An experimental study on the meanings of BrP modals ‘pode’, ‘deve’ and ‘tem que’

In this work I describe an experimental study on the meaning of the Brazilian Portuguese (BrP) modal auxiliaries ‘deve’, and ‘tem que’ in which I show how they differ in meaning. The analysis was based on results obtained via three questionnaires with which the intuitive judgments of BrP native speakers were collected and statistically analyzed on RStudio (R Core Team, 2014) by using mixed linear regression models. The theoretical framework for the analysis is Kratzer’s formal model (1981, 1991, 2012) in which the meanings expressed by modal verbs (epistemic, deontic, teleological, buletic, etc.) are determined by two functions of context – the modal base and the ordering source. The results show that ‘deve’ is preferred in evidential contexts, while ‘tem que’ is preferred in non-evidential contexts (as defined in Pessotto, 2015). Moreover, the results show that ‘deve’ does not express necessity, but a sort of comparative possibility (Kratzer, 2012), while ‘pode’ and ‘tem que’ come up as the actual pair possibility-necessity in BP.

The investigation was motivated by the fact that to both ‘deve’ and ‘tem que’ is usually attributed the meaning of “necessity”, or “obligation”, which leads to the naive conclusion that they are synonyms. Furthermore, the idea that ‘pode’ and ‘deve’ are the dual pair possibility-necessity still prevails in the analysis of modal verbs in BrP. However, an accurate inspection on our intuition and current language easily reveals that ‘deve’ and ‘tem que’ do not give the same semantic contribution. First, ‘deve’ and ‘tem que’ are used in different contexts: while ‘deve’ is preferred in contexts where the speaker makes an inference from available evidence, ‘tem que’ does not require evidence to be felicitously used. Second, a ‘deve-p’ sentence sounds “weaker” than a ‘tem que-p’ sentence: while ‘deve-p’ conveys that p is the best outcome, according to the context, ‘tem que’ conveys that p is the only possible outcome. Based on this intuitive inspection, the aim of the experiments was to evaluate the following hypotheses: (i) ‘deve’ is preferred in evidential contexts (which we define as contexts of stereotypical ordering), whilst ‘tem que’ is preferred in non-evidential contexts (deontic, teleological, and buletic ordering); (ii) ‘deve’ conveys a weaker modal force than ‘tem que’. I follow Pessotto (2015) and assume the evidential context as the one that projects a realistic modal base – epistemic or circumstantial – ordered by a stereotypical ordering source; and the non-evidential context as the one projecting a circumstantial modal base and non-stereotypical ordering sources, i.e., those that do not consider the normal course of the events, like deontic, teleological and bouletic ordering sources.

The first two questionnaires were design based on the principles of Matthewson’s (2004) methodology. In the questionnaire 1, in each of the 12 items, a sentence with ‘deve’ or ‘tem que’ was shown after a short story describing an evidential or a non-evidential context, and the participants should evaluate the sentence in the context by using a likert-scale from 1 to 5. In the questionnaire 2, the participant should choose between a ‘deve’ or a ‘tem que’ sentence according to the context. The results from both questionnaires confirmed the hypothesis (i) and showed a clear preference for ‘deve’ in evidential contexts and of ‘tem que’ in non-evidential contexts, which suggests, according to our analysis, a tendency of specialization for each modal. The design of the third questionnaire was based on Moesteller and Youts (1990) and aimed to verify the hypothesis (ii). The participants were presented to sentences with ‘pode’, ‘deve’ or ‘tem que’ and should attribute a percentage of 50%, 60% to 80% or more than 90% (which according to Moesteller and Youts (1990) correspond to the expressions “possible”, “probable” and “certain”, which we assume to correspond to ‘pode’, ‘deve’and ‘tem que’, respectively.). The results confirmed the second hypothesis. They indicate that ‘deve’ is stronger than ‘pode’ (force of possibility) and weaker than ‘tem que’ (force of necessity). According to my analysis, ‘deve’ comes up as a gradual modal whose
meaning can be derived from the notion of comparative possibility as described in Kratzer (2012), while ‘pode’ and ‘tem que’ represent the actual duality possibility-necessity.

With this work I believe to contribute to the understanding of modality by clarifying the meanings of these BrP modal auxiliaries and proposing a rearrangement of the BP modal system. Further work involves the investigation of online collected data.

References:


