

Model shows Welsh language in no danger of extinction but te reo Māori is on its way out

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Credit: Paul Brennan/public domain

A team of researchers affiliated with multiple institutions in New Zealand has developed a mathematical model that can be used to predict whether a language is at risk of disappearing. In their paper published in *Journal of the Royal Society Interface*, the group describes their model and how it can be used.

Despite the seeming worldwide popularity of languages such as English and Spanish, there are still thousands of others in use. But experts suggest between a half and one-third of them could be at risk of disappearing as more popular languages take over. In this new effort, the researchers created a [mathematical model](#) that can predict whether a given language is at risk of extinction.

The researchers created their model by devising a way to split a population who speaks a given language into one of three levels of proficiency. They also created variables to represent things like how quickly a language can typically be learned, what percentage of a population currently speaks the language, and the degree of effort to keep a language alive. The result was a model that can be used to predict how likely a language will be to live on or die out over the next century.

The team used their model to measure the likelihood of the Welsh language surviving into the next century. The researchers report that their model showed it to be quite robust and very likely to survive well into the future. The model even showed it being spoken by larger proportions of the population in Wales as time progresses. They note that their findings were not surprising, given the intense efforts of officials in Wales to keep the language alive. The team then turned their attention to te reo Māori—the language spoken by the Māori people native to New Zealand. Unsurprisingly, the [model](#) showed that the language is very likely on its last legs. Currently, only 4 percent of the Māori [population](#) speak the [language](#), not nearly enough to keep it going. They note that extinction of te reo Māori is not a certainty, however, as a stronger effort by officials to keep it alive could increase its odds of survival.

More information: Tessa Barrett-Walker et al. Kia kua te reo e rite ki te moa, ka ngaro: do not let the language suffer the same fate as the moa, *Journal of The Royal Society Interface* (2020). [DOI:](#)

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