

## Individual variation, network heterogeneity and linguistic complexity: which way does the relationship go?

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**Abstract:** Language is undoubtedly complex, robust and diverse, and we propose here that a (usually neglected) explanatory factor for these properties is represented by the acquisition and use of language by *intrinsically different individuals* embedded in *complex and dynamic networks*. More precisely, individuals cannot be meaningfully treated as identical units distinguished only by their position in the network, socio-economic status and their history of past interactions, but have *different preferences, thresholds and biases* (1), some of them rooted in biology and cognition (2). When embedded in complex and dynamic communication networks, interactions between such individuals generate variable and changing landscapes of constraints and affordances to which language must adapt to achieve its socio-linguistic functions. This view can be used to argue for at least *two radically different predictions*: on the one hand, it can be expected that this variation would force language to settle on the “least common denominator”, that is, to become *as simple as possible* (and much simpler than it could be) while still achieving its functions, while, on the other, language might become *very complex, robust and redundant* (and much more than it arguably should). Based on parallels with *evolutionary biology* (3, 4), work on the *spread of innovations* (and other types of behaviors) across networks (5), and modelling of *language change* (6), we will argue that the second prediction is likelier, and we will propose a set of theoretical, experimental and data-driven work that will allow the testing of these hypotheses.

### References

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