



Darwin and language diversity

Revolution or evolution?

Rissa:

Viewing language change from this longer-term perspective has been another fruitful avenue of research. What might influence how rapidly a language evolves from its point of origin to the present?

Quentin Atkinson:

What factors affect how the whole language changes through time? Does a language change at a roughly constant rate through time? Does it evolve in what you might call punctuated bursts? One theory in biology is that species evolve in punctuated bursts, so that when new species are formed their rates of evolution increase. Mark Pagel and some of my colleagues at the University of Reading tested this idea in a biological context and were able to show that indeed the rate of genetic evolution does speed up when new species are formed. What we wanted to try and do was test the same idea in languages. Do languages increase in their rate of change when new languages form?

Mark Pagel:

And so we got together collections of languages that form family trees of languages such as the Indo-European languages and we had a group of African languages known as the Bantu languages and a group of Austronesian languages; these are the people who moved out into the Pacific, the Polynesian islanders and so on. And we studied these languages to see if they ever showed these bursts of change in their histories. And one of the interesting things we found was that languages do show these bursts of change, and in particular it seems to be the case that if we follow a language over a long period of time, tracing it back to its ancestral language, that languages that have experienced many, many events in their history of splitting and forming into sister languages, seem to suffer more change than languages that don't have this history of splitting events. And what we found that the more often that splitting has happened, these sub-populations have formed, the more likely the languages were to have changed in these rapid bursts. So it almost seems to be the case that there's a social effect, that when languages split into two sister languages they somehow try to differentiate themselves from each other; they try to change in some way, almost as if forming an identity around the language.

Rissa:

One of the most striking examples of a rapid burst of linguistic evolution associated with two languages wanting to establish their own identity can be traced back to Noah Webster around the time of the American Revolution.

Mark Pagel:

Noah Webster was an educator who was putting together the first dictionary of American English, and Noah Webster says in the preface to that dictionary that the American people need a system of language that is independent as well as a system of government, and it's well known to American schoolchildren that Noah Webster in that dictionary introduced, you might say overnight, a series of peculiar or idiosyncratic American spellings for a whole lot of words that differ from those in British English.