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OPTIMALITY THEORY: AN INTERVIEW WITH JOHN MCCARTHY

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In its more than two decades, Optimality Theory has contributed to a great shift in linguistic theory. OT has made it possible for many different subfields of linguistics to converse more directly with one another. Besides, OT has also played a decisive role in the field of Language Acquisition. All these factors, besides its parallel processing and its computational nature, have contributed to a rapid growth of the model since its creation.

It is impossible to discuss Optimality Theory without referring to the research carried out by Professor John McCarhty. John McCarthy is a Professor at the Department of Linguistics at the University of Massachusetts (UMASS) – Amherst, and is Senior Vice Provost for Academic Affairs at UMASS. With many articles and books on the theory, he has helped researchers understand the tenets of OT and carry out research in this model, besides contributing with modifications to the Standard account of OT. In other words, Professor McCarthy's work has contributed to both the development and the dissemination of the model. For these reasons, he is one of the greatest OT researchers nowadays.

In this interview, Professor John McCarthy talks about the prospects and challenges that still need to be faced by OT. He also talks about the main characteristics of the model, besides discussing the proposal of Harmonic Serialism. We consider this interview to be of great relevance not only to those working with OT, but also to all linguists in general., given the importance of Optimality Theory in the

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last twenty years. Finally, we must thank Professor McCarthy for his kindness not only in answering the questions is this interview, but also for all his consistent work in Optimality Theory. His didactics and meticulousness, which can be noticed throughout the present interview, have contributed to the intellectual growth of both young and experienced researchers in the field of Linguistics.

Alves – Since it was created, Optimality Theory has revolutionized the field of linguistics. In your opinion, what explains the success this model has had in the last two decades, especially in Phonology and Morphology?

McCarthy – I see three main factors as responsible for the early and widespread interest in Optimality Theory:

(i) It had been clear since the early 1970s that representational constraints could both block and trigger phonological processes, but there was no satisfactory theory of how that was possible. In fact, I taught a course at the 1987 LSA Linguistic Institute at Stanford University on exactly this topic, and my conclusion was that this was a serious unsolved problem in phonology. OT offered tremendous new insights into this problem, and some would say that OT solved it.

(ii) Phonological naturalness was also a serious concern of that era. How does phonetic substance affect phonological processes? What are the "tendencies" that were so often mentioned in phonological analyses? Again, the notion of ranked, violable constraints contributed significantly to developing answers to these questions.

(iii) Very early in the history of OT, at the 1993 ROW-1 workshop, Bruce Tesar presented an important paper about learning constraint rankings. At that time, phonological acquisition was a real mystery, and Tesar's elegant solution increased the appeal of OT considerably.

Alves – In "Doing Optimality Theory" (2008), you say that "OT is a theory of constraint interaction, not a theory of Constraints. OT itself doesn´t say much about constraints except that they´re universal and limited to markedness and faithfulness" (p. 166). What consequences has this fact had in OT analyses? What are the positive/negative aspects that might be considered to have been brought up by this characteristic of Optimality Theory?

McCarthy – That OT lacks a theory of constraints is simply a fact about OT, neither positive nor negative in itself. The positive or negative consequences are perhaps to be found in the spread of the theory. On the positive side, it has encouraged the application of OT to a very wide range of linguistic phenomena: phonology, morphology, syntax, semantics, and even kinship terminology. On the negative side, it has led to a very likely excessive proliferation of phonological constraints. This has been mitigated somewhat by the exploration of schemata for constraint formulation, such as alignment or local conjunction, as well as mechanisms for relating certain constraints to their basis in substantive phonetics.

Ironically, even the limitation to markedness and faithfulness constraints has been questioned, such as proposals for antifaithfulness constraints or constraints that combine features of markedness and faithfulness.

Alves – Many researchers state that language variation poses big challenges to OT. How do you see the relationship between OT and variable data? Do you agree that there are still challenges to be faced as far as variable phenomena are concerned?

McCarthy – It always seemed to me that language variation poses a big challenge to rule-based phonology, and that the notion of variable constraint ranking offered considerable insight into language variation. Perhaps the intent of the question is to contrast OT with Harmonic Grammar, which uses weighted constraints instead of ranking and accounts for variation by randomly perturbing the weights. This is one of a number of ways in which OT and Harmonic Grammar differ.

Alves – In the last years, you have devoted your research to the study of Harmonic Serialism. What has motivated you to pursue this model (which, unlike OT, is a serial model)? What conclusions have you reached so far?

McCarthy – I first became interested in Harmonic Serialism (HS) in 2000. At that time, I was mainly trying to understand whether HS improved upon parallel OT's account of phonological opacity. I concluded that it did not. As I worked more on opacity, though, I found reason to adopt a different serial version of OT, OT with candidate chains (OT-CC). I went on to realize that OT-CC could help solve the too-many-repairs problem, in which the actually observed ways of satisfying a markedness constraint are a proper subset of those that would be predicted by free permutation of faithfulness constraints. From there, I came to the further realization that OT-CC's relevance to the too-many-repairs problem is shared with HS, which is a simpler theory and therefore easier to investigate.

In my view, the most interesting results to emerge from the study of HS are these:

(i) New insights into the too-many-repairs problem. Suppose there are two imaginable ways of satisfying some markedness constraint, but only one of them is actually observed. Arguably, the difference is that the observed process requires only one derivational step and the non-observed process requires two or more. HS derivations will never proceed through a step that produces no markedness improvement, even if the next step would improve markedness. An example of this reasoning can be found in my paper "The gradual path to cluster simplification".

(ii) A different approach to the constraints motivating autosegmental spreading that improves upon earlier proposals.

(iii) An analysis of deletion of unstressed vowels, which is problematic in parallel OT.

(iv) A reason to pay more attention to Gen.

(v) Resolution of a formal problem with perceptually-grounded faithfulness constraints.

(vi) A different view of lexical foot structure and lexical tone structure.

(vii) Explanations for some puzzling generalizations about reduplication.

(viii) A better understanding of what would constitute evidence for parallelism.

Alves – What are the next theoretical challenges to be faced by OT? In what sense do your current research goals tackle some of these challenges?

McCarthy – I have reached a point in my career where I don't have to worry about the direction the field is taking, so I don't give it much thought. Instead, I work on problems that interest me. Lately, I have been particularly interested in the link between deletion processes and reduction processes – a natural link in HS, where reduction may be a step on the way toward deletion – and I continue my interest in opacity, returning to some opaque phenomena of Biblical Hebrew that I worked on in my doctoral dissertation.

Alves - Finally, could you please suggest some of your publications (books, book chapters, article) that might be useful for those starting their studies in Optimality Theory and in Harmonic Serialism?

McCarthy – I have written two introductory articles about HS, this one and this one. They are a good place to start. For people who know my book *Doing Optimality Theory*, I have written a supplement about HS that even includes exercises.

Most of my work, except for the books, can be downloaded from here. Almost everything since 2006 deals with HS or OT-CC.