The Reverse Relationship between Modularity and Popularity: Domain-General Mechanisms on the Rise

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In recent years, large-scale domain-specific modules (e.g. phonology and syntax) have become less popular, and instead, domain-general explanations are taking over. In the phonological literature, Emergentist approaches (e.g. Samuels, 2011; Archangeli and Pulleyblank, 2022) have abandoned phonological domain-specificity in favor of more general processes. Regarding syntax, aside from the Emergentist approaches that eliminate the syntactic module altogether (e.g. O'Grady, 2010), recent discussions suggest that even in Essentialist accounts such as the Chomskyan FLN, syntax does not seem to be a domain-specific module anymore (see Scholz et al., 2022). The move toward less modularity is not new in the history of linguistics: Halle's argument (Halle, 1959) against the "biuniqueness" of American Structuralism (combining the separate phonemic and morphophonemic levels into a single level) and the Minimalist elimination of the internal syntactic modules of the Government and Binding theory are two examples of that.

I suggest that the growing popularity of less modularity can be explained on three grounds: 1) everything else being equal, a less modular account of cognitive phenomena has methodological superiority over a more modular account (see Boeckx and Hornstein, 2010) – a point which can be considered as an example of parsimony (aka Occam's razor); 2) breaking down large-scale modules and adhering to more general processes can facilitate the dialog between linguistics and other fields of cognitive science: in this regard (especially the conversation between linguists and neurobiologists), Poeppel (2005) discerns two problems – namely the "Granularity Mismatch Problem" and the "Ontological Incommensurability Problem" – and suggests a path to a computational research program that involves decomposing large-scale modules and working with formal general processes; 3) postulating a domain-specific module for a certain cognitive trait can make harder its evolutionary explanation (see Boeckx, 2021).

Overall, it can be predicted that modularity (or at least large-scale modularity) will completely fall out of favor in cognitive science.

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