LIFE IN DEATH

James Akka, winner of the 16–18 category of our Young Writers' Competition 2016, looks at three stories of language birth.

Since 1960, humanity has lost, in one estimate, 28 whole language families. By 2011, 10% of all languages known ever to have existed were already extinct. 452 languages were on the brink of that same fate, each having fewer than ten living speakers. As English and a few other languages become increasingly dominant, language death can appear to be an unfortunate inevitability. Nevertheless, in the face of this, humanity has seen great stories of language birth, and in much more modern times than you might think. What follows are three stories of language birth, and what we can learn from them.

Poto and Cabengo

It is not unusual to hear heart-warming stories of special bonds between twins. Few twins, however, could boast the kind of connection shared by Grace and Virginia Kennedy.

'Twin languages', with which twins can communicate in a way unintelligible to others, are not uncommon. In fact, the phenomenon now has a name – 'cryptophasia', which stems from the Greek 'crypto' meaning secret, and 'phasia' meaning language. One estimate suggests that up to 50% of young twins have just such a unique language only understandable to each other.

But what do these mysterious 'secret languages' look like? Interestingly, they all look rather similar. In one comparison of nine separate twin languages, similarities were discovered across different cases: heavy use of onomatopoeic expressions, neologisms (newly created words), a lack of morphology, and word order mostly based on relevance, with the most contextually relevant words placed closer to sentence beginnings. For the most part, though, these languages were composed of adapted words from the language of surrounding adults. This final similarity is the key to understanding why cryptophasia arises with twins. The reason so many of the seemingly unintelligible words are based on adult language is that, usually, one child in the pair is struggling more than the other to develop language skills appropriately. When young children are learning to speak, they can often get pronunciations or syntax wrong. However, in the absence of adults, twins can talk to each other in a way that reinforces their first ideas about speech, without having their 'mistakes' corrected. If, as time goes on one child's speech continues to conform less to standard forms, the other child will often start to mimic them. Eventually, these ideas become more stabilised as the twins talk with each other more. New ideas can be built on top of the 'flawed' foundation, and over time forming a unique sort of language develops, no longer recognisable as linked to the adult language. As the parents talk more and the children begin to socialise with people outside the family, the cryptophasia usually ceases to be present by the age of around three.

Imagine the surprise, then, when it was discovered in the 1970s that Grace and Virginia Kennedy, known to each other as 'Poto' and 'Cabengo', could still not communicate in English at the age of six. Having grown up in San Diego, a very particular set of circumstances had halted the twins' development, and had resulted in a rudimentary cryptophasic mix of English and German being the only way the twins could communicate. Grace and Virginia, identical twins, were born in 1970 in Georgia to an English father and a German mother. Soon after birth, both twins suffered seizures. Their doctor speculated that the twins could be developmentally handicapped, causing the parents to assume the worst and consider the two to have severe learning difficulties. While both parents worked, Grace and Virginia were left at home with their maternal grandmother, who spoke German, and who did not interact with them very much. As a result, the twins were left with fairly minimal exposure to adult language, and what exposure they *did* get was split between English and German. Their main source of interaction, then, was with each other, and so a normal case of cryptophasia came about, albeit with two language influences as opposed to one.

What made this case exceptional, however, was the parents' decision not to send Grace and Virginia to school on the basis of their presumed handicaps. This meant that Grace and Virginia's language was not influenced by the language of others – the influence that usually causes the decline of other cryptophasic languages. At the age of six, the twins still had little to no understanding of English or German.

Grace and Virginia's own language, having had a greater than usual opportunity to develop, was complex: the girls spoke incredibly quickly and with

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staccato rhythm. There were at least 16 ways to say 'potato salad'! Below is an extraordinary recorded extract of their speech:

"Pinit, putahtraletungay" ('Finish, potato s

"Nis, Poto?" ('This, Poto?')

"Liba Cabingoat, it" ('Dear Cabengo, eat')

"La moa, Poto?" ('Here more, Poto?')

"Ya" ('Yeah')

When Grace and Virginia were six, Grace and Virginia's parents' concern at the lack of development in their ability to communicate with others caused them to seek speech therapy for the twins. News of the twins hit national headlines, even resulting in a documentary about them by Jean-Pierre Gorin in 1979. They learned English quickly and were found to be of normal intelligence, but struggled to learn social skills. Their father banned the twin language once Grace and Virginia started education. In 2007, a report found Grace to be mopping floors at McDonalds, and Virginia to be working on an assembly line.

The twins' story is unusual, and seems to be in part due to neglect at a crucial age for language learning. However, their story is still revealing: it shows that the human brain is desperate to learn language, and deprived of sufficient stimulus, can create its own.

Idioma de Señas de Nicaragua

The language of Poto and Cabengo eventually gave way to the English of Grace and Virginia. The story of Nicaraguan Sign Language, however, has a happier ending.

Today, we see deaf communities and organisations all over the world providing support for each other and conversing in complex and efficient sign language. Even so, the first school for the deaf was only founded as recently as 1760, in Scotland, and progress was remarkably slow, especially outside the West.

In the early 1970s, Nicaragua had no such facilities for deaf citizens. Deaf people were very isolated from each other and from society in general, and communicated either through simple gesture or home-sign, a gestural system developed by deaf children with no language model, with elements of more complicated language. For example, home-sign systems can often create sentences in similar patterns, unlike simple gesture systems.Apart from a few cases of idioglossia (like cryptophasia, but not restricted to twins), deaf people in Nicaragua were, for the most part, language-less.

In 1977, that began to change. A centre for special education in Managua set up a program for deaf children. It initially had 50 attendees, but by 1979 had doubled in size. In 1980 another school, for deaf teenagers, was established, and by 1983 400 students had moved from isolation to a position where they could socialise with other people like themselves. However, while the children grew closer together, they grew away from their teachers. Teachers were told to encourage the use of spoken Spanish, and taught finger-spelling, an alphabet made with the hands to spell out words in conversation. Not having experienced or used spoken language before, the children found it difficult to understand what they were supposed to be learning, and didn't see why they should learn finger-spelling

when they each had home-sign systems of their own.

As time went on, the teachers found it increasingly difficult to understand the children: their home-sign systems were changing – and merging into one. Outside the classroom, in the playground and on the bus, the children had been communicating in their own ways. As they spent more time together the group as a whole had started to pick up each other's signs and gestures, with some becoming common among the different languages. These were the beginnings of Nicaraguan Sign Language.

At first, the sign language was much like a pidgin – a rudimentary combination of two languages for the sake of communication (often for the purpose of trading). Most of the language at this point was merely a consensus on what certain signs meant, though there was a wide variety of gestures that conveyed all sorts of expressions. The real leap came when a syntax began to develop: the ability to combine gestures into formed sentences led to a sort of creole: a stable language with native speakers, with its origins in a pidgin. Considering that the deaf children had not had what could be called 'language' before the establishment of the schools, what developed became their own native language. To a certain extent, the language was not fully formed and lacked many elements of what we see in other global languages. The language at this stage of its development is referred to as 'Lenguaje de Signos Nicaragüense (LSN)' in Spanish.

Increasingly, the teachers were stumped by the developments in NSL. Not only had the children failed to learn lip-reading and oral speech, but they were also talking to each other in an unrecognisable, and significantly more complex, way. This led the staff to call for help from linguistic researchers from Massachusetts Institute of Technology, who noticed something incredible: not only had the children started to form their own vocabulary and syntax, but the younger children arriving at the school were making their own additions. While the children who had been around from the start had remained mostly in the pidgin-like stage, the younger ones had taken it and formed an undeniable language, complete with verb agreement and other complex elements of grammar. As a result, it was possible to recognise different 'generations'. If the original group of children had stayed at the school, they would perhaps have settled on a simpler form of what is now known as 'Idioma de Señas de Nicaragua (ISN)'; however, the result of young children arriving and older teenagers leaving was a changing form with many different influences, eventually resulting in a fully-formed, grammatically consistent language. By 1997, ISN (or NSL as it is known in English) had about 3,000 native speakers, and is now indisputably a language in its own right.

NSL teaches us a great deal about language formation, and its development provided a unique opportunity for researchers to observe the process of language formation. NSL also provides evidence in favour of the claim that language rules are innate in humans: the children started to form structures and concepts found in all known languages, without prompting. Nevertheless, there is still a lot more that NSL can teach us.

Esperanto

The stories of Poto and Cabengo's twin language and Nicaraguan Sign Language indicate that humans continue to create languages. The story of Esperanto, however, is quite different. The idea of a 'constructed' language is not a new one – the first completely artificial language is thought to have existed as early as 1200. Since then, there have been numerous attempts to create 'perfect' languages, 'accessible' languages, 'universal' languages, and languages with various other grand purposes. None has been quite as successful, though, as Dr Ludwig Lazarus Zamenhof's Esperanto.

'Esperanto' means 'the hopeful one', and was certainly conceived in hope. In 1870, Zamenhof (a Polish doctor, inventor, and writer, bilingual in Yiddish and Russian) began to design Esperanto, a constructed language that has since undergone many official refinements. Zamenhof intended Esperanto to be a language that the whole world could learn – something he had dreamt of since childhood. Linguistically, Esperanto claims to be much simpler than languages like English, in part through its use of phonetic spelling and (supposedly) unchanging grammatical rules.

By 1878, Zamenhof felt that Esperanto was ready. However, the censors of the Russian Empire would not allow the publication of his explanation of the intricacies of his language. Zamenhof focused his attention on translating works such as the Bible into what he then called 'The International Language'. 1887 at last saw the publication of Unua Libro ('first book'), Zamenhof's first textbook. Zamenhof employed the

pseudonym 'Dr Esperanto', the stem for the common name of the language today.

In the years following the publication of Unua Libro, Esperanto quickly expanded. However, at this point the language was primarily a written, rather than spoken, phenomenon, for example in publications like La Esperantisto, an Esperanto magazine. By 1905 the language had spread as far as Canada, and Western Europe had 27 magazines in publication. 1905 also saw the first world congress for Esperanto, with 688 speakers representing 20 nationalities present. Here, Zamenhof resigned leadership of the movement, not wanting the language's development to be hindered by any potential prejudices against himself, for example because he was Jewish.

The 1920s have come to be seen as the period in which Esperanto flourished. During this decade, the language gained new speakers every day, and Esperanto was touted as a possible language for various organisations, including the League of Nations (France rejected this proposition). However, the subsequent rise of totalitarianism in Europe meant that a language of hope and international ties came to be distrusted by various nations' leaders. The Holocaust saw speakers of Esperanto executed, as Hitler was concerned that Zamenhof's Judaism could lead to a Jewish conspiracy conducted through Esperanto. By 1937, Stalin was also wary of Esperanto, seeing fit to destroy the still-young Soviet Esperanto Association and making it illegal and punishable by death or exile to speak Esperanto. Attitudes towards Esperanto remained hostile in the subsequent Cold War, with concerns on both sides that enemy propaganda could be distributed in Esperanto,.

Esperanto never fully recovered to the heights of the 1920s excitement despite a sort of renaissance in the 1970s, as well as great popularity in Iran. Today, it is estimated that between 1,000 and 2,000 people speak Esperanto as a first language, with around 2,000,000 worldwide thought to have some basic knowledge of the language, largely aided by internet courses (Esperanto is even available on Duolingo). However, Esperanto today is essentially a curiosity, and has stagnated in terms of face-to-face use. Nevertheless, there remains a glimmer of hope that someday we might all be able to communicate with one tongue.

Esperanto has not been immune to criticism and revision from linguists. Some of its rules (such as whether verbs are intransative and which preposition to use) are thought to be needlessly complicated despite Esperantists' claims that the language is incredibly simple, and the great majority of the vocabulary and structure is derived from European languages, making it harder for learners whose native language is, for example, Japanese or Arabic. As a result of such criticisms, several 'Esperantidos' have been created: constructed languages based on or inspired by Esperanto. Esperanto may have slowed in some respects, but it undoubtedly still inspires generations of language lovers.

Language seems to be inseparable from humanity. The stories are all very different: the first shows us language birth on a very small scale, the second is a story of the power of community rather than individual ties, and the third demonstrates how we try to understand and channel the power of language. Nevertheless, they all have one thread in common: language is inseparable from our communities and bonds, and humanity will never stop trying to talk to each other. They also show us, however, that we still have a lot to understand, and a lot to learn. ¶

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Find out more

Books

Poto and Cabengo: Jean-Pierre Gorin's documentary on the pair is a great source of footage on the twins and information on how they lived.

NSL: A quick search for 'Nicaraguan Sign Language' on Google will yield dozens of articles about the children and their language, and part of the PBS documentary *Evolution: The Mind's Big Bang* is focused on NSL.

Esperanto: Duolingo has a wonderful and easy to use Esperanto course if you're interested in learning the International Language! Peter G. Forster's 'The Esperanto Movement' also provides a good account of the language's history across the world and later in Britain.

Find **CHILDES** (Child Language Data Exchange System) at childes.Psy.Cmu.Edu