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Social network structure contributes to differences in language use

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Abstract: Some theories of language see it as a complex and highly adaptive system. For example, language may adapt to certain social or demographic variables of a linguistic community. If so, language may be used as an indication of certain social influences. Studies have begun to explore how the structure of social-networks contribute to language use. Until recently, datasets large enough to test how subtle effects of socio-cultural properties—spanning vast amounts of time and space—influence language change have been difficult to obtain. We analyzed over one million online business reviews using network analyses and information theory to quantify social connectivity and language structure. Results indicate that sometimes a surprisingly high proportion of variance in individual language use can be accounted for by differences in social structure. We consider how big data can be used as an arena for testing the influence of social variables on language use.