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Connectivity in Implicational Maps

Authors' reply to 'The Added Value of the Connectivity Hypothesis for the Map of Parts of Speech' by Caterina Mauri (2010)

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Mauri (2010), in her response to our paper (Hengeveld and van Lier 2010), states that adding the connectivity constraint to the sets of constraints we propose in our implicational map of parts of speech would increase the accuracy of our model.

Mauri's point is well taken. The connectivity constraint has strong empirical support in a wide variety of semantic domains, and indeed, if this constraint is added to the ones we propose, we can exclude two systems that were predicted by our original model but have not been attested. Thus, with the connectivity constraint added, the model would predict 15 possible systems, 13 of which are attested either in their 'pure' form or in combination with another predicted system.

This leaves us with two predicted but as yet unattested systems. These remaining systems are given in Figures 19 and 22 in our contribution to this volume, and are repeated below for convenience.

The system in Figure 19 is perhaps just as plausible as a system which has verbs only (represented in Figure 14 of our contribution to this volume). In languages of both these types, lexemes are used for predication, while reference is established indirectly, i.e. through the predication of properties and relations in which a referent is typically involved.

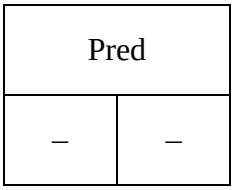

Figure 19

The system in Figure 22 is arguably just as plausible as a system which lacks modifiers within predicate phrases only (represented in Figure 21 of our contribution to this issue). We presented Tagalog as an example of a language of the latter type, the reason being that this flexible language has no slot for modifiers within predicate phrases. One could imagine that the opposite situation, a flexible language which lacks a slot for modifiers within referential phrases, could also exist, and would manifest itself as strongly appositional in nature.

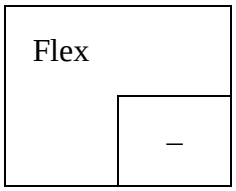

Figure 22

Thus, in all, adding the connectivity constraint would improve the predictive power of our implicational map, and would leave us with 15 predicted systems, 13 (pure or mixed) attested systems, and 2 unattested systems.

Our hesitation to take this step has to do with the fact that our approach to implicational maps is hierarchical in nature: hierarchies themselves are subject to higher hierarchies, and are ordered in their application. The question is then what counts as contiguous in such an approach. It is evident that contiguity applies along the predication-reference parameter and along the head-modifier parameter within each of the domains of predication and reference, but no real predictions can be made concerning the cases that cross-cut these two parameters. And since we have two parameters only and each of our parameters has only two values, the contiguity constraint then becomes vacuous.

A real test case for the issue at hand is one in which more than two parameters with more than two values each would be combined into an implicational map, or rather, into an implicational multidimensional space. In such a case, contiguity has to be redefined in terms of connections rather than strict two-dimensional contiguity. Our case does not permit us to make any strong claims in this area. We would thus be happy to adopt Mauri's valuable suggestion, but only after further experimenting with the notion of connectivity in implicational maps.

References

Hengeveld, Kees and Eva van Lier. 2010. An implicational map of parts of speech. *Linguistic Discovery*, this issue.

Mauri, Caterina. 2010. The added value of the Connectivity Hypothesis for the map of parts of speech. Comment on Hengeveld and van Lier 2010. *Linguistic Discovery*, this issue.

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