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Typological Universals in ESL Instruction

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Abstract

Some theories provide insights which are immediately applicable to instruction. A relatively little discussed concept of Greenberg’s typological universals is one such theory. While the jury is still out on whether the use of Greenbergian universals can speed up the learning of selected grammatical structures (e.g., relative clauses, questions), it is important to become informed about this promising approach. This paper explains the nature of typological universals, reviews seminal studies testing their applicability to instruction, and offers insights into how to use them in ESL instruction.

Introduction

Typological universals can be phonological, syntactic, or semantic. This paper focuses mainly on syntactic universals and reviews some seminal studies exploring their applicability to foreign/second language instruction. It also gives some attention to phonological universals. While the up-to-date findings remain inconclusive, it is important to remember that only few out of the original forty-five Greenbergian universals (Greenberg, 1963) have been tested in classroom settings. ESL teachers may find immediate uses for the hierarchies of grammatical structures proposed by this theory, widely discussed in the past, but drawing relatively little attention for the last few decades. Its Markedness Differential Hypothesis offers valuable insights into how easy or difficult some structures may be for English language learners, depending on their first language.

Typological universals, developed in the 1960’s by Greenberg, offer a viable option to Chomsky’s Universal Grammar. One of the main differences between the two approaches hinges upon the fact that Greenberg arrived at his universals inductively by studying the features of numerous world languages, while Chomsky’s theory is deductive in nature (Eckman, 1988). Another fundamental difference is that between a descriptive versus explanatory theory: Greenberg aims at describing language at the surface level, while Chomsky hypothesizes about its deep structure. While the latter has dominated theoretical discussions for decades and inspired numerous studies in the field of second language acquisition, the former has been tested less frequently over the years, and many questions regarding its usefulness to ESL teachers remain unanswered. Nevertheless, the concept of implicational universals, best exemplified by its Noun Phrase Accessibility Hierarchy (NPAH), still seems to hold some promise to offer shortcuts to success when it comes to learning a foreign/second language grammar.
As typological universals render themselves well for testing in classroom settings, one hopes that this paper will inspire teachers to try this concept out in their own instruction to see whether it delivers what the theory promises, which is speeding up the learning process of selected grammatical structures (e.g., relative clauses, questions).

**Typological Approaches to Language**

**Absolute Universals versus Universal Tendencies**

World languages have many features in common. Comrie (1981) postulated two types of such features. A characteristic that is shared by all languages is called an *absolute language universal*. For example, the statement “all languages have consonants” is such a universal. If a statement refers to most, but not all languages, it is called a *universal language tendency.* “Nearly all languages have final obstruents” is such a tendency.

According to Comrie (1981), language universals and language tendencies can be either *implicational* or *non-implicational*. The above statements exemplify non-implicational universals. However, when the occurrence of one feature implies the occurrence of another feature in a given language, such universals are called implicational. One of Greenberg’s universal tendencies cited below illustrates the latter. “In prepositional languages the genitive almost always follows the governing noun, while in postpositional languages it almost always precedes the noun” (1963, p.78).

E.g.:  
*dom mojego ojca* (Polish) house my  
[GEN] father [GEN]. the house of my  
father  
(the authors’ own example)  
*kelen-u surveyuli* (Classical Mongolian)  
languages [GEN] school the school  
of languages  
(Kaluzynski, 1998, p. 56) (Prepositional  
languages, such as Polish, English and other Indo-European languages, have  
prepositions, meaning standing before the noun, e.g., “*with students,*” while  
postpositional languages, such as Mongolian, Turkish, Japanese, Korean, and  
other Altaic languages have *post*positions, meaning standing after the noun,  
e.g., “students *with*”.)

To illustrate further the concept of implicational universals, here is an  
example of an implicational universal that is absolute: “the existence of clusters  
containing at least one glottalized member implies the existence of clusters  
containing exclusively non-glottalized members” (Greenberg, 1966, p.22).

Historically, the concept of implicational universals provided a framework for  
deriving hierarchies of grammatical structures and ultimately for developing  
pedagogical assumptions based on those hierarchies. However, none of this would  
have been possible without introducing the notion which is fundamental to typological  
approaches, namely, that of markedness.
Markedness

The term markedness was coined in the 1930’s by N.S. Trubetzkoy, a linguist from the Prague School (Greenberg, 1966, p.11) and given saliency in the 1950’s by the writings of Jakobson and Hjelmslev, among others (Greenberg, 1966, p.27). The concept of markedness, just like that of language universals, applies to phonology, syntax, and semantics. It was originally derived from observations that some structures are more common across world languages than others. To use the example of an implicational absolute universal from the previous section, the most common word ending across languages is that of a vowel, the least common is that of a stop-stop cluster. The former would be called least marked, the latter most marked.

Some additional criteria of markedness are often employed. The frequency of occurrence within a given language is one of them. While the frequency data for final double stop clusters in English are not available, the intrigued reader may find many frequency data sets pertaining to other unmarked versus marked phonological pairs in Greenberg (1966, pp.16-20). Another criterion is structural complexity, which may lead to difficulty in producing or learning the structure. To stay with the same example, a final double-stop cluster is indeed more challenging phonetically than a vowel; thus, it should be considered more marked. One transparent example of markedness in language involves feminine forms. Consider such words as actress or poetess. They are less frequently used than their masculine counterparts, actor and poet, which are often used generically to mean either males or females. In addition, feminine forms possess an affix, which makes them more complex morphologically.

The notion of markedness combined with that of implicational language universals provides the highly formalized, yet useful definition, cited below:

If the presence of a structure $p$ in a language implies the presence of some other structure, $q$, but the presence of $q$ in some language does not imply the presence of $p$, then structure $p$ is marked relative to structure $q$, and structure $q$ is unmarked relative to structure $p$. (as cited in Ritchie & Bhatia, 1996, p. 198).

Marked structures are less common across languages, less frequently used, and presumably more complex and difficult to learn. They also imply the existence of the corresponding less marked structures in a given language. These assumptions potentially have far-reaching consequences for the theory of second language acquisition and in turn for ESL instruction, especially when it comes to teaching selected grammatical structures.

Typological Universals and Markedness in Second Language Acquisition

Markedness Differential Hypothesis

The most direct application of markedness to second language acquisition was offered by Eckman, in 1977, in the form of the Markedness Differential Hypothesis (MDH). This hypothesis was formulated as a response to the growing body of research showing the limitations of the Contrastive Analysis Hypothesis (CAH), which states that target structures similar to native structures are easier to learn than those that are dissimilar to native structures (Ritchie & Bhatia, 1996, p.196). Subsequently, many researchers investigated various aspects of the MDH’s
applicability to second language acquisition (for details, see Doughty, 1991; Gass, 1978, 1979, 1980; Hyltenstam, 1984; Pavesi, 1986; as cited in Braidi, 1999, p. 92). The MDH offers a much more complex picture of the interaction between the native and target languages than the Contrastive Analysis Hypothesis. Below are the predictions formulated by Eckman regarding difficulties, or lack thereof, a second language learner faces based on the MDH.

(a) Those areas of the target language (TL) that are different from the native language (NL) and are relatively more marked than in the NL will be difficult.
(b) The degree of difficulty associated with those aspects of the TL that are different and more marked than in the NL corresponds to the relative degree of markedness associated with those aspects.
(c) Those areas of the TL that are different than the NL but are not relatively more marked than in the NL will not be difficult. (Ritchie & Bahtia, 1996, pp. 197-198.)

One can illustrate the above predictions using the example of Greenberg’s absolute universal of word final clusters, cited here earlier. Assuming that English is the target language and there are two English learners, where one’s first language is French and the other’s is Swahili, the following scenario ensues. English allows for two stops to occur at the end of the word, e.g., leaked /likt/. French does not allow two stops, but it allows a fricative-stop cluster at the end of the word, e.g., optimiste /optimist/ (the pronunciation is given in slash brackets according to the International Phonetic Alphabet). Swahili allows only vowels at the end of the word. Two stops are more marked than a fricative-stop word ending, and a vowel word ending is least marked. According to the MDH, two-stop clusters at the end of the word will be somewhat difficult for the French speaker and even more difficult for the Swahili speaker. One limitation of the MDH is the fact that it does not make predictions about structures that are similar in the TL and NL.

Noun Phrase Accessibility Hierarchy and Supporting Research

There is no doubt that the most studied typological hierarchy in the field of second language acquisition is that of relative clauses. Below is the Noun Phrase Accessibility Hierarchy (NPAH) (Keenan & Comrie, 1977) with the authors’ own examples.

SUB > DO > IO > OP > GEN > OCOMP (> less marked than)

<table>
<thead>
<tr>
<th>Subject (SU)</th>
<th>Direct Object (DO)</th>
<th>Indirect Object (IO) of a Preposition (OP) (GEN)</th>
<th>Comparative (OCOMP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The chimp that outsmarted the scientist…</td>
<td>The chimp that the cat outsmarted…</td>
<td>The chimp that I gave money to… Object</td>
<td>The chimp whose personality I like… Object of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the above hierarchy, relative clauses in the position of the object of comparative are most marked, and those in the position of the subject are least marked. According to the MDH, the OCOMP relative clauses should be more difficult than GEN relative clauses, the latter should be more difficult than OP
relative clauses, and so forth, assuming that they do not occur in the English learner’s first language.

As the studies reviewed here attest, the NPAH inspired much research, including the two seminal studies conducted by Gass (1979, 1980) on universals in language transfer. The results cumulatively support the notion that the NPAH operates in the production of English relative clauses and that learners can generalize from the more marked to the less marked structures. The former finding has importance for classroom teaching, especially regarding the sequence of introducing relative clauses to students and it will be elaborated upon further below under Pedagogical Implications.

A corollary to the NPAH is the hierarchy of retentive pronouns, which exhibits the reverse levels of markedness with Subject being most marked and Object of Comparative being least marked (Keenan & Comrie, 1977). The following examples are all ungrammatical in English, as noted by using the conventional asterisk:

\[
\begin{align*}
\text{OCOMP} > \text{GEN} > \text{OP} > \text{IO} > \text{DO} > \text{SU} \ (> \text{less marked than}) \\
\text{Subject (SU)} & \ast \text{The chimp that he outsmarted the scientist…} \\
\text{Direct Object (DO)} & \ast \text{The chimp that the cat outsmarted him… Indirect} \\
\text{Object (IO)} & \ast \text{The chimp that I gave money to him…} \\
\text{Object of a Preposition (OP)} & \ast \text{The chimp that I told you about him…} \\
\text{Genitive (GEN)} & \ast \text{The chimp whose his personality I like…} \\
\text{Object of Comparative (OCOMP)} & \ast \text{The chimp that I am duller than him…}
\end{align*}
\]

Second language learners often use retentive pronouns in their interlanguage regardless of their TL and NL, although the relationship between the extent to which they use retentive pronouns as well as their markedness and occurrence in the NL is a complex one (Hyltenstam, 1984).

**Question Formation Universals**

Another grammatical hierarchy which has met the scrutiny of second language acquisition scholars is that of question formation universals. First noted by Greenberg and restated by Eckman (Braidi, 1999, p.85), it reads as follows, with the authors’ own examples:

\[
\begin{align*}
\text{Wh-fronting} > \text{Wh-inversion} > \text{Yes/No inversion} (> \text{less marked than}) \text{ Wh-fronting:} & \ast \text{What can you do?} \\
\text{Wh-inversion:} & \ast \text{What can you do?} \\
\text{Yes/No inversion:} & \ast \text{Can you do it?}
\end{align*}
\]

This hierarchy, according to which yes/no questions are more marked than wh-inversion, which in turn is more marked than wh-fronting has been supported by research conducted on ESL learners (Braidi, 1999, p. 90). It has important implications for teaching question formations to English language learners, as discussed below.
Pedagogical Implications
Teaching ESL Grammar

Although the pedagogical implications pertaining to grammar that stem from the typological approaches are usually limited to the hierarchies of relative clauses and question formation, they are complicated by the corresponding structures of the native language of the learner. The issues of transfer further impact this already complex picture. While it is impossible for ESL teachers to know in detail the grammar of the native language of each student, some useful generalizations can be gleaned from the hierarchies. First of all, the potential level of difficulty of each relative clause or a question can be gauged from its level of markedness. Thus, one should expect overall more errors in producing OCOMP relative clauses, such as *The chimp that I am duller than knows how to be charming* than in GEN relative clauses, such as *The chimp whose personality I like knows how to be charming*, and so forth until we reach potentially the easiest SUB relative clauses, e.g. *The chimp that outsmarted the scientists knows how to be charming.*

A more counterintuitive implication refers to the sequence in which one should introduce students to relative clauses. This refers to the idea that learning one universal triggers automatically learning another, not unlike the domino effect. According to studies cited by Gass and Selinker (2001) (see Eckman, Bell, & Nelson, 1988; Gass, 1982), one might hypothetically start with the most marked structures and then generalization onto less marked forms will follow or at least will be facilitated. Thus, while introducing relative clauses, the teacher might start with OCOMP relative clauses and proceed down the markedness ladder once the students become sufficiently familiar with OCOMP relative clauses. However, it is important to keep in mind that the above suggestion needs to be mitigated by two factors: the limited experimental support for the idea and the greater learnability of unmarked structures.

Similarly, while teaching questions, the teacher might introduce the idea of inverting the subject and the verb in yes/no questions first, before covering *wh*-questions with inversion. Admittedly, this sequence seems less counterintuitive than the previous one, but it is not necessarily so with the prediction that students will find the structure *Can you do it?* potentially more difficult to produce than *What can you do?*

The implications regarding the sequences of teaching relative clauses and questions are the most conspicuous application of the typological approach to teaching ESL grammar. However, the familiarity with the markedness status of many basic grammatical structures may be useful in the ESL classroom. The marked structures are less frequently used, often more complex morphologically, and thus more difficult to learn and produce. Therefore, one might suggest giving them more attention and practice time than their unmarked counterparts. Teachers usually perceive their relative difficulty, and the typological paradigm simply provides reinforcement for this practice. In table 1, the selected unmarked structures are listed on the left, their marked counterparts on the right. Since, unlike the discussed hierarchies, they are not considered implicational, the paradigm does not suggest any particular sequence in which they should be taught.
<table>
<thead>
<tr>
<th>Unmarked</th>
<th>Marked</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular</td>
<td>plural</td>
</tr>
<tr>
<td>positive forms</td>
<td>negative forms</td>
</tr>
<tr>
<td>positive adjectives</td>
<td>comparative and superlative</td>
</tr>
<tr>
<td>present tense</td>
<td>past and future tense</td>
</tr>
<tr>
<td>active voice</td>
<td>passive voice</td>
</tr>
<tr>
<td>declarative sentences</td>
<td>interrogative sentences</td>
</tr>
<tr>
<td>indicative mode</td>
<td>conditional and subjunctive modes</td>
</tr>
</tbody>
</table>

Table 1: Pedagogically Relevant Structures, selected from Greenberg (1966, pp. 28-50).

Teaching Pronunciation

In teaching pronunciation, the concepts of language universals and markedness provide some instructionally relevant insights, as they draw attention to potentially difficult sounds and sound clusters. These can explain learners’ rendition of target sounds and thus facilitate teaching and learning.

One phonological feature of English that is strongly marked and difficult to produce is the occurrence of voiced consonants in word-final position. Most languages that allow consonants in this position allow only voiceless consonants and automatically devoice the voiced ones. For example, the last sound in the word *dog* would be pronounced as /k/ rather than /g/ by some English language learners who are native speakers of Polish or Russian, just to name two. Eckman (1981) conducted a study regarding this issue in Spanish and Mandarin speakers. Spanish speakers were found to devoice English final consonants, while Mandarin speakers were reported to add a schwa sound at the end of words as Mandarin does not allow any consonants, voiced or voiceless, to be pronounced in the final position. It is an interesting example of the interplay between markedness and transfer. Extra attention given to this issue in the ESL classroom is highly recommended.

Another highly marked phonological feature of English involves the constraints on initial consonant clusters, namely the rule that prohibits the pronunciation of a stop-fricative or stop-nasal cluster at the beginning of the word. Consider the pronunciation of such words as *gnaw, gnat, know, knight, psalm,* and *psychology,* where the initial stops signified by the graphemes *g, k,* and *p* became silent to conform to the rule. These examples illustrate well the historical changes in English phonology, which have not been reflected in spelling reforms. Drawing students’ attention to this phenomenon is useful, especially since the potential for errors in this area is high, due to the lack of this constraint in many other languages and to the misleading spellings.

While suggesting incorporating the above phonological knowledge in ESL instruction, we do not advocate teaching students linguistic glosses pertaining to these phenomena, but rather explaining them in simple terms. For example: when at the beginning of the word there is a *g, k,* or *p* followed by *m, n,* or *s,* the sound represented by the first letter is silent. Alternatively, one might say that initial
consonant clusters represented by gn, kn, ks, pn, and ps never begin words in English in regards to articulation.

**General Implications**

In addition to the specific instructional implications listed above, the knowledge of markedness and language universals may inspire teachers to take an in-depth look at the relationship between the L1 and L2 in language learning and draw their attention to various elements that factor into this complex phenomenon. This comparison may lead to a renewed interest in the students’ native languages. Simple questions, such as *How can you say... in your language?* or *Do you have the sound... in your language?* may elicit helpful information about a particular grammatical structure or a phonological feature, respectively. Finally, markedness theory suggests that common sense assumptions may not always be accurate and that counter-intuitive claims are worth examining.

**Conclusion**

The gap between linguistic theory and ESL instruction has always been wide. The authors’ hope is that this paper contributes to narrowing the gap. The pedagogical insights offered by typological universals and markedness, while by no means a panacea for most issues pertaining to teaching grammar and pronunciation, may help teachers understand some interlanguage phenomena taking place in their classroom. In the case of relative clauses and question formation, linguistic theory may actually help teachers decide upon the sequence in which to teach these structures. We would like to encourage our fellow teachers to conduct classroom research incorporating the ideas of language universals and markedness.

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