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Linguistic typology and language universals

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25.1 Introduction

Linguistic typology is a theoretical approach to the study of human language, with sophisticated methods and an impressive body of knowledge. The primary objective of linguistic typology is to study the structural variation within human language with a view to establishing limits on this variation and seeking explanations for the limits. Thus, practitioners of linguistic typology – or linguistic typologists – tend to work with a large number of languages in their research, typically asking ‘what is possible, as opposed to impossible, in human language?’ or, more modestly, ‘what is more probable, as opposed to less probable, in human language?’

Linguistic typology has a long tradition dating back to the nineteenth-century European interests in genealogical relationships among languages and in the evolution of human language or, as some historians of linguistics suggest, its origin may go even further back to other European scholarly traditions in the seventeenth or eighteenth centuries. The term ‘typology’ (or Typologie in German), in the context of the study of human language, was coined by the German philologist and sinologist Georg von der Gabelentz (1840–1893) to give a name to what was then still an emerging approach to the study of human language. The linguistic typology adopted in the nineteenth century was essentially the morphological typology, in which three basic strategies in the formal encoding of relational meaning were recognized: inflectional, agglutinating and isolating – a fourth, incorporating, was later added to this typology. Though initially embraced by scholars with enthusiasm, linguistic typology soon came to be subsumed under or overshadowed by other interests, i.e. historical linguistics in particular. It was not until the appearance of Joseph Greenberg’s 1963 article on word order that the focus of linguistic typology, in line with the contemporary development in linguistics, shifted from morphology to syntax. Greenberg’s emphasis on word order did not only spearhead a move from the classical morphology-based typology to a syntax-based one but, more importantly, he also initiated a new line of research by revamping and revitalizing linguistic typology, which had until then been largely ignored, if not forgotten, in linguistics. Note that syntax in linguistic typology needs to be construed broadly enough to encompass morphology because, for instance, what is done by syntax (e.g. word order) in
one language may be done by morphology (e.g. case marking) in another language. Syntactic typology, prominently researched in linguistic typology, may thus be better termed morphosyntactic typology. Morphosyntactic phenomena that have been the focus of linguistic typology include word order and word order correlations, case marking/alignment, grammatical relations, passive and other voices, and person agreement patterns among others. This morphosyntactic focus is being increasingly complemented by the coverage of phonology, semantics, and other areas of linguistics, e.g. sociolinguistics.

The remainder of this chapter is structured as follows. §25.2 describes the four stages of typological analysis with examples. §25.3 explains the nature of implicational statements and demonstrates how multiple implicational statements may be combined into a single implicational hierarchy, when they belong to the same grammatical domain. §25.4 discusses the connection between diversity and unity in human language with a view to highlighting the vital role of structural diversity in understanding the unity of human language. §25.5 examines two methodological issues in linguistic typology, namely cross-linguistic identification and language sampling. §25.6 discusses three ways in which languages may come to share structural properties, explaining when and where such shared structural properties may be important or relevant for the purpose of typological research. §25.7 provides a typology of universal statements (i.e. language universals and universal preferences) with examples and illustrates how universal statements are explained in linguistic typology. Particular attention is also paid to how the focus of linguistic typology has over the decades evolved from discovering what is possible, as opposed to impossible, in human language (i.e. language universals) to what is more or less probable (i.e. universal preferences), and to ‘what’s where why’ (i.e. the world’s linguistic diversity). The chapter ends in §25.8 with closing remarks.

25.2 Typological analysis

Linguistic typology involves four stages of investigation: (1) the identification of a phenomenon to be studied; (2) the classification of the phenomenon; (3) the formulation of a generalization or generalizations over the classification; and (4) the explanation of the generalization(s). First, linguistic typologists must determine what to investigate. There are no restrictions on what structural properties should or should not be studied. Nor are there any restrictions on how many properties should simultaneously be dealt with. Some may choose one property as an object of inquiry, whereas others may at once probe into more than one. The first and second stages of typological analysis may need to be carried out concurrently. This is because one does not know in advance whether or not the chosen property is going to be typologically interesting or significant. Once properties have been chosen for typological analysis, structural types pertaining to those properties will be identified and defined so that the world’s languages can be classified into those types. In the case of basic word order at the clausal level, for instance, six (logically possible) types – i.e. SOV, SVO, VSO, VOS, OVS and OSV – are identified, whereby languages are typologized according to the type that they exhibit. (The transitive clause consists of three main elements denoting the entity which initiates an action [i.e. S(ubject)], the entity at which that action is directed [i.e. O(bject)] and the action itself [i.e. V(erb)].) The identification of the six basic word order types and the classification of the world’s languages into those types – excluding languages without a dominant word order – will then constitute a linguistic typology of basic word order. The skewed distribution of the six basic word orders emerging
from this typological classification is such that there is a distinct tendency towards Subject-initial order, namely SOV and SVO, in the world’s languages. This is one significant generalization over the data classified — representing stage (3) above. It will also lead to the question as to why there is this strong tendency, because, if the ordering of S, O and V were random (i.e. no motivating factors), each of the six word order types would be represented by about 16.6 per cent of the world’s languages. At this stage (i.e. (4) above), every attempt is made to explain the tendency in question. Typically, in linguistic typology language-external explanations or factors outside the linguistic system, e.g. cognition, perception, processing, communication, etc., are appealed to. For instance, functional factors including discourse prominence, animacy, processing efficiency, etc. have been proposed to explain the preponderance of SOV and SVO in the world’s languages. This predilection for language-external explanations situates linguistic typology in the functional, as opposed to the formal or generative, research tradition in linguistics. This is not to say that language-internal explanations (e.g. constituent structure, formal constraints, etc.) are eschewed in linguistic typology. Language-internal explanations can indeed be sought if no language-external explanations are available or forthcoming. Moreover, even when formal properties are utilized in formulating cross-linguistic generalizations, linguistic typology continues to seek functional motivations for such formally-based generalizations (e.g. see §25.7). This is what makes linguistic typology different from formal approaches to language, e.g. Principles and Parameters Theory. In addition to functional and formal explanations, linguistic typologists also appeal to historical ones. For instance, there are reported to be a small number of ‘exceptions’ to the linguistic preference for the combination of Verb-Object order and Noun-Relative Clause order, i.e. Chinese and a few languages spoken in China and Taiwan, which have Verb-Object order and Relative Clause-Noun order (see (1)–(8) for examples of the relative clause). The explanation given to the existence of these ‘exceptions’ to what would otherwise be an exceptionless universal statement is that these languages have adopted Relative Clause-Noun order through direct or indirect contact with Object-Verb languages spoken to the north of China, which all have Relative Clause-Noun order. This explanation is historical or, more precisely, socio-cultural.

25.3 Implicational statements and implicational hierarchies

Generalizations such as the one discussed above about the strong tendency towards Subject-initial order concern the distribution of single structural properties. There are also cross-linguistic generalizations that involve more than one structural property. In point of fact, one of the major insights that emerged from Joseph Greenberg’s seminal work on word order is that two or more structural properties may correlate with one another (to a statistically significant extent). For instance, basic word order at the clausal level has been compared with the presence of prepositions or postpositions. Verb-initial languages (that is, languages with the verb appearing first in the sentence, i.e. VSO and VOS) are almost always found to be equipped with prepositions, not postpositions. This means that Verb-initial word order almost never co-occurs with postpositions. This constitutes one important property of human language in that it represents a very strong constraint on variation within human language. There is no reason why the two independent properties should correlate to the effect that the presence of Verb-initial word order (almost always) implies that of prepositions. Logically speaking, there should also be an abundance of Verb-initial
languages with postpositions – or at least as many Verb-initial languages with postpositions as Verb-initial languages with prepositions. This is clearly not the case, however.

Generalizations like the correlation between Verb-initial word order and the presence of prepositions lead to implicational statements, which take the form of ‘if $p$, then $q$’ (or $p \supset q$): the presence of Verb-initial word order ($p$) implies that of prepositions ($q$). (This kind of implicational statement originated from the work of the Prague School of Linguistics in the first half of the twentieth century.) The predicting power of implicational statements is not confined solely to the properties which they make explicit reference to. Thus, given the implicational statement ‘if a language is Verb-initial, then it is also prepositional’, there are two other situations that fall out from that statement (not to mention the (near) impossibility of Verb-initial languages with postpositions). By making no claims about them, it has the advantage of saying something about non-Verb-initial languages (i.e. Subject-initial or Object-initial) with either prepositions or postpositions, thereby recognizing these two combinations as possible in human language. In other words, the implicational statement in question rules out only Verb-initial languages with postpositions as an (near) impossibility – that is, $p \& \neg q$ (read: not $q$), which contradicts the original implicational statement of ‘if $p$, then $q$’ (i.e. $p \& q$). For this reason, implicational statements are highly valued in linguistic typology.

When multiple implicational statements pertain to the same grammatical domain, they may be combined into an implicational hierarchy. One well-known example is the Accessibility Hierarchy. Some noun phrase positions are cross-linguistically more likely to be relativized on than other noun phrase positions to the effect that the following individual implicational statements can be formulated:

1. a Subject (SBJ) is more accessible to relativization than a Direct Object (DO);
2. a DO is more accessible to relativization than an Indirect Object (IO);
3. an IO is more accessible to relativization than an Oblique (OBL);
4. an OBL is more accessible to relativization than a Genitive (GEN); and
5. a GEN is more accessible to relativization than an Object of Comparison (OCOMP).

Note that these implicational statements are interconnected with each other because part of one implicational statement is involved in another one that immediately follows or precedes it, not to mention the fact that they all concern accessibility to relativization. The implicational statements have been formulated on the basis of the observation that there are languages that can relativize on SBJ only, languages that can relativize on SBJ and DO only, languages that can relativize on SBJ, DO and IO only, and so on through the remaining noun phrase positions. For instance, Malagasy can relativize on SBJ only, as in (1); when DO (or the other noun phrase positions for that matter) is relativized on, the outcome is ungrammatical, as in (2):

(1) Malagasy (Austronesian; Madagascar)

ny mpianatra izay nahita ny vehivavy

the student COMP saw the woman

‘the student that saw the woman’

(2) Malagasy

*ny vehivavy izay nahita ny mpianatra

the woman COMP saw the student

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‘the woman that the student saw’

English can relativize on all the noun phrase positions:

(3) the girl who swam the Straits of Dover [SBJ]
(4) the girl whom the boy loved [DO]
(5) the girl to whom the boy gave a flower [IO]
(6) the girl with whom the boy danced [OBL]
(7) the girl whose mother the boy admired [GEN]
(8) the girl who the boy is taller than [OCOMP]

What the implicational statements 1–5 also entail is that the relativization of noun phrase position X implies that of noun phrase positions more accessible to relativization than X. For instance, if a language can relativize on IO, it can also relativize on SBJ and DO; if a language can relativize on GEN, it can also relativize on SBJ, DO, IO and OBL, and so on. Since the implicational statements 1–5 all belong to the domain of relativization, they can be combined into a single implicational hierarchy, as in:

(9) SBJ > DO > IO > OBL > GEN > OCOMP

The implicational hierarchy in (9) or the Accessibility Hierarchy, as it is known in the literature, indicates, by means of the ‘>’ sign, that if a given noun phrase position (e.g. OBL) is accessible to relativization, relativization is also available to all positions to the left (e.g. SBJ, DO and IO). Because of the way they are constructed, implicational hierarchies make strong predictions. For instance, testable predictions can be made that in no languages, SBJ, DO and GEN are accessible to relativization while IO and OBL are not, and so on.

25.4 The connection between diversity and unity

The area of linguistic typology dealing with diversity investigates the structural variation in the world’s languages (i.e. typological classification) whereas the area of linguistic typology concerned with unity focuses on the discovery of language universals (i.e. what is possible) or universal preferences (i.e. what is probable). Language universals impose constraints or limits on structural variation within human language, while universal preferences delineate the preponderance of some structural types over others (see §25.7 for further discussion). (Some linguistic typologists may subsume universal preferences under the rubric of language universals.) Typological investigation, in contrast, is concerned with classification of languages into different structural types. Thus, it may seem like something of a contradiction in terms to deal with these two distinct areas together. But the contradiction is more apparent than real. The search for the unity in human language, in fact, builds crucially on the structural diversity in the world’s languages. This is because in order to discover what is possible or probable in human language, what linguistic typologists need is typological classification to work on. With languages classified into different types, linguistic typologists will then be able to discern patterns or regularities in the distribution of the types, for instance, with some types being
significantly more common than others, or with one (or more) of the logically possible types completely unattested or marginally attested in the world’s languages.

This close relationship between language universals and universal preferences on the one hand and typological classification on the other can be demonstrated by the preponderance of Subject-initial order in the world’s languages. According to Matthew Dryer’s 2011 study, nearly 76.5 per cent of his 1,377 sample languages have Subject-initial order, i.e. SOV or SVO. (This percentage goes up to 88.6 per cent if languages without a dominant word order are excluded from his sample.) If the world’s languages – or at least a good portion of them – had not been surveyed in terms of all the possible word orders, this strong tendency would never have been brought to light in the first place. To put it differently, the typological classification of the world’s languages in terms of the six word orders is a prerequisite for the significant generalization to be made about human language. This universal preference could not have been uncovered from the examination of only one or only a handful of languages.

Further demonstration of the fruitful interaction between unity and diversity comes from another universal preference (albeit of an implicational nature): the presence of Verb-initial order implying that of prepositions. As has already been explained in §25.3, this implicational statement also entails what is not probable in human language, namely the near absence of Verb-initial languages with postpositions; moreover, it makes indirect reference to the two other logical possibilities, namely non-Verb-initial languages with either prepositions or postpositions. In order to arrive at the formulation of this implicational statement, however, it first needs to be ascertained which of the four logical possibilities – V-initial & preposition, V-initial & postposition, non-V-initial & preposition, and non-V-initial & postposition – is attested or unattested in the world’s languages. That can be achieved only on the basis of an initial typological classification of the world’s languages in terms of basic word order as well as the distribution of prepositions and postpositions. To wit, the search for the unity in human language is conducted on the basis of the structural diversity in human language. It is not possible to carry out the former without the latter.

25.5 Methodological issues

There are a number of methodological issues that have received much attention in linguistic typology. In this section, two of them will be discussed: the problem of cross-linguistic identification and language sampling.

25.5.1 Problem of cross-linguistic identification

Linguistic typologists study cross-linguistic variation in order to understand the nature of human language. The best way to gain access to the cross-linguistic variation of a linguistic phenomenon is to study as wide a range of languages as possible (see §25.5.2 on language sampling). Because they study many languages all at once, linguistic typologists must ensure that what they are comparing across languages will be the same thing, not different things. One does not want to compare ‘apples’ with ‘oranges’ when investigating the world’s languages in terms of one and the same property. Otherwise one will never be able to achieve what one sets out to achieve: cross-linguistic variation of the same phenomenon. But how does one actually make sure that X in language A will be compared with X, not Y, in language B? Put differently, how does one identify the same phenomenon across languages? This question concerns what may be referred to as the problem of cross-linguistic identification.
There are two possible ways of dealing with the problem of cross-linguistic identification. One may choose to carry out cross-linguistic identification on the basis of formal criteria. A set of formal properties, e.g. verbal marking, adpositions, cases, etc., may be put together in order to identify a given phenomenon. Alternatively, one may opt for functional – i.e. semantic, conceptual and/or pragmatic – definitions of the phenomenon to be studied. Which of the two types of definition – formal or functional – will meet the needs of typological analysis better? There are three reasons why formal definitions do not work for cross-linguistic comparison. First, structural variation across languages is so great that it cannot serve as the basis of cross-linguistic identification. For instance, the subjects in one language may be expressed by means of different grammatical relations in other languages. More generally, not all properties used to identify grammatical relations are found in all languages. In other words, grammatical relations cannot be defined uniformly from one language to another. Second, because of structural differences among languages, formal definitions have to be internal to the structural system of a single language, thereby again failing to serve as language-independent definitions. Put differently, no single formal definition may be able to capture all the differences that may exist between languages, their similarities notwithstanding. Third, there can hardly be any purely formal definitions. Formal definitions of phenomenon X can only be identified and thus understood in the context of the function that X carries out. One cannot simply look at a given formal property and say what function that formal property is used to carry out. This would be possible only if functions were inherent in, and thus deducible from, formal properties themselves. Rather, functions arise out of what linguistic expressions are utilized for. For example, if one wants to study comparative constructions across languages, one cannot infer the function of comparison from the linguistic expression in which that function is encoded (e.g. the use of adpositions, cases, lexical verbs, etc.). One will not know what grammatical properties to look for in the first place, thereby being unable to recognize a comparative construction when one sees it. In point of fact, language-dependent formal definitions do not tie in with linguistic typology, one of the primary aims of which is to characterize structural variation in the world’s languages. Structural variation itself is what linguistic typologists want to discover for cross-linguistic comparison in the first place. In other words, one cannot make use of the structural variation which has not yet been established in order to identify that structural variation. Thus, formal definitions are not deemed appropriate for resolving the problem of cross-linguistic identification.

In view of the foregoing objections to formal definitions, linguistic typologists opt for functional definitions for purposes of cross-linguistic identification. However, functional definitions may not be entirely without problems. More frequently than not, functional definitions themselves tend to be based on pre-theoretic concepts or ill-defined notions. This is not to say, of course, that the problem is unique to this type of definition. The definition of a given concept is always dependent on the understanding of other concepts which make up that definition – unless these other concepts are undefined theoretical primitives. For example, consider the semantic definition of comparison proposed by Stassen (1985: 15):

- a construction counts as a comparative construction (and will therefore be taken into account in the typology), if that construction has the semantic function of assigning a graded (i.e. non-identical) position on a predicative scale to two (possibly complex) objects.
In order to understand this definition fully, one needs to have an understanding of what a predicative scale, a graded position, etc. are. Also note that the definition has nothing to say about what form or shape the construction in question will take. Thus, it is possible that, depending on how they interpret the definition (e.g. broadly or narrowly), some linguistic typologists may recognize X in language A as a comparative construction while other linguistic typologists may not. Functional definitions are more of heuristics for cross-linguistic identification than definitions in the strict sense of the word.

While functional criteria are decidedly preferred to formal ones, far more often than not, formal properties do find their way into language-independent definitions used for typological analysis so that they can, for instance, narrow down the domain of typological research. In other words, formal properties may be used in order to refine or fine-tune functionally-based definitions. For instance, Stassen (1985: 25–6) appeals to a formal property of NP in order to restrict the two compared objects featured in his language-independent definition of the comparative construction (cited above) to those expressed in the form of NPs. Thus, this additional formal criterion of NP-hood rules out comparative expressions such as (12), (13) and (14) as ineligible for inclusion in Stassen’s research, while accepting comparative expressions such as (10) and (11). If applied all by itself, however, Stassen’s definition of the comparative construction would recognize all the examples in (10)–(14) as comparative expressions.

(10) The tree is taller than the house.
(11) I like Pamela better than Lucy.
(12) The general is more cunning than brave.
(13) The team plays better than last year.
(14) The president is smarter than you think.

Functionally-based definitions used in cross-linguistic comparison must be understood as broadly as possible. Thus, under the rubric of functional criteria, factors relating to discourse or to phonetics may also be considered for the purpose of invoking language-independent definitions needed for typological analysis. For instance, in her typological study of person markers, Anna Siewierska (2004) refers to the participant or discourse roles of speaker and addressee – and the third party, which assumes neither of these participant or discourse roles. Moreover, language-independent definitions used in a phonological typology are likely to be based on articulatory–acoustic properties such as the place and manner of articulation, voicing and such like (and, ultimately, to speech organs). To wit, the term ‘functional’ in functional criteria utilized in cross-linguistic comparison must be understood broadly enough to include all factors external to the language system.

25.5.2 Language sampling

It does not come as a surprise – in view of its emphasis on the structural variation within human language – that one of the most prominently discussed methods in linguistic typology is language sampling. The best way to discover the limits on the structural variation within human language is to study all languages of the world. For obvious reasons, it is easy to see
why that is out of the question. There are said to be almost 7,000 languages in the world. Individual linguistic typologists (or even a team of linguistic typologists) are unable to compare such a large number of languages or even a small fraction thereof. Economy alone will rule out such large-scale surveys as unfeasible. What makes it even more unrealistic is the fact that there are far more languages which await linguistic documentation than those which have been described – not to mention those which are extinct or which will come into existence in future. In view of these limitations, linguistic typologists choose to work with language samples. There are two main types of language sample: (1) probability samples, which are used to identify tendencies or correlations; and (2) variety samples, which are set up to discover all possible structural types used to encode a given function or meaning in the world’s languages. Different statistical methods and different sample sizes may be required, depending on whether one operates with a probability or variety sample. For instance, a variety sample tends to be larger in size than a probability sample, because the aim of the former is to identify what structural types are attested in the world’s languages (hence, the more languages in the sample, the better chances of finding all structural types), while the aim of the latter is to establish the presence or absence of a correlation between previously known structural properties (hence, what may matter is which languages, not how many languages, are to be included in the sample).

Alan Bell’s 1978 article was the first to raise the issue of language sampling for linguistic typology. He explained the role of stratification in language sampling (i.e. the process of placing languages into different strata, e.g. genetic affiliation, geographic location, etc.), and discussed genetic, areal and bibliographic biases to be avoided in language sampling. Bell’s sampling approach was based on proportional representation. For instance, each language family contributes to a sample in proportion to the number of genetic groups in that family. One fundamental issue to be addressed with respect to proportionally representative language samples is the independence of cases. This relates directly to the need to ensure that languages selected for a sample be independent units of analysis, rather than instances of the same case. Matthew Dryer’s 1989 article developed a novel yet ingenious method in language sampling, one of his primary aims being to maximize the independence of cases, albeit at the level of large linguistic areas: Africa, Eurasia, Australia–New Guinea, North America, and South America. (In Dryer’s subsequent work, Southeast Asia and Oceania are removed from Eurasia and treated as a separate linguistic area.) He also invoked the concept of a genus. Genera are genetic groups of languages, comparable to the sub-families of Indo-European, e.g. Romance. Genera, not individual languages, are then counted for purposes of determining linguistic preferences or tendencies in each of the large linguistic areas. The independence of cases, vital for all statistical procedures, is not demanded at the level of genera but required strictly at the level of the five (or six) large linguistic areas, which are reasonably well defined physically and which should thus be far less controversial – and less unwieldy to handle – than the divisions between over 300 genera. Thus, only if and when all the linguistic areas conform to the hypothesis being tested, that hypothesis is considered to be a linguistic preference. Dryer’s sampling method does not just represent an improvement in language sampling but also draws attention to the theoretical importance of nonlinguistic – in particular geographical – factors in investigating correlations between structural properties (see §§25.6 and 25.7). For instance, the correlation between O(bject)V(erb) and A(djective)N(oun) order was once thought to be a language universal. Thanks to Dryer’s sampling method, however, this correlation has been shown to derive largely from the dominance of that correlation in Eurasia. In all other linguistic areas, there is a clear tendency towards OV and NA.
There are some issues with sampling methods such as Dryer’s that remain to be resolved. One issue is that it is not clear how (and which) languages are chosen for each genus. Obviously, languages chosen for a sample must be representative of the genera that they represent but that requirement may not be able to be met for all genera (because some genera may have a greater amount of internal diversity than others). Moreover, one complicating factor in choosing languages that are representative of genera may be that some structural properties may be stable over time, while others may not be. For example, word order properties may change fairly easily, e.g. through contact, while morphological ones may be far more resilient to change. Thus, the assumption that languages within genera are generally similar typologically may not apply to all different types of structural property. This means that it may or may not be easy to find representative languages, depending on the structural properties being investigated. Of course, it goes without saying that one first needs to find out which structural properties are stable and which are not.

25.6 When and where similarities count

When studying the structural diversity of the world’s languages with a view to uncovering the unity of human language, one must take care to separate language universals or universal preferences from structural similarities brought about by nonlinguistic factors, e.g. historical accident. Imagine a hypothetical world where there are 1,000 languages. In this world, there is one large language family of 900 languages, with the remaining 100 languages evenly distributed among ten small language families (i.e. ten languages in each of these small language families). All the 900 languages in the large family have type X, and all the languages of the ten small families have type Y. Now, is it safe to conclude from this that there is a linguistic preference for X over Y, since X is attested in 900 languages (90 per cent) while Y is attested in only 100 languages (10 per cent)? The answer is no, because of the fact that X is found in only one language family and Y in ten language families. The fact that it could have been the other way round (i.e. Y in the large language family and X in the ten small language families) suggests that the presence of X in the majority of the hypothetical world’s languages may well be a historical accident, having nothing to do with what is or is not linguistically preferred. For further illustration, imagine that in the distant past, the large language family had only ten languages, with the remaining 990 languages evenly distributed among the other ten language families. Through their superior technology and political power, however, the size of the former language family subsequently increased exponentially at the expense of the latter language families. Thus, the presence of X in the majority of the hypothetical world’s languages (i.e. the large language family) is caused by the technological and political superiority of their speakers, and certainly not by the linguistic preference for X over Y. From this, it is glaringly obvious that language universals or universal preferences cannot be established on the basis of structural similarities brought by such historical accidents. This is why it is decided that X is not a universal preference in spite of the fact that it is attested in 90 per cent of the hypothetical world’s languages – in other words, Y is likely to be a universal preference.

There are three ways languages come to have similar properties: (a) shared genealogical origin; (b) language contact; and (c) language universals or universal preferences. Linguistic typology is concerned primarily with (c), while not neglecting to pay attention to (a) and (b), especially when dealing with ‘exceptions’ to language universals or universal preferences (see §25.7). Thus, when and where unity is the focus of investigation, it is (c) that counts, and (a) and (b) may have to be set aside. Needless to say, however, if the focus of investigation
is on understanding ‘exceptions’ to language universals or universal preferences, and the origins or causes thereof, (a) and (b) should also be brought into the picture.

The make-believe example given above illustrates shared genealogical origin. The fact that there are 900 languages in the large language family with type X is due to the fact that these languages all derive historically from a single ancestral language (see Chapter 22). In other words, languages may have similar structural properties because they have inherited them from their common ancestor.

The case of shared properties through language contact has already been alluded to when Chinese and its neighbouring languages were briefly discussed in §25.2 with respect to the universal preference for V(erb)O(bject) and N(oun-)Rel(ative Clause) order. Chinese belongs to the Sino-Tibetan family, whereas the neighbouring languages to the north of China belong to the Mongolic or Tungusic branch of the so-called Altaic family. However, Chinese and these northern languages share Rel(ative Clause-)N(oun) order, in spite of the difference in their basic word order at the clausal level. In the case of Chinese, a VO language, its RelN order goes against the grain of the universal preference, i.e. VO & NRel, as it were. As has already been explained, Chinese abandoned its original NRel order, adopting RelN order from the northern (OV) languages. This illustrates how languages of different genealogical origins may end up with common properties through contact, in opposition to language universals or universal preferences. Languages may come to share structural properties through contact because speakers of languages may adopt them from other languages that they come into contact with, even when those properties may give rise to what is inherently dispreferred in human languages. To wit, contact-mediated similarities also are due to historical accident, just as similarities through shared genealogical origins are.

Lastly, the world’s languages or at least the majority of the world’s languages may have such and such structural properties because they are due to the very nature of human language: all other things being equal, languages must have such and such properties (motivated by e.g. human cognition, basic communicative needs, etc.) because they are what makes human language what it is. These structural properties are expressed in the form of language universals or universal preferences. For instance, there is a clear, strong tendency for VO languages to have NRel order. This correlation is attested in virtually all VO languages of the world (with a very small number of exceptions, which can be explained by reference to language contact). This must have to do with the nature of human language: if a language has VO order, it must also opt for NRel order. (See §25.7 as to how language universals or universal preferences may be explained in linguistic typology.)

25.7 Language universals, universal preferences and explanation

Properties such as the preponderance of Subject-initial languages in the world’s languages are often referred to as language universals in the literature. Strictly speaking, however, language universals must be true of all languages. In other words, language universals are ‘absolute’ in the sense that there are no exceptions to them. Under this strict definition of the term, therefore, the preponderance of Subject-initial order does not qualify as a language universal since it is only a tendency in human language, albeit a strong one; in fact, it is ‘non-absolute’ in the sense that there are exceptions to it, i.e. Verb-initial or Object-initial order. Only properties which all human languages have in common may be taken to be language universals. Thus, it may be judicious to regard the preponderance of Subject-initial order as a universal preference, not as a language universal: a structural property attested in the majority of the world’s languages. Far more frequently than not, however, the term
‘language universal’ is interpreted liberally as including not only language universals but also universal preferences. To avoid possible confusion, therefore, the term ‘universal statement’ will be used henceforth when reference is made to both language universals and universal preferences.

Universal statements can also be implicational or non-implicational. The concept of implicational statements (together with the derivative concept of implicational hierarchies) has already been explained in §25.3. Implicational universal statements take the form of ‘if $p$, then $q$’. The presence of one property (i.e. the implicans) implies that of another (i.e. the implicatum). The correlation between Verb-initial order and prepositions is an implicational universal statement: if a language is Verb-initial, then it is almost always prepositional. By design, implicational universal statements are based on interaction of more than one property. Thus, there may also be implicational statements, involving more than two properties. One such example is Joseph Greenberg’s Universal 5: if a language has dominant SOV order and the genitive follows the governing noun, then the adjective likewise follows the noun. In this implicational statement, two properties are needed to predict a third. It is also possible that the implicatum can be more than one property. Joseph Greenberg’s Universal 21 offers an example of this kind: if some or all adverbs follow the adjective they modify, then the language is one in which the qualifying adjective follows the noun and the verb precedes its nominal object as the dominant order. It is not difficult to see that other things being equal, implicational statements that predict the presence of multiple properties on the basis of a single property are more highly valued than those that predict the presence of a single property on the basis of multiple properties. Put differently, it is preferable to predict as much as possible on the basis of as little as possible. By this criterion of economy, Universal 21 is of more value than Universal 5.

Non-implicational universal statements, in contrast, do not involve the predicting of property $X$ on the basis of property $Y$. They involve single properties. The preponderance of Subject-initial word order in the world’s languages is a non-implicational universal statement. Note that this particular statement is not only non-implicational but also non-absolute, thereby illustrating that universal statements may cut across the distinction between the absolute/non-absolute, and implicational/non-implicational parameters. Thus, in addition to non-absolute non-implicational statements, there may also be: (a) absolute implicational statements; (b) absolute non-implicational statements; and (c) non-absolute implicational statements. A potential example of (a) may be: If the general rule is that the descriptive adjective follows the noun, then there may be a minority of adjectives which usually precede, but if the general rule is that descriptive adjectives precede the noun, then there are no exceptions. Another example of (a), from phonological typology, may come from the observation that voiced fricatives are found only in languages with corresponding voiceless ones. This implies that if a language has voiced fricatives, it has corresponding voiceless fricatives as well. A possible example of (b) comes from the fact that all languages have ways to convert affirmative sentences into negative ones. Another example of (b), from phonological typology, is that all languages have syllables consisting of a single consonant and a single vowel. An example of (c) has already been provided: if a language is Verb-initial, it is almost always prepositional as well. Another example of (c), from phonological typology, may be that if a language has a fricative voicing contrast, it is very likely to have a plosive voicing contrast as well. For additional universal statements, the reader is referred to The Universals Archive.¹

Absolute universal statements are also referred to as exceptionless, and non-absolute universal statements as statistical tendencies or, as in this chapter, universal preferences. Implicational statements are also known as restricted or conditional, while non-implicational
Linguistic typology and language universals

Statements are also known as unrestricted or unconditional. The four (logical) types of universal statements are summarized in Table 25.1.

Table 25.1 Four types of universal statements

<table>
<thead>
<tr>
<th>Type</th>
<th>Absolute (Exceptionless)</th>
<th>Non-absolute (universal preferences/statistical tendencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-implicational</td>
<td>All languages have property X.</td>
<td>Most languages have property X.</td>
</tr>
<tr>
<td>Implicational</td>
<td>If a language has property X, it also has property Y.</td>
<td>If a language has property X, it tends to have property Y as well.</td>
</tr>
</tbody>
</table>

Nearly all the examples provided so far are non-absolute universal statements. This is because absolute language universals (i.e. exceptionless universal statements) are very hard to find. It is not the case that they do not exist. They certainly do. But they are not numerous and, as Joseph Greenberg once put it, they tend to be ‘banal’ or ‘trite’. For instance, it has been proposed as an absolute universal statement that all languages have vowels. This, however, is rather uninspiring. One may ask: All language have vowels, so what? It does not seem to lead to any further interesting questions about human language, except for the question as to why all languages must have vowels. More seriously, as some linguists are quick to point out, even this seemingly absolute universal statement is not without exceptions, when sign languages are taken into account. And there are quite a few of them in the world. Experience shows that what has been proposed as a language universal almost always turns out to have exceptions. A classic example of this kind is: all languages mark the negative by adding some morpheme to a sentence. This was once thought to be an absolute universal statement. Classical Tamil turns out to be a counterexample, as this language marks the negative by deleting the tense morpheme present in the positive. One may perhaps brush Classical Tamil aside as only one (known) counterexample among the world’s 7,000 languages. (But at the same time, this shows that, strictly speaking, one exception is all it takes to render an absolute universal statement non-absolute.) However, one must realize that only less than 10–20 per cent of the world’s languages have adequate descriptions (that is, adequate for typological research). One cannot be sure whether there may be other yet-to-be-documented (or even yet-to-be-discovered) languages that behave like Classical Tamil. More to the point, absolute universal statements may have been formulated on the basis of an even smaller number of languages (i.e. language samples). As more and more languages become documented and brought to the attention of researchers, new properties or strategies are very likely to show up, flying in the face of proposed language universals or universal preferences. Thus, it does not come as a surprise that absolute universal statements or language universals are hard to come by, and most of the language universals claimed so far have turned out to be less than what they were initially thought to be. Moreover, one must also bear in mind that we have no access to languages that disappeared without leaving any records or trace, not to mention those yet to come into existence. In view of this reality, not surprisingly, the focus of linguistic typology has recently shifted from unity to diversity, as the clear message coming from the increasing documentation of the world’s languages is that there is always going to be a language somewhere that will throw a curve ball, as it were. Thus, some linguistic typologists have argued that more effort
should instead go into documenting the structural diversity of the world’s languages before advancing premature claims about the nature of human language. Not surprisingly, the question of what is possible, as opposed to impossible, in human languages has given way to the question of what is more probable, as opposed to less probable, in human languages. But at the same time, it must be borne in mind that making observations or hypotheses about human language on the basis of available data is legitimate business, not just in linguistic typology but also in all scientific disciplines.

The fact that there are hardly any exceptionless language universals that can stand the test of time does not detract from the fact that there is a substantial amount of unity in the world’s languages. Various universal preferences capture the very unity of human language. A small number of languages that deviate from this unity may further reflect the structural diversity in the world’s languages, and must be accounted for in whatever way they can. As has already been pointed out on more than one occasion, however, these ‘deviations’ tend to have social, cultural and/or historical reasons behind them. Such nonlinguistic reasons enable linguistic typologists to understand why property X exists in language A at a particular point in time and space, in opposition to the overwhelming global tendency. In other words, it is important to understand why and how the ‘deviating’ languages have arisen. It is important to answer these questions also because in doing so, linguistic typologists can find themselves in a better position to strengthen the validity of universal preferences. When exceptions to universal preferences are addressed on their own terms, the conceptual as well as empirical strength of proposed universal preferences is by no means vitiates but rather increased to a greater extent than would otherwise be the case. This is because the exceptions have valid reasons for being what they are. In other words, a small number of exceptions to universal preferences are not really counterexamples as such, but rather the outcome of nonlinguistic factors ‘interfering’ with what is preferred in human language (read: the unity of human language). In this respect, exceptions to universal preferences represent nonlinguistic variables that override linguistic preferences in specific historical, social and cultural contexts. This perspective may enable the researcher to understand better why the world’s linguistic diversity is the way it is. Thus, some linguistic typologists have recently called for the need to shift the focus of linguistic typology even further to the question of ‘what’s where why?’, as the Swiss linguist Balthasar Bickel (2007) aptly puts it.

The conceptual shift from ‘what is possible (or more probable), as opposed to impossible (or less probable) in human language?’ to ‘what’s where why?’ is one of the most significant developments that have taken place in linguistic typology since Joseph Greenberg’s rejuvenation of the field in the 1960s. The most substantial and tangible outcome of this conceptual shift is The World Atlas of Language Structures or WALS (Haspelmath et al. 2005; published online in 2011 and available at www.wals.info). In this landmark volume, over 140 typological or structural properties are investigated by a group of fifty-five linguists in terms of areal or global distribution. For instance, one of the WALS chapters demonstrates that the co-occurrence of OV and RelN order is generally found in Asia, while in the rest of the world OV languages are much more likely to have NRel order. In other words, OV & RelN seems to be a distinct areal feature of Asia. Of course, the large question remains as to why OV & RelN is a distinct areal feature of Asia.

Due to space limitations, only one example can be given here to show how language universals or universal preferences are explained in linguistic typology. The correlation between Verb-initial (or, more generally, VO) order and prepositions provides a good illustration of functional explanation, typically proposed in linguistic typology. One
explanation that has been put forth for this correlation is that there is a linguistic preference for either right-branching or left-branching (in constituent structure). In right-branching, phrasal categories follow non-phrasal categories, whereas in left-branching, phrasal categories precede non-phrasal categories. In VSO or VOS order, V (a non-phrasal category) precedes S and O (both phrasal categories). Similarly, in a prepositional phrase, the preposition (a non-phrasal category) precedes its object noun phrase (a phrasal category). Thus, the correlation between Verb-initial order and prepositions is based on the consistent ordering of non-phrasal categories before phrasal categories, that is, right-branching. This consistent ordering must have something to do with processing efficiency, because the consistent direction of branching may not cause processing difficulty associated with the combination of right- and left-branching structure. Another processing-based explanation is that the use of prepositions, as opposed to postpositions, in Verb-initial (or, more generally, VO) languages makes it easier to build internal constituent structure in language performance as rapidly and efficiently as possible. The use of postpositions in Verb-initial or VO order will give rise to a decrease in processing efficiency, because the object noun phrase of the postpositional phrase will delay the processing of the (following) postposition – which needs to be processed together with V as early as possible for purposes of optimal recognition of the relevant constituent structure.

25.8 Closing remarks

Linguistic typology, to borrow the words of the American linguistic typologist Johanna Nichols (2007: 236), ‘is on the roll at the moment and likely to continue’ to contribute to the investigation into the nature of human language, on both empirical and theoretical levels, as it has done so since Joseph Greenberg’s pioneering work in the 1960s. Linguistic typology, at least in the first two decades of this century, is likely to concentrate on developing or refining its research methods – not least because such a methodological exercise, more frequently than not, leads to the discovery of problems or issues of theoretical import – and also on producing theories that make sense of the world’s linguistic diversity. Moreover, given linguistic typology’s open-mindedness about the basis of explanation, the kind of typological research that is willing to cross its boundaries into other disciplines (e.g. cognitive science, genetic science, human prehistory, human geography, etc.) is likely to occupy centre-stage, while the discovery of the nature of human language will continue to be the primary objective of linguistic typology.

Note

1 At http://typo.uni-konstanz.de/archive/intro/.

Further reading

J.J. Song


References