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BOOK REVIEW

Review of *Intonation in Romance*, by Sónia Frota and Pilar Prieto (Eds.). Oxford: Oxford University Press

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The edited volume, *Intonation in Romance*, comprises eleven chapters: nine content chapters summarise the results of detailed prosodic analysis of intonation patterns across varieties of a particular Romance language, and are framed by an introduction and conclusion by the editors. The languages treated include those whose intonation systems have received much attention (Catalan, French, Italian, Portuguese and Spanish), alongside less-studied languages (Friulian, Occitan, Romanian and Sardinian). All chapters used the same methods of data collection and analysis: parallel data across languages was elicited with a common set of dialogue completion tasks; intonation patterns in the data are analysed on the basis of a shared implementation of the Tone and Break Indices (ToBI) model of prosodic annotation, within the Autosegmental-Metrical framework. These shared methods inform direct comparison of Romance intonation patterns and systems, within and across languages, to identify the scope and potential causes of variation, as well as avenues for future research.

1. Introduction

The edited volume *Intonation in Romance* brings together the work of more than 40 researchers across nine research teams, each working on a different Romance language, who participated in the *Romance Tones and Break Indices* workshop held in Tarragona, Spain, in June 2011. The languages represented in the volume include those whose intonation systems had previously received considerable attention (Catalan, French, Italian, Portuguese and Spanish), alongside less-studied languages (Friulian, Occitan, Romanian and Sardinian), and each chapter represents the results of "years of research" (p. 1), even for the less-studied languages.

The goal of the workshop was to "create a consensus on the use of a common transcription system" (p. 1), and specifically a shared interpretation for Romance languages of the Tones and Break Indices (ToBI) system of prosodic annotation, originally proposed for American English (Beckman, Hirschberg & Shattuck-Hufnagel 2005). To achieve this, each research team developed an analysis of the intonation patterns in their language using i) data collected by means of a common data elicitation methodology (parallel set of discourse completion tasks), and ii) a shared set of ToBI labels for qualitative prosodic annotation of the data. The many strengths – but also inevitable weaknesses – of the resulting research can arguably be traced to these methodological decisions.

This volume represents a remarkable exercise in testing the Tones and Break Indices (ToBI) system of prosodic annotation, the theory on which it depends, namely Autosegmental-Metrical (AM) theory (Pierrehumbert 1980; Beckman & Pierrehumbert 1986; Gussenhoven 2004; Ladd 2008). AM is not the only available theory of intonational

phonology, but is widely used, though perhaps less widely understood. The research presented here serves as a much needed test of AM theory, or at least of the particular interpretation of ToBI adopted. The resulting theoretical contribution is in addition to the important empirical contribution made through parallel investigation of patterns of intonational variation within and across Romance languages, including languages whose intonation was previously undescribed.

2. Chapters

The volume starts with a brief *Introduction* by the editors, which states the purpose of the book and rationale of the methodology, before outlining the structure of the book and the scope and essential findings of the chapters that follow. Each of the nine content chapters (2–10) follows the same structure: an *introduction* provides relevant geographical, historical and linguistic information about the language and its varieties; the *methodology* section describes the use of the discourse completion tasks (DCT) for that language, and participant sampling (how many people in how many places); the main content of the chapter is then presented in a section on *intonation and phrasing*, in which different sentence types are presented in turn (statements, exclamatives, yes/no-questions, wh-questions, imperatives: commands and requests, and vocatives), plus a summary of the patterns and labels found in those sentence types which is presented as an "intonational analysis"; each chapter closes with a *conclusion* summarising the key findings, with comparison to other languages in the book. The chapters are ordered alphabetically by language name.

Most chapters provide summary charts illustrating the ToBI labels used to annotate pitch accents and boundary tones, and/or their observed combinations in nuclear contours. Stylised figures show the canonical shape of the F0 contour over the sequence of syllables in an accented word or at a constituent boundary, for each ToBI label or combination of labels. The body text is also supported by annotated pitch trace figures of sample utterances of the various patterns in each sentence type, showing F0 contour and spectrogram. The density of data sampling for each language (i.e. number of geographical locations) varies greatly, from just two (in the case of Romanian, which represents one of the first studies of intonation in the AM framework) to 68 (in the case of Catalan). The majority of chapters treat 8–12 varieties, crossing continents in the case of Spanish and Portuguese, but less than a hundred kilometres apart for Sardinian or Friulian. The number of participants sampled in each place varies, but is typically around 3–6.

Chapter 2 on *Catalan* is not only based on a very fine-grained sample, but draws on a rich body of prior experimental research. Catalan is analysed with an inventory of nine pitch accents (two restricted to some dialects only) and a large inventory of seven different boundary tones. The fine-grained sample allows the authors to provide detailed maps illustrating the geographical spread of different realisations of the main sentence types. Catalan stands out in that many nuances of epistemic bias (showing the stance of the speaker towards the content of the utterance) can be expressed by purely intonational means.

Chapter 3 on *French* is the first attempt to develop a ToBI annotation system for French, by a team of authors who represent a range of prior theoretical positions. French is the only language in the volume which does not have lexical (word-level) stress, resulting in a structurally very different intonational system. Pitch accents associate with the final metrical syllable in a phrase-level constituent, the Accentual Phrase (AP) rather than with accented words. French has a small inventory of pitch accents and boundary tones, which is ascribed to the fact that the nuclear contour is always realised on a limited amount of segmental material (since pitch accents are always realised on the last metrical syllable), leaving little room for variation in contour shapes/combinations.

Chapter 4 on *Friulian* analyses a relatively dense sampling of data for the small geographical region where the language is spoken. Friulian is the only Romance language in which the tone bearing unit (TBU) for pitch accents is not the syllable, but instead the mora. This claim is supported by additional experimental data presented alongside the DCT results, and the authors note a possible contact effect with Slavic languages in which the TBU is also the mora. The proposed Friulian pitch accent inventory leans somewhat towards capturing contrasts, over and above providing a surface transparent transcription; for example a non-contrastive low rising boundary contour is analysed as L%.

Chapter 5 on *Italian* starts by proposing a set of ToBI labels for annotation of Italian based on the results of prior research, which is then trialled on a set of data collected in 13 locations. The authors note the need for reduced surface transparency in the set of labels for Italian, due to strong prior phonological evidence for a particular label in some varieties. In contrast to dialect groupings based on segmental features, for intonation in Italian no clear geographical groups emerge, but rather a "mixing" of patterns across varieties.

Chapter 6 on *Occitan* reveals a fascinating structural difference between varieties spoken in France, which show prosodic marking of an AP constituent with an initial Hi accent as proposed for French, contrasting with varieties spoken further east or west, which lack this additional accent. French Occitan also has an unusual contour in vocatives which sets it apart from most other languages in the volume.

Chapter 7 on *Portuguese* treats both European (EP) and Brazilian (BP) varieties. The chapter provides more information about the distribution of pitch accents than other chapters, as this is known to vary across dialects. As for Italian, in Portuguese the geographical distribution of different intonational realisations of the same sentence type does not match dialect groupings based on segmental phonology. Standard European Portuguese (SEP), spoken in Lisbon, stands out as structurally somewhat different from other EP and BP varieties, and indeed from other Romance languages, in having a sparse distribution of pitch accents, typically observed at the start and end of relatively long prosodic phrases.

Chapter 8 on *Romanian* represents one of the first attempts to analyse varieties of Romanian in the AM framework, based on a sample of two dialects, with data from four speakers. Perhaps as a result of the much more limited depth of prior research on the language, the analysis is less developed than that for other languages, though the chapter successfully highlights avenues for further research; for example, some examples of putative contrasts (such as H* vs. L + H*) might be investigated as instances of truncation. Romanian stands out from the other Romance languages in displaying a varied set of possible post-nuclear accents, in yes/no-questions in which the nucleus is realised on the non-phrase-final verb.

Chapter 9 on *Sardinian* presents the result of data collection in five locations. The authors note a trade-off in Sardinian between prosodic vs. syntactic strategies in realisation of the categories of meaning elicited in the DCT task. Sardinian stands out as having few monotonal pitch accents, and appears also to lack a high boundary tone (H%), but shares with Romanian the property of placing the nucleus on the wh-word in a wh-question.

Chapter 10 on *Spanish* differs from the other content chapters in not presenting data collected for the present volume but instead a summary of the results of prior research using the DCT, across ten varieties of Spanish in Spain and Latin America (Prieto & Roseano 2010). Perhaps as a result, this chapter is reflective in tone, for example, noting limitations of the DCT data collection tool. The ToBI notation used in the earlier project is adapted here to match the agreed label set adopted for Romance, but some potentially non-contrastive distinctions are retained in the annotation, for example, in the case of differing alignment in rising accents with increasingly delayed peaks: L + H*, L + <H* and L* + H (p. 368).

Last but not least, chapter 11 presents a comparative analysis across the languages, offering a typology of Romance intonation in respect of phrasing, prominence, intonational expression of meaning and intonational systems. A set of maps illustrate the geographical distribution of different realisation of the main sentence types elicited in the DCT, with the greatest variation found in realisation of yes/no-questions. A useful summary across the intonational systems is provided, showing clear differences within the Romance family in the number and/or types of prosodic constituents that are relevant to intonation, and in the distribution of pitch events over these constituents. The survey highlights a trade-off between prosodic vs. syntactic realisation of meaning in relation to availability of particles expressing epistemic bias. The editors close by outlining a number of ways in which intonation in Romance is argued to differ from English, the language for which ToBI was originally proposed.

3. Reflection

The book makes a significant empirical contribution, providing generalisations about intonational patterns in an important subset of Romance languages, based on parallel analysis of parallel data. The theoretical strengths and weaknesses of the research relate to the methodological choices made, to use the DCT and to develop a shared set of ToBI labels.

Limitations of the DCT are noted in various places in the book, such as the fact that the resulting data does not provide examples with varying numbers of syllables in the last lexical item in the utterance (p. 246), to clarify how pitch accents and boundary tones align over sequences containing different numbers of syllables; perhaps more importantly, if the goal is to establish intonational contrasts based on meaning, the DCT paradigm does not actually provide information about the interpretation intended by the speaker (p. 390). A more detailed presentation of the DCT tool in the *Introduction* chapter might usefully have set out the assumptions underpinning the DCT, with regard to which categories of meaning are included and excluded in the elicitation tools, and why. For example, in a number of chapters the authors state that there is no difference in prosodic realisation of broad focus versus information (non-contrastive) focus, but I could not find any examples demonstrating this lack of difference. It is not clear whether this was because the examples were not thought to be of interest, thus were not shown, or because the DCT excludes elicitation of narrow information focus *a priori* as it is assumed not to differ. Either way this is an unfortunate gap, since evidence to support the claim of a lack of difference in realisation between these two categories of focus would – if found – support a particular theoretical position in the literature (Krifka 2008). The great advantage of the DCT, however, is that it results in utterances expressed with a high degree of naturalness, yielding a wide range of prosodic expression for analysis, but which are fairly easy to analyse as they fall into clear categories of meaning. The methods yield comparable data across lexically distinct languages which are sufficiently parallel as to form the basis of meaningful generalisations.

The rationale of the shared set of Romance ToBI labels labelling system might also usefully have been presented in greater depth in the *Introduction* to the volume, to acknowledge the inherent tension between identification of phonological categories and surface transparency. There are occasional statements about the labelling system in individual chapters which reveal some of the core assumptions of the shared labels set. For example, I found one explicit reference in the text to the fact that the "canonical" case which the stylised diagrams are intended to show is a word with stress on the penult syllable (p. 113). The stylised ToBI label figures are critical for the reader to understand what the claimed differences between labels are expected to look like in practice, and a

more explicit explanation of how the figures are to be interpreted in the case of words with stress in a different position would be useful. Even with these ambiguities, provision of a defined mapping between canonical F0 contours and specific ToBI labels represents a very great step forward; even if a researcher does not agree with the label used for a particular contour, we have a clear statement as to what shape to expect if we see a particular label. Importantly, also, the degree of consistency demonstrated in the volume, in interpretation and use of the labels as described, is very high, with inconsistencies mostly in less-studied languages, or where a compromise in the tension between labelling of phonological contrasts and retaining surface transparency is explicitly acknowledged. This consistency is a major advance when compared to previous edited volumes in the field, which saw different authors use the same label for different contours, or different labels for the same contour, and often unacknowledged variation in the approach to the trade-off between expression of phonological contrast versus surface transparency (Jun 2005, 2014). The discussion as to whether the labels used here are the correct ones is perhaps not finished, but the idea of agreeing on a potential set of labels is clearly important. There are examples of good practice in this volume in provision of clear statements regarding the targeted degree of surface transparency, though I would have welcomed more reflection on the process of the research, as well as its end-product, in the concluding chapter. Although there are clear empirical differences between English and the Romance languages, the structural differences between them that are suggested in the final chapter (p. 415) could also be artefacts of choices made in delimiting the Romance ToBI label set and/or of analytical choices made in the study of individual languages, rather than real typological differences.

An obvious strength of the book is the copious provision of pitch trace figures, which should allow future researchers to make use of the essential generalisations, even if they do not wish to learn the details of ToBI notation. There are minor presentational gaps, such as lack of marking of stressed syllables in figures for some languages (making it difficult to evaluate the accuracy of the ToBI labels), and a general difficulty in reading the maps due to small differences in shades of greyscale. Readers also benefit from availability of sound files for figures on the companion website, and further data in the *Interactive Atlas of Romance* (Prieto, Borrás-Comes & Roseano 2014).

In sum, this volume reports the results of a remarkable exercise in testing the utility of the AM framework, and of the ToBI annotation system in particular. The book will be useful for students and researchers working on the individual languages investigated: for less-studied languages this is a real step forward, and, for well-studied languages, an important opportunity to take stock of prior research and find consensus. The research enterprise that the book represents has already fuelled much-needed reflection within the field on issues that beset prosodic transcription (Frota 2016; Hualde & Prieto 2016), and this volume records the analytical process that underpins key positions in that debate. Above all, the volume makes an invaluable empirical contribution by documenting surface patterns across Romance languages, demonstrating the scope of prosodic variation even within one language family.

Competing Interests

Sam Hellmuth has no competing interests to declare. Sonia Frota is Editor in Chief of JPL, but was not involved in the editorial process for this review.

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