# 10 WEIRD Psycholinguistics

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Language is arguably the most defining trait of humans. In no other species has a semiotic system emerged that is as complex and, at the same time, as diverse as human language, evading centuries of attempts by linguists to successfully capture its inherent complexities. The uniqueness of human language raises several questions regarding the human mind: How do we acquire, process, store and produce language? And, how does language, once acquired, influence our actions and thoughts? Since its emergence in the late 1800s, the field of psycholinguistics has investigated these questions with ever-increasing vigour. Researchers in the field of the psychology of language have made – and are still making – considerable progress in conceptual development and technology. However, a potentially problematic aspect of this development is that the knowledge generated thus far mainly stems from a so-called WEIRD (Western Educated Industrialized Rich Democratic) context (Henrich *et al.*, 2010a, 2010b). This means that significant aspects of the rich variety of cultural and social contexts in which humans acquire and use language, or the diversity of human languages, have not been captured and may thus leave epistemological and methodological watermarks on knowledge production. Since psycholinguistics is essentially an empirically based endeavour, which relies on experimental and quasi-experimental paradigms to gain insights into the psychology of language, there is an urgent need for diversification.

This chapter sets out to analyse the WEIRD bias in psycholinguistics, with a particular focus on research on the multilingual mind. In doing so, the chapter makes use of the notion of utopia (e.g. Stroud, 2015; Stroud & Williams, 2017). This was recently introduced as part of the theoretical complex of Linguistic Citizenship (Stroud, 2001, 2009, 2018; Stroud & Heugh, 2004) as a means of denoting 'a better world' that is 'foreshadowed in the present but as yet unrealized' (Stroud, 2015: 25). While utopia has proved a useful tool for analysing expressions of alternative representations of language(s), for instance, it is not only a means of examining a given state-of-affairs, but also a means of conceptualizing an unrealized alternative prefigured in that state. In this chapter, the unrealized alternative is a psycholinguistic research endeavour where the agenda is not dictated by WEIRD biases.

The chapter is divided into two main sections. The first section, 'The WEIRD', deals with both research on the notion of WEIRD as well as WEIRD research (that is, research availing itself of WEIRD subjects and contexts), and serves to illustrate the properties of the WEIRD bias in extant research. The concept of WEIRD is introduced, followed by a brief bibliometric analysis and a selective overview of WEIRD assumptions in psycholinguistic research on the multilingual mind. Attention is also given to the representation of the non-WEIRD in psycholinguistic studies. The second section of the chapter, 'A Psycholinguistic Utopia', outlines the potential of a psycholinguistic paradigm that is not WEIRD, using South Africa as a starting point. Here, the South African multilingual situation is outlined, followed by an overview of the current status of psycholinguistics in research and tertiary education in South Africa. Against this backdrop, a psycholinguistic utopia is discussed.

Throughout the chapter, I make use of the following conceptual distinctions: the notions such as first language (L1) and second language (L2) are defined in accordance with their original meaning making function, namely the order of acquisition, regardless of language dominance. In other words, an L2 is a language acquired after the onset of the acquisition of the L1. The term 'non-WEIRD' serves as an umbrella term for anything that is not WEIRD. This does not by any means imply that all that is not WEIRD is uniform or similar in any way; instead, non-WEIRD is defined in opposition to WEIRD. While the term WEIRD was initially taken to denote participant characteristics (Henrich *et al*., 2010a), it has come to function as an umbrella term for contexts and even assumptions of a certain nature (see commentaries and response in Henrich *et al*., 2010b). Moreover, the study of psycholinguistics (or psychology of language) is conceptualized in broad terms, to represent the study of how the mind processes language, how language interacts with other aspects of the mind, as well as how the mind can accommodate the acquisition of languages of very different kinds (e.g. Rueschemeyer & Gaskell, 2018). The psycholinguistic phenomena and research directions covered in the chapter are not meant to be exhaustive, but to illustrate applications and manifestations of the concept of WEIRD.

## The WEIRD

### The concept of WEIRD

The tendency to draw data from Western participants and Western settings is not unique to psycholinguistics, but it is part of a general trend in the cognitive sciences. Over the past few decades, the cognitive sciences have seen several calls for diversification of research participants and contexts (e.g. Bender & Beller, 2013; Bender *et al*., 2012; Medin & Atran, 2004; Norenzayan & Heine, 2005; Rozin, 2001, 2009). In their paper

published in *Nature* in 2010, Henrich *et al*. (2010a) introduce the concept of WEIRD as a means to highlight the Western bias in research on the human mind. They argue that the notion of human cognitive and perceptual universals is inherently flawed, as its evidentiary basis mainly consists of data drawn from American undergraduate students (of Psychology, even). To this end, they review evidence from a variety of domains showing that processes such as visual perception, numerical cognition, cooperation and analytic reasoning may indeed vary across languages and cultures. They conclude that the commonly studied WEIRD subjects (undergraduate students) may be the 'worst population on which to base our understanding of Homo sapiens' (2010a: 22), simply because these subjects far from constitute a representative sample of the world's population. To overcome the WEIRD bias, Henrich *et al*. (2010a) suggest a number of short-term and long-term solutions, including stricter reviewing and publishing guidelines regarding claims for universality, and interdisciplinary networks of behavioural scientists and ethnographers.

The WEIRD argument was generally well-received, with some scholars even suggesting that stronger measures than those identified by Henrich *et al*. (2010a) are necessary if the WEIRD bias is to be properly overcome (e.g. Downey, 2010). However, a decade later, things are more or less business as usual, testifying either to the slow wheels of academia, to the conceptual and methodological difficulties in actually addressing the bias, and/or to a faded interest.[1]

## WEIRDNESS in psycholinguistics: Bibliometrics and studied phenomena

While the concept of WEIRD targets the cognitive sciences at large, and relates to issues of language and the mind, it is yet to be properly applied to the field of psycholinguistics. The keynote article by Henrich and colleagues that introduced the concept of WEIRD and the accompanying commentaries made some important observations about language in general, but seldom explicitly related to psycholinguistic problems, and no remark was made concerning the topics of multilingualism. This is not to say that there have not been other publications addressing the WEIRD bias, for instance by analysing speech processing phenomena in languages that are typologically different from those commonly studied (see contributions in Norcliffe *et al*., 2015), by examining less commonly studied – though not less commonly occurring – language acquisition situations (Bylund & Athanasopoulos, 2014, 2015), or by drawing attention to Western assumptions about the architecture of language (and its underlying mental mechanisms) (Evans & Levinson, 2009). However, despite these valuable contributions, the WEIRD bias is very much a reality of the field, as the overwhelming majority of studies is still being produced in WEIRD settings.

### *Bibliometric figures*

A numerical demonstration of the WEIRD bias may be obtained by means of a bibliometric analysis that examines author affiliations of articles published in journals central to the field. This was done for a number of journals, which belong to the top tiers of the Thomson-Reuter ISI lists of journal rankings based on citations, where psycholinguistic research on multilingualism is usually published (e.g. *Bilingualism: Language and Cognition*, *Cognition*, *Journal of Experimental Psychology: General*, *Journal of Memory and Language*, *Psychological Science*). The period covered is the past 11 years available, from 2006 to 2016.[2] The selected journals, largely published studies from the United States, the United Kingdom and Canada, which taken together top the lists (see Table 10.1 in the appendix). These numbers clearly illustrate the Western concentration of author bases, and by extension, the Western concentration of knowledge production on these topics. It should be acknowledged that some journals (e.g. the *Journal of Experimental Psychology* franchise) are run by the American Psychological Association, and thus likely to attract America-based authors or topics pertinent to the American context. However, this does not detract from the argument that the most influential journals in the field publish research on mainly WEIRD subjects from WEIRD contexts.

In addition to the bibliometric data, it is also possible to adopt a critical perspective on central psycholinguistic research themes, in order to tease out a number of assumptions about language and the mind that are likely rooted in the WEIRD bias. In what follows, we will look at such assumptions with particular attention to the areas of language development and emotive language.

### *Additional language learning*

The study of how an additional language is acquired is central to answering important questions regarding the human language learning ability. Some of these are: Is this ability largely expended with the acquisition of the first language, does it operate within a sensitive period. Traditionally, two different situations of additional language learning have been covered in the psycholinguistic literature. The first concerns the acquisition of a second language (L2) in the setting where it is the main medium of communication. This situation is associated with international migration such as that of a speaker of one language settles down in a new country and acquires the language spoken in that country.

The second situation concerns so-called foreign language learning, whereby an additional language is acquired through formal classroom instruction. Here, contact with the language to be learnt is mainly confined to the classroom context. While these types of learning situations are far from uncommon, they are not the only ones by which an additional language is acquired (cf. Canagarajah, 2007).

Another situation is, for instance, when additional language learning occurs in a multilingual context, and the target language is a *lingua franca* that is not necessarily the L1 of the individuals who use it. In these instances, the learner does not need to relocate to a new country, nor do they need to enrol in classes, in order to acquire the language. Instead, exposure to it, and subsequent acquisition, occurs through natural – and often inevitable – encounters with the language, be it through family members, peers, schooling or so. These kinds of situations are different from the ones commonly studied, crucially because the input is predominantly provided by other L2 speakers,[3] with the implication that what constitutes the 'target language' may in fact be multiple systems with both convergent and idiosyncratic lexico-grammatical rules. In such situations, the traditional concept of nativelike attainment is significantly blurred.

### *Language attrition*

The phenomenon of language attrition is commonly defined as a non-pathological loss or restructuring of language skills that were once possessed (e.g. Schmid, 2013). While being a relatively young field of research, the study of attrition has generated important insights into language development, documenting the (non)stability of linguistic processing and representation. Similar to research on additional language learning, attrition research has tended to focus on situations in which an individual suffers from attrition as he/she moves to another country where another language is the main medium of communication, and exposure to the L1 is thus reduced. Again, while this is not an uncommon situation, it is not the only one in which attrition phenomena may occur. In a multilingual setting, where different languages are used in different contexts and for different purposes, circumstances (e.g. schooling or work-related) may mean that speakers experience reduced L1 input and use, and as a consequence their L1 knowledge is restructured.

In such multilingual settings, instances of L1 restructuring may actually occur without there necessarily being any reduction in L1 input. A less commonly studied situation concerns processing and representation in native speakers of a lingua franca who are constantly exposed to L2 speech. While linguistic input is often assumed to be central for L1 retention, the properties of that input are less studied. If the input contains linguistic features that are different from the ones the speaker once acquired (e.g. different patterns or grammar, and information structure), the speaker's sensitivity to certain linguistic distinctions may be restructured.

Common to the situations of additional language learning and language attrition is the centrality of the notion of nativeness. The native speaker construct has been subject to intense debate within the field of applied linguistics (e.g. Afendras *et al.*, 1995; Birdsong & Gertken, 2013; Cook, 1999; Davies, 2003). This debate has led to considerable criticism of the use of the native speaker's (i.e. the L1 speaker's) behaviour as a

benchmark for L2 attainment and L1 retention. The main argument is that language representation and processing in a bi-/multilingual individual can never be expected to be identical to that of a monolingual individual, because of crosslinguistic influence (compare the notion of 'multicompetence').

*Emotional language*

In research on language and emotions, a long-held view has been that the individual's language of emotions is the L1, and that an L2 does not carry the same emotive loading – if any at all (for a recent discussion, see Caldwell-Harris, 2014). Again, this view clearly stems from (and might hold true for) a predominantly monolingual setting where the L1 is the primary language of communication, but it disregards other potential constellations, which might ultimately reject the alleged privileged status of the L1. As pointed out by Pavlenko (e.g. 2008), sufficient socialization in the L2 may very well turn this language into a primary means of expressing and experiencing emotions. There are other situations in which a language other than the L1 would be used to express emotive language. For instance, in a multilingual setting, a certain language (or languages) may be more strongly associated with or preferred for emotive expression, without that language necessarily being the L1 of the speakers concerned. Instead, societal perceptions of a given language's emotional potential and appropriateness may be what ultimately determines this outcome (Oostendorp & Bylund, 2012). Such a situation would serve to show that factors other than initial exposure or socialization may come into play in determining emotional linguistic behaviour.

While the phenomena outlined above are intensely studied in current psycholinguistic research, they are also specific research topics with specific research questions attached to them. To move beyond this specific agenda and gain a better perspective of the conceptual frames that guide the field, one has to take a step back. In these frames, the phenomena of monolingualism and multilingualism have quite different statuses. Even though current statistics shows that, from a global viewpoint, the number of individuals who use more than one language in their everyday communication far exceeds those who use only one (Aronin & Singleton, 2012), multilingualism is still construed as the exception and monolingualism as the default (for a similar point, see Bak & Mehmedbegovic, 2017). Seeing multilingualism as the exception is not necessarily negative; the way multilingualism is viewed has changed radically over the past century. Initially, linguistic and psychological research conceived of multilingualism as something that was cognitively harmful (e.g. Goodenough, 1926; Saer, 1923), a view that was possibly driven by ideologies of 'one nation, one language' in which the diversity represented by multilingualism had no place (Pavlenko, 2014). In an attempt to change this view, modern-day approaches focus on the potential cognitive advantages

afforded by multilingualism.[4] However, what these views have in common is the conception of multilingualism as an exception, as they both pose the question: 'how does multilingualism influence x or z?' (as opposed to 'how does monolingualism influence x or z?').

## Non-WEIRD as weird in psycholinguistics

While the overwhelming majority of psycholinguistic research is produced in and centred on WEIRD settings, as seen in the previous section, there is a non-negligible number of studies that focus on language and conceptualization in non-WEIRD participants and contexts (e.g. Brown, 2011; Bylund & Athanasopoulos, 2014; Haun & Rapold, 2009; Hobson, 1999; Levinson, 1997; Levinson *et al.*, 2002; Lucy, 1992; Majid & Burenhult, 2014). These studies naturally have great potential to contribute with unique data for testing, for example, allegedly universal behavioural patterns. More often than not, the non-WEIRD evidence serves to reject such alleged universality.[5]

In some instances, however, the non-WEIRD evidence is framed or presented in a somewhat noteworthy way. For instance, a study on colour categorization in a Melanesian community was published in *Nature* as *Colour categories in a* **stone-age tribe** (emphasis added) (Davidoff *et al.*, 1999). While the epithet 'stone-age tribe' might have been a useful rhetorical take to draw attention to the – by WEIRD standards – atypical sample, and thus boost the visibility of the study, it is also an epithet that could be perceived of as less than flattering. In fact, the phrasing is reminiscent of early cultural-anthropological work on pre-modern societies, which were often characterized in pejorative terms (e.g. 'primitive', 'savage' and 'wild'; see discussion in Lévi-Strauss, 1962). In that literature, these terms too served to underscore the studied population's divergence from the WEIRD standards.

Another example of a noteworthy engagement with non-WEIRD evidence is found in a study on metaphors for musical pitch (e.g. a *high*/*low* note) published in *Cognition* (Eitan & Timmers, 2010). Here, typological patterns for expressing pitch are reviewed for a number of different languages with the intention of uncovering potentially universal mappings. Among the typologically very distinct pitch metaphors we find examples relating to 'the Shona mbira (Zimbabwe)' (2010: 406), with low pitch expressed as 'crocodile', and high pitch as 'those who follow crocodiles'. What is implicit in the text, however, is the fact that *mbira* is a musical instrument (a type of lamellophone, sometimes called a 'thumb piano'), and not a language community, as one might think. Evidence of actual usage patterns of crocodile metaphors among Shona speakers is not reported, and the reader is referred to another study for further treatment (Ashley, 2004), which in turn refers to a study on the mbira (Berliner, 1981 [1978]). Even so, later in the study, crocodile terms are compared to

metaphors that are not distinct musical-instrument terms, but language-specific metaphors in common use. The risk of misunderstanding is thus strong, and some studies citing Eitan and Timmers (2010) indeed describe the crocodile expressions as if they were the typical pitch metaphors used by Shona speakers : 'crocodile – which, *among the Shona of Zimbabwe*, corresponds with low pitch' (Zbikowski, 2017: 508, italics added).[6] The fact that the crocodile expression are part of the title of Eitan and Timmers' study, 'Beethoven's last piano sonata and those who follow crocodiles', may further increase the likelihood of misunderstanding. The misunderstanding is likely the result of gaps in or even complete absence of research on the Shona language.

Taken together, these examples illustrate that while non-WEIRD evidence might serve to advance scientific progress around a particular question, it is also sometimes couched in such a way that it seems to represent unusual or atypical instances of human behaviour. Such framing runs the risk of exoticizing the studied behaviour, and ultimately the participants enacting it. In fact, the use of non-WEIRD data in WEIRD research has been criticized for its utilitarian tendencies, whereby non-WEIRD contexts are often simply conceived of as untapped potentials of 'exotic' data (e.g. Comaroff & Comaroff, 2011).

## A Psycholinguistic Utopia

Having outlined WEIRD traits of current psycholinguistic research, I will now in a more explicit way engage with the topic of psycholinguistic utopia. This I will do using as a starting point the case of South Africa, which, as the sections below will show, is characterized by societal multilingualism and, at the same time, a relative absence of psycholinguistic research.

### Multilingualism in South Africa

The current South African constitution states that the official languages of the Republic of South Africa are (in alphabetical order) Afrikaans, English, isiNdebele, isiXhosa, isiZulu, Sepedi, Sesotho, Setswana, siSwati, Tshivenda and Xitsonga. According to the constitution, the provincial governments must promote, regulate and monitor the use of these languages, and use of at least two of them in communication with their citizens. The language diversity of modern-day South Africa is largely a result of the country's political past, which saw, among other things, the arrival of the colonial Germanic languages, an almost complete extinction of the Khoe and San languages, demarcation of national borders with little regard to indigenous groups, and laws that enforced social separation of different ethnolinguistic groups. In addition to its 11 official languages, South Africa also recognizes a number of languages

that are either historically indigenous minority languages (e.g. the Khoi, Nama and San languages) or languages brought to the country through immigration, indentured labour, or the slave trade (e.g. German, Greek, Gujarati, Hindi, Portuguese and Tamil). According to the constitution, these languages must be promoted (see Mesthrie, 2002).

From a legislative point of view, its 11 official languages make South Africa one of the world's most multilingual countries. The country also ranks fairly high in terms of linguistic diversity, as measured by Greenberg's (1956) Linguistic Diversity Index (LDI), which represents the probability that any two random people from the same region (or, in this case, country) will have different L1s. For South Africa, the LDI is 0.87, meaning that the likelihood that two randomly chosen individuals from the population speak the same L1 is 13%. The LDI, along with the multilingual constitution, obviously does not mean that each South African citizen speaks all 11 languages, but according to census data and large-scale studies, the overwhelming majority of the South African population is multilingual (Coetzee-Van Rooy, 2012).

The multilingual situation in South Africa is dynamic in the sense that various studies have documented that the linguistic repertoires of speakers are undergoing a shift, with the English language increasingly gaining ground, often at the expense of other languages. Specifically, it has been observed that there is a tendency in coloured and black[7] communities to use English in private domains, as opposed to Afrikaans or Bantu languages, reflecting either increased bilingualism or language shift (Anthonissen, 2009; Bylund, 2014; de Kadt, 2005; de Klerk, 2000; Deumert, 2010; Dyers, 2008; Kamwangamalu, 2003; Posel & Zeller, 2016). There is also considerable diversity of dialectal and stylized varieties, prompting research into the question of mixed codes (McCormick, 2002; Mesthrie, 2002).

The South African education system to some extent caters for their students of varying linguistic backgrounds. In primary education, schooling might proceed through one or several of the local languages. In secondary education, English is the predominant medium of instruction, independently of the student's L1 or previous language of instruction. In tertiary education, English is the primary medium of instruction. Up until recently, some universities offered dual medium instruction (in languages such as Afrikaans), and other universities may offer interpreting, podcasts, and even tutorials to some extent in local languages.

## Psycholinguistics in South African tertiary education and research

Currently, the psychology of language is a most under-represented research area in South Africa. Sociolinguistic research, on the other hand, is well-represented in the country: several scholars based in South Africa carry out frontline research on sociolinguistic issues, publishing their

findings in high-impact outlets. These differences in disciplinary representation are also reflected in the academic offerings at tertiary education institutions. For instance, up until the year 2017, no South African university offered more than an introductory course (if at all) to psycholinguistics/psychology of language (judging from online programme guides).[8] Of course, this is not at all odd, as it is both natural and strategic that departments choose to build student capacities around their existing strengths.

Another consequence of the scarcity of South African psycholinguistic research is that several psycholinguistic aspects of Southern Bantu languages and Afrikaans are unknown (such as the processing and representation of noun classes or double adpositions). This has also influenced the teaching of psycholinguistics at tertiary level, since teaching materials to a great extent need to rely on WEIRD textbooks and/or WEIRD studies, which may not only have limited ecological validity in the (South) African context, but also South African students may not be familiar with them. Taken together, limited programme offerings and low levels of exposure to local psycholinguistic research reduce the likelihood that students will pursue post-graduate specializations in psycholinguistics. This, in turn, perpetuates the scarcity of psycholinguistic research in the country, and at a more general level, contributes to the slow growth of our knowledge about the psychology of language in non-WEIRD contexts.

At the same time, however, it is of course also legitimate to ask whether there is any need, beyond that of basic research, for South African psycholinguistic research. The answer to such question is a simple yes. Obvious areas of practical application concern acquired and developmental language disorders in multilingual populations, or, more specifically, (1) correctly assessing, diagnosing and remediating language problems in children; (2) addressing problems with the acquisition of literacy in multilingual contexts; or (3) detecting early signs of dementia in elderly people. Similarly, studying conceptual development and cognitive processing in interaction with language acquisition is important to gain a better understanding of the benefits afforded by linguistic diversity and multilingualism, and how these may be productively harnessed in education.

In addition to these more traditional applications are those that concern the psycholinguistics of everyday behaviour. Recent research shows that decisions taken in a L2 may be different from those taken in the L1 (e.g. Geipel *et al*., 2015, 2016; Hayakawa *et al*., 2017; Vives *et al*., 2018). This evidence suggests that individuals whose dominant language is their L1 exhibit greater risk-taking in the L2, are more rational in the L2, and have less-nuanced mental imagery in the L2. These phenomena are often subsumed under the umbrella term 'the foreign language effect'. Clearly, in a country where a significant part of the population operates in a language that is not their L1, it is important to know the extent to which, for example, political decisions may be influenced by said foreign language effect. Another aspect concerns public notices and communications, and the

influence of linguistic categories on their reception. For instance, due to the historical drought that recently hit (and is still affecting) parts of the country, the provincial governments circulate information about water-saving measures. Here, knowledge about the potential influence of spatio-temporal metaphors and tense categories on the perception of temporal proximity of the day the water runs out (so-called Day Zero) can serve to inform the linguistic framing of these notices so that they are optimally designed, and yield the greatest possible effect on water-saving behaviour (e.g. 'Day Zero has been moved *forward*/*backward* by two weeks').

## The utopia: A non-WEIRD psycholinguistics

Against the backdrop of the WEIRD bias, as well as the potential for psycholinguistics in South Africa, I now discuss a utopia of non-WEIRD psycholinguistics. Utopian expressions for an alternative psycholinguistics may be found on the pages of academic exploration such as the present one, which seek to move beyond the WEIRD bias. This type of evidence is more of the kind that Ernst Bloch (discussed in detail by Levitas, 1990: 15) labels *abstract utopia*, which expresses desire and is compared to 'wishful thinking'. Another kind of utopia is found in actual attempts at, in this case, expanding existing South African research on psycholinguistics, such as the establishment of a professional association, the African Psycholinguistics Association (APsA, www.apsa.africa), which seeks to bring together researchers on the African continent working on psycholinguistic topics. Another example along these lines is the construction of a dedicated space, the Multilingualism and Cognition Lab at Stellenbosch University, which seeks to function as a hub for local research on the multilingual mind (https://www.sun.ac.za/english/faculty/arts/linguistics). Following Bloch's taxonomy, these endeavours (see also Norcliffe *et al.*, 2015) are better labelled 'concrete utopia', since they simultaneously anticipate and effect the future.

The starting point for these expressions is the notion of absence: the lack of something which is not WEIRD (publications, textbooks, associations etc.), which in the end can be traced back to the absence of non-WEIRD psycholinguistic research. In this state of absence, the prefiguration of utopia then resides in the matter that can fill the void. Taking the South African situation as a point of departure, one can envisage a psycholinguistic research enterprise that is not dictated by WEIRD biases. Concretely, in this research, pre-conceived ideas about the relationship between order of acquisition of a language and proficiency and emotionality with that language would be few. Instead, linguistic behaviour would be viewed as a dynamic outcome of a combination of experiential factors. As a consequence, the traditional view of native-speaker competence would be untenable, as the conditions underlying such competence would largely be absent. It is important to note here that unlike

critiques of the native speaker construct that target concerning multicompetence, this critique is concerned with societal configurations of language use. Moreover, the creative use of multiple linguistic resources in urban varieties, for example, would pose a challenge not only to linguistic classification but also assumptions about what should be regarded as a language/variety and its psycholinguistic status.

It is also possible to take the reasoning one step further, so as to imagine what biases might be produced in a multilingual setting instead. Here, questions asked about multilingualism in current WEIRD psycholinguistics would be completely flipped. What the brain can do with only one language is what would attract interest. This, then, would give rise to questions such as how is the brain affected by using only one language? How malleable is the monolingual mind? Is there something different about monolingual repertoires? Research on these questions would be published in journals such as *Monolingualism: Language and Cognition*, the *International Journal of Monolingualism* and the *Journal of Monolingual Development*. While an interesting thought experiment, replacing one set of biases with another is not necessarily an improvement of the situation. It does not readily find a place in any version of utopia, as this concept has at its core the notion of 'something better'.

## Concluding Remarks

In the reasoning above, the notion of utopia is used as a tool to construe an alternative reality of knowledge production. The phenomenon treated here (i.e. research) might seem distant from the issues dealt with by previous studies on language and utopia, which have focused on everyday aspects of (linguistic) citizenship as they relate to fields and issues of contestation. While psycholinguistic research might be less present in a direct way in people's everyday lives, the findings it generates can have a massive impact on life choices and opportunities (e.g. education). For this reason, the WEIRD bias relates not only to the academic enterprise, but also to people's everyday life. As such, the psycholinguistic utopia is ultimately connected to participation (or the lack thereof) in knowledge production and an epistemological reorientation to be affected by a next generation of scholars.

## Notes

(1) A few years after WEIRD was introduced, the so-called replicability crisis hit the cognitive sciences (Open Science Collaboration, 2015), with an unusually large number of studies failing to replicate. As this has become an increasing concern of the field, it may also have contributed to pushing the concept of WEIRD into the periphery.

(2) I am thankful to Robyn Berghoff for helping me access these data.

(3) It could be argued that this kind of situation is also found in certain linguistically diverse urban settings in the west, where there are few native speakers of the majority language. While this is true, it should also be recalled that in WEIRD contexts, those situations are experienced by a rather small part of the population, making them the exception rather than the rule. Studying such less typical WEIRD subjects may thus be informative.
(4) Note, however, that this view is currently being questioned, in view of recent evidence suggesting that the influence of multilingualism on cognitive and linguistic abilities is either inconsistent, negligible, or confounded with other factors (Bylund *et al*., 2019; Lehtonen *et al*., 2018).
(5) An example would be the assumption that space is the only concrete domain used for temporal expressions. This was disproved in Sinha *et al*.'s (2011) study on the Amondawa language.
(6) While I myself do not have systematic evidence of how speakers of Shona express pitch, the 10 or so Shona speakers I have run the crocodile metaphors past have reacted with laughter and/or incredulity, saying that they have never heard of it.
(7) These terms denote ethnic origin and were established during the apartheid era. Though not uncontested in contemporary South African society, they are widely used in official statistics, mass media, academia, etc.
(8) It should be noted that other courses/modules (e.g. on L1 development, L2 acquisition may of course bring in psycholinguistic issues, but they are not solely dedicated to psycholinguistics.

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## Appendix

**Table 10.1** Figures of author affiliations 2006–2016 of selected journals for articles containing the keywords 'bilingualism', 'multilingualism' and 'second language'. (The left column under each journal indicates country of author affiliation; the right column indicates number of authors with an affiliation in that country.) Source: SCOPUS.

| **Applied Psycholinguistics** | | **Bilingualism: Language and Cognition** | | **Cognition** | | **Journal of Experimental Psychology: General** | |
|---|---|---|---|---|---|---|---|
| United States | 77 | United States | 198 | United States | 58 | United States | 14 |
| Canada | 34 | United Kingdom | 86 | United Kingdom | 25 | United Kingdom | 10 |
| United Kingdom | 29 | Canada | 61 | Canada | 12 | Canada | 8 |
| Netherlands | 15 | Netherlands | 52 | Spain | 10 | Belgium | 6 |
| Germany | 12 | Germany | 40 | France | 9 | France | 4 |
| Australia | 6 | Spain | 28 | Germany | 8 | Germany | 4 |
| Japan | 5 | Australia | 16 | Israel | 7 | Netherlands | 3 |
| Turkey | 5 | Belgium | 15 | Japan | 7 | Spain | 3 |
| Greece | 4 | Hong Kong | 13 | Netherlands | 7 | China | 2 |
| China | 3 | Italy | 12 | Italy | 5 | Portugal | 2 |
| Israel | 3 | France | 11 | Australia | 3 | Italy | 1 |
| Singapore | 3 | China | 10 | Belgium | 3 | Japan | 1 |
| France | 2 | Sweden | 10 | Singapore | 3 | Turkey | 1 |
| Hong Kong | 2 | Israel | 9 | Argentina | 2 | | |
| Italy | 2 | Japan | 8 | Greece | 2 | | |
| Norway | 2 | Singapore | 6 | Hong Kong | 2 | | |
| South Korea | 2 | Switzerland | 6 | Austria | 1 | | |
| Spain | 2 | Norway | 5 | Chile | 1 | | |
| Argentina | 1 | Finland | 4 | China | 1 | | |
| Belgium | 1 | Portugal | 4 | Colombia | 1 | | |
| Finland | 1 | Taiwan | 4 | Cyprus | 1 | | |
| India | 1 | Saudi Arabia | 3 | Denmark | 1 | | |
| Mexico | 1 | South Korea | 3 | Finland | 1 | | |
| Qatar | 1 | Brazil | 2 | Luxembourg | 1 | | |
| Slovakia | 1 | Denmark | 2 | Mexico | 1 | | |
| Sweden | 1 | Hungary | 2 | Poland | 1 | | |
| Taiwan | 1 | India | 2 | Portugal | 1 | | |
| United Arab Emirates | 1 | Mexico | 2 | Switzerland | 1 | | |
| | | Poland | 2 | Taiwan | 1 | | |
| | | Russian Federation | 2 | | | | |
| | | South Africa | 2 | | | | |
| | | Turkey | 2 | | | | |
| | | United Arab Emirates | 2 | | | | |
| | | Argentina | 1 | | | | |
| | | Cyprus | 1 | | | | |
| | | Czech Republic | 1 | | | | |
| | | Greece | 1 | | | | |
| | | Iran | 1 | | | | |
| | | Macao | 1 | | | | |
| | | Malta | 1 | | | | |
| | | New Zealand | 1 | | | | |
| | | Serbia | 1 | | | | |
| | | Thailand | 1 | | | | |
| | | Uruguay | 1 | | | | |

| Journal of Memory and Language | | Psychological Science | | Studies in Second Language Acquisition | |
|---|---|---|---|---|---|
| United States | 30 | United States | 14 | United States | 104 |
| United Kingdom | 14 | Spain | 6 | United Kingdom | 29 |
| Netherlands | 13 | United Kingdom | 5 | Canada | 27 |
| Spain | 10 | Canada | 4 | Sweden | 12 |
| Belgium | 8 | France | 3 | Netherlands | 11 |
| Canada | 4 | Belgium | 2 | Germany | 10 |
| China | 4 | Germany | 1 | Japan | 8 |
| France | 3 | Israel | 1 | New Zealand | 7 |
| Australia | 2 | Italy | 1 | South Korea | 6 |
| Germany | 2 | Luxembourg | 1 | Australia | 5 |
| Finland | 1 | Portugal | 1 | China | 4 |
| Hong Kong | 1 | Sweden | 1 | France | 4 |
| Israel | 1 | Switzerland | 1 | Belgium | 3 |
| Japan | 1 | | | Hong Kong | 3 |
| Switzerland | 1 | | | South Africa | 2 |
| | | | | Spain | 2 |
| | | | | Taiwan | 2 |
| | | | | Brazil | 1 |
| | | | | Chile | 1 |
| | | | | Denmark | 1 |
| | | | | Finland | 1 |
| | | | | Italy | 1 |
| | | | | Malaysia | 1 |
| | | | | Mexico | 1 |
| | | | | Poland | 1 |
| | | | | Puerto Rico | 1 |
| | | | | Thailand | 1 |
| | | | | Turkey | 1 |