Preface

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The notion of "rule" has always been at the heart of grammatical theory. Within transformational grammar of the 1960s and 70s rules were thought of as transformations, mapping representations onto other representations in both phonology and syntax (Chomsky 1965, Chomsky and Halle 1968, Anderson 1969, 1974, Kenstowicz and Kisseberth 1977, 1979, Williams 1974, Kayne 1975, Pullum 1979, Perlmutter and Soames 1979, among many others). It soon became clear that if the generation of a representation requires the application of more than one rule, then potential cases of rule interaction arise (Chomsky 1951). In order to describe interactions between rule applications, Kiparsky (1971, 1976) introduced a taxonomy of rule interaction that distinguishes transparent interactions (feeding, bleeding) and opaque ones (counter-feeding, counter-bleeding). Feeding describes an interaction where the application of a rule R_1 provides the context for the application of a rule R_2. Bleeding, on the other hand, is an interaction where application of a rule R_1 destroys the context for the application of a rule R_2. Counter-feeding is a term for an interaction where the feeding relation that could, in principle, apply between two rules does not arise. On the surface, it looks like a rule did not apply although its context was created by the application of another rule. Similarly, counter-bleeding describes an interaction where a bleeding relation that could show up between two rules is not found on the surface: a rule applied although its context was destroyed by another rule.

    Extending and generalizing Kiparsky's (1971, 1976) taxonomy, one may distinguish interactions that involve a sequential application of rules from interactions that involve parallel rule application; alongside with this, there is a distinction between interactions that come about by rules that strengthen/support one

another (the interaction is excitatory) and those where rules weaken/restrain one another (the interaction is inhibitory). Cross-classifying these two binary oppositions, bleeding and counter-feeding (as they arise in rule based theories) fall under the notion of inhibitory sequential rule interaction; accordingly, feeding and counter-bleeding can be comprised under the notion of excitatory sequential rule interaction (see below for parallel rule interaction).

In the 1980s, there was a general shift towards representationalism in syntactic theory (Government and Binding, cf. Chomsky 1981; Generalized Phrase Structure Grammar, cf. Gazdar et al. 1985; Head Driven Phrase Structure Grammar, cf. Pollard and Sag 1994). The general approach consisted in formulating principles and filters that restrict the number freely generated representations to the well-formed ones. As a consequence, the interest in rule interactions was temporarily reduced. In the 1990s, the derivational view was resurrected within the syntactic framework of the Minimalist Programm (Chomsky 1995, et seq.; but see also Brody 1995, 2002, where a representational variant of this framework is pursued). In its context, it became common to assume that the rules, which were thought of as theoretical primitives before, are actually composed of more elementary operations, such as Merge, Move, Agree, etc. (see, e.g., Kitahara 1997, Řezáč 2004). This assumption created further room for potential rule interaction, which could now also involve elementary operations.

At about the same time, Optimality Theory (Prince and Smolensky 1993, 2004) became a popular stream of research in phonology. The standard variant of this theory involves generation of representations plus their subsequent evaluation by grammatical constraints. It is thus highly representational. Although one can think of the grammatical constraints in an optimality theoretical grammar as "triggering" rules in a certain sense, the architecture of parallel rule application (or constraint evaluation) does not allow for the full range of rule interaction known from derivational frameworks: Opaque interactions cannot be derived without additional assumptions. This is even the case in a branch of optimality theoretic research called Harmonic Serialism (McCarthy 2000, 2007), which reintroduces certain derivational traits into the theory (see also Hermans and van Oostendorp 2000 for related issues). There is, however, another sense in which Optimality Theory contributes to the topic of rule interaction. Namely, one of its basic tenets is that grammatical constraints can be in conflict with one another. The conflict is resolved by enforcing the fulfillment of the higher-ranked constraint at the expense of the non-fulfillment

of the lower-ranked one. In this way, the theory introduces a new type of rule interaction included within the taxonomy mentioned above: inhibitory simultaneous rule interaction. And also cases of exhibitory simultaneous rule interaction can be found within optimality theoretic work: Analyses that involve the notion of "local conjunction" (Smolensky 1995) employ the idea that constraints may strengthen/support each other (see, e.g., Alderete 1997, Łubowicz 2005 for phonology and Legendre et al. 1998, Aissen 1999, 2003, Fischer 2001 for syntax).

The present volume of Linguistische Arbeitsberichte collects contributions that focus on the way rules interact within and across different grammatical components. It starts with papers that involve rule interaction across components. A common trait of the analyses they contain is that the independently motivated relative order of the components imposes an intrinsic order on the interaction of rules across these components.

The paper by **Daniela Thomas** deals with the question as to how split ergativity in subordination contexts in Sierra Popoluca and Jacaltec is derived. The leading idea is that there are filters that apply to the numeration, a component which precedes the syntax. One such filter, dubbed the *Constraint on Case Assignment in Intransitive Contexts*, determines which functional head assigns case in intransitive clauses and which does not. The application of this filter to the numeration leads to bleeding of absolutive case assignment in intransitive clauses in the syntax. Thus, the the assumption that the numeration is formed before the syntactic derivation proper starts induces an order among the constraints and operations that are associated with the numeration and the derivation, respectively.

Interactions between operations that apply in the syntactic component and those that apply post-syntactically are investigated in the paper by **Anke Assmann, Svetlana Edygarova, Doreen Georgi, Timo Klein & Philipp Weisser**. The proposal derives the case split on possessors in Udmurt by assuming that the syntax creates case stacking configurations that serve as an input for the post-syntactic morphological component, which then computes what case marker has to be inserted on the possessor. Thus, syntactic case stacking feeds the application of the post-syntactic, morphological rules fusion and vocabulary insertion.

The paper by **Martin Salzmann** focuses on the interaction between syntactic rules and PF rules. It presents a solution to an extraposition paradox (an observation due to Hubert Haider), which arises in the context of verb

cluster formation in the Germanic languages, and an explanation for the difference in behaviour of the infinitival markers *te/zu* in Dutch and German, respectively. The first part of the proposal consists of ordering the syntactic rule of extraposition before the phonological rule of cluster formation. The second part is concerned with different rule orders within PF. Descriptively speaking, placement of the infinitival marker applies early in Dutch, thereby transparently interacting with PF-inversion within the verb-cluster (feeding); in German, lowering of the infinitival marker enters into an opaque interaction with inversion (counter-feeding) because it applies late.

We now introduce the papers of the present volume that deal with potential morphology-phonology interactions. Such an interaction is sometimes argued to be involved in the linearization of affixes. The paper by **Eva Zimmermann and Jochen Trommer** argues against such a view on the basis of the linearization of abstract mora affixes, resulting in morphological lengthening at the surface. It is suggested that all instances of bona fide mora affixation that are attested cross-linguistically, and only those, can be derived by assuming that moras are assigned to a small array of fixed positions within morphological representations. In contrast, theories that derive the ultimate positioning of mora affixes by the interaction of morphological and phonological rules are argued to overgenerate and undergenerate at the same time.

A case of superficial counter-bleeding in morphology-phonology interaction is discussed in the paper by **Barbara Stiebels**. It concerns the interaction of the phonological rule of dorsal fricative fronting and affixation of the diminutive *-ske* in Kleverlandish (a German dialect). On the one hand, affixation of *-ske* seems to be contingent on the feature [+VELAR] on the stem final consonant. On the other hand, affixation indirectly triggers dorsal fricative fronting of the stem final consonant, thereby destroying the context for affixation. Upon closer inspection, however, it turns out that the alleged opaque relation becomes transparent once it is assumed that the phonological context for diminutive affixation involves the feature [+DORSAL]. As Stiebels argues, this assumption is motivated on independent grounds. A further issue that is addressed in the paper concerns a rule order paradox between cluster simplification and diminutive affixation.

An underlying theme of both the paper by Aaron Doliana and the one by Anke Assmann is the idea that one and the same rule may show interaction within different components. Thus, **Aaron Doliana**'s paper explores a new argument for the idea that the operation of Impoverishment, which is standardly assumed

to be morphological, may also interact with syntactic rules, in particular the operation Agree. The proposal consists of splitting up Agree into the more primitive operations Copy and Check. This creates an additional window for the application of Impoverishment in the syntax, leading to a feeding relation between Copy and Impoverishment and a bleeding relation between Impoverishment and Check. As a result, a broader range of typologically attested variants of the Person Case Constraint can be accounted for.

In a similar vein, the paper by **Anke Assmann** explores the possibility for pre-syntactic operations that create new contexts for the syntactic derivation. In order to capture the behavior of *wh*-phrases in free relative clauses, it is proposed that the operation Copy, which is usually assumed to be syntactic, may also apply pre-syntactically within the lexical array. More precisely, pre-syntactic copying affects the *wh*-head and creates a partial copy of it, which in turn allows for the creation of a new lexical item. The existence of this item, then, gives rise to new possibilities for the syntactic operations Merge and Agree; thus, pre-syntactic copying feeds syntactic rules.

Finally, we introduce the various proposals in the present volume that deal with the interaction of rules in narrow syntax. To begin with, the paper by **Gereon Müller** provides a derivational reformulation of a constraint called the Williams Cycle, which is concerned with the ban on improper movement: Ā-movement bleeds subsequent A-movement of the same category; but A-movement counter-bleeds subsequent Ā-movement. Standard formulations of the Williams Cycle are incompatible with a locality theory that is based on the Phase Impenetrability Condition. In order to remedy this situation, the proposal is made that every moved category stores aspects of its derivational history. What then violates the Williams cycle is not Ā-movement followed by A-movement as such but rather Ā-movement that is not ultimately terminated by Ā-movement (but by A-movement).

A closer inspection of the interaction of Move and Merge is presented in **Philipp Weisser**'s paper. It deals with the Left Subordinating *and*-Construction in English, which differs from other coordinations in that it does not obey the Coordinate Structure Constraint. To account for this exceptional behavior, it is proposed that clauses in this construction start out as subordinate adjuncts and then become coordinates of their superordinate clause via movement. This leads to a counter-bleeding relation because, usually, coordination bleeds asymmetric extraction. As often, opacity is accounted for by rule ordering:

Extraction is possible after all in this case because it takes place prior to the movement that creates coordination in the first place.

The paper by **Marie-Luise Popp** discusses the interaction of two Agree operations. In the languages Itomana and Basque, the goal for person agreement is determined by a person hierarchy. The difference between the two languages is that a combination of two arguments bearing local person results in inverse marking in Basque while it leads to direct marking in Itomana. This is captured in the analysis by assuming that one functional head agrees with both arguments. The order of the two Agree operations is then determined by a language-specific parameter, leading to direct marking if subject agreement precedes object agreement and inverse marking if the order is vice versa.

The goal of the paper by **Anke Assmann, Doreen Georgi, Fabian Heck, Gereon Müller, and Philipp Weisser** is to present a new account of the ban on ergative movement in morphologically ergative languages. The underlying assumption is that in such languages Merge/Move applies before Agree, thereby creating new configurations for Agree between the moved ergative argument and the head which triggered movement. This in turn bleeds case Agree between the head and the absolutive argument in the structure, ultimately leading to a case filter violation. In contrast, in accusative systems, where Agree applies prior to Merge, a counter-bleeding relation between both operations holds and no restriction on moving the accusative argument arises.

Closely related to this is the paper by **Doreen Georgi**. Its main claim is that a distinction between intermediate steps of successive cyclic movement on the one hand and movement to a final position (often called criterial movement) on the other hand is necessary. The distinction allows for variable orders of Agree and Move within one language, thus accounting for possible instances of opaque interactions between these two operations: Whereas criterial movement precedes Agree and may hence feed or bleed Agree, intermediate movement takes place after Agree, which may create instances of counter-feeding and counter-bleeding.

The interaction of intermediate movement steps and Agree also plays a role in the paper by **Anke Assmann and Fabian Heck**. It deals with cases of opaque and transparent intervention. On the one hand, there are cases where an antecedent cannot enter into Agree with its associate (a floating quantifier or a parasitic gap) because another potential antecedent intervenes at the surface: transparent intervention. On the other hand, one can observe cases where an intervention effect occurs although no argument intervenes on the surface.

Opaque configurations such as these are then accounted for by assuming that intervention actually takes place at some earlier point of the derivation and is then undone by movement at some later step.

Finally, the paper by **Fabian Heck and Gereon Müller** deals with cases where an interaction between Move and Agree is expected but exceptionally does not show up. It is argued that the ban on moving ergative arguments (assumed to be due to Move preceding Agree) fails to hold in particular cases where movement is procrastinated. This avoids an otherwise expected bleeding of Agree, resulting in counter-bleeding instead. Also, it is proposed that movement of dative arguments in German, which otherwise follows Agree, exceptionally applies early (before Agree) in particular contexts. This gives rise to bleeding of Agree (instead of the expected counter-bleeding relation) and thereby derives a ban against extraction of dative arguments out of ECM complements in German.

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