *confident*, *complacent*) are used to construe attitudes towards a person's personality traits; accordingly, such items are candidates for classification as judgement resources and if so have to be accounted for in the JUDGEMENT system. However, since currently there is no specific category that is designated to cover these resources, following up on this observation requires the proposal of a new judgement category. We therefore tentatively propose 'emotionality' as a category of JUDGEMENT to deal with those resources which are used to evaluate emotional types of personality traits.

5.2 Corpus evidence: forms and frequency

Having argued that these items need to be accounted for in terms of JUDGEMENT, it is then necessary to identify the range of patterns associated with each judgement category and to investigate in particular whether 'emotional personality type' as a judgement category is expressed in a substantial number of lexical items or is too minor a feature to be worth further investigation. We thus classified all items listed under 'JUDGEMENT' throughout the analyses, including the proposed 'emotionality' category; the results are presented in Table 7 and an overview of the distribution of lexical items identified across JUDGEMENT is shown in Figure 2.

[Insert Table 7 and Fig. 2 about here]

According to Saucier and Goldberg (2001: 849), "[t]he degree of representation of an attribute in language has some correspondence with the general importance of the attribute"

(italics in original). In other words, the more frequent an attribute is represented in language, the more important the attribute is. Frequency discussed here refers to number of types. As shown in Table 7, a considerable number of lexical items, which co-occur with 10 of the 14 patterns examined, can construe attitudes towards emotional types of personality traits, offering lexical-grammatical basis for the category ‘emotionality’ we proposed. Further, Figure 2 shows that the frequency of this category ranks it third in all judgement categories, which indicates that this attribute, i.e. the evaluation of emotional personality traits, is indeed (at least proportionally) significantly represented in naturally occurring language. It would appear, then, that this attribute is important and thus should be accounted for adequately, and our proposal of the new judgement category ‘emotionality’ is helpful in doing so.

5.3 Systematizing the network of JUDGEMENT

The next question that needs to be addressed is how to model the system of JUDGEMENT following the argument made above. It has been suggested in Section 3 that both the distinctions between judgements of social esteem and judgements of social sanction and those between the evaluation of character and the evaluation of behaviour should be considered when organizing the system network of JUDGEMENT. Since the judgement subcategories have been adequately discussed in terms of the distinction between judgement of social esteem and that of social sanction (Martin and White 2005: 52–53), here we focus on discussing these categories with respect to the distinction between the evaluation of behaviour and the evaluation of character. The intention is to illustrate how the alternative framework of JUDGEMENT could be typologically represented.

From a typological or system-network perspective,⁶ it is clear that the subcategories ‘normality’, ‘capacity’ and ‘propriety’ in the JUDGEMENT system are associated with the evaluation of behaviour. This is uncontroversial: ‘capacity’ is concerned with the ability to perform an action and ‘propriety’ with whether the action/behaviour is performed appropriately. The category of ‘normality’ is less clear, but is considered as having to do with the evaluation of behaviour in the sense that it is the action/behaviour that makes a person special. This interpretation is consistent with White’s (2011: 23) statement that “Judgement of social esteem can be to do with normality (*how usual someone’s behaviour is*)” (our emphasis).

The other two subcategories in the original JUDGEMENT system – tenacity and veracity – sometimes refer to behaviour (e.g. *he told lies*) but can also refer to more permanent character traits (e.g. *he’s a liar*). The character trait interpretation seems to be the unmarked interpretation when adjectives are used. This is especially true when an acceptable paraphrase in context uses the diagnostic frame *someone is ADJ person (by nature)*, as in *he wasn’t selfish (by nature)*. The proposed category of ‘emotionality’ evaluates character traits, as discussed above.

Summing up, in the previous sections suggestions have been made for an alternative categorization of lexical items realizing judgement. Since the original JUDGEMENT system cannot easily accommodate those resources which construe evaluation of emotional types of personality traits, we have proposed ‘emotionality’ as a new subtype of judgement and have presented corpus evidence to support our proposal. We have also argued that the distinction between character and behaviour should be taken into account in addition to that between judgements of social esteem and judgements of social sanction when modelling JUDGEMENT.

⁶ Typology, which is used in line with SFL, refers to the taxonomic representation of agnation in terms of discrete categories with respect to a particular set of criteria (Matthiessen et al. 2010: 232).

We then further noted that, from a typological perspective, ‘normality’, ‘capacity’, and ‘propriety’ are related to the evaluation of behaviour, and the other three categories are related to the evaluation of character. Bringing together all the suggestions, the adjusted framework of judgement is presented in Table 8. Note that to simplify this table we have not distinguished between positive and negative polarity, recognizing that the polarity of a word in context may not be predictable from its form in isolation (cf. Hunston 2007).

[Insert Table 8 about here]

The proposed alternative framework of JUDGEMENT is one that prioritises form; it draws on empirical evidence for a relatively wide range of lexical-grammatical realizations but marks a departure from the accepted notion of APPRAISAL as exclusively the product of discourse semantics. It does, however, strengthen the coherence of the description of attitudinal interaction (Su 2015: 80–82). Specifically, appraisal researchers have discussed the border areas between AFFECT and APPRECIATION, and between APPRECIATION and JUDGEMENT (Martin 2000; Martin and White 2005; Bednarek 2007); however, they have yet not fully explored how AFFECT interacts with JUDGEMENT. Our proposal effectively closes the circle of attitudinal interaction. In APPRAISAL, categories can be represented topographically, as adjoining or overlapping spaces in a two-dimensional map, as well as typographically as a system of binary alternatives (Martin and Matthiessen 1991; Bednarek 2007; Martin 2000, 2017). The topographical representation goes some way to addressing a concern that representing meaning as a set of oppositions is an oversimplification, by showing that two categories can be more or less similar to each other, or indeed can merge into each other. The previous research cited above has suggested that AFFECT can be close to APPRECIATION and APPRECIATION close to JUDGEMENT. The current research effectively completes that circle by showing the closeness of AFFECT to JUDGEMENT (via ‘emotionality’).

6 Discussion and conclusion

The starting point for this paper was a set of lexical-grammatical forms (predicative adjectives plus complementation pattern) identified initially from investigation of a large general corpus of English (Francis et al. 1998) and forming the basis of a study of a smaller corpus of biographical texts. A total of 855 evaluative adjective-in-pattern types (lexical items) were found occurring 2 or more times in the CoB. Those lexical items have been categorized using Martin and White's (2005) categories of JUDGEMENT as far as possible, and adjustments have been proposed to the network where the occurrence of lexical items required them. Thus far, then, an attempt has been made to align a methodology based on corpus investigations of lexical-grammatical patternings with a theory based on meaning-in-text. The heuristic potential of attempting to align insights from different traditions is intriguing.

For example, an alternative way of looking at these adjective-in-pattern lexical items is in accord with Cognitive Linguistics, and that is to identify them as constructions, i.e. pairings of form and meaning (Goldberg 1995, 2006). This has previously been shown to be useful for the discussion of evaluation (Hunston and Su 2017). For instance, the **ADJ at** pattern, as described above, can be argued to exemplify two distinct constructions:

- a) PERSON is QUALITY at ACTIVITY (e.g. *She was good at raising money*)
- b) PERSON is REACTION at TARGET (e.g. *He was very angry at being left penniless*)

A range of adjectives is found in each construction. Francis et al. (1998) list 76 adjectives and Su (2015) finds 45 in the CoB. Each of these constructions aligns with one of the ATTITUDE systems: construction (a) realizes JUDGEMENT and construction (b) realizes AFFECT. This upholds the distinction in APPRAISAL between 'feeling' and 'opinion' (see also Bednarek 2009).

Two further observations are in order here. Firstly, the adjectives found in construction (a), which include *bad*, *good*, *proficient* and *useless*, range from those specifically indicating a level of skill (e.g. *good*, *proficient*) to more general positive or negative adjectives (e.g. *bad*, *useless*), which have the meaning of ‘(un)skilled’ when used with this pattern. This is consistent with what is known about constructions and the words found in them: that meaning can be more truly said to reside in the construction than in the constituent words (Goldberg 1995, 2006; see also our discussion about *guilty about/of* in Section 4). This might suggest that constructions rather than individual words are of most use in illustrating appraisal categories. This in turn leads to the speculation that it is the construction, rather than lexis, that is the most delicate grammar (cf. Hasan 1987; Martin 2017), though exploration of this possibility lies beyond the scope of this paper.

Secondly, in construction (b), which realizes AFFECT, the term ‘reaction’ is a broad one that covers many kinds of emotion, including each of Martin and White’s primary categories ‘un/happiness’ (*happy*, *sad*), ‘disquiet’ and ‘in/security’ (*uneasy*, *surprised*), and ‘dis/satisfaction’ (*disappointed*, *pleased*). In other words, the construction is not helpful in supporting the distinction between the three. In all cases, though, what is reacted to (the Target) is a ‘situation or idea’ (Francis et al. 1998: 429), that is, something that is done, said or thought. Implicit in that characterization is a set of Target types (possibly: ‘person’, ‘action’, ‘physical object’, ‘verbal object’ etc.) of which, in this case, ‘situation’ and ‘idea’ form a single one. This raises the possibility of Target types being an important distinction within the AFFECT system, and the further possibility that some patterns or constructions are limited in the target types they permit. Target types distinguish between JUDGEMENT and APPRECIATION but are not used to distinguish beyond that in the classic APPRAISAL framework (though see references in Martin [2017]). However, as Martin (2017) has pointed out, classification systems based on meaning are multidimensional. Within AFFECT, for example,

distinctions may be drawn between ‘surge’ (short-term response) and ‘disposition’ (longer-term response) and between ‘reaction to others’ behaviour’ (e.g. *indignant*, *overawed*) and ‘reaction to own behaviour’ (e.g. *complacent*, *ashamed*), as well as between ‘un/happiness’, ‘in/security’ and ‘dis/satisfaction’. We suggest that it would not be out of place, then, to propose a distinction between Target types as an additional feature.

The distinction between JUDGEMENT and APPRECIATION is less clearly upheld (see also Su and Hunston in press). The major apparent difference between JUDGEMENT and APPRECIATION, in Martin and White’s (2005) model, is the nature of the Target (human behaviour or an entity), though this is a somewhat simplistic rendition of a more complex distinction. In most cases, after all, the nature of the evaluated entity and the evaluations that can be applied are inextricably linked. Human behaviour can be judged in terms of how ethical it is and poems can be judged in terms of their coherence, but not vice versa (though human beings can be judged according to their physical appearance, realizing APPRECIATION, and poems can be judged according to the extent to which they induce socially-responsible behaviour). The linguistic resources that realize the ‘ethical human behaviour’ meaning and those realizing the ‘coherent poem’ meaning are necessarily different. In some instances, however, the distinction between ‘person’ and ‘thing’ seems forced and is not supported by a study of complementation pattern. For example, the pattern **ADJ *for*** can be associated with a number of constructions (see Hunston and Su [2017] for further discussion), corresponding to the dozen meaning groups proposed by Francis et al. (1998: 435–439). One of these includes adjectives such as *celebrated*, *famous*, *renowned* and *famed*. The construction might be encoded as

- c) ENTITY is ASSESSED-SPECIAL for EVIDENCE

There is no difference in the construction whether the Entity is a person, book, landmark or other entity (e.g. *He was renowned for his excellent lectures*; *Parma became renowned for its elegance during the reign of Maria Luigia*). This elides the JUDGEMENT – APPRECIATION distinction. Perhaps more usefully, though, it draws attention to what that distinction really consists of; that is, not a simple ‘behaviour’ versus ‘object’ contrast, but a difference between bundles of meanings. In other words, what matters here is not what the nature of the Entity is, but what the nature of the ‘evidence’ is and whether the fame is for doing something (*famous for his relentless line of questioning*) or being something (*famous for its grapes and wine*).

Turning to JUDGEMENT. The study reported in this paper shows that in many cases we find that the instances of judgement identified in the corpus are very satisfactorily represented in the appraisal system of JUDGEMENT. In those cases we are able to strengthen the formal basis for judgement categories by aligning those categories with specific ‘adjective + complementation’ sequences. In other cases, although the instances we have identified can be classified, the formal basis for such classification is not clear, suggesting that the meaning-based taxonomy and a hypothetical form-based one may be at odds with each other. At its most extreme, the investigation offers evidence for a potential alternative framework of JUDGEMENT. The main argument of this paper has thus been the proposal of an adjusted framework of JUDGEMENT (Table 8), developed based on an attempt to align adjective-in-pattern exemplars (lexical-grammar) with JUDGEMENT (discourse-semantics). The proposal is both to distinguish between behaviour and character as targets of judgement and, more notably, to introduce a new category, i.e. emotionality, to account for those instances where the character trait is of an emotion type. It is worth further noting that the proposed new category would also be useful for analyzing instances in which emotional or affective adjectives are used as attributive (e.g. *X is a happy/crazy person*; see also Thompson 2014). We would thus argue that the proposed alternative framework can facilitate the practice of

ATTITUDE analysis in real contexts and we hope that future research will appear to support our argument.

Research in Corpus Linguistics that is form-based and frequency-based is rarely applied to social semiotic systems that are highly sensitive to context. This paper has suggested that adjective constructions, when viewed from the perspective of such a system, APPRAISAL, can offer substantial corroborating evidence for the distinctions made therein as well as raising issues that lead to adjustments to the semiotic systems. The paper has also raised the possibility of prioritizing form, with its associated potential for non-manual identification of evaluation, as part of the ongoing research in appraisal. The proposal to consider constructions within the system networks offers one such possibility.

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Tables and Figures

Table 1: The JUDGEMENT system in APPRAISAL (adapted from Martin and White 2005: 53)

social esteem	normality: ‘how special’ e.g. <i>lucky, fortunate, normal, celebrated</i> , etc.
	capacity: ‘how capable’ e.g. <i>adept, shrewd, weak, stupid</i> , etc.
	tenacity: ‘how dependable’ e.g. <i>brave, heroic, cautious, adaptable</i> , etc.
social sanction	veracity: ‘how honest’ e.g. <i>truthful, honest, frank, deceptive</i> , etc.
	propriety: ‘how far beyond reproach’ e.g. <i>kind, humble, polite, immoral</i> , etc.

Table 2: Comparison of two versions of AFFECT (adapted from Bednarek 2008: 169)

Martin and White (2005)				Bednarek (2008)			
un/happiness				un/happiness			
happiness		unhappiness		happiness		unhappiness	
<i>cheer</i>	<i>affection</i>	<i>misery</i>	<i>antipathy</i>	<i>cheer</i>	<i>affection</i>	<i>misery</i>	<i>antipathy</i>
dis/satisfaction				dis/satisfaction			
satisfaction		dissatisfaction		satisfaction		dissatisfaction	
<i>interest</i>	<i>pleasure</i>	<i>ennui</i>	<i>displeasure</i>	<i>interest</i>	<i>pleasure</i>	<i>ennui</i>	<i>displeasure</i>
in/security				in/security			
security		insecurity		Security		Insecurity	
<i>confident</i>	<i>trust</i>	<i>disquiet</i>	<i>surprise</i>	<i>quiet</i>	<i>trust</i>	<i>disquiet</i>	<i>distrust</i>
dis/inclination				dis/inclination			
inclination		disinclination		inclination		disinclination	
<i>desire</i>		<i>fear</i>		<i>desire</i>		<i>non-desire</i>	
				surprise			

Table 3: An appraisal analysis of **ADJ at**

ATTITUDE	No.	%	ADJ at
AFFECT	34	75.56	<i>surprised at, happy at, pleased at, amazed at, shocked at, disappointed at, amused at, upset at, excited at, furious at,</i>

ATTITUDE	No.	%	ADJ <i>at</i>
			<i>alarmed at, unhappy at, delighted at, angry at, nervous at, horrified at, embarrassed at, concerned at, aghast at, distressed at, appalled at, astonished at, guilty at, disgruntled at, disturbed at, aggrieved at, impressed at, glad at, elated at, dismayed at, resentful at, astounded at, scared at, overjoyed at</i>
JUDGEMENT	11	24.44	<i>good at, adept at, bad at, excellent at, professional at, talented at, successful at, wonderful at, reasonable at, brilliant at, hopeless at</i>
Total	45	100	

Table 4: An appraisal analysis of **ADJ *for***

ATTITUDE	No.	%	ADJ <i>for</i>
AFFECT	20	20.83	<i>ready for, sorry for, pleased for, delighted for, enthusiastic for, grateful for, keen for, hungry for, desperate for, thankful for, happy for, eager for, anxious for, concerned for, unprepared for, willing for, homesick for, ashamed for, miserable for, frightened for</i>
JUDGEMENT	19	19.79	<i>suitable for, famous for, remarkable for, right for, fit for, unfit for, renowned for, notable for, notorious for, ripe for, ambitious for, unsuitable for, eligible for, famed for, active for, slow for, conspicuous for, well-known for, stupid for</i>
APPRECIATION	57	59.38	<i>difficult for, good for, necessary for, suitable for, important for, famous for, remarkable for, right for, bad for, essential for, ideal for, renowned for, notable for, unusual for, fine for, useful for, usual for, clear for, great for, sufficient for, notorious for, unsuitable for, ripe for, short for, strong for, convenient for, inadequate for, interesting for, embarrassing for, natural for, crucial for, famed for, significant for, valid for, appropriate for, popular for, frustrating for, valuable for, inevitable for, vital for, worrying for, wonderful for, excellent</i>

ATTITUDE	No.	%	ADJ <i>for</i>
			<i>for, counterproductive for, well-known for, terrible for, awkward for, funny for, strange for, exciting for, suited for, dreadful for, formative for, adequate for, insufficient for, pleasant for, memorable for</i>
Total	96	100	

Table 5: An appraisal analysis of **ADJ of**

ATTITUDE	No.	%	ADJ <i>of</i>
AFFECT	30	40.00	<i>aware of, fond of, proud of, afraid of, conscious of, tired of, unaware of, sure of, suspicious of, convinced of, glad of, ashamed of, frightened of, wary of, sick of, certain of, relieved of, terrified of, unsure of, nervous of, weary of, enamoured of, scared of, desirous of, fearful of, uncertain of, sceptical of, apprehensive of, resentful of, hopeful of</i>
<u>Unclassified</u>	12	16.00	<i>jealous of, confident of, dismissive of, shy of, protective of, envious of, tolerant of, intolerant of, contemptuous of, scornful of, impatient of, considerate of</i>
JUDGEMENT	18	24.00	<i>capable of, incapable of, worthy of, critical of, guilty of, appreciative of, ignorant of, oblivious of, innocent of, mindful of, supportive of, generous of, careful of, forgetful of, chary of, unworthy of, oblivious of, independent of</i>
APPRECIATION	15	20.00	<i>short of, typical of, worthy of, reminiscent of, devoid of, characteristic of, unheard of, true of, symptomatic of, symbolic of, indicative of, unworthy of, representative of, suggestive of, productive of</i>
Total	75	100	

Table 6: Distribution of adjective-in-pattern exemplars across types of attitudes

Pattern	AFFECT		<u>Unclassified</u>		JUDGEMENT		APPRECIATION	
	No.	%	No.	%	No.	%	No.	%
ADJ <i>at</i>	34	75.56	0	0	11	24.44	0	0
ADJ <i>about</i>	39	50.65	15	19.48	23	29.87	0	0
ADJ <i>by</i>	52	94.55	0	0	0	0	3	5.45
ADJ <i>for</i>	20	20.83	0	0	19	19.79	57	59.38
ADJ <i>from</i>	3	37.50	0	0	1	12.50	4	50.00
ADJ <i>in</i>	15	13.76	5	4.59	60	55.04	29	26.61
ADJ <i>of</i>	30	41.10	12	16.00	18	24.00	15	20.54
ADJ <i>on</i>	3	33.33	1	11.11	4	44.45	1	11.11
ADJ <i>over</i>	7	70.00	2	20.00	1	10.00	0	0
ADJ <i>to n</i>	9	6.67	6	4.44	37	27.41	83	61.48
ADJ <i>towards</i>	1	6.67	4	26.67	10	66.66	0	0
ADJ <i>with</i>	37	50.00	4	5.40	20	27.03	13	17.57
ADJ <i>to-inf.</i>	62	63.92	1	1.03	22	22.68	12	12.37
ADJ <i>that</i>	46	93.88	2	4.08	1	2.04	0	0
Total	358		52		227	218		

Table 7: Classifying the lexical items in terms of JUDGEMENT⁷

JUDGEMENT	Pattern	Lexical items
normality	ADJ <i>for</i>	<i>famous, remarkable, renowned, notable, notorious, famed, conspicuous, well-known</i>
	ADJ <i>in</i>	<i>fortunate, prominent, lucky, famous, remarkable, eminent, outstanding, renowned</i>
	ADJ <i>to n</i>	<i>special</i>
	ADJ <i>with</i>	<i>popular, unpopular</i>
	ADJ <i>to-inf.</i>	<i>fortunate, luck</i>
capacity	ADJ <i>at</i>	<i>good, adept, bad, excellent, professional, talented,</i>

⁷ Note that to save space, the items are presented as individual adjectives in this table but should be interpreted as adjective-in-pattern exemplars, e.g. *famous* as *famous for*.

		<i>successful, wonderful, reasonable, brilliant, hopeless</i>
	ADJ about	<i>right, naïve, vague, knowledgeable, ignorant, clueless</i>
	ADJ for	<i>fit, unfit, suitable, ripe, unsuitable, active, slow, available, stupid, right</i>
	ADJ in	<i>active, instrumental, successful, influential, useful, fluent, slow, quick, clever, witty, gifted, proficient, shrewd, wise, cunning, brilliant, foolish, imaginative, stupid, seasoned, naïve, skilled</i>
	ADJ of	<i>capable, incapable, worthy, ignorant, unworthy</i>
	ADJ to n	<i>new, responsive, unsuited, subordinate</i>
	ADJ with	<i>familiar, conversant, ready, skilled, unfamiliar, clever, expert, good</i>
	ADJ to-inf.	<i>able, unable, quick, slow, fit, available, powerless, unfit, foolish, eligible, naïve, swift, unavailable</i>
tenacity	ADJ about	<i>careful, brave, reticent, firm, open</i>
	ADJ of	<i>supportive, careful, chary, independent</i>
	ADJ on	<i>dependent, intransigent</i>
	ADJ from	<i>immune</i>
	ADJ in	<i>helpful, firm, uncompromising, indefatigable, fearless, meticulous, assiduous, reliable, punctilious, circumspect, fastidious, courageous, careful, conservative, scrupulous, diligent, independent</i>
	ADJ to n	<i>adaptable, loyal, vulnerable, immune, receptive, attentive</i>
	ADJ with	<i>careful</i>
	ADJ to-inf.	<i>careful</i>
	ADJ that	<i>careful</i>
veracity	ADJ about	<i>honest, outspoken, frank, equivocal</i>
	ADJ in	<i>genuine, blunt, straightforward</i>
	ADJ to n	<i>true</i>
	ADJ with	<i>honest</i>
propriety	ADJ about	<i>scathing, particular, nice, complimentary, sensible, rude, specific, fussy</i>
	ADJ for	<i>eligible</i>
	ADJ in	<i>right, wrong, generous, correct, fierce, easy-going, gentle, profligate, coarse, scathing</i>
	ADJ of	<i>protective, critical, guilty, oblivious, innocent, generous, contemptuous, appreciative, forgetful</i>
	ADJ on	<i>short, hard</i>
	ADJ over	<i>illiberal</i>
	ADJ to n	<i>acceptable, kind, hostile, rude, oblivious, good, fair, nice, unacceptable, generous, responsible, friendly, answerable, polite, wonderful, blind, amenable, unkind, sweet, obedient, antagonistic, obliging, disobedient, gracious</i>
	ADJ towards	<i>friendly, protective, hostile, slanted, contemptuous, disrespectful, severe, pugnacious, kind, conciliatory</i>
	ADJ with	<i>friendly, generous, gentle, strict, fierce, tough, wonderful, indulgent, short</i>
	ADJ to-inf.	<i>free, right, wrong, correct, unwise, ill-advised</i>

emotionality	ADJ about	<i>confident, shy, passionate, serious, optimistic, patient, understanding, sensitive, diffident, fanatical, modest, pessimistic, obsessive, sentimental, solicitous</i>
	ADJ in	<i>confident, complacent, passionate, modest, shy</i>
	ADJ of	<i>jealous, intolerant, tolerant, envious, considerate, shy, confident, dismissive, scornful, contemptuous, impatient, intolerant</i>
	ADJ on	<i>confident</i>
	ADJ over	<i>optimistic, compassionate</i>
	ADJ with	<i>impatient, patient, shy, arrogant</i>
	ADJ to n	<i>sympathetic, unsympathetic, sensitive, faithful, indifferent, unfaithful</i>
	ADJ towards	<i>considerate, thoughtful, ambivalent, solicitous</i>
	ADJ that	<i>confident, optimistic</i>
	ADJ to-inf.	<i>impatient</i>

Table 8: The adjusted system of JUDGEMENT

	evaluation of behaviour	evaluation of character
social esteem	normality: uniqueness; e.g. <i>luck to-inf.</i> , <i>famous for</i> , <i>notable for</i> , <i>popular with</i> , etc.	tenacity: dependability/resilience; e.g. <i>careful to-inf.</i> , <i>brave about</i> , <i>adaptable to n</i> , <i>conservative in</i> , etc.
	capacity: ability; e.g. <i>adept at</i> , <i>capable of</i> , <i>skilled with</i> , <i>clueless about</i> , etc.	emotionality: emotional personality; e.g. <i>confident in</i> , <i>dismissive of</i> , <i>jealous for</i> , <i>complacent with</i> , etc.
social sanction	propriety: appropriateness; e.g. <i>generous with</i> , <i>rude about</i> , <i>short on</i> , <i>guilty of</i> , etc.	veracity: honesty/truthfulness; e.g. <i>frank about</i> , <i>honest with</i> , <i>blunt in</i> , <i>dishonest about</i> , etc.

Frequency breakdown of lexical items for position "node" (292 types and 646 tokens)			
< << >> >		Frequency breakdown of tags only <input type="button" value="Go!"/>	<input type="button" value="Download whole table"/>
No.	Lexical items	No. of occurrences	Percent
1	good at	53	8.2%
2	present at	29	4.49%
3	surprised at	18	2.79%
4	adept at	15	2.32%
5	close at	15	2.32%
6	pleased at	11	1.7%
7	ill at	11	1.7%
8	happy at	11	1.7%
9	available at	11	1.7%
10	shocked at	9	1.39%

Figure 1: Screenshot of ‘frequency breakdown’ of **ADJ at**

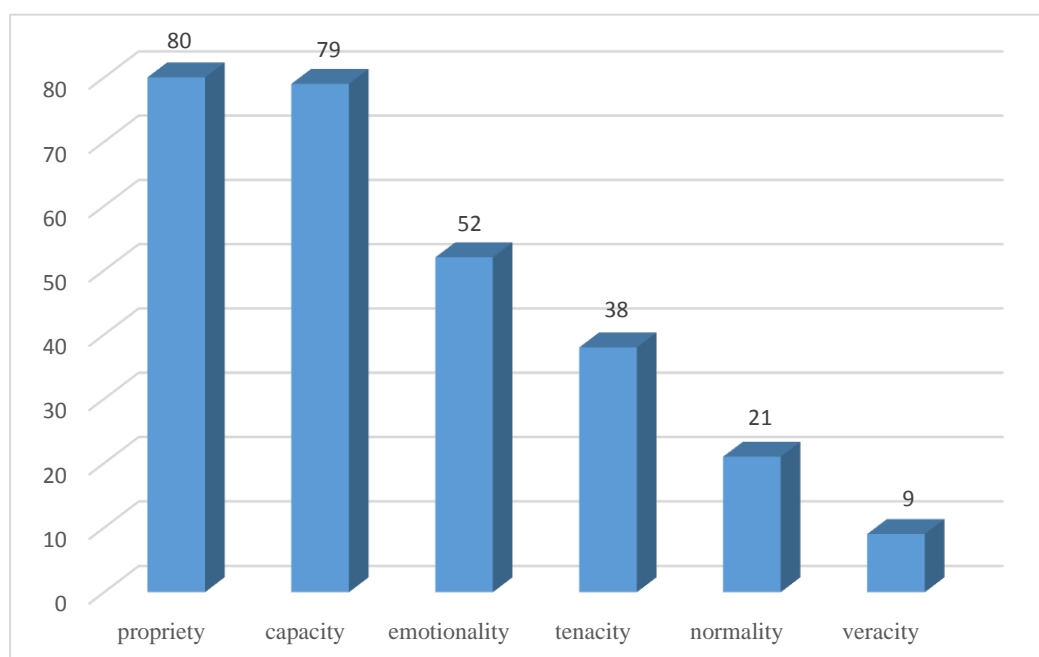


Figure 2: Distribution of lexical items across judgement categories