

Modeling the grammar of casual conversation in Brazilian Portuguese: a corpus-based study of language probabilities functioning in context

Giacomo PATROCINIO FIGUEREDO (UFOP)
Adriana PAGANO (UFMG)

Drawing on the notion of probabilistic grammar (Halliday, 1991b), this paper presents a corpus-based model for the clause grammar of casual conversation (Eggins & Slade, 1997) in Brazilian Portuguese. 'Modeling', as construed here, can be defined as the description of grammar features and statement of their probabilities of instantiation for the text type under investigation.

Halliday (1978) states that language is a naturally evolved semiotic system, its main purpose being to offer a reservoir of meaning-making resources for humans to interpret and organize both our natural world and our social relations (Martin, 2008). Grammar is, in turn, the stratum of language responsible for creating meaning (Halliday, 1996). Since meaning is, in fact, the contrast of paradigmatic features, for any given language subsystem, the job done by grammar is to change (responding to the pressure of new contextual demands) systemic (paradigmatic) organization of features in order to create meaning. As a result, language is modeled in terms of (Halliday, 1991a): (i) its relations to the context of culture – the "environment" in which it takes place, in which it is meaningful; and (ii) the process in which language as a reservoir of meaning-making potential (the system) becomes, through grammar operation, language in context (the text). Consequently, the modeling of "actual" grammar – the grammar that creates meaning functioning in the context of culture – needs to account for (a) the way context is materialized in language (examining the systemic dimension of realization) and (b) the probabilities for a potential grammatical feature to be instantiated as text (the dimension of instantiation) (Halliday, 1992). Thus, to model any given text type, including casual conversation, it is necessary to account for the dimensions of realization and instantiation.

Following Halliday's conceptualization of language, a great number of studies have explored grammar from a realizational point of view (cf. Martin, 1992; Halliday & Matthiessen, 1999; Caffarel et al. 2004, among others and Eggins & Slade, 1997, specifically for casual conversation). A smaller number of studies have explored the instantiational process (cf. Matthiessen, 2001; Martin, 2008, among others). There are fewer studies still drawing on the complementarity of realization and instantiation (Matthiessen, 2004). To a large extent, this is due to the fact that the process of instantiation that leads to the modeling of specific text types is not fully understood (Martin, 2008). By presenting the modeling of casual conversation grammar, this paper aims at exploring the complementarity of realization and instantiation, as well as contributing to the understanding of probabilities in the constitution of text types.

To model casual conversation in these terms, the following methodology was adopted. A spoken language corpus of 10,000 tokens (10 texts of 1,000 tokens) of casual conversation was compiled using the existing corpus CALIBRA (Catalogue of the Language of Brazil) developed at UFMG and UFOP. CALIBRA is a corpus compiled based on the typology of language in the context of culture (Matthiessen et al., 2008). This typology takes into consideration five variables to separate texts into types: specialization (specialized/non-specialized), role of language in situation (ancillary/constitutive), mode of production (written/spoken), mode of interaction (monologue/dialogue), socio-semiotic process (exploring, expounding, reporting, recreating, sharing, doing, recommending, enabling). Casual conversation texts are located in the typology as non-specialized, constitutive, spoken, dialogue texts within the sharing subcorpus. For CALIBRA, spoken texts, including casual

conversation texts used in this research, are recorded from spontaneous conversations and subsequently transcribed. Few features are inserted into the transcriptions, including basically clause/information unit separation: `.' falling tone; `?' rising tone; `...' level tone; `,' short pause; `--' hesitation or turn-taking; `[' more than one speaker speaking simultaneously.

After compilation texts in the casual conversation corpus were analyzed according to systemic functional theory categories (Halliday & Matthiessen, 2004; Figueredo, 2011; Figueredo & Pagano, forth.) and annotated for grammar categories semi-automatically with the software CorpusTools (O'Donnell, 2008). This software allows researchers to annotate texts with categories of interest and retrieve their frequency along the corpus tested for statistical significance.

From the point of view of realization, a trinocular view (Halliday, 1996) was adopted, examining texts (1) from below: the grammar functions – for this research, nine general grammar systems were selected due to their importance for casual conversation text type (Eggins & Slade, 1997; Figueredo, 2011): (MOOD, MODALITY, ASSESSEMENT, POLARITY, TRANSITIVITY, THEME, INFORMATION, TONE and EPITHESES), (2) from roundabout: the staged steps of texts (Eggins & Slade, 1997); and (3) from above, selecting texts according to their function in the context of culture (Matthiessen et al. 2008).

From the point of view of instantiation, a profile for the casual conversation text type resources was contrasted to the whole of grammar resources for the language (Figueredo, 2010; Figueredo & Pagano, forth.). In addition, the probabilities for features to appear in the different stages of casual conversation were calculated. Halliday (1991b) states that counting frequencies in a text is, in fact, stating instantiation probabilities in the grammar. Thus, the probabilistic grammatical profile can be understood as the generalization of frequencies found in the corpus.

Results from the point of view of realization indicate how grammar features materialize their context of culture: interpersonal systems (MOOD, MODALITY, ASSESSEMENT and POLARITY) are deployed to establish a "sympathy relation" towards the speaker's values and positions. Ideational systems (TRANSITIVITY and EPITHESES) help building the narrative underlying casual conversation as well as pass judgment and ascribe voice and thought to other people. Textual systems (THEME and INFORMATION) help staging phases of casual conversation, as well as giving prominence to interpersonal and ideational systems relevant to the construction typical features of casual conversation such as sympathy, narrative and judgment.

From the point of view of instantiation, results suggest that the grammar of the language changes the typical, non-prominent, ratio of feature instantiation, which in turn can be interpreted as a skewing due to contextual pressure. Although less features in relation to the whole of the system are deployed, these are relatively more frequent in casual conversation. For example, the features probability from MODALITY; validation from ASSESSEMENT; negative from POLARITY; verbal from TRANSITIVITY, perspective from THEME.

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