

Morphology, typology, computation

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Typology and computational linguistics belong together, not only because typology may use computational tools, but also in more principled ways. Evidence to support this claim is given from joint research involving Norman Fraser, Dunstan Brown and Nicholas Evans. First, computational linguistics can offer ways of demonstrating that particular analyses are valid (in the sense of demonstrating that they account for the data), and the example will be given of an analysis of gender assignment in languages like Russian, which is crucial for a typology of such systems. Second computational work can offer new ideas, such as the now prevalent notion of 'default'. Linguists have used this notion in contradictory ways, and we therefore discuss a distinction drawn within the Network Morphology framework: 'normal case default' and 'exceptional case default'. The normal case default is the outcome expected for a given domain, while the exceptional case default is what an item may have as a last resort.

These two types of contribution from computational linguistics, validation and new ideas, come together with morphology and typology in an analysis of the gender and noun class systems of Mayali, a non-Pama-Nyungan language of northern Australia. We show how this language requires us to extend the typology of gender systems, how the notions of 'normal case default' and 'exceptional case default' allow us to account for intriguing sub-regular patterns, and how the use of the lexical knowledge representation language DATR allows us to demonstrate the extent to which our analysis captures the recorded facts of Mayali. This work is outlined as an example of possible convergences of morphology, typology and computation.

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