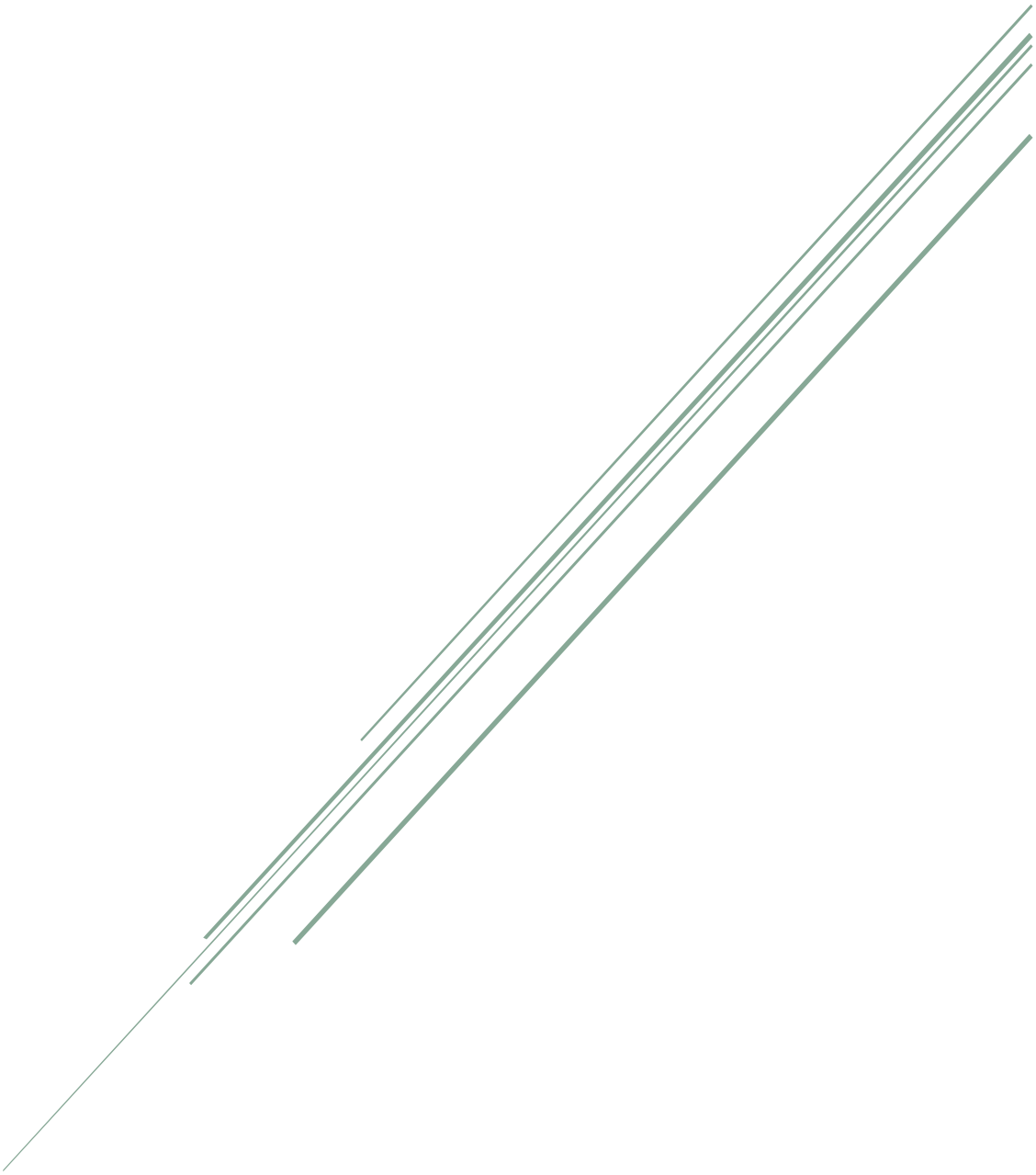
PARDON ME?

An investigation into the biological and social reasons for codeswitching



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1 August 2022

‘PEOPLE WHO SPEAK TWO OR MORE LANGUAGES OR DIALECTS SOMETIMES SWITCH BETWEEN THEM WITHIN THE SAME CONVERSATION, AND EVEN WITHIN THE SAME SENTENCE. WHAT REASONS MAKE PEOPLE SWITCH LANGUAGES (OR DIALECTS)? WHY IS THIS INTERESTING FOR LINGUISTS? SHOULD LINGUISTS PRESCRIBE IF SWITCHING IS GOOD OR BAD?’

One sunny afternoon in late summer many years ago, my mother and I got off a plane in an airport in Nassau, Bahamas, after my first journey to Ukraine to visit my grandparents. I was about three, and incredibly excited to tell my father about everything I had been up to over the summer. I ran to him, shouting at the top of my lungs that “Dad there were two fluffy *kotyky* and I ate loads of *mlyntsy* – I love *mlyntsy*!” Most certainly I earned a look of confusion from my father, who of course had no idea what *kotyky* or *mlyntsy* were. He looked to my mother for an explanation but never got one as my mother was crying with laughter at the expression on his face.

Learning multiple languages is excellent for brain stimulation and pattern recognition, but many other language speakers find themselves switching between languages at inconvenient times, often leading to embarrassing but funny misinterpretations; I should know, as a speaker of multiple languages. Thanks to the rise of the internet, globalisation, and planes, trains and automobiles, today’s population is more connected and more international than ever before. Today, over half of the global population speaks more than one language, with estimates varying between 60% and 75%[1]. With multilingualism, however, come both positives and negatives, and for decades, psycholinguists and linguistic anthropologists have been fascinated with the way bi- and multi-lingual people speak, switch languages, and codeswitch, all in one sentence.

Codeswitching is defined as when a speaker alternates between two or more languages, dialects, or accents, in the context of a single conversation or situation, and generally tends to take place between two bilinguals, or indeed multilinguals, who speak the same languages. In fact, studies show that even if a parent, for instance, pretends not to know one of the languages, the child will continue to codeswitch, only stopping if the other person genuinely does not know the language. Once commonly perceived as having a negative impact on cognition in young children, the science

[1] Vince, 2016

has begun to prove otherwise. Research shows that rather than getting confused, as previously thought, bilingual and multilingual children are actually more effective at cognitive processing tasks than monolingual children, as they have developed executive function multitasking, due to their multiple languages. Researchers also discovered that code-switching stimulates brain activity and increases languages skills in early childhood, allowing children to perform multiple tasks at once, as well as learn more languages in the future. Studies show that the Stroop test, where participants say the colour of the ink rather than the colour the word spells out, is particularly good at identifying differences in monolinguals and bilinguals[2]. Bilinguals, and multilinguals, who have to focus on different languages in different situations, have an advantage over their monolingual peers.

An important element of codeswitching is linguistic or structural priming, a form of positive priming, where individuals will unconsciously imitate sentence structures from a primer sentence. Priming, a phenomenon first thought to have been described by psycholinguist Karl Lashley, refers to the way one event or stimulus affects a subsequent one, and is often related to semantics and modality. Semantic priming concerns imitation between words with similar meanings, for instance "red" and "crimson." In linguistics, a modality is a particular way of representing information, thus one can have verbal and visual modalities, in which the priming occurs between two similar stimuli. Positive priming, the main focus of linguistic priming, simply describes the type of priming – positive means the processing speeds up, and there is an overall increase in ability to codeswitch, in this case[3].

A 2012 study by Brojde et al. found that monolingual and bilingual children will use different cues when learning a new language. This could potentially stem from the child's early learning environment, where parents of bilingual children may draw on vocabulary from the other language to help learn a new word – for example, if a Spanish-English speaking child were just learning the word *dog*, the parent may choose to first describe it as *perro*, drawing on the child's Spanish vocabulary. Monolingual parents tend to describe the object using adjectives, highlighting to the child the dog's furriness or ability to bark, rather than using a synonym. This means that bilingual

[2] Vince, 2016
[3] Wikipedia, 2022

children are more likely to use pragmatic cues such as pointing or eye direction, than monolingual children, when learning novel vocabulary. The researchers theorised that the reason for this is that bilingual children learn two different words for the same thing at the same time so may need extra cues, while monolingual children will often rely on the object's properties as a cue. Thus, a monolingual parent may say "where is the fluffy dog? The one that says woof," whereas bilingual parents may point to the object or use both words in succession. If the bilingual parent has not given a cue however, the child will unconsciously follow the parent's gaze to determine what is being referred to. This is important to know when looking at codeswitching because it explains why bilinguals codeswitch – they learn both words for an object, concept or phrase simultaneously leading to the two words being used almost interchangeably[4].

When speaking with my mother, we very frequently speak a good mixture of English and Ukrainian when speaking around other members of our family. I subconsciously notice that, if I have just spoken in English with my father, I will use more English with my mother, but interestingly, I never have the urge to speak Ukrainian with my father or my friends, who are monolingual, as was described in several studies where children would only codeswitch when the other participant knew the two languages. When speaking to my mother however, I do sometimes start speaking in Spanish, without realising that she is not a Spanish speaker, perhaps suggesting that multilinguals, are more likely to speak to other bi- and multilingual people using codeswitching, than with monolinguals, even if the language switched to is unknown to the other speaker. Similarly, I make mistakes when writing in French or Spanish in that I occasionally begin writing in another language in the middle of my sentence, leading to frantic crossing out in exams. This gives rise to the most obvious question of *why* we codeswitch?

One of the main reasons we switch dialects, accents, languages, and registers is to satisfy one of humans' most fundamental needs: the need to appertain to a group. In fact, a prominent psychologist Abraham Maslow states it is the third most important need after physiological and

[4] Brojde, Ahmed and Colunga, 2012

safety needs are met. Each time an individual moves socially, culturally, or geographically, there is an unconscious need to fit into any new group encountered, which perhaps stems from our evolutionary pathways. One school of thought is that there is a biological component to the differences in languages and the need for multilingualism. Others believe the need is only social, for when an individual moves socially or culturally, and needs to stand out less.

In 2015, psycholinguist Hernandez et al. researched possible biological differences in brain activity between bilinguals and monolinguals. A group of Spanish-English speakers as well as English speaking monolinguals were taught some German words which were not orthographically similar to Spanish or English. fMRI scans revealed that the bilinguals used the internal brain structure known as the putamen, which influences various types of learning, whilst the monolinguals showed greater activity in the dorsolateral prefrontal cortex, which plays a part in task switching, and the anterior cingulate cortex, functioning as a regulator of attention and focus. This study shows that bilinguals and multilinguals, use less cognitive energy when learning new languages and helps explain why other language speakers find it easier to learn another language. Interestingly, the monolinguals were the ones using the task-switching part of the brain, suggesting one of two things. Either the monolinguals needed a greater amount of effort and concentration to switch to the novel language, or the bilinguals only display use of this area of the brain when switching between their own languages, hence why it did not show up on the scans. Either way, this provides solid biological evidence for code-switching, but like most theories in the biological approach to psychology, it does not explain *why* the codeswitching occurs, only how it occurs[5].

It is a very widely shared belief that one of the most extraordinary evolutionary milestones that humans have achieved is language. However, it could be argued that the fact that humans have created so many different languages, over a relatively short period of time, is equally if not more important. Once humans had shifted their centre of gravity onto their hind legs and began walking upright, there was greater room for the fine tuning of muscles, nerves, and breath control needed to

[5] Hernandez et al., 2015

create new sounds and combinations that formed language as we know it[6]. And as a result of groups moving further away from each other, both geographically and culturally, and other groups popping up in places far removed from the cradle of humankind, new languages, dialects, and language groups also emerged; thus, the need, for multilingualism and a knowledge of the other groups' language for trading purposes, developed, leading to greater mingling and multilingual parents. Indeed, even today, modern hunter-gatherers are almost entirely multilingual, as to marry or have children with anyone inside your tribe is considered inconceivable, so a partner from another group is necessary[7].

On the other hand, however, other psycholinguists believe that code-switching originated from a more sociocultural standpoint, from the need to fit into a social group. It is believed that bilingual and multilingual individuals codeswitch as a social strategy, to mark social categories, group solidarity and status, as well as an indicator of personality or identity. John Gumperz, an American linguistic anthropologist, argued that the functions of codeswitching comprised of "quoting the speech of others, identifying the person being addressed, repeating the same message for emphasis and adding more details to the main message." This is all semantically based codeswitching, hence why it is not part of biological explanations for codeswitching. Certainly, many politicians make use of codeswitching as a means of getting 'down-to-earth' and appearing more relatable to audiences. Whilst many politicians speak amongst themselves using received pronunciation (RP), for instance, when addressing an audience of non-politicians, they may tend to use words or phrases which are not commonly used in RP to connect more with their audiences, many of whom may not speak in RP. When I first moved to the UK, my accent, having come from the Bahamas, resembled a stereotypical American accent, meriting me quite the number of stares and questions. I was called the 'American girl,' despite not actually being American, leading me to develop a British accent. I have noticed, very consciously this time, that whenever I speak with my family, I use my original Bahamian accent, whereas when I speak to my friends or others in the

[6] Vince, 2016
[7] Vince, 2016

UK, I use a British accent. This is one of the most striking things I have noticed about my speech and being a multilingual has only increased my fascination.

In answer to the last part of this question, there can be no doubt that linguists must be as unbiased as possible. Linguistics is by definition an objective subject, and there are numerous studies to show that codeswitching is good for mental stimulation. In fact, in the past linguists proposed the idea that knowing multiple languages is damaging for cognition, yet this was disproved by a multitude of studies, including Hofweber and Marinis' study on executive functions[8], among others. It is not a linguist's duty to pass value judgements on codeswitching, rather to study it and provide objective analysis. Fortunately, now that the science has supported a newer hypothesis, there is greater room for improvement in theories, and linguists have begun to adapt their previous ideas on codeswitching. This is important for a subject like psychology as it is an ever-changing subject, and the research is constantly being renewed; no two individuals will behave in the same way.

For centuries linguists, psychologists, historians, and ordinary people alike have always been fascinated about the mysteries of language. Ultimately, codeswitching is an experience like no other. Not only do multilinguals use it, but nearly everyone switches accents or dialects within their own language without realising it. It is beneficial both biologically and cognitively, and in certain ways, it allows an individual to express themselves and think in a new perspective, which is arguably what language is all about. If we cannot express ourselves through our language, there can be no hope for the future. Language is, after all, a window to a person's soul and a pathway to a greater understanding of humankind.

[8] Hofweber, Marinis and Treffers-Daller, 2020

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