40% of languages (Turkish, Japanese, etc.) have Subject-Object-Verb order, with the object left-adjacent to the verb rather than right-adjacent to it. This is different from English but equally consistent with the VOC.

Languages with Verb-Subject-Object order (7%) look like violations of (1), but careful research has shown that many of them (at least) are not. For example, Irish clearly has a (Subject + [Verb + Object]) structure when there is no tense marking. Verb-Subject-Object order arises only when the verb needs to combine with tense (McGloskey 1991); see also Chung 1998 on Chamorro. These languages thus support the VOC, understood as holding at an abstract level.

Mohawk is a language in which word order gives no evidence of constituency. But Mohawk also has noun incorporation, where an argument can combine with the verb to form a compound. Crucially, the theme-object of the verb can incorporate into the verb, but the agent-subject argument cannot: Mohawk (and Biniŋ Gun-wok) allows “The baby meat-ate” but not “Babylate the meat.” This is another manifestation of the VOC, the compositional asymmetry showing up at the level of compounding rather than phrase formation (Baker 1988; 1996).

Universal features of newly described languages can reveal universal properties in new ways. Kayardild has the very rare property of copying tense marking onto every constituent related to the verb phrase (Evans 1995a, pp. 399–401). Strikingly, this marking shows up on the theme-object but not on the agent-subject (see E&L’s example [16]) – which is new support for the VOC. Including minor types (like Verb-Object-Subject languages), we now have solid leads that the VOC is valid for well over 90% of the known linguistic diversity. And I know of no counterexamples that have been investigated directly by mutually correcting research communities that include some researchers open to using abstractness.

The descriptive and typological research that E&L draw on summarily rejects most abstractness in linguistic analysis. E&L say it is a misconception that the differences among languages can be resolved by postulating a more abstract formal level, declaring this to be a false dogma. But the only support they give for this declaration is saying that “the experts either cannot formulate it clearly or do not agree that it is true” (target article, sect. 2). There is a real issue underlying this: It is a serious intellectual challenge to find exactly the right formulations of principles like the VOC (or Subjacency, or the Binding Principles). Generativists thus offer different formulations, and they do not claim to have found the definitive ones yet. But these formulations share a common core. Saying that UG is false on these grounds is thus like saying (as some do) that evolution is false because experts disagree about the details.

The challenge and opportunity of finding the right statement of universals can be seen in the putative contrast between “dependency” languages and “constituency” languages, which E&L emphasize. I find it striking that the dependency relations they identify for Latin in their example (14) are exactly the same as the dominance relations in the phrase structure of the English equivalent in example (13). We can thus isolate something substantive that these allegedly different language types have in common by finding a neutral mode of representation that expresses this important topological equivalence.

E&L also voice the widespread concern that abstractness allows generative theories to immunize themselves from counterexamples. No doubt this happens. But the VOC is not an unfalsifiable dogma for generativists. On the contrary, they have seriously considered alternative possibilities. For example, Marantz (1984) proposed that the VOC is a feature of language that varies parametrically to account for “deep ergative” languages like Dyirbal. This hypothesis was investigated, but the preponderance of evidence showed it to be false, as more data came in from languages like Inuit (Bok-Bennema 1991). That the VOC is universal is simply the hypothesis that has fared better empirically than any well-articulated alternative.

Note that if the VOC is universal, this is certainly of great interest to cognitive science. Why should verbs combine with their theme arguments before their agent arguments? It is easy to write formal languages that do it the other way around. Presumably this tells us something contingent and potentially profound about how humans mentally represent events.

Linguistic universals are thus not myths, but hypotheses – hypotheses that gain new support from much of the same research that E&L cite. This research shows that we cannot be superficial in our approach to language, not that we cannot be universalist.

** Widening the field: The process of language acquisition **

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**Abstract:** Evans & Levinson (E&L) argue against Universal Grammar on the basis of language diversity. A related and fundamental issue is whether the language input provides sufficient information for a child to acquire it. I briefly discuss the more integrated approaches to language acquisition which focus on the mechanisms, and research showing that input cues provide valuable information for the language learner.

Evans & Levinson (E&L) argue against the notion of Universal Grammar (UG), illustrating the huge diversity in human language – and a diversity that exists at all levels. A justification for UG was the assumption that language is too complex for a child to acquire and that the input does not contain sufficient evidence for the child to learn the system; prior knowledge of language was therefore assumed. Hence, information about the process of language acquisition is fundamental in any discussion of UG and the domain specificity of language, something that E&L do not elaborate on.

Acquisition data are available from a range of languages, including those represented in the cross-linguistic studies pioneered by Dan Slobin (1985a; 1985b; 1992; 1997a; 1997b) and from more recent publications. The data indicate that young children quickly attune to the input language at all levels. Young children are adept at identifying the recurrent patterns of organisation within the input language, whether these are related to case systems, tense and aspect systems, word order, syntactic alternations, complex sentences, pronominal systems, the encoding of spatial relations, or other features. Based on the findings, the proposed UG principles and parameters are not adequate to explain the acquisition process. Nor do they convince all researchers that the language input lacks sufficient evidence for acquisition without prior knowledge of language structures, or that children from different language environments follow the same path in acquisition.

The crucial question is: What does the child bring to the task? A related question is: What factors influence language development? In the UG approach, the focus is on the end state, the mature grammar. Abstract linguistic concepts are available to the child, and language forms in the input are mapped onto these concepts. Both absolute and relative universals have been proposed, candidates for possible innate syntactic content (Valian 2009, p. 18). The relative universals allow for variation across languages including syntactic features and categories from which languages are built and from which they can select, as well as proposed binary parameters of syntactic variation.
having SLI are judged to have nonverbal abilities in the normal range, a significant body of research has revealed memory and information processing deficits (e.g., Archibald & Gathercole 2007; Bavin et al. 2005; Montgomery et al. 2009). In addition, significantly lower scores on standardised cognitive assessments are typically reported for SLI groups compared to age-matched, non-impaired children. Thus, an alternative explanation is that cognitive deficits lead to difficulty in processing information from the input, information required in acquiring the language (Leonard et al. 2007).

Theorists need to understand more about the diversity of languages, such as discussed by E&L, and the impact that such typological features have on the acquisition process; and, in addition, develop a greater understanding of language in atypical situations. Such understanding can only advance discussion about constraints on human language.

**Unveiling phonological universals: A linguist who asks “why” is (inter alia) an experimental psychologist**

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Abstract: Evans & Levinson (E&L) are right to hold theories of language accountable for language diversity, but typological data alone cannot determine the structure of mental phonological grammars. Grammatical universals are nonetheless testable by formal and experimental methods, and the growing research in experimental phonology demonstrates the viability of a comparative experimental evaluation of the Universal Grammar (UG) hypothesis.

There is little doubt that the twin challenges of language universals and language diversity are critical for understanding the architecture of the language faculty, its domain-specificity and evolutionary origins. Despite their crucial import, these questions remain unaddressed in most existing psycholinguistic research. Evans & Levinson (E&L) should be commended for reminding the cognitive science community of its outstanding intellectual debt in this area. Nonetheless, E&L’s own conclusion – that the hypothesis of universal grammar is false – does not follow from the evidence they present. Here, I specifically consider E&L’s analysis of phonological universals – the role of syntactic and semantic universals falls beyond the scope of this commentary.

In its bare minimum, the hypothesis of Universal Grammar (UG) states that the brains of all speakers represent a shared set of grammatical constraints. Although this hypothesis is often associated with the claims that UG constraints are innate, and domain- and species-specific, these additional claims are not logically linked to the basic hypothesis of grammatical universals. E&L appear to reject all four claims on the grounds that language typology exhibits no absolute, exceptionless regularities. Typological universals, however, are distinct from grammatical universals, and the link between them is complex. Grammatical universals – the object of cognitive inquiry – are mental representations (I-language), whereas typological universals are statistical generalizations concerning external linguistic outputs (E-language). Such outputs are shaped by multiple factors, of which putative grammatical universals are only one force – the restrictions on perception, motor control, conceptual structure and memory, coupled with cultural and social factors, are equally strong determinants.

Consider, for example, the typological prevalence of CV syllables (discussed by E&L). One theory of UG, Optimality Theory