

# Prosody: Information Structure, Grammar, Interaction\*

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This special issue of *Linguistik Online* collects four articles by researchers whose contribution to prosody research has been seminal. The main aims of the issue are to introduce the reader to some leading approaches to prosody and to increase discussion between scholars working within different frameworks. The main focus of the contributing authors' work has been prosodic aspects of Italian and German, and their articles make particular reference to these languages. However, neither research in English, nor English as an object language, can or should be ignored when working on prosody, as substantial theories on it – and especially on intonation – were first developed for British English and American English. We believe that the four articles all address crucial issues, including the role of prosody in linguistic description and its place in a general theory of language: a brief overview of current trends in research on prosody, and an explanation of how the four contributions relate to these trends, follows below.

## 1 Current trends in prosody research

In linguistics, prosody is usually taken to include features such as length, accent, stress, tone, intonation, etc. Prosody research on intonation languages like Italian, German and English to date has focused mainly on accent (i. e. type and location of an utterance's main prominence) and intonation (i. e. the melody of pitch changes in a speaker's voice) and the contributions to the present issue are no exception.

Since it is impossible to summarize all the current prosody research here, we will just touch upon some important issues and formulate some questions which we consider crucial for a better understanding of the topic. Our overview is divided into four sections, three of which relate to the key topics of the special issue, namely: grammar, information structure and interaction. In the fourth section we address the question of prosody and meaning, which is fundamental to all three key topics.

### 1.1 Prosody and Grammar

The current debate in prosody and grammar focuses mainly on three particular issues:

(i) the question of intonational phrasing, i. e. the prosodic units speech can be divided into and their relation to syntax (key words: intonational phrase/unit, hierarchy, prosodic constituents). It is now well-established that speech can be divided into units, characterized by intonational contours and containing at least one accent (see Peters' contribution in the present issue). Such units are called intonational phrases (IP) and their status differs, according to the

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\* Matthias Heinz takes responsibility for Sections 1.1 and 1.2, Manuela Caterina Moroni for 1.3 and 1.4. We thank Rachel Murphy for editing the English of this introduction. All errors are our own.

framework adopted: in the approaches of Bergmann, Hinterhölzl and Peters (see their contributions in this issue), the IP represents the central intonational unit; in Cresti's framework (see this issue) IPs are the building blocks of a higher organizational unit, the utterance, which is the reference unit of speech.<sup>1</sup>

(ii) the relationship between intonation (i. e. the shape of intonation contours) and sentence mode. This question has been debated since the very beginning of prosody research. The contrast between the (falling) intonation of declarative and the (rising) intonation of interrogative clauses – with the latter being understood in many languages (including Italian, German and English) to signal the “markedness” of a question, in contrast with the default falling intonation of declarative clauses – is an important aspect of this relationship. Also relevant is the debate on the universality of prosodic features and the so-called frequency, or size, code (Ohala 1984; Gussenhoven 2004: 80–81). Several questions regarding intonation and sentence mode therefore arise:

1. Does one-to-one mapping between sentence mode and intonation contour occur in certain language varieties?
2. Is this relation language-specific or universal?
3. Is it methodologically sound to attempt an in-depth description of the intonation of declarative, interrogative, imperative etc. clauses in certain languages? In other words, can we say that intonation bears grammatical meaning signaling sentence mode? (We will return to the related aspect of so-called intonational meaning later).

(iii) The third important question concerning prosody and grammar is whether or not the position of the main accent (nuclear stress) can be derived from the syntactic structure of the sentence. This question has been the main focus of prosody research within the generative framework. On this, we mention in passing Selkirk (1984) and the debate between Gussenhoven and Bolinger in the 70s and 80s which started with Bolinger's (1972) paper “Accent is predictable (if you're a Mind-Reader)” against Chomsky/Halle's (1968) attempt to explain stress purely in terms of syntax by means of the nuclear stress rule. Recent research has established that syntax alone cannot account for stress assignment and both Chomsky/Halle's syntactic nuclear stress rule (1968) and Cinque's (1993) strictly syntactic approach to stress assignment have been integrated with non-syntactic factors such as prosodic phrasing (Féry 2011) and metrical structure (Zubizarreta 2016), or with semantics or semantic processing principles, as in Jacobs' (1999) theory of informational autonomy (see Zubizarreta 2016 for an overview).

## **1.2 Prosody and Information Structure**

The debate on the interaction between syntax and prosody and the predictability of stress position in syntactic terms soon revealed that stress placement is somehow related to both the syntactic structure of an utterance and discourse, that is with information structure and the informational status of constituents. It would go way beyond the scope of this introduction to try and sum up the literature on these topics but it seems to us that work on prosody and in-

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<sup>1</sup> Whether and how IPs should be divided into further sub-units/prosodic constituents also remains a matter of debate (for discussion see Selkirk 1984: 31).

formation structure can be divided into two major lines of work which are related to one another in many ways:

(i) The first line of work focuses on the relation between prosodic features and the informational status of constituents in discourse (given vs. new, familiar, retrievable etc.) starting from Chafe (1976), Lambrecht (1994) for a general overview, Baumann (2006) for German and Frascarelli/Hinterhölzl (2007) for German and Italian, among others. The main goal of these works is to determine whether the informational status of a referent correlates with specific prosodic features especially with the presence/absence of a pitch accent and a specific accent type or alignment of the pitch accent with the syllable sequence. Along the lines of Pierrehumbert/Hirschberg's (1990) seminal work Peters' paper puts forward a compositional model for the description of intonational contours in Standard German based on features of information structure associated with different types of tones. In Peters' model tones bear fixed, abstract information-structural meanings which restrict the array of contexts a given tune can fit into in spoken interaction.

(ii) The second orientation deals with the role of the main sentence accent (the so called nuclear stress) for the identification of the informational focus, that is "the sentence's presumed 'informational contribution' to a discourse" (Selkirk 1984: 199) or "the non-presupposed or asserted part of the sentence" (Zubizarreta 2016: 165). Most of the research within generative frameworks can be attributed to this area (see e. g. Selkirk 1984 for English; Uhmann 1991 for German and Frascarelli 2000 for Italian). The key-concepts here are unmarked vs. marked intonational patterns or broad vs. narrow focus, focus projection, topic identification and placement (and different kinds of topics like Contrast-Topic [Büring 1997], Aboutness-Topic and Shift-Topic [Lambrecht 1994; Frascarelli/Hinterhölzl 2007]). In this regard Roland Hinterhölzl's paper represents a truly innovative approach. Within a minimalist framework he treats the role of metric prominence for articulating information structure and takes on the question of the mapping between syntactic and prosodic structure via a prominence-based interface with access to information structure. The author combines metrical evaluation with phase-based rules of prosodic domain formation in his formulation of a prominence-based account, which has implications for the general architecture of grammar, challenging standard assumptions about the interaction between syntax, phonological form (PF) and logic form (LF).

### 1.3 Prosody and Interaction

The third key word, "Interaction", in the title of this special issue stands for approaches which are very different from those mentioned above in that they adopt a pragmatic perspective taking it as a dynamic product of social interaction. One of those pragmatic approaches to the study of prosody is the *interaktionale Prosodieforschung* ('interactional research on prosody'), which started developing in Germany in the mid-1980s as a combination of prosody research and North American conversation analysis (Sacks/Schegloff/Jefferson 1974). In the last 40 years the interactional approach to prosody has been mostly applied to German and English whereas it is still almost unknown in research on Romance languages (except for Rabanus 2001). In this framework prosodic features are conceived of as "contextualization cues" which contribute together with other resources at all levels of linguistic description, i. e.

grammatical and lexical items, to make recurrent tasks in social interaction interpretable. In this perspective prosody is primarily seen as a language and culture specific resource which speakers deploy to characterize their actions in conversation. Selting (2010: 7) lists the most important conversational tasks for which prosody is relevant: construction of units, focus signaling, turn-taking, construction of actions (contextualization), distinction of grammatical constructions in the sense of the theory of construction grammar (Deppermann 2006). In her work on conversational questions in German Selting (1995) claims that prosodic features are independent from grammar except for the choice of stress placement in a sentence. In Selting's view for instance, intonational contours are independent from sentence mode. Two ground-breaking studies in this framework are Gilles (2005) and Bergmann (2008 and this issue). Based on data from natural conversational speech Gilles (2005) adopts a functional and interactional view in order to identify two main functional/interactional categories in conversation, namely turn-concluding versus turn-continuing units. In a second step he analyzes the shape of the intonation contours as displayed by the units. The identification of the units is based on interactional principles and does not take into account any prosodic feature so that the intonational shape is treated as a dependent variable.

While Gilles (2005) starts with identifying pragmatic categories in conversation and then looks at their prosodic realization, Bergmann in her contribution adopts the opposite perspective, starting from the prosodic form and investigating in which conversational contexts a particular contour (the so called rising-falling contour in Cologne German) is used. In this way she identifies grammatical and lexical items and interactional/sequential characteristics which co-occur with the contour. Both Gilles and Bergmann and most of the studies belonging to the interactional prosody approach also contribute to fill the research gap concerning the areal variation of intonation, an aspect often neglected by grammar-oriented approaches which usually work with constructed examples from standard language varieties.

From the point of view of Romance linguistics, an important contribution to the study of prosody comes from Cresti's Theory of Language into Act (*teoria della lingua in atto*). This discourse-pragmatic approach has been developed on the basis of spontaneous speech data from Italian and has so far been receiving recognition mostly in research on Romance languages, as can be seen in the CORAL-ROM corpus which brings together authentic speech data from Italian, French, Spanish and Portuguese. Cresti's approach is in our view highly relevant because from its distinction between the pragmatic category of "comment" and the semantic category of "focus" two levels of analysis result, a pragmatic one and a semantic one, both of which it aims to integrate in a unified theory.

#### **1.4 Prosody and Meaning/Intonational Meaning**

To conclude this overview we want to focus briefly on the question of intonational meaning. Intonation (in its narrow sense of pitch movement) is maybe the most studied prosodic feature.

The question of what kind of meaning intonation bears, of how exactly it conveys meaning and how its meaning should be described has been pivotal in research on prosody. Approaches to the question of intonational meaning can be divided into two groups, depending on whether or not scholars attempt to divide up intonational patterns into significant segments.

In the first type of approaches intonational patterns or types of intonational movements (like rising, falling, rising-falling) as a whole are the basic units of intonation and bear each a specific meaning which is taken to be of emotional or attitudinal kind. The approaches of the second type are compositional, i. e. they decompose intonational patterns in sequences of high and low tones. Here not the patterns/movements but the tones are seen as the meaningful elements, with the meaning of the patterns resulting from the meanings of the single tones. In this compositional view intonational meaning is seen as neither of emotional nor attitudinal kind but as rather abstract and pertaining to information structure (Avesani 1995; Peters 2014 and Peters' contribution in the present issue).

As one of the directions the study of prosody has taken we could also mention research focusing on prosody as a means of discourse/text cohesion, as in Heinz' work on Textsortenprosodie (2006), Terkens' studies on the so called "paragraph intonation" (e. g. Sluijter/Terken 1993) and others, which in a way have precursors in more impressionistic and auditive analyses of "discourse intonation", especially in earlier British work with a particular focus on interaction (e. g. Brazil 1975, 1985).

The "Textsortenprosodie" approach, i. e. an approach searching for the specifics of text/discourse type prosody (cf. Heinz 2006, 2012), attempts to single out those prosodic features that are responsible for the stylization of oral discourse types (though often based on scripturality; cf. also the "Nähesprache-Distanzsprache" and "orality-scripturality continuum" described by Koch/Oesterreicher 1985, 2011) as belonging to genres like "(read) informative monologue", "(read) narrative monologue", "(semi-)spontaneous narrative". In this phenomenon text-related parameters like paragraph structure (e. g. the prosodic marking of text initial, internal or text final paragraphs, which are thus the most important discourse structuring unit above the phonological utterance or, syntactically speaking, the sentence) and speaker-related parameters like stance (e. g. neutral vs. emotionally involved) are intertwined. Speech rate, fluency, pause structure and frequency, intonational phrasing and pitch range can be identified as relevant factors both for the production and perception of those patterns. Sometimes those highly conventionalized prosodic patterns can "override" the information structuring function of prosody (Heinz 2012). This becomes clear in examples where intonational peaks suggest novel information status for elements like function words, discourse particles etc., that can bear no such focus (cf. the so-called "picchi abnormi" Cresti 2000: 162; the phenomenon is also known from "newscasterese", the speech of news speakers, in German, English and French).

Another point we can only mention *en passant* is the lack of cross-linguistic studies. Although some studies considering two or more languages stand out, as is the case with Stephan Rabanus' 2001 monograph comparing intonational patterns in German and Italian conversations, and Manuela Moroni's ongoing work on the function of a number of intonation contours in German and Italian regional varieties (Moroni 2015). Still large-scale comparative and typological studies remain a research gap (see Ladd 1996, who mentions the problem of the *tertium comparationis*).

With respect to the fundamental question of intonational meaning, this special issue aims to provide fresh insights into two types of approaches. On the one hand we can identify approaches based on the recognition of the inherent variation of the speech signal and looking at

the wide range of different realizations of prosodic phenomena, drawing upon an undeniable potential specific to prosody as an extremely versatile resource for expressing all sorts of information-structural, pragmatic and discourse-specific nuances. On the other hand models like those of Peters and Hinterhölzl aim at abstracting from piecemeal, small-scale variation for the sake of defining invariable, sometimes universal configurations.

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