The Selective Fossilization Hypothesis: A Revitalization of the Construct of Markedness in Second Language Acquisition

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With the Selective Fossilization Hypothesis (SFH), Han (2009) cites the synergy of first language (L1) markedness and second language (L2) input robustness as a determinant of selective fossilization and, in doing so, returns the construct of markedness to the forefront of second language acquisition (SLA) research and theory. With the SFH, Han offers a principled account of the differential consequences for L2 learning (Han, 2008, p. 6), and its explanatory and predictive qualities hold great promise for the field. Nevertheless, Han's unique approach to markedness lays open the possibility for misunderstanding, particularly for those who are accustomed to viewing markedness in SLA through the lens of linguistic universals. Moreover, when one considers that markedness has long been a problematic term in linguistics, with "many different approaches defin[ing] markedness in different ways, apply[ing] it to different domains, and integrat[ing] it into different approaches" (Battistella, 1990, p. 5), the possibility for misunderstanding looms even larger. For these reasons, it might be helpful to take a retrospective look at markedness for the purposes of contextualizing the construct and preempting any potential misapprehensions of its role in the SFH.

The term *markedness* was first introduced in the early 1930s in the writings of Trubetzkoy (Jakobson, Baren, Ronen, & Taylor, 1975). In its earliest conception, the notion of markedness posited that "the terms of polar opposition at any level are not mere opposites, but rather ... show a nonequivalence that is imposed on all oppositions" (Battistella, 1990, p.1). This early concept of markedness was developed within the theoretical framework of structuralism, in general, and the study of phonology, in particular. While Trubetzkoy's predecessors had focused their attention largely on the identification and classification of phonemes within and among languages, Trubetzkoy, along with his Prague School colleague Jakobson, explored the relationship among polar opposites (e.g., voiced vs. unvoiced members of a pair such as /b/ and /p/) noting that in each case one member of the opposition was more frequent (and common), and the other, less so. (Battistella 1990, p.1). While this observation might seem obvious today, it was quite revolutionary at the time.

It was through the study of phonology that markedness made its way into the field of generative linguistics, where it was developed by Chomsky within the *principles and parameters* framework (Battistella, 1996, p. 3). Chomsky, who in the 1960s had introduced the idea of an innate, language-specific cognitive faculty for first language acquisition, related the theory of markedness to his concept of core and periphery rules. According to Chomsky, children learning their native language first acquire core rules via universal grammar. Peripheral rules, which require specific, positive evidence, are acquired next. Chomsky further postulated that core rules are unmarked rules, and periphery rules, marked. Hence, a child learning his or her first language will acquire unmarked rules first and marked rules last.

While markedness has been defined in many ways since Trubetzkoy first introduced the term nearly 80 years ago, a core notion has evolved. Moravcsik and Wirth (1993) proposed a core definition of markedness that incorporates a three-way correlation between: (1) familiarity /

frequency, (2) variation, and (3) complexity. In this model. a term is considered marked when it possesses the following characteristics: it is neither frequent nor familiar; there is very little differentiation of the term, paradigmatically; and it is perceived as being complex in comparison to the unmarked form. Conversely, an unmarked term is perceived as being more familiar to language users and more frequent in the input, as having greater paradigmatic differentiation, and as being simpler in form than its marked counterpart.

As noted above, the construct of markedness was initially integrated into first language acquisition theory before being adopted by researchers within the field of SLA. There it made its way into SLA theory through the work of Eckman (1977), who introduced the *Markedness Differential Hypothesis* (MDH). It was later incorporated in Eckman, Moravcsik and Wirth's (1989) *Structural Conformity Hypothesis* (SCH) and most recently featured as a key constituent in Han's (2009) Selective Fossilization Hypothesis. In each instantiation, the construct of markedness has been used to predict and/or explain second language learners' difficulties with the target language (TL).

With the Markedness Differential Hypothesis, Eckman (1977), who defines markedness as "the relative frequency or generality of a given structure across the world's languages" (p. 198), adopts a functional-typological approach to second language acquisition that endeavors to "explain facts about the acquisition of an L2 ... through the use of universal, linguistic generalizations that have been postulated on the basis of primary languages (Eckman, 1996, p. 195). While the MDH was quite successful in accounting for second language learners' difficulties, it was still unable to explain, for example, instances in which learners were having difficulty where none would have been predicted on the basis of differences between the native and target languages. For this reason, Eckman, Moravcsik, and Wirth (1989) removed native language (NL) – target language differences from the equation and formulated the Structural Conformity Hypothesis (SCH), which claims, simply, that "All universals that are true for primary languages are also true for Interlanguages" (Eckman, 1996, p. 204). In a nutshell, what distinguishes the SCH from the MDH is the omission of NL-TL differences; what remains the same is the incorporation of markedness as a key component, albeit now within a universal framework.

Markedness also figures prominently in Han's (2009) Selective Fossilization Hypothesis. With the SFH, Han (2008), cites *L1 markedness*, defined here as "frequency and form-meaning-distribution variability" and *L2 input robustness* (i.e., +/- frequent and +/- variable) as putative causes of learner difficulties that can lead to selective fossilization (p. 5). According to Han, constructions that are marked (i.e., infrequent and variable) in their L1 counterpart(s) (if existent) and robust (i.e., frequent and invariable) in the L2 input are more likely to be acquired, while those that are unmarked (i.e., frequent and invariable) in their L1 counterparts (if existent) and non-robust (infrequent and variable) in the L2 input tend to fossilize.

Like any other model in which markedness figures prominently, the Selective Fossilization Hypothesis is vulnerable to misinterpretations that stem from the many different – and sometimes conflicting – ways in which markedness and its associated terms (e.g., "variability" and "frequency") have been defined and operationalized over time. Within the field of SLA, for example, the construct of markedness has, as were the cases in the MDH and the SCH, traditionally been viewed through the lens of linguistic universals, which is meant for comparisons between L1 and L2 markedness. However, unlike earlier markedness models, Han's (2009) Selective Fossilization Hypothesis is concerned only with L1 markedness, and no crosslinguistic comparisons are made in determining L1 markedness. Instead, a form is considered marked in the L1 if it is less frequent or habitual, the reason being that "if it is less habitual, it is less likely to interfere with the learning of the target L2 feature" (Z.-H. Han, personal communication, October 7, 2009). Another possible source of misunderstanding is Han's surprising use of the term "variability" to describe marked forms. Han's notion of variability is isomorphic with consistency, and thus diverges from Moravcsik and Wirth's (1993; see also Eckman, Moravcsik, & Wirth, 1983) conceptualization of variability as entailing the unmarked constructions of greater paradigmatic differentiation and simplicity. Hence, in Han's model, constructions that are unmarked in the L1 are both frequent and *in*variable (i.e., consistent).

Han's (2009) Selective Fossilization Hypothesis promises to be a most positive addition to the second language acquisition research. While each facet of the hypothesis must be stringently tested, alone and in combination, and the key concepts of markedness and robustness examined, defined, and operationalized, the SFH has the potential to take the study of fossilization in a new direction. Once a fuzzy, idiosyncratically defined concept, fossilization may now be explored in a principled way that can benefit second language learners, teachers, and scholars alike. As such, the SFH not only has far-reaching implications for L2 scholarship and pedagogy, but also has revitalized the construct of markedness in second language acquisition.

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