Even with the internet, we're not any closer to everyone speaking the same language

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Global economic integration has been enabled by technologies that radically lower the costs of moving goods and of communicating across long distances. The first of these, the railroad and the telegraph, were developed in the early 19th century. Later additions include the telephone, radio, containerized shipping, and the internet. All of these technologies exhibit network effects: The value of the technology to each current user increases with the number of adopters.

Perhaps the greatest recent example of the network effect is Facebook. The value to me of being on Facebook increases with each additional friend that signs up. The wider the adoption of Facebook, the less attractive alternative networks, such as the open-source alternative Ello, appear. The network effect favours the development of standards so that all adopters of a technology can be linked together.

While one might imagine the power of the network effect to be a recent discovery, the same logic underlies the ancient biblical story of the Tower of Babel, which is about language. According to the story, in the aftermath of the great flood the descendants of Noah all speak a common language. The power of communication enables them to build a great tower that stretches to the heavens. Displeased by this challenge, Yahweh (God) fragments the people into many groups each speaking a different language, reducing their power and keeping them in line.

Language is the original network technology. When someone learns a language I speak, I benefit because of expanded possibilities for interaction. The long-distance communications revolutions since the 19th century increase the strength of the network effect. These days an English speaker can travel the globe, either in person or from the comfort of a web browser, and interact with others who speak English, either as their mother tongue (372 million) or as a second language (612 million) (Ethnologue).

The globalised Anglosphere we are all familiar with stands in stark contrast to the tremendous diversity of mother tongues spoken around the world. There are more than 6,500 distinct languages in use today. We measure the size

of a language by counting the number of people who speak it as a mother tongue. There is enormous variation in the size of languages. While the sixteen largest account for half of the human population, there are more than three thousand small languages spoken by fewer than 10,000 people.

The network effect, reinforced by modern communications technologies, would seem to favour the consolidation of human beings on to a much smaller set of spoken languages, posing a threat to the continued survival of the vast majority of the 6,500 languages in use. But is that actually what is happening? In work recently published in The Economic Journal, I bring two data sources to bear on the question of whether the world's languages are consolidating. These sources allow me to address the question from different angles, and both provide the same answer. Language consolidation does appear to be underway, but only for those languages with fewer than 35,000 speakers. That means that around 1,900 languages are large enough to be under no threat at all. I conduct simulations using the relationship between language size and growth that suggest about 1,600 languages will become extinct in the next 100 years.

There are two ways to look at these results. On the one hand, the extinction of a quarter of the world's extent languages would represent a significant loss of human cultural diversity. From that perspective, language consolidation appears as a significant problem. On the other hand, it is striking just how small the minimum viable size for a language remains in a world with such cheap and easy long-distance communication. A settlement of 35,000 people would be considered small almost anywhere in the modern world. That such a small group could maintain its own language in a globalised world is remarkable.

Given the power of these technologies, why are people not abandoning languages that connect them with only 50,000 or 100,000 other people? The answer to this question is less certain, though there are three likely explanations. The first is that much linguistic communication is face-to-face and thus very localised. Above all else, one must be able to speak with others in one's family, those one works with, and members of their local community. For the vast majority of human beings, those interactions happen within just a few miles of where they live. Second, many goods that can be produced far away, such as clothing and food, do not require knowledge of another language to consume. Third, bilingualism in a second, more widely spoken language need not lead to displacement of a small-sized mother tongue over time. Indeed, a small cadre of bilinguals can serve many of the external communication needs of a small language community.

The data I use primarily reflects conditions at the end of the 20th century. It therefore does not reflect changes that may have come or will come with the wider diffusion of the internet. Only 178 languages, a mere three per cent of the total, have any content at all on the internet. Only 11 per cent of the world's internet users come from English-majority countries, more than half of all web pages are in English (W3Techs and WDI). While it is possible that the internet may increase the minimum viable size for a language, my suspicion is that the main result will be to promote more bilingualism. Consider the case of the Netherlands, where knowledge of Dutch is under no threat despite more than 90 per cent of the population being able to speak English.

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Notes:

- *This blog post is based on the author's paper Are The World's Languages Consolidating? The Dynamics and Distribution of Language Populations, in the Economic Journal, Volume 127, issue 599, pp 143-176, February 2017.*
- *The post gives the views of its author, not the position of LSE Business Review or the London School of Economics and Political Science.*
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