

Introduction to Universal Syntax and Parametric Phonology

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The goal of this special issue of *Linguistic Analysis* is to explore the theoretical issues and empirical consequences of a minimalist approach to the syntax-phonology interface. The study of syntax-phonology has gained more and more attention because the syntactic component in the current theoretical framework has become simpler and more restrictive, allowing less variation and laying more burden on its external systems (Chomsky 2000 et seq.). Moreover the introduction of theoretical notions such as phases and multiple spell-out has led to a grammatical framework in which syntax has a close and well-defined relation with phonology (e.g., Grohmann 2009, Samuels 2011, Scheer 2012, Dobashi to appear). The present collection focuses on fundamental issues concerning syntactic computation and its interaction with the phonological component, aiming to elucidate the grammatical architecture of the syntax-phonology connection.

Specifically, we will consider the following research questions: (1) What is the origin of “syntactic” parameters? Since the syntactic tools are very limited in the current theoretical framework, large portions of cross-linguistic variation need to be attributed to non-syntactic factors. (2) What does multiple spell-out account for, especially on the phonological side? Since the innovation of this interface device, new perspectives on the syntax-phonology interface have been emerging, but what is the exact nature of spell-out? Does it just demarcate a phonological domain, or does it do more? (3) How do the guiding concepts of minimalism (such as economy) play a role in shaping the exact mechanisms of the syntax-phonology interaction? These concepts should be generally applicable to any theoretical enterprise. What can be said about the formalization of the syntax-phonology relation?

By addressing these and related questions in one collection of articles, we hope to show that interface studies contribute significantly toward a deeper understanding of grammatical architecture in current theoretical linguistics.

The title of this special issue suggests a possible approach to the minimalist theory of grammar. If syntax is constrained by output conditions at an interface (cf. Chomsky 1995), one possible approach is to find parametric differences in phonology that produce variations in syntax, which in itself is universal. We call this approach Universal Syntax and Parametric Phonology (USPP) (Tokizaki 2011). USPP provides more principled answers to questions—such as why certain syntactic operations exist in some languages but not in others—than simply stipulating abstract syntactic features such as strong features in movement (cf. Richards 2010).

The articles in this collection are organized in the following way: The first two authors discuss syntactic phenomena in terms of multiple spell-out, the next three articles are concerned with compound and stress locations, and the last three consider prosodic phenomena and their relation to syntax.

Ekaterina Chernova argues that the apparent discourse phenomenon of echo questions requires a formal analysis. Examining echo questions in Russian, a multiple *wh*-fronting language, she shows that an echoed *wh*-phrase may undergo movement to the left-peripheral position, unlike English. It is pointed out that there is a restriction in that an echoed *wh*-phrase cannot intervene between two fronted *wh*-phrases, which she calls *wh*-impenetrability. She argues that the difference between Russian and English involves a syntactic explanation in terms of the availability of an escape hatch. Moreover, she argues that *wh*-impenetrability follows from Uriagereka's (1999) Multiple Spell-Out theory that makes invisible the internal structure of a spelled-out syntactic object.

Investigating modal complement ellipsis in Javanese, **Yosuke Sato** argues that Phase Theory gives a principled account of why root modals allow ellipsis while epistemic modals do not. He shows that root modals, having a control structure, constitute a strong phase, and its complement, vP, undergoes spell-out, the domain of which can be a target of PF-ellipsis. In contrast, an epistemic modal is a weak phase and its complement does not undergo spell-out, and hence cannot be a site for PF-ellipsis. He further shows that his analysis of the root-epistemic asymmetry can be extended to VP-topicalization in Javanese and similar constructions in English.

The next three articles are concerned with syntax-morphophonology interactions.

Taking a derivational syntactic approach to the focus structure, **Aritz Irurtzun** proposes that the Nuclear Stress Rule should be focus-sensitive so that nuclear stress is assigned to the most deeply embedded element within a focused constituent. Irurtzun provides a unified analysis of

stress placement for both phrases and compounds, in both narrow and broad focus contexts. His theory of stress placement is further reinforced with a production experiment on compound stress in Central Basque.

Working within the framework of phase-based multiple spell-out and Distributed Morphology that does not distinguish syntax from morphology, **Scott Jackson** and **Jeffrey Punske** propose a unified theory where a stress assignment rule for sentential stress accounts for the stress patterns of English compounds, dispensing with the compound-specific stress assignment rules. Their proposed theory gives a straightforward account of the apparently complex pattern of noun-noun and adjective-noun compounds in English.

By investigating the typology of word-stress location, **Hisao Tokizaki** argues that Snyder's (2001) compounding parameter, formulated in terms of morphosyntax, should be eliminated from the grammar, in favor of the morphophonological approach. He shows that the canonical word-stress location correlates with the productivity of compounding, and claims that the correlation is a reflex of the asymmetry between left- and right-branching structures in compounding. In this approach, the parameter setting is straightforward: the trigger is the stress location, which is directly audible and accessible to the child acquiring a language.

The last three articles discuss Multiple Spell-Out and prosodic categories.

On conceptual grounds, **Roberta D'Alessandro** and **Tobias Scheer** argue that SPE-type hash marks or units of the Prosodic Hierarchy, being arbitrary theoretical entities, should be abandoned in favor of an independently motivated chunk-defining device, i.e., Spell-Out, which marks a phase head and its complement domain. In two case studies, they show that a phase head (C in both cases) may be marked at PF by complementizer doubling and the insertion of syllabic space (an x slot) in Abruzzese, a southern Italian dialect. They thereby argue for a fully modular direct interface theory where morpho-syntactic structure is spelled out directly as phonological vocabulary (e.g. x slots), rather than as mediating diacritics (hash-marks, units of the prosodic hierarchy) which are not used in regular phonological computation.

In the traditional theory of the syntax-phonology interface, it is assumed that syntactic structure is mapped to the prosodic hierarchy in one step, forming all the layers of the hierarchy at once. In contrast, **Yoshihito Dobashi** proposes the architecture of the PF branch of grammar, where the mapping from syntax to PF involves a step-by-step derivational procedure. He argues that the prosodic word, the phonological phrase, and the intonational phrase can each be cast in

terms of primitive elements of different sorts of a linearization procedure, and discusses some empirical consequences of the proposed approach.

In the investigations of prosodic domains in terms of Multiple Spell-Out, it has been generally held that Spell-Out domains correspond to phonological phrases, but there is no general consensus about exactly what is spelled-out, and a number of alternative approaches have been proposed for phonological phrasing. **Bridget Samuels** and **Hiroki Narita** show that their theory of head-detection in phrase structure necessitates cyclic application of Transfer, and that this cycle provides a new perspective on the cross-linguistic typology of phonological phrasing.

The project presented in the present collection was inspired by the symposium “Syntax-Phonology Interface” held at Niigata University in November 2011, as part of the 29th Conference of the English Linguistics Society of Japan, where 4 papers were presented by Hiroki Narita, Yosuke Sato, and the present editors. All the presenters discussed major theoretical and conceptual issues such as cyclicity, phase, computational efficiency, and parameters. Following the success of the symposium, the other contributors joined and completed this project. We would like to thank all the contributors and David Willingham, Editor of *Linguistic Analysis* for making this project possible.

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