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Tense systems across languages support efficient communication

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Abstract: All languages have ways of expressing location in time, but they differ widely in their grammatical tense systems. At the same time, there are tense systems that recur across unrelated languages. What explains this wide but constrained variation? Taking a functionalist perspective, we propose that tense systems are shaped by the need to support efficient communication–a need that has recently been shown to explain cross-language semantic variation in other domains. We test this proposal computationally against the tense systems of 64 languages. We find that most languages in the sample support near-optimally efficient communication, but with some interesting and potentially illuminating exceptions. We conclude that efficient communication may play an important role in explaining why tense systems vary across languages in the ways they do.