

Rice, Curt and Sylvia Blaho (eds.) (2009) *Modeling Ungrammaticality in Optimality Theory*, Advances in Optimality Theory. London: Equinox Press. Pp. 297.

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Optimality Theory (hereafter OT), much like the Minimalist Program (MP), is, as argued by Broekhuis and Vogel (2010), highly programmatic in nature; serving as a cover term for a host of a sub-varieties of OT that all hold to the central concept of violable constraint interaction and their harmonic ranking which determines whether a given output is grammatical in a particular language (thus sufficing the requirements of descriptive adequacy). OT's focus on output, as pointed out by Rice and Blaho, "emphasizes a central architectural property of the theory, namely that every input is associated with some output" (p. 2). The notion of *ineffability* (coined by Pesetsky (1997) and more common in OT-syntax) or *absolute ungrammaticality* (more common in OT-morphophonology circles) presents a significant challenge for OT-grammars for the following reasons: First, as mentioned above, is OT's focus on output (in an input-output correspondence system), which forces each input to have some output. The notion of ineffability, i.e., the fact that sometimes no winner can be derived from a given competition, has proven to be a confounding problem for linguists who use OT. Secondly, and closely related to the first point, is the concept of constraint violability – a core component of OT. Due to the fact that there are no "perfect" candidates in the generated output candidate set (CON), i.e., any winner can violate an infinite number of lowly ranked constraints, it remains unclear to some (see e.g. especially Legendre's contribution in this volume) on the surface how and why a null parse candidate (commonly marked as \ominus in OT-tableaux) solves this puzzle (a puzzle, I might point out, that was recognized as early as the seminal work on OT by Prince and Smolensky (1993/2004)). In sum, OT does not generate perfect candidates, it generates optimal, "good enough for the situation at hand," structures, which marks the fact that sometimes no possible output is given for a particular input as a serious challenge to the ontology of the framework. The papers in the volume take on the task of modeling ungrammaticality in OT, presenting novel theoretical solutions to this problem and often forcing a re-evaluation of core, long-assumed

axioms of the theory. The contributions of the volume are grouped into three sub-sections: *Architecture*, *Paradigms*, and *Ineffability in Syntax*.

The section on *Architecture* begins with Matthew Wolf and John McCarthy's contribution entitled *Less than zero: correspondence and the null output*. The purpose of Wolf and McCarthy's contribution is to rationalize the properties of the null parse (or null output as they refer to it). The central guiding question to their paper is: How is it possible for this candidate to violate only the constraint MPARSE while it (apparently) satisfies all other faithfulness and markedness constraints in a grammar? Their answer to this question rests in a revision of the Correspondence Theory (McCarthy and Prince 1995, 1999), where strings rather than segments are the formal objects that stand in correspondence. According to this revision, well-behaved unfaithful mappings do not alter \mathfrak{R} 's (\mathfrak{R} = relation between segments in an input string i of an output string o) as a total bijective function. In their own words, "candidates with a less orderly \mathfrak{R} violate MPARSE; among these candidates there is one that harmonically bounds all others, the null output \odot " (p. 60). In *Dutch diminutives and the question mark*, Marc van Oostendorp breaks away from a contemporary view of Correspondence Theory in favor of Containment Theory, which embodies a different theoretical understanding of faithfulness. The view of faithfulness in Containment Theory is a return to the "original" understanding of faithfulness, a version of OT that was strictly monostratal, with the constraints targeting only the output (including faithfulness constraints). The remainder of Oostendorp's contribution sketches out how Containment Theory is a step forward in the discussion of ineffability in OT. This section concludes with Ohran Orgun and Ronald Sprouse's contribution entitled *Hard constraints in Optimality Theory*, where the authors present the CONTROL approach to morphological gaps. According to this approach, constraints can belong to the more conventional EVAL component or CONTROL. The harmonic constraint ranking present in EVAL functions as one would expect in all variants of OT, proposing an optimal candidate. With the addition of CONTROL, the candidate must also satisfy all of the constraints in CONTROL, with failure to meet this requirements resulting in an ungrammatical output. In contrast to EVAL, CONTROL only evaluates one candidate (the optimal/winning candidate resulting from EVAL), this preventing any sort of repair mechanism or alternative candidate possibilities. In this system, CONTROL determines grammaticality, a component of the grammar that lacks any sort of grammatical capacity.

The second set of papers devoted to the topic of Paradigms seeks to provide insight into modeling phonological, morphological, and lexical gaps from an OT-perspective. Adam Albright's *A Lexical and morphological condition of paradigm gaps* focuses on gaps that only affect certain words, while other, seemingly parallel words surface as expected. In this paper, Albright attempts to predict which parts of a paradigm, and in particular which lexical items, may be affected by paradigm gaps. Albright concludes that "it is hypothesized that gaps affect only those forms that are computed with reference to another base form in the paradigm, and occur only in cases where the mapping between the base and the derived form requires an inference over small amounts of possibly conflicting data" (p. 160). Outi Bat-El explores data in Hebrew, a language that often avoids surface forms where a string of suffixes has identical consonants. In her contribution entitled *A gap in the feminine paradigm of Hebrew: a consequence of identity avoidance in the suffix domain*, Bat-El presents various strategies employed in the grammar of Hebrew to amend inputs with identical consonants in the suffix domain, with one of the possible solutions being the null output candidate. Finally, Peter Rebrus and Miklós Törkenczy investigate the notion of defectiveness (i.e., the occurrence of paradigmatic gaps) from a bifurcated perspective, looking separately at *phonologically motivated gaps* in juxtaposition to *arbitrary gaps* and distinguishing *overt* vs. *covert defectiveness*. Rebrus and Törkenczy's contribution illustrates that not all instances of defectiveness should be analyzed at the same level of grammar, for example forcing the input of certain paradigm gaps to allomorphs rather than morphemes in the case of their Hungarian data.

The third and final subset of papers addresses the topic of *Ineffability in Syntax*. Géraldine Legendre takes a critical look at the notion of null parse in her paper, *The neutralization approach to ineffability*. Legendre provides arguments against the null parse candidate in OT-syntax, opting rather for a neutralization approach to ineffability, "whereby different inputs (interpretations) neutralize to and the same optimal output because specific input features ([wh]; operator scope) may be underparsed. The optimal candidate is close to the input but not identical: "Sometimes it's best to say something else"" (p. 240). Ralf Vogel's *Wh-islands: a view from Correspondence Theory* closes out this section and the volume. Vogel focuses on the notion of *expressive ineffability* in the syntax of languages and language families, i.e., the notion that a certain meaning cannot be expressed by using a particular structure S in some language. Vogel

employs a Correspondence-based version of OT to take a closer look at two particular cases of syntactic ineffability: 1.) the impossibility of a particular structure *S* in some language(s), and 2.) the impossibility to express a particular meaning *M* by using a particular structure *S* in some language(s). Vogel concludes that instances of wh-islandhood result in an unparsimonious correspondence between conflicting requirements (formalized as OT-constraints) enforced at the syntax-semantics interface.

This collection of research on the notions of ineffability and absolute ungrammaticality is the first step at filling a long-standing gap (pun intended) in the literature pertaining to our understanding of modeling ungrammaticality in OT. The various contrastive approaches to model ungrammaticality presented in this collection of paper, e.g., null parse, underspecification of the input, the addition of a post-EVAL level of constraints (CONTROL), etc., provides evidence that this volume is but a first step towards understanding how best to model ungrammaticality from an OT-perspective. I say this not as a mark against this book, but rather to simply point out future work that needs to be done in this area. As work progresses on this topic, this volume will undoubtedly serve as an invaluable starting point for such research ventures.

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