# 27

# Neural consequences of bilingualism for cortical and subcortical function

Jennifer Krizman and Viorica Marian

We are what we repeatedly do. Excellence, then, is not an act, but a habit.

(Aristotle)

## 27.1 Introduction

Experience is a prime catalyst for change in the human brain and this capacity for change enables us to optimally engage with our environment. Just as continued practice swinging a tennis racket can lead to increased muscle strength in the racket-swinging hand (Lucki & Nicolay, 2007), the nervous system dynamically adapts to meet task demands. Underlying this experience-dependent plasticity are structural and functional changes in brain regions engaged by these experiences. For example, learning to play golf results in plasticity of the sensorimotor cortex (Bezzola et al., 2011), learning to juggle induces plasticity in neural centers devoted to complex visual processing (Draganski et al., 2004), and practicing a musical instrument drives plasticity in auditory areas (Kraus & Chandrasekaran, 2010; Schlaug, 2001; Schlaug, Norton, Overy, & Winner, 2005). While active engagement in skill-based training reshapes training-related neural circuits, native language acquisition, a fundamental aspect of normal human development, plays a key role in shaping neural circuitry throughout the brain (reviewed in Huttenlocher, 2009). This pervasive wiring of cognitive and sensory circuits for language facilitates expertise in a given language and in doing so language exerts a stronghold on sensory abilities such that

The authors would like to thank Anthony Shook, Scott Schroeder, James Bartollotti, Sarah Chabal, and Dr. Tuan Lam for helpful comments on earlier drafts of this manuscript. Preparation of this chapter was supported in part by grant NICHD 1R01HD059858 to Viorica Marian.

seeing an object is sufficient to activate its linguistic label (Chabal & Marian, under review).

Acquisition of more than one language offers a distinct way to tune cognitive and sensory circuits to wire the brain with the ability to communicate in a multilingual environment (e.g., Abutalebi et al., 2011; Luk et al., 2011; Mechelli et al., 2004). For example, by learning more than one language, bilinguals necessarily have to make a variety of sound-to-meaning connections that they must subsequently compartmentalize into their two language systems (Shook & Marian, 2013). Moreover, whereas language input leads to activation of the single language system in a monolingual, in a bilingual both languages are automatically activated (Kuipers & Thierry, 2010; Marian & Spivey, 2003a; Shook & Marian, 2012; Spivey & Marian, 1999) and so one language must be inhibited for communication to proceed (Kroll et al., 2008; van Heuven et al., 2008). This process of cross-linguistic coactivation and the need to inhibit the irrelevant language necessitates increased activation of the executive system during communication for a bilingual relative to a monolingual. The heightened need to actively engage inhibitory and attentional processes - functions of the executive system - during communication leads to an enhancement in some executive abilities. For example, bilinguals show cognitive control advantages on tasks requiring attentional focus, conflict resolution, switching, and flexibility (Bialystok, 2005, 2009c, 2011; Bialystok & Craik, 2010; Bialystok & Majumder, 1998; Bialystok & Martin, 2004; Bialystok, Martin, & Viswanathan, 2005; Bialystok & Viswanathan, 2009; Carlson & Meltzoff, 2008; Krizman et al., 2012; Martin-Rhee & Bialystok, 2008). Moreover, because bilinguals may utilize the components of the executive network differently as a result of their experience managing multiple languages (Abutalebi et al., 2011) this may result in differences in how they interact with their auditory environment relative to monolinguals (Blumenfeld & Marian, 2011). Given this unique auditory-executive link resulting from experience with more than one language, in this chapter we explore the neural consequences of multilingualism on cognitive and sensory function through the lens of the auditory and executive systems.

## **27.2** Anatomy of the auditory and executive systems

## 27.2.1 Overview of the executive system

The executive system exerts top-down control on cognitive and sensory processing. Brain areas that are implicated in cognitive control include the prefrontal cortex, the anterior cingulate cortex, and the basal ganglia, including the caudate and putamen of the striatum (see Figure 27.1) (MacDonald et al., 2000; Redgrave, Prescott, & Gurney, 1999; Zou et al., 616

#### JENNIFER KRIZMAN AND VIORICA MARIAN

2012). The left dorsolateral prefrontal cortex is involved in the implementation of control and in representing and maintaining the attentional demands of the task (MacDonald et al., 2000). The dorsolateral prefrontal cortex is activated when tasks require maintenance and manipulation of information in working memory. The anterior cingulate cortex is involved in performance monitoring (MacDonald et al., 2000) and is called upon in tasks that require divided attention, novel or openended responses, or overcoming an automatic or primed response (Abutalebi et al., 2008; Abutalebi & Green, 2007). It tracks errors and is involved in response conflict by providing feedback to lower level processing centers (MacDonald et al., 2000). The basal ganglia are composed of the substantia nigra, globus pallidus, nucleus accumbens, subthalamic nuclei and the striate, which includes the caudate and putamen. In the striate, the caudate is involved in learning and memory as well as feedback processing (reviewed in Packard & Knowlton, 2002). It is also involved in sentence comprehension and language switching (Zou et al., 2012).

## 27.2.2 Overview of the auditory system

The auditory system encodes sounds, including language, and consists of a series of neural relays extending from the cochlea to the cortex (see Figure 27.1). At the cochlea, the sound wave is translated into electricity, the currency of the nervous system, and from there is conducted along the ascending auditory pathway. These ascending fibers, or "bottom-up" pathway, carry all auditory-based sensory signals to the brain: there is not a unique ascending pathway for speech relative to non-speech sounds. However, the auditory midbrain and primary auditory cortex do show specialized responses to meaningful vocalizations (De Lucia, Clarke, & Murray, 2010; Woolley et al., 2005; Woolley, Gill, & Theunissen, 2006; Woolley, Hauber, & Theunissen, 2010). What mediates this differential neural response for conspecific vocalizations relative to other auditory stimuli is signaling from the "top-down" or descending auditory system, which extends from the cortex to the cochlea. These descending fibers carry regulatory or feedback information from higher to lower processing centers with the effect of modifying the ascending signal along the auditory pathway. This pathway can function to enhance sensory encoding of relevant signals and inhibit or minimize encoding of irrelevant ones, suggesting an intimate link between auditory and executive systems. Structural support for this link is seen in the projections between executive and auditory centers of the cortex, such as the link between the superior temporal gyrus (i.e., auditory cortex, see Figure 27.1) and the anterior cingulate cortex (Jürgens, 1983), as well as connections between the inferior colliculus



Figure 27.1 Schematic of the nuclei of the auditory and executive systems. Note: Auditory processing begins at the cochlea, where sound waves are translated into electricity, the currency of the nervous system. This electrical signal is carried from the cochlea to the cochlear nuclei (CN) via the cochlear division of the vestibulocochlear nerve (i.e., 8th nerve) and it subsequently ascends to the superior olivary complex (SOC) of the brainstem. From the brainstem, the signal travels to the inferior colliculus (IC) of the midbrain by way of the lateral lemniscus (LL). The inferior colliculus projects auditory information to the medial geniculate body (MGB) of the thalamus in the midbrain, which subsequently sends auditory information to the primary and secondary auditory cortex (AC) in the left and right superior temporal gyri located on the temporal lobes. At each neural relay, innervation from the ascending system is tonotopically maintained, meaning that the frequency information from the sensory signal is conserved in a spatial arrangement throughout the auditory system. Brain areas that are implicated in cognitive control include the prefrontal cortex, the anterior cingulate cortex, and the basal ganglia, including the caudate and putamen of the striatum. Gray lines indicate top-down (efferent) connections, black lines indicate bottom-up (afferent) projections. Gray ovals are nuclei of the auditory system and black ovals are relays of the executive system.

(i.e., auditory midbrain, see Figure 27.1)<sup>1</sup> and basal ganglia (Casseday et al., 2002; Moriizumi & Hattori, 1991). Additionally, encoding of auditory information in both the midbrain and cortical structures are sensitive to attention (Hairston, Letowski, & McDowell, 2013; Jäncke, Mirzazade, & Joni Shah, 1999; Mesgarani & Chang, 2012; Rinne et al., 2008; Woldorff et al., 1993). These connections between neural regions devoted to auditory processing and executive function likely exist to enhance encoding of acoustic stimuli that carry a learned behavioral significance, such as

<sup>&</sup>lt;sup>1</sup> The inferior colliculus is located in the midbrain. It is an auditory nucleus that integrates across many ascending auditory fibers and is innervated by efferent fibers from cortical structures. The inferior colliculus plays a key role in sound localization, integration of sensory information across different sensory systems (e.g., audio and visual), and potentially filtering of relevant from irrelevant auditory signals (the inferior colliculus is discussed in great detail in Casseday, Fremouw, & Covey, 2002; Huffman & Henson, 1990).

#### JENNIFER KRIZMAN AND VIORICA MARIAN

language, and may underlie the specialized neural responses to speech that are evident in these auditory cortical and midbrain structures.

## **27.3** Auditory and executive systems develop under the influence of language experience

## 27.3.1 A monolingual perspective on language development

From infancy, the brain is sculpted by experience and experience provides a strong influence on our subsequent interactions with the world. Through experience, our nervous system becomes capable of dynamically responding to the world in a behaviorally appropriate manner. Within the context of language learning, experience-dependent plasticity in the auditory and executive systems is a natural developmental process that selectively strengthens communication abilities for one's native language. Indeed, while infants are able to discriminate phonetic contrasts across many languages for a short period after birth (Eimas et al., 1971; Trehub, 1976; Werker & Tees, 1984), with continued exposure to a native language, discrimination abilities are selectively honed for that native language (Kuhl et al., 2006). As this process occurs, the infant transitions from being a universal speech perceiver to a language-specific speech perceiver by 6 to 12 months of age (Cheour et al., 1998; Kuhl et al., 1992, 2006). These enhancements of within-language phoneme discrimination provide the building blocks on which sound-to-meaning mappings for that language can be made. However, expertise in the native language comes at the expense of perception of non-native languages: as fluency in the native language increases from phoneme discrimination to knowledge of words and phrases and the acquisition of syntax, the individual becomes relatively insensitive to non-native contrasts (Krishnan et al., 2005; Miyawaki et al., 1975). Accompanying this change in behavior is a change in the underlying neural architecture.

During normal development of a single language, exposure to native phonemic contrasts sculpts the neural architecture to selectively enhance the recognition of these contrasts while diminishing discrimination of non-native contrasts (Cheour et al., 1998; Kuhl et al., 2006). The neural changes underlying language development appear to rely on the same mechanisms that are known to underlie development generally (Nixdorf-Bergweiler et al., 1995). Normal development is characterized by excessive proliferation of synapses early in life, which can be indexed as changes in gray matter<sup>2</sup> density or gray matter volume (Craik & Bialystok, 2006; Gilmore et al., 2007). Across the brain, this heightened synaptic density<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> Gray matter is the collective of neuronal cell bodies, dendrites, unmyelinated axons, glial cells (i.e., supporting cells), and blood vessels (i.e., capillaries).

 $<sup>^{\</sup>rm 3}\,$  Synaptic density refers to the number of synapses per unit area on a given neuron.

persists through early childhood but synapses are subsequently pruned through late childhood into early adulthood to include those that are necessary for function, such as the connections enabling communication in one's native tongue<sup>4</sup> (Chechik, Meilijson, & Ruppin, 1999; Craik & Bialystok, 2006; Paolicelli et al., 2011). This synaptic pruning is experience dependent (Zuo et al., 2005), is a neural correlate of learning (Craik & Bialystok, 2006) and is competitively driven by Hebbian mechanisms (Hebb, 1949), where neurons activated in response to an experience can strengthen one another and their strengthened activation can lead to the elimination of quiescent synapses (Chechik et al., 1999; Glazewski & Fox, 1996). Ultimately, synaptic pruning increases synaptic efficiency (Balice-Gordon & Lichtman, 1994; Kerschensteiner et al., 2009; Mimura, Kimoto, & Okada, 2003). The outcome of this synaptic pruning is the formation of an expert system that is optimally primed to respond to the environment in a way that has been behaviorally meaningful in prior experiences (e.g., a native English speaker becomes expertly capable of communicating in English).

Additionally, during this period of early language development, changes are occurring in white matter, which is primarily made up of myelinated<sup>5</sup> axons. Although changes in myelination may be largely genetically preprogrammed (Craik & Bialystok, 2006; Tsuneishi & Casaer, 2000) experience does appear to play some role in myelination as it has been shown that increased electrical activity in axons can drive increases in myelination, while a lack of electrical activity can lead to reductions in myelination of those silent axons (Demerens et al., 1996). Given this relationship between myelination and neural activity, it is possible that white matter density may increase with second language experience (e.g., Mohades et al., 2012).

## 27.3.2 A sensitive period for language learning

Optimal native-language learning occurs within a sensitive period (Werker & Tees, 2005).<sup>6</sup> Though the term critical period and sensitive period have sometimes been used interchangeably (e.g., Bruer, 2001; Ruben, 1997), they refer to two distinct ideas. A *critical period* is defined as a developmental time point in which an experience must occur for a skill (such as language) to be acquired (Lenneberg, 1967). A *sensitive (i.e., optimal) period*, however, is defined as a time when an experience can have the

<sup>&</sup>lt;sup>4</sup> These changes in synaptic density are not uniform throughout the brain. Maturation of brain structures occurs in a caudal-to-rostral direction (Rakic, Bourgeois, & Goldman-Rakic, 1994) with synaptic density peaking in the auditory system at 3 months (Huttenlocher & Dabholkar, 1997), followed by experience-based pruning, a timescale that supports a relationship between changes in synaptic connectivity in auditory structures and language development.

<sup>&</sup>lt;sup>5</sup> Myelination is the accumulation of a fatty layer around a nerve cell, normally around the axon of the nerve cell, to improve transduction of the electrical signal that is carried by the nerve.

<sup>&</sup>lt;sup>6</sup> To avoid confusion, Werker and Tees refer to this period as an "optimal period." This is because until recently 'critical period' and 'sensitive period' were used interchangeably when describing language acquisition.

620

#### JENNIFER KRIZMAN AND VIORICA MARIAN

greatest influence on acquiring a particular skill (Bornstein, 1989; Knudsen, 2004). Early childhood is a developmental period when neural resources are in abundance and the nervous system is highly malleable (Chechik, Meilijson, & Ruppin, 1998), two necessary ingredients of a sensitive period (Greenough, Black, & Wallace, 1987; Jolles & Crone, 2012; Knudsen, 2004) and so early childhood has been suggested as being a sensitive (i.e., optimal) period. It is within a sensitive period that the greatest changes in synaptic density, and subsequently gray matter volume, occur (i.e., experience-dependent pruning of the overabundance of existing synaptic connections; Knudsen, 2004). Native language experience within this sensitive window of development facilitates expertise in the language while failure to be exposed to language within this optimal period results in difficulty acquiring native-like language abilities (as evidenced by children raised in isolation, Curtiss, 1977, 1989). Auditory-based language input during the sensitive period appears to be a major factor in language outcomes as evidenced by the relationship between age of cochlear implantation and eventual language abilities (McConkey Robbins et al., 2004) and the inability of a young bird to learn its song in the absence of a tutor early in life (Doupe & Kuhl, 1999; Mooney, 1999). Moreover, evidence from deaf children implanted with cochlear implants at various ages within this optimal developmental window also suggests that auditory-based language experience provides the scaffolding upon which some executive abilities develop (Cleary, Pisoni, & Geers, 2001; Conway, Pisoni, & Kronenberger, 2009).

## 27.3.3 Neural consequences of second language learning

In regard to second language learning, there is a strong relationship between the age at which a second language is acquired and the subsequent proficiency in that language (e.g., see Hakuta, Bialystok, & Wiley, 2003), where a later age of acquisition often relates to lower proficiency. Given that some level of second language proficiency is seen throughout life, this has been taken as evidence against the 'critical period hypothesis' (Birdsong & Molis, 2001; Flege, 1999; Hakuta et al., 2003), which posits that the nervous system is only capable of language acquisition within a finite developmental period extending from infancy to puberty (e.g., see Lenneberg, 1967). In addition to second language learning, evidence of late-in-life learning and subsequent neuroplasticity for other skills has further debunked the hypothesis that acquisition of a skill must occur before the door to the critical period closes (Boyke et al., 2008; Draganski et al., 2004).

Although the greatest neural and behavioral changes tend to occur early in childhood, in contrast to the critical period hypothesis, experiencebased neuroplasticity persists throughout life, suggesting that the door for learning never fully closes. That ultimate attainment wans with increasing age of acquisition would however support the proposed 'sensitive period' (Johnson & Newport, 1989; Krashen, Long, & Scarcella, 1979). Indeed, it would be expected that a sensitive period – especially one that slowly declines but never fully closes - would result in a negative relationship between age of acquisition and proficiency, with the trend that earlier acquisition relates to higher proficiency and later acquisition relates to lower proficiency. On the other hand, the relationship between age of acquisition and proficiency also has been interpreted as resulting from greater interference by the more developed native language system with increasing age of second language acquisition (e.g., see Flege, Yeni-Komshian, & Liu, 1999). Whether the relationship between proficiency and age of acquisition results from maturational (i.e., optimal period) changes or interference from prior learning, it is likely that neural encoding of the second language is influenced by proficiency and acquisition age. In support of a relationship between brain structure and behavior, these metrics (i.e., proficiency and age of acquisition) have been shown to track with differences in neural encoding of the second language: poorer neural responses to second language utterances, as indexed by evoked response potentials, are seen with increasing age of second language acquisition (e.g., Peltola et al., 2012; Weber-Fox & Neville, 1996) and decreased proficiency (Peltola et al., 2003).

These changes in the evoked neural response to second-language utterances likely reflect differences in the neural architecture underlying the second-language abilities, with more robust evoked responses relating to enhancements in the neural structures. Support for this link between auditory evoked potentials and neural structure comes from work in congenitally deaf cats fitted with cochlear implants which find that evoked activity increases as gray matter density increases (i.e., with increased synaptic density; Kral & Sharma, 2012; Kral et al., 2005). Therefore, increases in evoked response potential in individuals who acquired their second language early in life suggests that linguistic experience increases gray matter density, potentially through increases in synaptic connectivity, and that differences in age of second language acquisition are linked to differences in the underlying neural architecture (e.g., Grogan et al., 2012). Moreover, if the auditory and executive systems are involved in second language acquisition and language acquisition is heightened during the sensitive period, then areas devoted to auditory and executive processing should show greater gray matter density in multilinguals relative to monolinguals and this change in gray matter density should be dependent on age of acquisition, with larger increases in gray matter density being seen in bilinguals who learned both languages earlier in life (e.g., see Mechelli et al., 2004). Furthermore, if plasticity in the auditory and executive systems are dependent on language experience, then the degree of plasticity observed in these regions should be dependent upon the number of languages the

#### JENNIFER KRIZMAN AND VIORICA MARIAN



**Figure 27.2** Schematic of the nuclei of the auditory and executive systems. Note: The darker-colored structures are neural relays known to be sensitive to multilingualism. Abbreviations are: CN: cochlear nucleus; SOC: superior olivary complex; IC: inferior colliculus; MGB: medial geniculate body; AC: auditory cortex; BG: basal ganglia; ACC: anterior cingulate cortex; PFC: prefrontal cortex

individual knows (e.g., trilinguals would show greater plasticity than bilinguals).

Indeed, evidence for language-dependent plasticity resulting in enhancements in neural structure for bilinguals relative to monolinguals is seen in both auditory-related and executive systems. Bilinguals who learned both languages within the presumed sensitive period for language (Johnson & Newport, 1989; Ruben, 1997) demonstrate structural differences from monolinguals in Heschl's gyrus (Ressel et al., 2012), an area of the brain that comprises the primary auditory cortex (Figure 27.2). Ressel and colleagues found that early Spanish–Catalan bilinguals had larger Heschl's gyrus volume than Spanish monolinguals. This volume difference was driven by greater volume of both white and gray matter in Heschl's gyrus. Moreover, enhanced gray matter density in the inferior colliculus (i.e., auditory midbrain, Figure 27.2) has been found for simultaneous interpreters (Green, Crinion, & Price, 2006), lending further support to the involvement of auditory areas in multilingual language acquisition and use.

These structural enhancements in the auditory system are not limited to those who learned to speak multiple languages earlier in life. Longitudinal studies assessing second language learning in adults have found structural enhancements following second language learning in areas known to subserve language and auditory function, including increases in gray

622

matter volume in the left inferior frontal gyrus (Osterhout et al., 2008; Stein et al., 2012), and increased cortical thickness in the superior temporal gyrus (which contains the primary auditory cortex, see Figure 27.2; Mårtensson et al., 2012). Additionally, although unable to disentangle preexisting differences in neural structure from language training induced plasticity, two recent studies have shown that for monolinguals learning a foreign speech contrast, those who learned the foreign contrasts had a larger Heschl's gyrus volume than those who struggled to learn the contrast (Golestani et al., 2007; Wong et al., 2008). Taken together, these results show that cortical and subcortical areas involved in auditory processing are sensitive to language experience and that these structures are likely involved in language acquisition and use for both monolinguals and bilinguals. Through their role in language learning, these auditory regions show higher gray matter density with increasing proficiency in the second language, suggesting a heightened involvement of these regions during multilingual communication.

Additionally, observations have been made for structural plasticity in areas that integrate auditory signals with information from other systems involved in language processing; and, these studies have found that the amount of plasticity in these regions is related to age of second language acquisition. For example, Mechelli and colleagues found higher gray matter density in the left inferior parietal cortex for bilinguals relative to monolinguals (Mechelli et al., 2004). The left inferior parietal region includes the angular gyrus and supramarginal gyrus. It lies roughly superior and posterior to the primary auditory cortex and it may provide an important connection between the auditory perception of a speech sound and its motor production (Hickok & Poeppel, 2000) as it is known to project to Broca's area (Aboitiz & García, 1997). Not only are these auditory-related areas sensitive to age of acquisition of the second language, but they also demonstrate increased plasticity with increased number of languages. For example Grogan and colleagues (2012) examined structural plasticity in bilinguals and multilinguals and found that multilinguals who spoke two or more non-native languages had higher gray matter density in the right posterior supramarginal gyrus compared to bilinguals who only spoke one non-native language. Moreover, in bilinguals, gray matter density in the left pars opercularis (i.e., part of the left inferior frontal gyrus that comprises Broca's area) was positively related to lexical efficiency in their second language. Other recent work has shown that in L1-German speakers increases in gray matter volume in the supramarginal gyrus and Broca's area relate to better imitation of words and sentences in their second language (i.e., English) as well as a foreign language (i.e., Hindi) (Reiterer et al., 2011). Though for a long time Broca's area was thought to be involved exclusively in language production, there is evidence that this area is also involved in language comprehension, including the processing of complex sentences (D'Ausilio, Craighero, & Fadiga, 2012;

#### JENNIFER KRIZMAN AND VIORICA MARIAN

Rogalsky & Hickok, 2011) and understanding of auditorily presented instructions (Schäffler et al., 1993). Thus, not only is the neural architecture of the auditory midbrain (i.e., inferior colliculus) and auditory cortex (i.e., superior temporal gyrus) shaped by language experience, but the cortical areas that these structures send auditory information to, such as the angular gyrus and supramarginal gyrus, are also sculpted by experience with multiple languages. This plasticity suggests that brain regions that interact with auditory structures are also highly involved in multilingual communication.

It is not only auditory areas or auditory-associated areas of the brain that show plasticity with the acquisition of a second language. Studies have also shown that following acquisition of novel phonological-toorthographic mappings, larger evoked responses to the learned orthography are seen in the visual word form area, which has been taken as evidence for experience-dependent plasticity (Song et al., 2010). Moreover, while future research should investigate the structural changes associated with improved production in a second language, behavioral measures of learning a difficult to perceive phonetic contrast in a second language (e.g., |r|-|l| distinctions for Japanese speakers) appear to support the idea that changes in performance are driven by Hebbian-based plasticity (McCandliss et al., 2002).

Moreover, the brain areas implicated in cognitive control (i.e., the prefrontal cortex, the anterior cingulate cortex, the caudate and putamen of the striatum, the inferior parietal lobe and the supplementary motor area) (Abutalebi et al., 2011; Zou et al., 2012) also show plasticity that is related to language experience (Figure 27.2). For example, it has been shown that bimodal<sup>7</sup> bilinguals have greater gray matter density than monolinguals in the head of the left caudate nucleus (Zou et al., 2012). This neural structure is called upon when bilinguals switch between languages (Abutalebi et al., 2008) or when bilinguals encounter response competition (Abutalebi et al., 2008). It is likely, then, that the continued use of the caudate by bilinguals during daily communication leads to experience-based enhancements in the synaptic density of this structure. Furthermore, differences have been found between monolinguals and bilinguals in the anterior cingulate cortex. Though differences were not seen in overall gray matter density in this region, only in bilinguals was there a positive relationship between gray matter density in the anterior cingulate cortex and a measure of conflict resolution (Abutalebi et al., 2011). These results suggest that the neural infrastructure of the bilingual anterior cingulate cortex is optimally wired for resolving conflict and that the executive system is enhanced through experience with more than one language. Additional research should address the roles of age of acquisition and effects of knowing

<sup>7</sup> Bimodal bilinguals are individuals who know two languages that differ in modality (e.g., oral and signed language), while a unimodal bilingual is an individual whose two languages are in the same modality (e.g., two spoken languages).

624

three or more languages on the structural plasticity of networks within this system.

Language is a multifaceted ability that relies on the integration of information across systems and so in addition to greater neural connectivity within the neural structures involved in auditory and executive processing, it is likely that the connections between these structures would be heightened in multilinguals as well. Indeed, in children aged 8-11 years, using fractional anisotropy<sup>8</sup> as an index of white matter organization and structure, white matter along the left inferior occipitofrontal fasciculus was found to be higher in simultaneous bilinguals as compared to monolinguals, while sequential bilinguals had levels that were intermediate relative to the two other language groups (Mohades et al., 2012). This inferior occipitofrontal fasciculus is thought to be involved in semantic processing (Mandonnet et al., 2007) and is a tract that connects the venterolateral and dorsolateral prefrontal cortex with the posterior temporal lobe and the occipital lobe (Maheshwari, Klein, & Ulmer, 2012). Similarly, in older adults, white matter integrity in the corpus callosum is maintained in bilinguals, whereas monolinguals show age-related declines in white matter (Luk et al., 2011). The corpus callosum is the largest white matter structure in the brain and runs along the base of the cortex. It consists of a bundle of myelinated neural fibers that connect the two cerebral hemispheres. The differences in white matter integrity that are observed between older adult bilinguals and monolinguals were evidenced by higher fractional anisotropy values in the bilingual group that extended from the bilateral superior longitudinal fasciculi<sup>9</sup> to the right inferior occipitofrontal fasciculus and uncinate fasciculus<sup>10</sup> (Luk et al., 2011). Enhancement of these neural tracts in bilinguals suggests that multilanguage experience leads to a pervasive rewiring in the neural architecture, likely to meet the need for enhanced and efficient communication between the multitude of systems (e.g., auditory, visual, motor, executive) that are involved in language processing, a need that is presumed to increase with the addition of more than one language. Finally, young adults participating in intensive classroom instruction of Chinese demonstrated pervasive increases in white matter throughout the brain, which the authors interpreted as likely reflecting increased myelination; and, these increases positively correlated with class performance (Schlegel & Rudelson, 2012). The observed changes in white matter during language

<sup>&</sup>lt;sup>8</sup> Fractional anisotropy is a measure of the directionality of diffusion of water molecules in the brain, whereby molecules located within a tract are restricted to diffuse in a specific (i.e., anisotropic) direction while water molecules outside of a tract have less restrictions on their movement. Fractional anisotropy is often used in diffusion imaging as an index of fiber density, myelination, or axon diameter (discussed in Hasan & Narayana, 2003).

<sup>&</sup>lt;sup>9</sup> The bilateral superior longitudinal fasciculi are a pair of bidirectional bundles of neurons that connect the fronterior to the posterior of the cortex. This tract lies superior to the corpus callosum.

<sup>&</sup>lt;sup>10</sup> The uncinate fasciculus is a white matter tract that connects structures of the limbic system located in the temporal lobe with limbic structures in the frontal lobe.

learning provide additional evidence for the role of language in driving neural enhancements.

## 27.3.4 Potential mechanisms underlying differences in neural infrastructure

Two possible mechanisms may underlie differences in neural structure between monolinguals and multilinguals: increased synaptic pruning in monolinguals (de Bot, 2006) and structural plasticity in multilinguals (Mechelli et al., 2004). The close of the sensitive period is marked by stabilization of neural circuitry and a significant reduction in experiencedependent synaptic pruning (Jolles & Crone, 2012; Knudsen, 2004). It is possible that monolingual language abilities are optimal in a system that has fewer synaptic connections than what is needed to facilitate multilingual communication. Experience with a single language within this sensitive window would therefore lead to greater synaptic pruning in the monolingual brain (de Bot, 2006). This honed system would afford the monolingual expertise in the native language but may come at the expense of easily acquiring new languages. A relationship between language experience and amount of synaptic pruning would suggest that acquisition of more than one language inside the sensitive period would result in a greater number of synaptic connections being retained in multilinguals. Moreover, it is possible that the number of connections that are maintained are also dependent on age of acquisition (e.g., Mechelli et al., 2004) in addition to the number of languages acquired within this window (one language vs. two languages, e.g., Mohades et al., 2012).

It is also likely that differences in the neural architecture of monolinguals and multilinguals results from experience-induced plasticity and growth of additional neural connections in the multilingual brain. The differences in gray matter density and volume observed between multilinguals and monolinguals could come from experience-induced increases in synaptic connectivity in areas that subserve multilingual language abilities. Experience with more than one language, then, may serve as one form of environmental enrichment in humans that bolsters gray matter changes in the brain. Through animal work on environmental enrichment, it is known that the mechanisms underlying gray matter increases include dendritic arborization (i.e., an increase in the proliferation of dendrites) which leads to greater dendritic density (Ip et al., 2002), sprouting of new axon terminals (Knudsen, 2004) the formation of new blood vessels (i.e., angiogenesis, Black, Sirevaag, & Greenough, 1987), and increased proliferation of both supporting cells (i.e., gliogenesis; Soffié et al., 1999) and nerve cells (i.e., neurogenesis; Kempermann, Kuhn, & Gage, 1997; Nilsson et al., 1999) in the neural region undergoing experiencedependent changes.

Through the enriched environment of multiple languages, multilinguals also demonstrate white matter plasticity. Increased myelination, through myelination of previously unmyelinated axons, or thickening of the myelin sheath of myelinated axons (Juraska & Kopcik, 1988; Markham et al., 2009; Sanchez et al., 1998) underlies the experience-dependent changes in white matter. These changes in myelination may improve conduction velocity, or improve the connection between separate areas of the brain that are simultaneously engaged during the plasticityinducing experience (e.g., multilingual communication).

## 27.4 Connectivity between auditory and executive systems

Interestingly, the processes that are involved in auditory comprehension of language are presumed to provide the scaffolding for the development of domain-general executive functions (Conway et al., 2009; Pisoni & Cleary, 2004), suggesting that there is a strong link between development of cognitive skills and phonetic discrimination abilities (Kuhl & Rivera-Gaxiola, 2008). Indeed, the auditory and executive systems appear to be highly intertwined, with connections between auditory and executive systems evident both cortically and subcortically (Figure 27.2). These connections have been structurally observed between the anterior cingulate cortex and the auditory cortex (Jürgens, 1983) and between the basal ganglia and the inferior colliculus (Casseday et al., 2002). There have been functional connections observed between the frontal cortex and inferior colliculus (Raizada & Poldrack, 2007) as well as frontal cortex and auditory cortex (Wu et al., 2007). These structural and functional links between the auditory and executive system suggest a privileged role of auditory-based stimuli in facilitating interaction with the environment in a behaviorally relevant manner.

At any given moment, the various sensory systems will receive and subsequently bombard the brain with more information than the brain is capable of processing (e.g., see Marois & Ivanoff, 2005). The ability to perform higher-level actions, such as those involved in communication, requires the cognitive system to not be solely influenced by the incoming stimulus but to also incorporate prior experience (e.g., whether that signal was behaviorally meaningful in the past) in influencing how the stimulus is encoded and responded to. Activation of the executive system influences sensory encoding to focus the brain's processing capacity on the encoding of sensory stimuli necessary for achieving behaviorally relevant goals as opposed to responding to sensory stimuli in a reflex-like manner (Koechlin & Summerfield, 2007).

The auditory system is sensitive to the effects of the executive system on neural processing. For example, attention to stimuli in another modality decreases neural encoding of auditory stimuli in the inferior colliculus

#### JENNIFER KRIZMAN AND VIORICA MARIAN

(i.e., auditory midbrain) and auditory cortex (Hairston et al., 2013; Oatman, 1976). On the other hand, attentional focus to auditory stimuli selectively enhances important features of the auditory signal in both the auditory midbrain and cortex (Galbraith & Arroyo, 1993; Galbraith et al., 1998; Jäncke et al., 1999). Although the afferent, bottom-up auditory signal begins as a faithful encoding of the incoming stimulus, through descending projections, the executive system configures neural processing in auditory midbrain and cortical structures to meet the current task demands. Physiological studies demonstrate that the top-down (i.e., efferent) pathway can affect many aspects of subcortical processing, including filtering, sharpness of tuning, and response plasticity (Gao & Suga, 1998, 2000; Hairston et al., 2013; Rinne et al., 2008; Sakai & Suga, 2001; Suga, 2008). Top-down feedback will tune the ascending auditory signal at midbrain and cortical nuclei to selectively encode stimulus features deemed behaviorally important based on experience and prior-knowledge (Gao & Suga, 1998, 2000).

The top-down feedback signal will preferentially reinforce patterns of neural firing that represent the behaviorally relevant features of incoming signals. Preferentially selecting the same behaviorally relevant features of a signal can lead to greater synchrony in the stimulus-evoked response across a population of neurons thereby increasing the consistency of the neural response to that signal (i.e., better neural synchrony) and decreasing the neural encoding of irrelevant cues (e.g., noise, Faisal et al., 2008). This heightened neural synchrony across a population of neurons can enhance the saliency of neural responses (Engel & Singer, 2001). Exerting this experience-dependent influence (i.e., enhancing synchrony of response to behaviorally relevant features) earlier in the signaling pathway (e.g., auditory midbrain relative to cortex) is preferable for optimal sound transmission and decoding (Faisal et al., 2008). This is because the synchronous neural response is projected to additional structures along the ascending pathway and at these subsequent structures the synchronous firing can exert a greater influence than neural firings that are temporally disorganized (Engel & Singer, 2001).

This auditory-executive link functions to encode a consistent and precise representation of sound for everyone (e.g., Hornickel & Kraus, 2013). The relationship between executive function and auditory processing likely aids both monolinguals and multilinguals in managing the withinlanguage competition that occurs during communication. However, because multilinguals also must manage cross-linguistic co-activation when communicating, their auditory-executive link may be strengthened (i.e., greater top-down influence, resulting in greater consistency in the representation of the incoming auditory signal) and plasticity of these systems may result from experience with multiple languages (e.g., Krizman et al., 2014).

628



**Figure 27.3** Bilinguals demonstrate unique relationships between auditory and executive systems. Note: Bilinguals have more consistent brainstem responses to auditory stimuli as evidenced by greater similarity between responses from the first half (A-pink, B-gray) and second half (A-red, B-black) of a recording session. In A and B, the top panel is the entire response to the speech syllable (0–180 ms) and the bottom panel is the response to the vowel portion of the speech syllable (60–180 ms) to better illustrate the amount of overlap between the first half and last half responses for bilinguals (A) and monolinguals (B) (adapted from Krizman et al., 2014). In bilinguals, consistency of the neural response relates to enhancement of the response to the fundamental frequency ( $F_0$ , r = 0.68, p < 0.0005), a cue that may be behaviorally relevant for a bilingual (C and D, adapted from Krizman et al., 2012). Bilingual response consistency is also linked to auditory attentional focus (r = 0.42, p < 0.05), an ability that requires inhibitory control (D). Vertical lines indicate 0.1  $\mu$ V scale

## 27.4.1 Heightened integration of auditory and executive systems in multilinguals: a proposal

While the auditory-executive link necessarily must develop in everyone to allow us to navigate complex sensory environments and is a normal process that occurs throughout maturation, we propose that this connection may be particularly strong for speakers of more than one language due to the additional demands of cross-linguistic co-activation during communication, resulting in synergistic activation of both the auditory and executive systems. As described above, it has been shown that both the auditory and executive systems are structurally enhanced in multilinguals relative to monolinguals (Ressel et al., 2012; Stein et al., 2012; Zou et al., 2012). Furthermore, it has been shown that this executive-auditory network functions more efficiently during auditory comprehension for multilinguals relative to monolinguals (Blumenfeld & Marian, 2011). Moreover, we have seen relationships between attentional control and auditory processing that are unique to speakers of more than one language (Figure 27.3; Blumenfeld & Marian, 2011; Krizman et al., 2012, 2014); and, importantly, we have seen these relationships at subcortical levels of auditory processing, which may boost signal transmission and

629

processing at a greater number of ascending auditory nuclei in a multilingual (Faisal et al., 2008).

From this relationship between attentional control and subcortical auditory function, we propose that, in multilinguals, the executive system biases the neural response of auditory cues important to early and accurate selection of the appropriate language. One potential cue<sup>11</sup> may be the fundamental frequency  $(F_0)$ , a speech feature that may be subtly manipulated by a bilingual speaker (see Figure 27.3; Altenberg & Ferrand, 2006; Krizman et al., 2012). Through the experience of juggling two languages, the neural pathway encoding these cues (e.g.,  $F_0$ ) is continuously selected via top-down feedback from higher order processing centers (Miller & Cohen, 2001), resulting in these pathways being strengthened through Hebbian plasticity mechanisms (Hebb, 1949). We suggest that the bilingual's unique experience of cross-linguistic co-activation (Marian & Spivey, 2003b; Spivey & Marian, 1999) leads to a rewiring of neural circuitry so that over time the neural architecture of the bilingual brain reflects the experience of using two languages and the heightened need for executive and auditory circuits to interact to manage language co-activation during communication.

This strengthened interaction between auditory and executive systems may facilitate enhancements in bilingual foreign language learning (Bartolotti & Marian, 2012; Marian & Kaushanskaya, 2009) in that bilinguals are able to focus their encoding on the relevant acoustic features (Bartolotti et al., 2011). These enhancements in novel language learning suggest that bilinguals have learned how to actively engage the executive system when the sensory signal is ascending the bottom-up pathway so that the behaviorally relevant features of the signal are emphasized.

## 27.5 Conclusions

In conclusion, both auditory and executive systems are sculpted by language experience. Learning and using more than one language leads to structural enhancements in auditory and executive systems at both cortical and subcortical processing centers. The degree of plasticity observed in these systems appears to be dependent on both age of acquisition and the number of languages acquired. Through normal development, the relationship between executive and auditory relays is established to facilitate efficient and meaningful interactions with the auditory world. Given the unique relationships seen in multilinguals between auditory and executive functions, we propose that the connection between these two systems is strengthened by experience with more than one language. The strengthened network leads to fundamental differences in how multilinguals and monolinguals process sounds.

<sup>11</sup> Future work should determine whether there are additional cues that are important for bilingual communication.

- Aboitiz, F., & García, R. (1997). The evolutionary origin of the language areas in the human brain. A neuroanatomical perspective. *Brain Research Reviews*, 25(3), 381–396.
- Abreu, A., Macaluso, E., Azevedo, R., Cesari, P., Urgesi, C., & Aglioti, S. (2012). Action anticipation beyond the action observation network: A functional magnetic resonance imaging study in expert basketball players. *European Journal of Neuroscience*, 35(10), 1646–1654.
- Abunuwara, E. (1992). The structure of the trilingual lexicon. *European Journal of Cognitive Psychology*, 4, 311–322.
- Abutalebi, J. (2008). Neural aspects of second language representation and language control. *Acta psychologica*, 128(3), 466–478.
- Abutalebi, J., Annoni, J., Zimine, et al. (2008). Language control and lexical competition in bilinguals: An event-related fMRI Study. *Cerebral Cortex*, 18, 1496–1505.
- Abutalebi, J., Brambati, S., Annoni, J., Moro, A., Cappa, S., & Perani, D. (2007). The neural cost of the auditory perception of language switches: An event-related functional magnetic resonance imaging study in bilinguals. *Journal of Neuroscience*, 27, 13762–13769.
- Abutalebi, J., Cappa, S., & Perani, D. (2005). What can functional neuroimaging tell us about the bilingual brain? In J. Kroll & A. de Groot (eds.). Lexical access in bilingual production. Handbook of bilingualism: Psycholinguistic approaches (pp. 497–515). New York: Oxford University Press.
- Abutalebi, J., Della Rosa, P., Green, D. et al. (2012). Bilingualism tunes the anterior cingulate cortex for conflict monitoring. *Cerebral Cortex*, 22(9), 2076–2086.
- Abutalebi, J., Della Rosa, P., Tettamanti, M., Green, D., & Cappa, S. (2009). Bilingual aphasia and language control: A follow-up fMRI and intrinsic connectivity study. *Brain and Language*, 109(2–3), 141–156.

- Abutalebi, J., & Green, D. (2007). Bilingual language production: The neurocognition of language representation and control. *Journal of Neurolinguistics*, 20(3), 242–275.
  - (2008). Control mechanisms in bilingual language production: Neural evidence from language switching studies. *Language and Cognitive Processes*, 23(4), 557–582.
- Acha, J., & Perea, M. (2008). The effect of neighborhood frequency in reading: Evidence with transposed-letter neighbors. *Cognition*, 108, 290– 300.
- Ackerman, P. (2003). Aptitude complexes and trait complexes. *Educational Psychologist*, 38, 85–93.
- Adamic, L. (2002). Zipf, Power-laws, and Pareto: A ranking tutorial. Accessed from: www.hpl.hp.com/research/idl/papers/ranking/ranking.html.
- Adamic, L., & Huberman, B. (2002). Zipf's law and the Internet. *Glottometrics*, 3, 143–150.
- Addyman, C., & French, R. (2012). Computational modeling in cognitive science: A manifesto for change. *Topics in Cognitive Science*, 4(3), 332–341.
- Adesope, O., Lavin, T., Thompson, T., & Ungerleider, C. (2010). A systematic review and meta-analysis of the cognitive correlates of bilingualism. *Review of Educational Research*, 80(2), 207–245.
- Adrover-Roig, D., Galparsoro-Izagirre, N., Marcotte, K., Ferré, P., Wilson, M., & Inés Ansaldo, A. (2011). Impaired L1 and executive control after left basal ganglia damage in a bilingual Basque-Spanish person with aphasia. *Clinical Linguistics & Phonetics*, 25, 480–498.
- Albareda-Castellot, B., Pons, F., & Sebastián-Gallés, N. (2011). The acquisition of phonetic categories in bilingual infants: New data from an anticipatory eye movement paradigm. *Developmental Science*, 14(2), 395–401.
- Albert, M., & Obler, L. (1978). The bilingual brain: Neurophysiological and neurolinguistic aspects of bilingualism. New York: Academic Press.
- Alexiadou, A., & Anagnostopoulou, E. (1998). Parametrizing AGR: Word order, V-movement and EPP-checking. Natural Language & Linguistic Theory, 16, 491–539.
- Alladi, S., Bak, T., Duggirala, V., et al. (2013). Bilingualism delays age at onset of dementia, independent of education and immigration status. *Neurology*, 81, 1938–1944.
- Allan, L. (1980). A note on measurement of contingency between two binary variables in judgment tasks. *Bulletin of the Psychonomic Society*, 15, 147–149.
- Allen, D., & Conklin, K. (2013). Cross-linguistic similarity and task demands in Japanese–English bilingual processing. *PLoS One*, 8, e72631.
- Allen, L. (2000). Form-meaning connections and the French causative: An experiment in processing instruction. *Studies in Second Language Acquisition*, 22, 69–84.

- Allopenna, P., Magnuson, J., & Tanenhaus, M. (1998). Tracking the time course of spoken word recognition using eye movements: Evidence for continuous mapping models. *Journal of Memory and Language*, 38, 419–439.
- Allport, A. (1989). Visual attention. In M. Posner (ed.), *The foundations of cognitive science* (pp. 631–682). Cambridge, MA: MIT Press.
- Allport, A., Styles, E., & Hsieh, S. (1994). Shifting intentional set: Exploring the dynamic control of tasks. In C. Umilta, & M. Moscovitch (eds.), Attention and performance XV: Conscious and nonconscious information processing (pp. 421–452). Hillsdale, NJ: Erlbaum.
- Allport, D., & Wylie, G. (1999). Task-switching: Positive and negative priming of task-set. In G. Humphreys, J. Duncan, & A. Treisman (eds.), Attention, space and action: Studies in cognitive neuroscience (pp. 273–296). Oxford, UK: Oxford University Press.
- Altarriba, J. (1992). The representation of translation equivalents in bilingual memory. In R. Harris (ed.), *Cognitive processing in bilinguals* (pp. 157– 174). Oxford, UK: Oxford University Press.
  - (2003). Does *cariño* equal "liking?" A theoretical approach to conceptual nonequivalence between languages. *International Journal of Bilingualism*, 7, 305–322.
  - (2006). Cognitive approaches to the study of emotion-laden and emotion words in monolingual and bilingual memory. *Bilingual Education and Bilingualism*, 56, 232–256.
  - (2008). Expressions of emotion as mediated by context. *Bilingualism: Language and Cognition*, 11, 165–167.
  - (2012). Emotion and mood: Over 120 years of contemplation and exploration. *American Journal of Psychology*, 125, 409–422.
- Altarriba, J., & Basnight-Brown, D. (2011). The representation of emotion vs. emotion-laden words in English and Spanish in the Affective Simon Task. *International Journal of Bilingualism*, 15(3), 310–328.
  - (2012). The acquisition of concrete, abstract, and emotion words in a second language. *International Journal of Bilingualism*, 16, 446–452.
- Altarriba, J., & Bauer, L. (2004). The distinctiveness of emotion concepts: A comparison between emotion, abstract, and concrete words. *American Journal of Psychology*, 117(3), 389–410.
- Altarriba, J., Bauer, L., & Benvenuto, C. (1999). Concreteness, context availability, and imageability ratings and word associations for abstract, concrete, and emotion words. *Behavior Research Methods, Instruments, & Computers*, 31(4), 578–602.
- Altarriba, J., & Canary, T. (2004). The influence of emotional arousal on affective priming in monolingual and bilingual speakers. *Journal of Multilingual and Multicultural Development*, 25, 248–265.
- Altarriba, J., & Mathis, K. (1997). Conceptual and lexical development in second language acquisition. *Journal of Memory and Language*, 36, 550–568.

- Altarriba, J., & Santiago-Rivera, A. (1994). Current perspectives on using linguistic and cultural factors in counseling the Hispanic client. *Professional Psychology: Research and Practice*, 25, 388–397.
- Altarriba, J., & Soltano, E. (1996). Repetition blindness and bilingual memory: Token individuation for translation equivalents. *Memory & Cognition*, 24(6), 700–711.
- Altarriba, J., Kroll, J., Sholl, A., & Rayner, K. (1996). The influence of lexical and conceptual constraints on reading mixed-language sentences: Evidence from eye fixations and naming times. *Memory & Cognition*, 24, 477–92.
- Altenberg, E., & Cairns, H. (1983). The effects of phonotactic constraints on lexical processing in bilingual and monolingual subjects. *Journal of Verbal Learning and Verbal Behavior*, 22, 174–188.
- Altenberg, E., & Ferrand, C. (2006). Fundamental frequency in monolingual English, bilingual English/Russian, and bilingual English/Cantonese young adult women. *Journal of Voice*, 20(1), 89–96.
- Altmann, G. (1998). Ambiguity in sentence processing. *Trends in Cognitive Sciences*, 2(4), 146–152.
- Altmann, G., Garnham, A., & Dennis, Y. (1992). Avoiding the garden path: Eye movements in context. *Journal of Memory and Language*, 31(5), 685– 712.
- Altmann, G., & Mirković, J. (2009). Incrementality and prediction in human sentence processing. *Cognitive Science*, 33(4), 583–609.
- Alvarez, R., Holcomb, P., & Grainger, J. (2003). Accessing word meaning in two languages: An event-related brain potential study of beginning bilinguals. *Brain and Language*, 87, 290–304.
- Amcdt, C., & Gentile, R. (1986). A test of dual coding theory for bilingual memory. *Canadian Journal of Psychology*, 40, 290–299.
- Ameel, E., Malt, B., Storms, G., & Van Assche, F. (2009). Semantic convergence in the bilingual lexicon. *Journal of Memory and Language*, 60, 270– 290.
- Ameel, E., Storms, G., Malt, B., & Sloman, S. (2005). How bilinguals solve the naming problem. *Journal of Memory and Language*, 53, 60–80.
- Amrhein, P., & Sanchez, R. (1997). The time it takes bilinguals and monolinguals to draw pictures and write words. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 1439.
- Amuzu, E. (2011). Ewe contact database. (Unpublished corpus), University of Ghana, Legon.
- Anderson, J. (1983). A spreading activation theory of memory. *Journal of Verbal Learning & Verbal Behavior*, 22(3), 261–295.
- Anderson, J., Morgan, J., & White, K. (2003). A statistical basis for speech sound discrimination. *Language and Speech*, 46, 155–182.
- Anderson, M., Brumbaugh, J., & Şuben, A. (2010). Investigating functional cooperation in the human brain using simple graph-theoretic methods. *Computational Neuroscience* (pp. 31–42). Springer: New York.

- Anderson, M., & Levy, B. (2007). Theoretical issues in inhibition: Insights from research on human memory. In D. Gorfein & C. MacLeod (eds.), *Inhibition in Cognition* (pp. 81–102). Washington, DC: American Psychological Association.
- Andrews, S. (1989). Frequency and neighborhood effects on lexical access: Activation or search? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15, 802–814.
  - (1996). Lexical retrieval and selection processes: Effects of transposedletter confusability. *Journal of Memory and Language*, 35, 775–800.
  - (1997). The effect of orthographic similarity on lexical retrieval: Resolving neighborhood conflicts. *Psychonomic Bulletin & Review*, 4, 439-461.
- Androulaki, A., Gômez-Pestaña, N., Mitsakis, C., Jover, J., Coventry, K., & Davies, I. (2006). Basic colour terms in Modern Greek: Twelve terms including two blues. *Journal of Greek Linguistics*, 7, 3–45.
- Anooshian, L., & Hertel, P. (1994). Emotionality in free recall: Language specificity in bilingual memory. *Cognition and Emotion*, 8, 503–514.
- Aparicio, X., Midgley, K., Holcomb, P., Pu, H., Lavaur, J.-M., & Grainger, J. (2012). Language effects in trilinguals: An ERP study. Frontiers in Psychology, 3(402), 1–9.
- Appelbaum, L., Liotti, M., Perez, R., Fox, S., & Woldorff, M. (2009). The temporal dynamics of implicit processing of non-letter, letter, and word-forms in the human visual cortex. *Frontiers in Human Neuroscience*, 3, 1–11.
- Ardal, S., Donald, M., Meuter, R., Muldrew, S., & Luce, M. (1990). Brain responses to semantic incongruity in bilinguals. *Brain and Language*, 39, 187–205.
- Arêas da Luz Fontes, A., & Schwartz, A. (2010). On a different plane: Cross-language effects on the conceptual representations of withinlanguage homonyms. *Language and Cognitive Processes*, 25(4), 508– 532.
  - (2011). Working memory influences on cross-language activation during bilingual lexical disambiguation. *Bilingualism: Language and Cognition*, 14(3), 360–370.
- Arêas da Luz Fontes, A., Yeh, L., & Schwartz, A. (2010). Bilingual lexical disambiguation: The nature of cross-language activation effects. *Letronica*, 3(1), 107–128.
- Arias-Trejo, N., & Plunkett, K. (2009). Lexical-semantic priming effects during infancy. Philosophical Transactions of the Royal Society B: Biological Sciences, 364(1536), 3633–3647.
- As, A. (1962). The recovery of forgotten language knowledge through hypnotic age regression: A case report. *American Journal of Clinical Hypnosis*, 5, 24–29.
- Ashby, F., & Crossley, M. (2012). Automaticity and multiple memory systems. *Wiley Interdisciplinary Reviews: Cognitive Science*, 3(3), 363–376.

- Athanasopoulos, P. (2006). Effects of the grammatical representation of number on cognition in bilinguals. *Bilingualism: Language and Cognition*, 9, 89–96.
  - (2009). Cognitive representation of color in bilinguals: The case of Greek blues. *Bilingualism: Language and Cognition*, 12, 83–95.
- Athanasopoulos, P., & Bylund, E. (2013). Does grammatical aspect affect motion event cognition? A cross-linguistic comparison of English and Swedish speakers. *Cognitive Science*, 37, 286–309.
- Athanasopoulos, P., Dering, B., Wiggett, A., Kuipers, J., & Thierry, G. (2010). Perceptual shift in bilingualism: Brain potentials reveal plasticity in pre-attentive colour perception. *Cognition*, 116, 437–443.
- Athanasopoulos, P., & Kasai, C. (2008). Language and thought in bilinguals: The case of grammatical number and non-verbal classification preferences. *Applied Psycholinguistics*, 29(3), 105–123.
- Atkinson, R., & Raugh, M. (1975). An application of the mnemonic keyword method to the acquisition of a Russian vocabulary. *Journal of Experimental Psychology: Human Learning and Memory*, 104, 126–133.
- Au, R., Joung, P., Nicholas, M., Obler, L., Kass, R., & Albert, M. (1995). Naming ability across the adult life span. Aging and Cognition, 2(4), 300–311.
- Au, T., & Glusman, M. (1990). The principle of mutual exclusivity in word learning: To honor or not to honor? *Child Development*, 61, 1474–1490.
- Au, T., Knightly, L., Jun, S.-A., & Oh, J. (2002). Overhearing a language during childhood. *Psychological Science*, 13(3), 238–243.
- Au, T., Oh, J., Knightly, L., Jun, S., & Romo, L. (2008). Salvaging a childhood language. *Journal of Memory and Language*, 58(4), 998–1011.
- Auer, P. (ed.). (1998). Code-switching in conversation. London: Routledge.
- Ayçiçeği-Dinn, A., & Caldwell-Harris, C. (2009). Emotion memory effects in bilingual speakers: A levels-of-processing approach. *Bilingualism:* Language and Cognition, 12, 291–303.
- Ayçiçeği, A., & Harris, C. (2004). Bilinguals' recall and recognition of emotion words. *Cognition & Emotion*, 18, 977–987.
- Baayen, R. (2010). Demythologizing the word frequency effect: A discriminative learning perspective. *Mental Lexicon*, 5, 436–461.
- Baayen, R., Wurm, L., & Aycock, J. (2007). Lexical dynamics for lowfrequency complex words: A regression study across tasks and modalities. *Mental Lexicon*, 2(3), 419–463.
- Babcock, L., Stowe, J., Maloof, C., Brovetto, C., & Ullman, M. (2012). The storage and composition of inflected forms in adult-learned second language: A study of the influence of length of residence, age of arrival, sex, and other factors. *Bilingualism: Language and Cognition*, 15(4), 820–840.
- Backus, A. (1992). Patterns of language mixing, a study of Turkish-Dutch bilingualism. Wiesbaden, Germany: Otto Harrassowitz.

- (1996). Two in one: Bilingual speech of Turkish immigrants in the Netherlands. Tilburg, the Netherlands: Tilburg University Press.
- Baddeley, A. (1986). Working memory. Oxford, UK: Oxford University Press.
  - (1996). Exploring the central executive. *Quarterly Journal of Experimental Psychology*, 49A, 5–28.
  - (2000). The episodic buffer: a new component of working memory? *Trends in Cognitive Sciences*, 4, 417–423.
  - (2003). Working memory: looking back and looking forward. *Nature Reviews Neuroscience*, 4, 829–839.
- Baddeley, A., & Hitch, G. (1974). Working memory. In G. Bower (ed.), *The psychology of learning and motivation* (pp. 47–90). New York: Academic Press.
- Baddeley, A., & Logie, R. (1999). Working memory: The multiple component model. In A. Miyake & P. Shah (eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 28–61). Cambridge, UK: Cambridge University Press.
- Badre, D., & Wagner, A. (2007). Left ventrolateral prefrontal cortex and the cognitive control of memory. *Neuropsychologia*, 45(13), 2883–2901.
- Bahrick, H., & Phelps, E. (1987). Retention of Spanish vocabulary over 8 years. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13, 344–349.
- Bahrick, H., Bahrick, L., Bahrick, A., & Bahrick, P. (1993). Maintenance of foreign language vocabulary and the spacing effect. *Psychological Science*, 4, 316–321.
- Bai, J., Shi, J., Jiang, T, He., S., & Weng, X. (2011). Chinese and Korean characters engage the same visual word form area in proficient early Chinese–Korean bilinguals. *PLoS ONE*, 6, e22765.
- Baillargeon, R. (2004). Infants' reasoning about hidden objects: Evidence for event-general and event-specific expectations. *Developmental Science*, 7(4), 391–424.
- Bak, P. (1996). *How nature works: The science of self-organized criticality.* New York: Copernicus.
- Baker, S., & MacIntyre, P. (2000). The role of gender and immersion in communication and second language orientations. *Language Learning*, 50, 311–341.
- Balass, M., Nelson, J., & Perfetti, C. (2010). Word learning: An ERP investigation of word experience effects on recognition and word processing. *Contemporary Educational Psychology*, 35, 126–140.
- Baldo, J., Schwartz, S., Wilkins, D., & Dronkers, N. (2006). Role of frontal versus temporal cortex in verbal fluency as revealed by voxel-based lesion symptom mapping. *Journal of the International Neuropsychological Society*, 12, 896–900.
- Balice-Gordon, R., & Lichtman, J. (1994). Long-term synapse loss induced by focal blockade of postsynaptic receptors. *Nature*, 372(6506), 519.
- Balling, L. (2013). Reading authentic texts: What counts as a cognate? *Bilingualism: Language & Cognition*, 16(3), 637–653.

- Banich, M., Mackiewicz, K., Depue, B., Whitmer, A., Miller, G., & Heller, W. (2009). Cognitive control mechanisms, emotion and memory: a neural perspective with implications for psychopathology. *Neuroscience & Biobehavioral Reviews*, 33(5), 613–630.
- Barac R., & Bialystok, E. (2012). Bilingual effects on cognitive and linguistic development: Role of language, cultural background, and education. *Child Development*, 83(2) 413–422.
- Barcelo, F. (2003). The Madrid card sorting test (MCST): A task switching paradigm to study executive attention with event-related potentials. *Brain Research Protocols*, 11(1), 27–37.
- Barcroft, J. (2002). Semantic and structural elaboration in L2 lexical acquisition. *Language Learning*, 52, 323–363.
- Barcroft, J., & Sommers, M. (2005). Effects of acoustic variability on second language vocabulary learning. *Studies of Second Language Acquisition*, 27, 387–414.
- Barcroft, J., Sommers, M., & Sunderman, G. (2011). Some costs of fooling Mother Nature: A priming study on the keyword method and the quality of developing L2 lexical representations. In P. Trofimovic & K. McDonough. (eds.), *Applying priming research to L2 learning and teaching: Insights from psycholinguistics* (pp. 49–72). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Bard, E., Robertson, D., & Sorace, A. (1996). Magnitude estimation of linguistic acceptability. *Language*, 72, 32–68.
- Bardel, C., & Falk, Y. (2007). The role of the second language in third language acquisition: The case of Germanic syntax. *Second Language Research*, 23, 459–484.
- Bar-Kochva, I. (2011). Does processing a shallow and a deep orthography produce different brain activity patterns? An ERP study conducted in Hebrew. *Developmental Neuropsychology*, 36, 933–938.
- Barner, D., Inagaki, S., & Li, P. (2009). Language, thought, and real nouns. *Cognition*, 111(3), 329–344.
- Barron-Hauwaert, S. (2004). Language strategies for bilingual families: The oneparent-one-language approach. Clevedon, UK: Multilingual Matters.
- Bartolotti, J., & Marian, V. (2012). Language learning and control in monolinguals and bilinguals. *Cognitive Science*, 36(6), 1129–1147.
- Bartolotti, J., Marian, V., Schroeder, S., & Shook, A. (2011). Bilingualism and inhibitory control influence statistical learning of novel word forms. *Frontiers in Psychology*, 2(324).
- Barulli, D., & Stern, Y. (2013). Efficiency, capacity, compensation, maintenance, plasticity: emerging concepts in cognitive reserve. *Trends in Cognitive Sciences*, 17, 502–509.
- Basnight-Brown, D., & Altarriba, J. (2007). Differences in semantic and translation priming across languages: The role of language direction and language dominance. *Memory & Cognition*, 35, 953–965.

- Basnight-Brown, D., Chen, L., Hua, S., Kostic, A., & Feldman, L. (2007). Monolingual and bilingual recognition of regular and irregular English verbs: Sensitivity to form similarity varies with first language experience. *Journal of Memory and Language*, 57(1), 65–80.
- Baten, K., Hofman, F., & Loeys, T. (2011). Cross-linguistic activation in bilingual sentence processing: The role of word class meaning. *Bilingualism: Language and Cognition*, 14(3), 351–359.
- Bates, E. (1974) The acquisition of conditional verbs by Italian children. Proceedings from the 10th Regional Meetings of the Chicago Linguistic Society (pp. 27–36). Chicago, IL: University of Chicago Press.
  - . (1976). Language and context: The acquisition of pragmatics. New York: Academic Press.
- Bates, E., Benigni, L., Bretherton, I., Camaioni, L., & Volterra, V. (1979). *The emergence of symbols: Cognition and communication in infancy.* New York: Academic Press.
- Bates, E., Devescovi, A., Hernandez, A., & Pizzamiglio, L. (1996). Gender priming in Italian. *Perception & Psychophysics*, 58(7), 992–1004.
- Bauer, L. (2001). *Morphological productivity*. Cambridge, UK: Cambridge University Press.
- Bauer, L., & Altarriba, J. (2008). An investigation of sex differences in word ratings across concrete, abstract, and emotion words. *Psychological Record*, 58, 465–474.
- Bauer, L., Olheiser, E., Altarriba, J., & Landi, N. (2009). Word type effects in false recall: Concrete, abstract, and emotion word critical lures. *American Journal of Psychology*, 122, 469–481.
- Baum, S., & Titone, D. (2014). Moving towards a neuroplasticity view of bilingualism, executive control, and aging. *Applied Psycholinguistics*, 35 (5), 857–894.
- Baus, C., Costa, A., & Carreiras, M. (2013). On the effects of second language immersion on first language production. *Acta Psychologica*, 142, 402– 409.
- Beauvillain, C., & Grainger, J. (1987). Accessing interlexical homographs: Some limitations of a language-selective access. *Journal of Memory & Language*, 26(6), 658–672.
- Beck, I., McKeown, M., & Kucan, L. (2002). Bringing words to life: Robust vocabulary instruction. New York: The Guilford Press.
- Beckner, C., Blythe, R., Bybee, J., et al. (2009). Language is a complex adaptive system: Position paper. *Language Learning*, 59, 1–26.
- Bedore, L., & Peña, E. (2008). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism*, 11(1), 1–29.
- Behrens, H. (2009). First language acquisition from a usage-based perspective. In K. de Bot, & R. Schrauf (eds.), *Language development over the life span* (pp. 19–39). New York: Routledge.

- Bell-McGinty, S., Lopez, O., Cidis Meltzer, C., et al. (2005). Differential cortical atrophy in subgroups of mild cognitive impairment. *Archives of Neurology*, 62, 1393–1397.
- Benati, A. (2001). A comparative study of the effects of processing instruction and output-based instruction on the acquisition of the Italian future tense. *Language Teaching Research*, 5, 95–127.
  - (2005). The effects of processing instruction, traditional instruction, and meaning-output instruction on the acquisition of the English past simple tense. *Language Teaching Research*, 9, 67–93.
  - (forthcoming). The effects of re-exposure to instruction and the use of discourse-level interpretation tasks on processing instruction and the Japanese passive.
- Benati, A., & Lee, J. (2008). Grammar acquisition and processing instruction: Secondary and cumulative effects. Bristol, UK: Multilingual Matters.
- Benati, A., & Lee, J. (eds.) (2010). Processing instruction and discourse level input. London: Continuum Press.
- Benedict, H. (1979). Early lexical development: comprehension and production. *Journal of Child Language*, 6(2), 183–200.
- Benjamin, A. & Tullis, J. (2010). What makes distributed practice effective? *Cognitive Psychology*, 61, 228–247.
- Bennett, D., Schneider, J., Tang, Y., Arnold, S., & Wilson, R. (2006). The effect of social network on the relation between Alzheimer's disease pathology and level of cognitive function in old people: a longitudinal cohort study. *Lancet Neurology*, 5, 406–412.
- Bennett, D., Wilson, R., Schneider, J., et al. (2003). Education modifies the relation of AD pathology to level of cognitive function in older persons. *Neurology*, 60, 1909–1915.
- Bentahila, A., & Davies, E. (1983). The syntax of Arabic-French codeswitching. *Lingua*, 59, 301–330.
  - (1992). Code-switching and language dominance. In R. Harris (ed.), *Cognitive processing in bilinguals* (pp. 443–458). Amsterdam: Elsevier.
- Bentin, S., Allison, T., Puce, A., Perez, E., & McCarthy, G. (1996). Electrophysiological studies of face perception in humans. *Journal of Cognitive Neuroscience*, 8, 551–565.
- Bentin, S., Mouchetant-Rostaing, Y., Giard, M., Echallier, J., & Pernier, J. (1999). ERP manifestations of processing printed words at different psycholinguistic levels: Time course and scalp distribution. *Journal of Cognitive Neuroscience*, 11, 235–260.
- Ben-Zeev, S. (1977). The influence of bilingualism on cognitive development and cognitive strategy. *Child Development*, 48, 1009–1018.
- Bergelson, E., & Swingley, D. (2012). At 6–9 months, human infants know the meanings of many common nouns. *Proceedings of the National Academy of Sciences*, 109(9), 3253–3258.

- Bergelson, E., & Swingley, D. (2013). The acquisition of abstract words by young infants. *Cognition*, 127(3), 391–397.
- Berman, R. (1979). The re-emergence of a bilingual: A case study of a Hebrew-English speaking child. *Working Papers on Bilingualism*, 19, 157–177.
- Berman, R., & Slobin, D. (eds.). (1994). Relating events in narrative: A Crosslinguistic developmental study. Hillsdale, NJ: Lawrence Erlbaum.
- Bernolet, S., Hartsuiker, R., & Pickering, M. (2007). Shared syntactic representations in bilinguals: Evidence for the role of word-order repetition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33, 931–949.
- Bertsch, S., Pesta, B., Wiscott, R., & McDaniel, M. (2007). The generation effect: A meta-analytic review. *Memory & Cognition*, 35, 201–210.
- Best, C. (1995). A direct realist view of cross-language speech perception. In W. Strange (ed.), *Speech perception and linguistic experience* (pp. 171–206). Baltimore, MD: York Press.
- Best, C., & Tyler, M. (2007). Nonnative and second-language speech perception: Commonalities and complementarities. In: O. Bohn & M. Munro (eds.) Language experience in second language speech learning: In honor of James Emil Flege (pp. 13–34). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Bialystok, E. (1988). Levels of bilingualism and levels of linguistic awareness. *Developmental Psychology*, 24(4) 560–567.
  - (1999). Cognitive complexity and attentional control in the bilingual mind. *Child Development*, 70(3), 636–644.
  - (2001). Bilingualism in development: Language, literacy, and cognition. Cambridge, UK: Cambridge University Press.
  - (2005). Consequences of bilingualism for cognitive development. In J. Kroll & A. de Groot, *Handbook of bilingualism: Psycholinguistic approaches* (pp. 417–432). Oxford, UK: UK: Oxford University Press.
  - (2006). Effect of bilingualism and computer video game experience on the simon task. *Canadian Journal of Experimental Psychology*, 60(1), 68–79.
  - (2007). Language acquisition and bilingualism: consequences for a multilingual society. *Applied Psycholinguistics*, 28(3), 393–397.
  - (2009a). Claiming evidence from non-evidence: A reply to Morton and Harper. *Developmental Science*, 14, 499–503.
  - (2009b). Bilingualism: the good, the bad, and the indifferent. *Bilingualism: Language and Cognition*, 12(1) 3–11.
  - (2009c). Effects of bilingualism on cognitive and linguistic performance across the lifespan. *Streitfall Zweisprachigkeit: The bilingualism controversy*, 53–67. Wiesbaden, Germany: Springer Fachmedien Wiesbaden GmbH.
  - (2010). Bilingualism. Wiley Interdisciplinary Reviews: Cognitive Science, 1(4), 559–572.

- (2011). Reshaping the mind: The benefits of bilingualism. *Canadian Journal of Experimental Psychology*, 65(4), 229–235.
- Bialystok, E., & Barac, R. (2012). Emerging bilingualism: Dissociating advantages for metalinguistic awareness and executive control. *Cognition*, 122(1) 67–73.
- Bialystok, E., Barac, R., Blaye, A., & Poulin-Dubois, D. (2010). Word mapping and executive functioning in young monolingual and bilingual children. *Journal of Cognition and Development*, 11(4) 485–508.
- Bialystok, E., & Craik, F. (2010). On structure and process in lifespan cognitive development. In W. Overton (ed.), *Cognition, biology, and methods across the lifespan* (pp. 195–225). Hoboken, NJ: Wiley.
  - (2010). Cognitive and linguistic processing in the bilingual mind. *Current Directions in Psychological Science*, 19(1), 19–23.
- Bialystok, E., Craik, F., Binns, M., Ossher, L., & Freedman, M. (2014). Effects of bilingualism on the age of onset and progression of MCI and AD: Evidence from executive function tests. *Neuropsychology*, 28(2), 290– 304.
- Bialystok, E., Craik, F., & Freedman, M. (2007). Bilingualism as a protection against the onset of symptoms of dementia. *Neuropsychologia*, 45(2), 459–464.
- Bialystok, E., Craik, F., Klein, R., & Viswanathan, M. (2004). Bilingualism, aging, and cognitive control: Evidence from the Simon task. *Psychology* of Aging, 19, 290–303.
- Bialystok, E., Craik, F., Grady, C., et al. (2005). Effect of bilingualism on cognitive control in the Simon task: Evidence from MEG. *Neuroimage*, 24(1), 40–49.
- Bialystok, E., Craik, F., Green, D., & Gollan, T. (2009). Bilingual minds. *Psychological Science in the Public Interest*, 10, 89–129.
- Bialystok, E., Craik, F., & Luk, G. (2008a). Cognitive control and lexical access in younger and older bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34, 859–873.
  - (2008b). Lexical access in bilinguals: Effects of vocabulary size and executive control. *Journal of Neurolinguistics*, 21, 522–538.
  - (2012). Bilingualism: Consequences for mind and brain. *Trends in Cognitive Sciences*, 16(4) 240–250.
- Bialystok, E., Craik, F., & Ryan, J. (2006). Executive control in a modified antisaccade task: Effects of aging and bilingualism. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32(6), 1341– 1354.
- Bialystok, E., & Harris, R. (1992). Selective attention in cognitive processing: The bilingual edge. In R. Harris (ed.), *Cognitive processing in bilinguals* (pp. 501–513). Oxford, UK: North-Holland.
- Bialystok, E., & Luk, G. (2012). Receptive vocabulary differences in monolingual and bilingual adults. *Bilingualism: Language and Cognition*, 15, 397–401.

- Bialystok, E., Luk, G., Peets, K., & Yang, S. (2010). Receptive vocabulary differences in monolingual and bilingual children. *Bilingualism:* Language and Cognition, 13, 525–531.
- Bialystok, E., & Majumder S (1998). The relationship between bilingualism and the development of cognitive processes in problem solving. *Applied Psycholinguistics*, 19(1) 69–85.
- Bialystok, E., Majumder, S., & Martin, M. (2003). Developing phonological awareness: Is there a bilingual advantage? *Applied Psycholinguistics*, 24 (1), 27–44.
- Bialystok, E., & Martin, M. (2004). Attention and inhibition in bilingual children: Evidence from the dimensional change card sort task. *Developmental Science*, 7(3), 325–339.
- Bialystok, E., Martin, M., & Viswanathan, M. (2005). Bilingualism across the lifespan: The rise and fall of inhibitory control. *International Journal of Bilingualism*, 9(1), 103–119.
- Bialystok, E., & Viswanathan, M. (2009). Components of executive control with advantages for bilingual children in two cultures. *Cognition*, 112 (3), 494–500.
- Biberauer, T. & Roberts, I. (2010). Subjects, tense, and verb-movement. In T. Birberauer, A. Holmberg, I. Roberts, & M. Sheehan (eds.), *Parametric variation: Null subjects in Minimalist theory* (pp. 263–302). Cambridge, UK: Cambridge University Press.
- Bick, A., Goleman, G., & Frost, R. (2011). Hebrew brain vs. English brain: Language modulates the way it is processed. *Journal of Cognitive Neuroscience*, 23, 2280–2290.
- Bijeljac-Babic, R., Biardeau, A., & Grainger, J. (1997). Masked orthographic priming in bilingual word recognition. *Memory & Cognition*, 25, 447– 457.
- Bijeljac-Babic, R., Nassurally, K., Havy, M., & Nazzi, T. (2009). Infants can rapidly learn words in a foreign language. *Infant Behavior and Development*, 32, 1–5.
- Bijeljac-Babic, R., Serres, J., Höhle, B., & Nazzi, T. (2012). Effect of bilingualism on lexical stress pattern discrimination in French-learning infants. *PLoS ONE*, 7(2), e30843.
- Billig, J., & Scholl, A. (2011). The impact of bilingualism and aging on inhibitory control and working memory. *Organon*, 26(51), 39–52.
- Binder, J., Frost, J., Hammeke, T., Cox, R., Rao, S., & Prieto, T. (1997). Human brain language areas identified by functional magnetic resonance imaging. *Journal of Neuroscience*, 17, 353–362.
- Binder, K., & Rayner, K. (1998). Contextual strength does not modulate the subordinate bias effect: Evidence from eye fixations and self-paced reading. *Psychonomic Bulletin and Review*, 5, 271–276.
- Birdsong, D., & Molis, M. (2001). On the evidence for maturational constraints in second-language acquisition. *Journal of Memory and Language*, 44(2), 235–249.

- Bjork, R., & Bjork, E. (2006). Optimizing treatment and instruction: Implications of a new theory of disuse. In L.-G. Nilsson & N. Ohta (eds.), *Memory and society: Psychological perspectives* (pp. 109–133). New York, NY: Psychology Press.
  - (2011). Making things hard on yourself, but in a good way: Creating desirable difficulties to enhance learning. In M. Gernsbacher, R. Pew, L. Hough, & J. Pomerantz (eds.), *Psychology and the real world: Essays illustrating fundamental contributions to society* (pp. 56–64). New York, NY: Worth Publishers.
- Black, J., Sirevaag, A., & Greenough, W. (1987). Complex experience promotes capillary formation in young rat visual cortex. *Neuroscience Letters*, 83(3), 351–355.
- Blakemore, D. (2002). Relevance and linguistic meaning, the semantics and pragmatics of discourse markers. Cambridge, UK: Cambridge University Press.
- Blazquez-Domingo, R. (1998). Spanish-English code switching corpus, University of South Carolina, Columbia, SC.
- Bleasdale, F. (1987). Concreteness-dependent associative priming: Separate lexical organization for concrete and abstract words. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13(4), 582–594.
- Blom, E., & Unsworth, S. (2010). *Experimental methods in language acquisition research*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Blumenfeld, H., & Marian, V. (2007). Constraints on parallel activation in bilingual spoken language processing: Examining proficiency and lexical status using eye-tracking. *Language and Cognitive Processes*, 22, 633–660.
  - (2011). Bilingualism influences inhibitory control in auditory comprehension. *Cognition*, 118(2), 245–257.

BNC. (2007). BNC XML Edition. Accessed from www.natcorp.ox.ac.uk/corpus.

- Boada, R., Sánchez-Casas, R., Gavilán, J., García-Albea, J., & Tokowicz, N. (2013). Effect of multiple translations and cognate status on translation recognition performance of balanced bilinguals. *Bilingualism:* Language and Cognition, 16, 183–197
- Bobaljik, J. 2002. Realizing Germanic inflection: Why morphology does not drive syntax. *Journal of Comparative German Linguistics*, 6, 129–167.
- Bobb, S., & Wodniecka, Z. (2013). Language switching in picture naming: What asymmetric switch costs (do not) tell us about inhibition in bilingual speech planning. *Journal of Cognitive Psychology*, 25, 568–585.
- Bock, K., & Levelt, W. (1994). Language production: grammatical encoding.In M. Gernsbacher (ed.), *Handbook of Psycholinguistics*. New York: Academic Press, pp. 945–984.
- Bock, K., & Miller, C. (1991). Broken agreement. *Cognitive psychology*, 23(1), 45–93.
- Boehm, S., Dering, B., & Thierry, G. (2011). Category-sensitivity in the N170 range: A question of topography and inversion, not one of amplitude. *Neuropsychologia*, 49, 2082–2089.

- Bogulski, C. (2009). Learning words in a new language: The effect of language experience on vocabulary acquisition and inhibitory control. (Unpublished master's thesis), Pennsylvania State University, University Park, PA.
- Bogulski, C., & Kroll, J. (under review). A bilingual advantage in vocabulary acquisition depends on learning via the dominant language.
- Bolger, D., Perfetti, C., & Schneider, W. (2005). Cross-cultural effect on the brain revisited: Universal structures plus writing system variation. *Human Brain Mapping*, 25, 92–104.
- Bond, M., & Lai, T. (1986). Embarrassment and code-switching into a second language. *Journal of Social Psychology*, 126, 179–186.
- Bono, M., & Stratilaki, S. (2009). The M-factor, a bilingual asset for plurilinguals? Learners' representations, discourse strategies and third language acquisition in institutional contexts. *International Journal of Multilingualism*, 6, 207–227.
- Bornstein, M. (1989). Sensitive periods in development: structural characteristics and causal interpretations. *Psychological Bulletin*, 105(2), 179.
- Boroditsky, L., Schmidt, L., & Phillips, W. (2003). Sex, syntax, and semantics. In D. Gentner & S. Goldin-Meadow (eds.), Language in mind: Advances in the study of language and thought. (pp. 61–79). Cambridge, UK: Cambridge University Press.
- Bosch, L., Costa, A., & Sebastián-Gallés, N. (2000). First and second language vowel perception in early bilinguals. European Journal of Cognitive Psychology, 12, 189–222.
- Bosch, L., Figueras, M., Teixidó, M., & Ramon-Casas, M. (2013). Rapid gains in segmenting fluent speech when words match the rhythmic unit: Evidence from infants acquiring syllable-timed languages. *Frontiers in Psychology*, 4(106), 1–12.
- Bosch, L., & Ramon-Casas, M. (2011). Variability in vowel production by bilingual speakers: Can input properties hinder the early stabilization of contrastive categories? *Journal of Phonetics*, 39, 514–526.
- Bosch, L., & Sebastián-Gallés, N. (1997). Native-language recognition abilities in 4-month-old infants from monolingual and bilingual environments. *Cognition*, 65, 33–69.
  - (2001). Evidence of early language discrimination abilities in infants from bilingual environments. *Infancy*, 2(1), 29–49.
  - (2003). Simultaneous bilingualism and the perception of a language-specific vowel contrast in the first year of life. *Language and Speech*, 46, 217–243.
- Botvinick, M., Braver, T., Barch, D., Carter, C., Cohen, J. (2001). Conflict monitoring and cognitive control. *Psychological Review*, 108(3) 624–652.
- Botwinick, J., & Stordandt, M. (1974). Vocabulary ability later in life. *Journal* of *Genetic Psychology*, 125, 303–308.
- Boutonnet, B., Athanasopoulos, P., & Thierry, G. (2012). Unconscious effects of grammatical gender during object categorisation. *Brain Research*, 1479, 72–79.

- Bowden, H., Gelfand, M., Sanz, C., & Ullman, M. (2010). Verbal inflectional morphology in L1 and L2 Spanish: A frequency effects study examining storage versus composition. *Language Learning*, 60(1), 44–87.
- Bowers, J. (2002). Challenging the widespread assumption that connectionism and distributed representations go hand-in-hand. *Cognitive Psychology*, 45(3), 413–445.
- Bowers, J., Davis, C., & Hanley, D. (2005). Interfering neighbours: The impact of novel word learning on the identification of visually similar words. *Cognition*, 97, B45–B54.
- Bowers, J., Mattys, S., & Gage, S. H. (2009). Preserved implicit knowledge of a forgotten childhood language. *Psychological Science*, 20(9), 1064–1069.
- Bowers, J., Mimouni, Z., & Arguin, M. (2000). Orthography plays a critical role in cognate priming: Evidence from French/English and Arabic/ French cognates. *Memory & Cognition*, 28, 1289–1296.
- Boyke, J., Driemeyer, J., Gaser, C., Büchel, C., & May, A. (2008). Traininginduced brain structure changes in the elderly. *Journal of Neuroscience*, 28(28), 7031–7035.
- Bozic, M., Tyler, L., Ives, D., Randall, B., & Marslen-Wilson, W. (2010). Bihemispheric foundations for human speech comprehension. Proceedings of the National (USA) Academy of Sciences, 107(40), 17439– 17444.
- Braet, W., Wagemans, J., & Op de Beeck, H. (2011). The visual word form area is organized according to orthography. *NeuroImage*, 59, 2751–2759.
- Branzi, F., Martin, C., Abutalebi, J., & Costa, A. (2014). The after-effects of bilingual language production. *Neuropsychologia*, 52, 102–116.
- Braver, T., Reynolds, J., & Donaldson, D. (2003). Neural mechanisms of transient and sustained cognitive control during task switching. *Neuron*, 39, 713-726.
- Brito, N., & Barr, R. (2012). Influence of bilingualism on memory generalization during infancy. *Developmental Science*, 15, 812–816.
- Broadbent, D. (1958). Perception and Communication. London: Pergamon.
- Broersma, M. (2009). Triggered codeswitching between cognate languages. Bilingualism: Language and Cognition, 12, 447–462.
- Broersma, M. (2011). Triggered code-switching: Evidence from picture naming experiments. In M. Schmid & W. Lowie (eds.), *Modeling bilingualism from structure to chaos: In honor of Kees de Bot* (pp. 37–57). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2012). Increased lexical activation and reduced competition in secondlanguage listening. *Language and Cognitive Processes*, 27, 1205–1224.
- Broersma, M., & Cutler, A. (2008). Phantom word activation in L2. *System*, 36, 22–34.
- Broersma, M., & de Bot, K. (2006). Triggered codeswitching: A corpus-based evaluation of the original triggering hypothesis and a new alternative. *Bilingualism Language and Cognition*, 9, 1–13.

- Broersma, M., Isurin, L., Bultena, S., & de Bot, K. (2009). Triggered codeswitching: Evidence from Dutch-English and Russian-English bilinguals. In L. Isurin, D. Winford, & K. de Bot (eds.), *Multidisciplinary approaches to code switching* (pp. 85–102). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Brown, A., & Gullberg, M. (2008). Bidirectional crosslinguistic influence in L1–L2 encoding of manner in speech and gesture: A study of Japanese speakers of English. *Studies in Second Language Acquisition*, 30, 225–251.
  - (2010). Changes in encoding of PATH of motion in a first language during acquisition of a second language. *Cognitive Linguistics*, 21, 263–286.
- Brown, J.D. (2009). Foreign and second language needs analysis. In M. Long & C. Doughty (eds.), *The handbook of language teaching* (pp. 269–293). Oxford, UK: Blackwell.
- Bruer, J. (2001). A critical and sensitive period primer. In D. Bailey, J. Bruer, & J. McDonnell, *Critical thinking about critical periods* (pp. 3– 26). Baltimore, MD: Brookes Publishing.
- Brysbaert, M., & Duyck, W. (2010). Is it time to leave behind the Revised Hierarchical Model of bilingual language processing after fifteen years of service? *Bilingualism: Language and Cognition*, 13, 359–371.
- Brysbaert, M., Van Dyck, G., & Van de Poel, M. (1999). Visual word recognition in bilinguals: Evidence from masked phonological priming. *Journal of Experimental Psychology: Human Perception and Performance*, 25, 137–148.
- Bullock, B., & Toribio, A. (2009). The Cambridge handbook of linguistic codeswitching. New York: Cambridge University Press.
- Bultena, S., Dijkstra, T., & van Hell, J. (2014). Cognate facilitation effects in sentence context depend on word class, L2 proficiency and task. *Quarterly Journal of Experimental Psychology*,67(6):1214–1241.
  - (forthcoming). Language switch costs in comprehension depend on language dominance: Evidence from self-paced reading. *Bilingualism: Language and Cognition.*
  - (under review). Switch cost modulations in bilingual sentence processing: Evidence from shadowing.
- Burgess, C., & Lund, K. (1997). Modeling parsing constraints with highdimensional context space. Language and Cognitive Processes, 12, 177– 210.
- Burke, D., MacKay, D., Worthley, J., & Wade, E. (1991). On the tip of the tongue: What causes word finding failure in young and older adults? *Journal of Memory and Language*, 30, 542–579.
- Burns, T., Yoshida, K., Hill, K., & Werker, J. (2007). The development of phonetic representation in bilingual and monolingual infants. *Applied Psycholinguistics*, 28, 455–474.
- Butler, Y., & Hakuta, K. (2004). Bilingualism and second language acquisition. In T. Bhatia, & W. Ritchie (eds.), *The handbook of bilingualism* (pp. 114–144). Malden, MA: Blackwell.

- Bybee, J. (2001). *Phonology and language use*. Cambridge, UK: Cambridge University Press.
  - (2002). Word frequency and context of use in the lexical diffusion of phonetically conditioned sound change. *Language Variation and Change*, 14(3), 261–290.
  - (2010). *Language, usage, and cognition*. Cambridge, UK: Cambridge University Press.
- Bybee, J., & Hopper, P. (eds.). (2001). Frequency and the emergence of linguistic structure. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Byers-Heinlein, K. (2013). Parental language mixing: Its measurement and the relation of mixed input to young bilingual children's vocabulary size. *Bilingualism: Language and Cognition*, 16(1), 32–48.
- Byers-Heinlein, K., Burns, T., & Werker, J. (2010). The roots of bilingualism in newborns. *Psychological Science*, 21, 343–348.
- Byers-Heinlein, K., & Fennell, C. (2014). Perceptual narrowing in the context of increased variation: Insights from bilingual infants. *Developmental Psychobiology*. 56(2), 274–291.
- Byers-Heinlein, K., Fennell, C., & Werker, J. (2013). The development of associative word learning in monolingual and bilingual infants. *Bilingualism: Language and Cognition*, 16, 198–205.
- Byers-Heinlein, K., & Werker, J.F. (2009). Monolingual, bilingual, trilingual: Infants' language experience influences the development of a wordlearning heuristic. *Developmental Science*, 12(5), 815–823.
  - (2013). Lexicon structure and the disambiguation of novel words: Evidence from bilingual infants. *Cognition*, 128(3), 407–416.
- Bylund, E. (2009). Effects of age of L2 acquisition on L1 event conceptualization patterns. *Bilingualism: Language and Cognition*, 12, 305–322.
- Bylund, E., & Athanasopoulos, P. (2014). Language and thought in a multilingual context: The case of isiXhosa. *Bilingualism: Language and Cognition*, 17(2), 431–441
- Bylund, E., & Jarvis, S. (2011). L2 effects on L1 event conceptualization. Bilingualism: Language and Cognition, 14(1), 47–59.
- Cabeza R., & Kingstone, A. (eds.). (2001). Handbook of functional neuroimaging of cognition. Cambridge, MA: MIT Press.
- Cadierno, T. (1995). Formal instruction from a processing perspective: an investigation into the Spanish past tense. *Modern Language Journal*, 79, 179–93.
  - (2008). Learning to talk about motion in a foreign language. In P. Robinson & N. Ellis (eds.), *Handbook of cognitive linguistics and second language acquisition*. London: Routledge.
- Calabria, M., Hernández, M., Branzi, F., & Costa, A. (2012). Qualitative differences between bilingual language control and executive control: Evidence from task-switching. *Frontiers in Psychology*, 2(399), 9–18.

- Caldwell-Harris, C., Tong, J., Lung, W., & Poo, S. (2011). Physiological reactivity to emotional phrases in Mandarin-English bilinguals. *International Journal of Bilingualism*, 15, 329–352.
- Calvo, M., & Eysenck, M. (1996). Phonological working memory and reading test anxiety. *Memory*, 4, 289–305.
- Campbell, J. (2005). Asymmetrical language switch costs in Chinese-English bilinguals' number naming and simple arithmetic. *Bilingualism: Language and Cognition*, 8, 85–91.
- Cao, F., Tao, R., Liu, L., Perfetti, C., & Booth, J. (2013). High proficiency in a second language is characterized by greater involvement of the first language network: Evidence from Chinese learners of English. *Journal* of Cognitive Neuroscience, 1–15.
- Caramazza, A. (1997). How many levels of processing are there in lexical access? *Cognitive Neuropsychology*, 14(1), 177–208.
- Caramazza, A., & Brones, I. (1979). Lexical access in bilinguals. Bulletin of the Psychonomic Society, 13, 212–214.
- (1980). Semantic classification by bilinguals. Canadian Journal of Psychology/Revue Canadienne de Psychologie, 34, 77–81.
- Caramazza, A., Yeni-Komshian, G., & Zurif, E. (1974). Bilingual switching: The phonological level. *Canadian Journal of Psychology/Revue canadienne de psychologie*, 28, 310–318.
- Carlson S., Meltzoff, A. (2008). Bilingual experience and executive functioning in young children. *Developmental Science*, 11, 282–298.
- Carminati, M. (2002). The processing of Italian subject pronouns. (Unpublished doctoral dissertation), University of Massachusetts, Amherst.
- Carpenter, S., & DeLosh, E. (2006). Impoverished cue support enhances subsequent retention: Support for the elaborative retrieval explanation of the testing effect. *Memory & Cognition*, 34, 268–276.
- Carpenter, S., & Olson, K. (2012). Are pictures good for learning new vocabulary in a foreign language? Only if you think they are not. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 38, 92–101.
- Carreiras, M., & Clifton, C. (1993). Relative clause interpretation preferences in Spanish and English. *Language and Speech*, 36(4), 353–372.
- Carreiras, M., Perea, M., & Grainger, J. (1997). Effects of orthographic neighborhood in visual word recognition: Cross-task comparisons. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 23, 857–871.
- Carroll, J. (1981). Twenty-five years of research on foreign language aptitude. In K. Diller (ed.), *Individual differences and univerals in language learning aptitude* (pp. 119–154). Rowley, MA: Newbury House.
- Carroll, J., & Sapon, S. (1959). *The modern language aptitude test*. San Antonio, TX: Psychological Corporation.
- Carroll, S. (2001). Input and evidence: The raw material of second language acquisition. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Caspi, T. (2010). A dynamic perspective on second language development. (Unpublished doctoral dissertation), University of Groningen, the Netherlands.
- Caspi, T., & Lowie, W. (2013). The dynamics of L2 vocabulary development: A case study of receptive and productive knowledge. *Revista Brasiliera de Linguistica*, 13(2), 45–106.
- Casseday, J., Fremouw, T., & Covey, E. (2002). The inferior colliculus: a hub for the central auditory system Integrative functions in the mammalian auditory pathway. In D. Oertel, R. Fay, & A. Popper (eds.), *Integrative functions in the mammalian auditory pathway*, 238–318. New York: Springer.
- Cattell, J. (1887). Experiments on the association of ideas. Mind, 12, 68-74.
- CDI Advisory Board. (n.d.). CDIs in Other Languages. Retrieved from www. sci.sdsu.edu/cdi/adaptations\_ol.htm.
- Cenoz, J., Hufeisen, B., & Jessner, U. (2001). Towards trilingual education. International Journal of Bilingual Education and Bilingualism, 4(1), 1–10.
- Cepeda, N., Vul, E., Rohrer, D., Wixted, J., & Pashler, H. (2008). Spacing effects in learning: A temporal ridgeline of optimal retention. *Psychological Science*, 19, 1095–1102.
- Chabal, S., & Marian, V. (under review). Automatic language activation during visual processing.
- Chambers, C., & Cooke, H. (2009). Lexical competition during secondlanguage listening: sentence context, but not proficiency, constrains interference from the native lexicon. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 1029–1040.
- Chambers, S. (1979). Letter and order information in lexical access. *Journal* of Verbal Learning and Verbal Behavior, 18, 225–241.
- Chan, B. (2009). Code-switching between typologically distinct languages. In B. Bullock & A. Toribio (eds.) *The Cambridge handbook of linguistic codeswitching* (pp. 182–198). Cambridge, UK: Cambridge University Press.
- Chan, H. (2013). A dynamic approach to the development of lexicon and syntax in a second language. (Unpublished doctoral dissertation), University of Groningen, the Netherlands.
- Chan, H., Lowie, W., & de Bot, K. (forthcoming). Input outside the classroom and vocabulary development: A dynamic perspective. In J. Robinson, and M. Reif (eds.), *Culture and cognition in bilingualism*. Berlin: Mouton de Gruyter.
- Chan, M.-C., Chau, H., & Hoosain, R. (1983). Input/output switch in bilingual code switching. *Journal of Psycholinguistic Research*, 12, 407–416.
- Chauncey, K., Grainger, J. & Holcomb, P. (2008). Code-switching effects in bilingual word recognition: A masked priming study with event-related potentials. *Brain and Language* 105, 161–174.

- Chauncey, K., Holcomb, P., & Grainger, J. (2009). Primed picture naming within and across languages: An ERP investigation. *Cognitive, Affective, & Behavioral Neuroscience,* 9, 286–303.
- Chechik, G., Meilijson, I., & Ruppin, E. (1998). Synaptic pruning in development: A computational account. *Neural Computation*, 10(7), 1759–1777.
- Chechik, G., Meilijson, I., & Ruppin, E. (1999). Neuronal regulation: A mechanism for synaptic pruning during brain maturation. *Neural Computation*, 11(8), 2061–2080.
- Chee, M., Hon, N., Lee, H., & Soon, C. (2001). Relative language proficiency modulates BOLD signal change when bilinguals perform semantic judgments. *NeuroImage*, 13, 1155–1163.
- Chen, H.-C. (1990). Lexical processing in a non-native language: Effects of language proficiency and learning strategy. *Memory & Cognition*, 18, 279–288.
- Chen, H.-C., Cheung, H., & Lau, S. (1997). Examining and reexamining the structure of Chinese–English bilingual memory. *Psychological Research*, 60, 270–283.
- Chen, H.-C., & Ho, C. (1986). Development of Stroop interference in Chinese-English bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 12, 397–401.
- Chen, H.-C., & Leung, Y. (1989). Patterns of lexical processing in a nonnative language. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15, 316–325.
- Chen, H.-C., & Ng, M.-L. (1989). Semantic facilitation and translation priming effects in Chinese–English bilinguals. Memory & Cognition, 17, 454– 462.
- Chen, L., Shu, H., Liu, Y., Zhao, J., & Li, P. (2007). ERP signatures of subjectverb agreement in L2 learning. *Bilingualism: Language and Cognition*, 10 (2), 161–174.
- Cheng, Y., Horwitz, E., & Schallert, D. (1999). Language writing anxiety: Differentiating writing and speaking components. *Language Learning*, 49, 417–446.
- Cheour, M., Ceponiene, R., Lehtokoski, A., et al. (1998). Development of language-specific phoneme representations in the infant brain. *Nature Neuroscience*, 1(5), 351–353.
- Cheour, M., Imada, T., Taulu, S., Ahonen, A., Salonen, J., & Kuhl, P. (2004). Magnetoencephalography is feasible for infant assessment of auditory discrimination. *Experimental Neurology*, 190, 44–51.
- Cherkasova, M., Manoach, D., Intriligator, J., & Barton, J. (2002). Antisaccades and task-switching: Interactions in controlled processing. *Experimental Brain Research*, 144, 528–537.
- Chertkow H., Whitehead V., Phillips, N., Wolfson, C., Atherton, J., & Bergman, H. (2010). Multilingualism (but not always bilingualism) delays the onset of Alzheimer disease: Evidence from a bilingual community. *Alzheimer Disease & Associated Disorders*, 24, 118–125.

Chomsky, N. (1965). Aspects of the theory of syntax. Cambridge, MA: MIT Press. Christiansen, M., & Chater, N. (2001a). Connectionist psycholinguistics:

Capturing the empirical data. *Trends in Cognitive Sciences*, 5, 82–88. (eds.). (2001b). *Connectionist psycholinguistics*. Westport, CO: Ablex.

Christoffels, I., de Groot, A., & Kroll, J. (2006). Memory and language skill in simultaneous interpreting: The role of expertise and language proficiency. *Journal of Memory and Language*, 54, 324–345.

Christoffels, I., Firk, C., & Schiller, N. (2007). Bilingual language control: An event-related brain potential study. *Brain Research*, 1147, 192–208.

Clahsen, H., Balkhair, L., Schutter, J-S., & Cunnings, I. (2013). The time course of morphological processing in a second language. *Second Language Research*, 29.1, 7–31.

Clahsen, H., & Felser, C. (2006). Grammatical processing in language learners. *Applied Psycholinguistics*, 27(1), 3–42.

Clahsen, H., Felser, C., Neubauer, K., Sato, M., & Silva, R. (2010). Morphological structure in native and nonnative language processing. *Language Learning*, 60(1), 21–43.

Clark, E. (1978). Discovering what words can do. In D. Farkas, W. Jacobsen, & K. Todrys (eds.), Papers from the parasession on the lexicon, Chicago Linguistics Society April 14–15 (pp. 34–57). Chicago, IL: Chicago Linguistics Society.

(1993) The lexicon in acquisition. Cambridge, UK: Cambridge University Press.

- (2010). Adult offer, word-class, and child uptake in early lexical acquisition. *First Language*, 30(3–4), 250–269.
- Clauset, A., Newman, M., & Moore, C. (2004). Finding community structure in very large networks. *Physical Review E*, 70, 066111.

Cleary, M., Pisoni, D., & Geers, A. (2001). Some measures of verbal and spatial working memory in eight- and nine-year-old hearing-impaired children with cochlear implants. *Ear and Hearing*, 22(5), 395–411.

- Clifton, C., Jr., & Frazier, L. (1989). Comprehending sentences with longdistance dependencies. In G. Carlson & M. Tanenhaus (eds.), *Linguistic structure in language processing* (pp. 273–317). Dordrecht: Kluwer.
- Clyne, M. (1967). Transference and triggering. The Hague: Nijhoff.
  - (2003). *Dynamics of language contact*. Cambridge, UK: Cambridge University Press.
- Coderre E., van Heuven J., & Conklin, K. (2013). The timing and magnitude of Stroop interference and facilitation in monolinguals and bilinguals. *Bilingualism: Language Cognition*, 16, 420–441.
- Coderre, E. (2012). Exploring the cognitive effects of bilingualism: Neuroimaging investigations of lexical processing, executive control, and the bilingual advantage. (Unpublished doctoral thesis), University of Nottingham, UK.
- Coderre, E., Filippi, C., Newhouse, P., & Dumas, J. (2008). The Stroop effect in kana and kanji scripts in native Japanese speakers: An fMRI study. *Brain and Language*, 107, 124–132.

- Cohen, L., Dehaene, S., Naccache, L. et al. (2000). The visual word form area: Spatial and temporal characterization of an initial stage of reading in normal subjects and posterior split-brain patients. *Brain*, 123, 291–307.
- Cohen, J., Dunbar, K., & McClelland, J. (1990). On the control of automatic processes: A parallel-distributed processing account of the Stroop effect. *Psychological Review*, 97, 332–361
- Colé, P., & Segui, J. (1994). Grammatical incongruency and vocabulary types. *Memory & Cognition*, 22(4), 387–394.
  - Collins English Dictionary: Complete & Unabridged (10th edn, n.d.). Access from http://dictionary.reference.com/browse/bilingual.
- Collins, A., & Loftus, E. (1975). A spreading-activation theory of semantic processing. *Psychological Review*, 82, 407–426.
- Collins, L., & Ellis, N. (2009). Input and second language construction learning: frequency, form, and function. *Modern Language Journal*, 93(2).
- Colombo, J., & Mitchell, D. W. (2009). Infant visual habituation. *Neurobiology* of *Learning and Memory*, 92(2), 225–234.
- Colomé, A. (2001). Lexical activation in bilinguals' speech production: Language-specific or language-independent? *Journal of Memory and Language*, 45, 721–736.
- Colomé, A., & Miozzo, M. (2010). Which words are activated during bilingual word production? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 96–109.
- Coltheart, M., Rastle, K., Perry, C., Langdon, R., & Ziegler, J. (2001). DRC: A dual route cascaded model of visual word recognition and reading. *Psychological Review*, 108, 204–256.
- Comer, W. & deBenedette, L. (2010). Processing instruction and Russian: Issues, materials, and preliminary experimental results. *Slavic and East European Journal*, 54, 118–146.
- Conboy, B., & Kuhl, P. (2011). Impact of second-language experience in infancy: brain measures of first- and second-language speech perception. *Developmental Science*, 14(2), 242–248.
- Conboy, B., & Mills, D. (2006). Two languages, one developing brain: Eventrelated potentials to words in bilingual toddlers. *Developmental Science*, 9(1), F1–F12.
- Conboy, B., & Thal, D. (2006). Ties between the lexicon and grammar: Cross-sectional and longitudinal studies of bilingual toddlers. *Child Development*, 77(3), 712–735.
- Connor, L., Spiro, A., Obler, L., & Albert, M. (2004). Change in object naming during adulthood. *Journal of Gerontology: Psychological Sciences*, 59(5), 203–209.
- Conway, C., Pisoni, D., & Kronenberger, W. (2009). The importance of sound for cognitive sequencing abilities. *Current Directions in Psychological Science*, 18(5), 275–279.

- Cook, S. (2012). Phonological form in L2 lexical access: Friend or foe? (Unpublished doctoral dissertation), University of Maryland, College Park.
- Cook, V. (ed.). (2003). Effects of the second language on the first. Clevedon, UK: Multilingual Matters.
- Cook, V., & Bassetti, B. (2005). An introduction to researching second language writing systems. In V. Cook and B. Bassetti (eds.). Second language writing systems (pp. 1–67). Clevedon, UK: Multilingual Matters.
- Cook, V., Bassetti, B., Kasai, C., Sasaki, M., & Takahashi, J. (2006). Do bilinguals have different concepts? The case of shape and material in Japanese L2 users of English. *International Journal of Bilingualism*, 10, 137–152.
- Corbett, G. (2005). Number of genders. In M. Haspelmath, M. Dryer, D. Gil, & B. Comrie (eds.), *World atlas of language structures* (pp. 126-129). Oxford, UK: Oxford University Press.
- Core, C., Hoff, E., Rumiche, R., & Señor, M. (2013). Total and conceptual vocabulary in Spanish-English bilinguals from 22 to 30 months: Implications for assessment. *Journal of Speech, Language and Hearing Research*, 56, 1637–1649.
- Corin, A. (1994). Teaching for proficiency: The conversion principle. A Czech to Serbo-Croatian conversion course at the Defense Language Institute. ACTR Letter: Newsletter of the American Council of Teachers of Russian, 20(1), 1–5.
- Corrigan, R. (2012). Using the CHILDES database. In E. Hoff (ed.), *Research methods in child language: A practical guide* (pp. 271–284). Malden, MA: Wiley-Blackwell.
- Costa, A. (2005). Lexical access in bilingual production. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 308– 325). New York: Oxford University Press.
- Costa, A., Albareda, B., & Santesteban, M. (2008). Assessing the presence of lexical competition across languages: Evidence from the Stroop task. *Bilingualism Language and Cognition*, 11, 121.
- Costa, A., & Caramazza, A. (1999). Is lexical selection in bilingual speech production language-specific?: Further evidence from Spanish-English and English-Spanish bilinguals. *Bilingualism: Language and Cognition*, 2(3), 231–244.
- Costa, A., Caramazza, A., & Sebastián-Gallés, N. (2000). The cognate facilitation effect: Implications for the models of lexical access. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26, 1283–1296.
- Costa, A., Colomé, À., Gómez, O., & Sebastián-Gallés, N. (2003). Another look at cross-language competition in bilingual speech production: Lexical and phonological factors. *Bilingualism: Language and Cognition*, 6, 167–179.
- Costa, A., Hernandez, M., Costa-Faidella, J., & Sebastián-Gallés, N. (2009). On the bilingual advantage in conflict processing: Now you see it, now you don't. *Cognition*, 113(2) 135–149.

- Costa, A., Hernandez, M., & Sebastián-Gallés, N. (2008). Bilingualism aids conflict resolution: Evidence from the ANT task. *Cognition*, 106, 59–86.
- Costa, A., Miozzo, M., & Caramazza, A. (1999). Lexical selection in bilinguals: Do words in the bilingual's two lexicons compete for selection? *Journal of Memory and Language*, 41, 365–397.
- Costa, A., & Santesteban, M. (2004). Lexical access in bilingual speech production: Evidence from language switching in highly proficient bilinguals and L2 learners. *Journal of Memory and Language*, 50(4), 491–511.
- Costa, A., Santesteban, M., & Ivanova, I. (2006). How do highly-proficient bilinguals control their lexicalization process? Inhibitory and languagespecific selection mechanisms are both functional. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32, 1057–1074.
- Costa, P., & McCrae, R. (1992). NEO-PI-R. Professional manual. Odessa, FL: Psychological Assessment Resources.
- Coulson, S., King, J., & Kutas, M. (1998). Expect the unexpected: Eventrelated brain response to morphosyntactic violations. *Language and Cognitive Processes*, 13, 21–58.
- Cowan, N. (1995). Attention and memory. Oxford, UK: Oxford University Press.
- Craik, F. (1983). On the transfer of information from temporary to permanent memory. *Philosophical Transactions of the Royal Society of London, Series B*, 302, 341–359.
- Craik, F., & Bialystok, E. (2006). Cognition through the lifespan: Mechanisms of change. *Trends in Cognitive Sciences*, 10(3), 131–138.
- Craik, F., Bialystok, E., & Freedman, M. (2010). Delaying the onset of Alzheimer disease: bilingualism as a form of cognitive reserve. *Neurology*, 75(19), 1726–1729.
- Craik, F., & Tulving, E. (1975). Depth of processing and the retention of words in episodic memory. *Journal of Experimental Psychology: General*, 104, 268–294
- Crepaldi, D., Rastle, K., Coltheart, M., & Nickels, L. (2010). 'Fell' primes 'fall,' but does 'bell' prime 'ball'? Masked priming with irregularlyinflected primes. *Journal of Memory and Language*, 63(1), 83–99.
- Crinion, J., Turner, R., Grogan, A., et al. (2006). Language control in the bilingual brain. *Science*, 312(5779), 1537–1540.
- Cristoffanini, P., Kirsner, K., & Milech, D. (1986). Bilingual lexical representation: The status of Spanish–English cognates. *Quarterly Journal of Experimental Psychology*, 38, 367–393.
- Croft, W. (2001). Radical construction grammar: Syntactic theory in typological perspective. Oxford, UK: Oxford University Press.
- Croft, W., & Cruise, A. (2004). *Cognitive linguistics*. Cambridge, UK: Cambridge University Press.
- Crone, E., Donohue, S., Honomichl, R., Wendelken, C., & Bunge, S. (2006). Brain regions mediating flexible rule use during development. *Journal* of *Neuroscience*, 26(43), 11239–11247.

- Cross, E., & Burke, D. (2004). Do alternative names block young and older adults' retrieval of proper names? *Brain and Language*, 89, 174–181.
- Csizér, K., Kormos, J., & Sarkadi, Á. (2010). The dynamics of language learning attitudes and motivation: lessons from an interview study with dyslexic language learners. *Modern Language Journal*, 97, 470–487.
- Cummins, J. (1976). Cognitive basis of uznadze illusion. *International Journal* of Psychology, 11(2) 89–100.
  - (1978). Bilingualism and the development of metalinguistic awareness. Journal of Cross-Cultural Psychology, 9, 131–149.
  - (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49(2) 222–251.
  - (1984). Wanted: A theoretical framework for relating language proficiency to academic achievement among bilingual students. In C. Rivera (ed.), *Language proficiency and academic achievement* (pp. 2–19). Clevedon, UK: Multilingual Matters.
  - (2001). Instructional conditions for trilingual development. *International Journal of Bilingual Education and Bilingualism*, 4(1), 61–75.
- Cummins, J., & Gulutsan, M. (1974). Bilingual education and cognition. *Alberta Journal of Educational Research*, 20(3) 259–269.
- Cuppini, C., Magosso, E., & Ursino, M. (2013). Learning the lexical aspects of a second language at different proficiencies: A neural computational study. *Bilingualism: Language and Cognition*, 16(2), 266.
- Curtin, S., Byers-Heinlein, K., & Werker, J. (2011). Bilingual beginnings as a lens for theory development: PRIMIR in focus. *Journal of Phonetics*, 39(4), 492–504.
- Curtiss, S. (1977). *Genie: A psycholinguistic study of a modern-day "wild child."* New York: Academic Press.
  - (1989). The case of Chelsea: A new test case of the critical period for language acquisition. (Unpublished master's thesis), University of California, LA.
- Cutler, A., & Weber, A. (2006). First-language phonotactics in secondlanguage listening. *Journal of the Acoustical Society of America*, 19(1), 597–607.
- Cutler, A., Weber, A., & Otake, T. (2006). Asymmetric mapping from phonetic to lexical representations in second-language listening. *Journal of Phonetics*, 34, 269–284.
- Cutler, A., Weber, A., Smits, R., & Cooper. (2004). Patterns of English phoneme confusions by native and non-native listeners. *Journal of the Acoustical Society of America*, 116(6), 3668–3678.
- D'Ausilio, A., Craighero, L., & Fadiga, L. (2012). The contribution of the frontal lobe to the perception of speech. *Journal of Neurolinguistics*, 25(5), 328–335.
- D'Aloisio, A., & Klein, R. (1990). Aging and the deployment of visual attention. In J. Enns (ed.), *The development of attention: Research and theory* (pp. 447–466). Amsterdam: Elsevier.

- Dahan, D., Swingley, D., Tanenhaus, M., & Magnuson, J. (2000). Linguistic gender and spoken-word recognition in French. *Journal of Memory and Language*, 42(4), 465–480.
- Dahl, T., Rice, C., Steffensen, M., & Amundsen, L. (2010). Is it language relearning or language reacquisition? Hints from a young boy's codeswitching during his journey back to his native language. *International Journal of Bilingualism*, 14(4), 490–510.
- Dale, P., & Fenson, L. (1996). Lexical development norms for young children. Behavior Research Methods, Instruments, & Computers, 28, 125–127.
- Dale, R., & Spivey, M. (2005). From apples and oranges to symbolic dynamics: a framework for conciliating notions of cognitive representation. *Journal of Experimental & Theoretical Artificial Intelligence*, 17(4), 317–342.
  - (2006). Unraveling the dyad: Using recurrence analysis to explore patterns of syntactic coordination between children and caregivers in conversation. *Language Learning*, 56(3), 391–430.
- Dallas, A. (2008). Influences of verbal properties on second language fillergap resolution: A cross-methodological study. (Unpublished doctoral dissertation), University of Florida, Gainesville.
- Dalrymple-Alford, E. (1968). Interlingual interference in a color naming task. *Psychonomic Science*, 10, 215–216.
  - (1985). Language switching during bilingual reading. British Journal of Psychology, 76, 111–122.
- Dalrymple-Alford, E., & Aamiry, A. (1969). Language and category clustering in bilingual free recall. *Journal of Verbal Learning and Verbal Behavior*, 8, 762–768.
- (1970). Word associations of bilinguals. Psychonomic Science, 21, 319–320.
- Dalrymple-Alford, E., & Budayr, B. (1966). Examination of some aspects of the Stroop color-word test. *Perceptual and motor skills*, 23, 1211–1214.
- Daneman, M. (1991). Working memory as a predictor of verbal fluency. *Journal of Psycholinguistic Research*, 20, 445–464.
- Daniels, P., & Bright, W. (1996). *The world's writing systems*. New York: Oxford University Press.
- Danon, G. (2011). Agreement and DP-internal feature distribution. *Syntax*, 14(4), 297–317.
- Danon, L., Díaz-Guilera, A., Duch, J., & Arenas, A. (2005). Comparing community structure identification methods. *Journal of Statistical Mechanics*, 29, P09008.
- Darcy, I., Dekydspotter, L., Sprouse, R., et al. (2012). Direct mapping of acoustics to phonology: On the lexical encoding of front rounded vowels in L1 English-L2 French acquisition. Second Language Research, 28(1), 5-40.
- Darcy N. (1953). A review of the literature on the effects of bilingualism upon the measurement of intelligence. *Journal of Genetic Psychology*, 82, 21–57.

- Das, T., Padakannaya, P., Pugh, K., & Singh, N. (2011). Neuroimaging reveals dual routes to reading in simultaneous proficient readers of two orthographies. *NeuroImage*, 54, 1476–1487.
- Datta, H. (2010). Brain bases for first language lexical attrition in Bengali– English speakers. (Unpublished doctoral dissertation), City University of New York, New York City.
- David, A., & Wei, L. (2008). Individual differences in the lexical development of French-English bilingual children. *International Journal of Bilingual Education and Bilingualism*, 11(5), 598–618.
- Davidson, D., & Tell, D. (2005). Monolingual and bilingual children's use of mutual exclusivity in the naming of whole objects. *Journal of experimental child psychology*, 92, 25–45.
- Davidson, M., Amso, D., Anderson, L., & Diamond, A. (2006). Development of cognitive control and executive functions from 4 to 13 years: Evidence from manipulations of memory, inhibition, and task switching. *Neuropsychologia*, 44(11), 2037–2078.
- Davies, A. (1978a). Language testing: Part I. Language Teaching, 11(3), 145–159.

(1978b). Language testing: Part II. Language Teaching, 11(4), 215-231.

- Davies, A., Criper, C., & Howatt, A. (eds.). (1984). *Interlanguage*. Edinburgh: Edinburgh University Press.
- Davis, C., Sánchez-Casas, R., García-Aibea, J., Guasch, M., Molero, M., & Ferré, P. (2010). Masked translation priming: Varying language experience and word type with Spanish–English bilinguals. Bilingualism: *Language and Cognition*, 13, 137–155.
- De Angelis, G. (2005). Multilingualism and non-native lexical transfer: An identification problem. *International Journal of Multilingualism*, 2, 1–25.
  - (2007). Third or additional language acquisition. Clevedon, UK: Multilingual Matters.
- De Bot, K. (1992). A bilingual production model: Levelt's "speaking" model adapted. *Applied Linguistics*, 13(1), 1–24.
  - (2006). The plastic bilingual brain: Synaptic pruning or growth?: Commentary on Green et al. *Language Learning*, 56(s1), 127–132.
  - (2008). The imaging of what in the multilingual mind? Second Language Research, 24(1), 111–133.
  - (2010). Cognitive processing in bilinguals: From static to dynamic models. In R. Kaplan (ed.), *Oxford handbook of applied linguistics* (pp. 335–348). Oxford, UK: Oxford University Press.
  - (2012). Time scales in second language development. Dutch Journal of *Applied Linguistics*, 1(1), 144–150.
- De Bot, K., Broersma, M., & Isurin, L. (2009). Sources of triggering in code switching. In K. de Bot (ed.), *Cross-disciplinary approaches to code switching* (pp. 103–120). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- De Bot, K., & Lowie, W. (2010). On the stability of representations in the multilingual lexicon. In M. Pütz & L. Sicola (eds.), *Cognitive processing in*

second language acquisition (pp. 117–134). Amsterdam/Philadelphia, PA: John Benjamins Publishing.

- De Bot, K., Lowie, W., & Verspoor, M. (2007). A dynamic systems theory approach to second language acquisition. *Bilingualism*, 10(1), 7–21.
- De Bot, K., Martens, V., & Stoessel, S. (2004). Finding residual lexical knowledge: The "Savings" approach to testing vocabulary. *International Journal of Bilingualism*, 8(3), 373–382.
- De Bot, K., & Stoessel, S. (2000). In search of yesterday's words: Reactivating a long-forgotten language. *Applied Linguistics*, 21(3), 333–353.
- de Diego Balaguer, R., Rodríguez-Fornells, A., Rotte, M., Bahlmann, J., Heinze, H.-J., & Münte, T. (2006). Neural circuits subserving the retrieval of stems and grammatical features in regular and irregular verbs. *Human Brain Mapping*, 27, 874–888.
- De Groot, A. (1992a). Bilingual lexical representation: A closer look at conceptual representations. In R. Frost & L. Katz (eds.), *Orthography, phonology, morphology, meaning* (pp. 389–412). Amsterdam: Elsevier.
  - (1992b). Determinants of word translation. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 18, 1001–1018.
  - (1993). Word-type effects in bilingual processing tasks: Support for a mixed-representational system. In R. Schreuder & B. Weltens (eds.), *The bilingual lexicon* (pp. 27–51). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2000). On the source and nature of semantic and conceptual knowledge. *Bilingualism: Language and Cognition*, 3, 7–9.
  - (2006). Effects of stimulus characteristics and background music on foreign language vocabulary learning and forgetting. *Language Learning*, 56, 463–506.
  - (2011). Language and cognition in bilinguals and multilinguals: An introduction. New York: Psychology Press.
  - (2012). Vocabulary learning in bilingual first-language acquisition and late second-language learning. In M. Faust (ed.), *The handbook of the neuropsychology of language* (pp. 472–493). Malden, MA: Blackwell.
- De Groot, A., & Christoffels, I. (2006). Language control in bilinguals: Monolingual tasks and simultaneous interpreting. *Bilingualism:* Language and Cognition, 9(2), 189–201.
- De Groot, A., Dannenburg, L., & van Hell, J. (1994). Forward and backward word translation by bilinguals. *Journal of Memory and Language*, 33, 600–629.
- De Groot, A., Delmaar, P., & Lupker, S. (2000). The processing of interlexical homographs in translation recognition and lexical decision: Support for non-selective access to bilingual memory. *The Quarterly Journal of Experimental Psychology: Section A*, 53(2), 397–428.
- De Groot, A., & Comijs, H. (1995). Translation recognition and translation production: Comparing a new and an old tool in the study of bilingualism. *Language Learning*, 45(3), 467–509.

- De Groot, A., & Hoeks, J. (1995). The development of bilingual memory: Evidence from word translation by trilinguals. *Language Learning*, 45, 683–724.
- De Groot, A., & Keijzer, R. (2000). What is hard to learn is easy to forget: The roles of word concreteness, cognate status, and word frequency in foreign language vocabulary learning and forgetting. *Language Learning*, 50, 1–56.
- De Groot, A., & Kroll, J. (eds.) (1997). Tutorials in bilingualism: Psycholinguistic perspectives. Mahwah, NJ: Lawrence Erlbaum Associates.
- De Groot, A., & Nas, G. (1991). Lexical representation of cognates and noncognates in compound bilinguals. *Journal of Memory and Language*, 30(1), 90–123.
- De Groot, A., & Poot, R. (1997). Word translation at three levels of proficiency in a second language: The ubiquitous involvement of conceptual memory. *Language Learning*, 47, 215–264.
- De Groot, A., Starreveld, P., & Geambaçu, A. (in preparation). Lexical activation in unbalanced bilinguals' word production as measured in a phoneme-monitoring task: Effects of language dominance and sentence context.
- De Groot, A., & van den Brink, R. (2010). Foreign language vocabulary learning: Word-type effects during the labeling stage. In M. Kail & M. Hickmann (eds.), *Language acquisition across linguistic and cognitive systems*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- De Groot, A., & van Hell, J. (2005). The learning of foreign language vocabulary. In J. F. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 9–29). New York: Oxford University Press.
- De Houwer, A. (1990). *The acquisition of two languages from birth*. Cambridge, UK: Cambridge University Press.
  - (1995). Bilingual language acquisition. In P. Fletcher & B. MacWhinney (eds.), *Handbook of child Language* (pp. 219–250). Oxford, UK: Blackwell.
  - (1998). By way of introduction: Methods in studies of bilingual first language acquisition. International Journal of Bilingualism, 2(3), 249-263.
     (2007). Depended language input patterns and children's hills gual use
  - (2007). Parental language input patterns and children's bilingual use. *Applied Psycholinguistics*, 28(3), 411–424.
- De Houwer, A., & Bornstein, M. (2003). Balancing on the tightrope: Language use patterns in bilingual families with young children. Paper presented at the 4th International Symposium on Bilingualism, Tempe, AZ.
- De Houwer, A., Bornstein, M., & De Coster, S. (2006). Early understanding of two words for the same thing: A CDI study of lexical comprehension in infant bilinguals. *International Journal of Bilingualism*, 10(3), 331–347.
- De Houwer, A., Bornstein, M., & Putnick, D. (2013). A bilingual-monolingual comparison of young children's vocabulary size: Evidence from comprehension and production. *Applied Psycholinguistics*, 1–23.

- De Houwer, J., & Eelen, P. (1998). An affective variant of the Simon paradigm. *Cognition & Emotion*, 12, 45–61.
- De Lucia, M., Clarke, S., & Murray, M. (2010). A temporal hierarchy for conspecific vocalization discrimination in humans. *Journal of Neuroscience*, 30(33), 11210–11221.
- de Nooy, W., Mrvar, A., & Batagelj, V. (2010). Exploratory social network analysis with Pajek. Cambridge, UK: Cambridge University Press.
- Declerck, M., Koch, I., & Philipp, A. (2012). Digits vs. pictures: The influence of stimulus type on language switching. *Bilingualism: Language and Cognition*, 15, 896–904.
- DeFrancis, J. (1989). Visual speech: The diverse oneness of writing systems. Honolulu, HI: University of Hawai'i Press.
- Degani, T., Prior, A., & Tokowicz, N. (2011). Bidirectional transfer: The effect of sharing a translation. *Journal of Cognitive Psychology*, 23, 18–28.
- Degani, T., & Tokowicz, N. (2010a). Ambiguous words are harder to learn. Bilingualism: Language and Cognition, 13, 299–314.
  - (2010b). Semantic ambiguity within and across languages: An integrative review. *Quarterly Journal of Experimental Psychology*, 63(7), 1266–1303.
  - (2013). Cross-language influences: Translation status affects intra-word sense relatedness. *Memory & Cognition*, 41, 1046–1064.
- Degani, T., Tseng, A., & Tokowicz, N. (forthcoming). Together or apart? Learning of ambiguous words. *Bilingualism: Language and Cognition*.
- Degner, J., Doycheva, C., & Wentura, D. (2012). It matters how much you talk: On the automaticity of affective connotations of first and second language words. *Bilingualism: Language and Cognition*, 15(1), 181–189.
- Dehaene, S., & Cohen, L. (2011). The unique role of the visual word form area in reading. *Trends in Cognitive Sciences*, 15, 254–262.
- Dehaene, S., Cohen, L., Sigman, M., & Vinckier, F. (2005). The neural code for written words: a proposal. *Trends in Cognitive Sciences*, 9, 335–341.
- Dehaene-Lambertz, G., Dehaene, S., & Hertz-Pannier, L. (2002). Functional neuroimaging of speech perception in infants. *Science*, 298(5600), 2013–2015.
- DeKeyser, R. (2013). Age effects in second language learning: Stepping stones toward better understanding. *Language Learning*, 63, 52–67.
- DeKeyser, R., & Sokalski, K. (1996). The differential role of comprehension and production practice. *Language Learning*, 46, 613–642.
- Delis, D., Kaplan, E., & Kramer, J. (2001). *Delis Kaplan Executive Function System*. San Antonio, TX: The Psychological Corporation.
- Dell, G. (1986). A spreading activation theory of retrieval in language production. *Psychological Review*, 93, 283–321.
- Dell, G., & O'seaghdha, P. (1992). Stages of lexical access in language production. *Cognition*, 42(1-3), 287-314.
- Demerens, C., Stankoff, B., Logak, M., et al. (1996). Induction of myelination in the central nervous system by electrical activity. *Proceedings of the National Academy of Sciences*, 93(18), 9887–9892.

- Depue, B., Banich, M., & Curran, T. (2006). Suppression of emotional and nonemotional content in memory: effects of repetition on cognitive control. *Psychological Science*, 17(5), 441–447.
- Desmet, T., & Declercq, M. (2006). Cross-linguistic priming of syntactic hierarchical configuration information. *Journal of Memory and Language*, 54(4), 610–632.
- Desrochers, A., & Petrusic, W. (1983). Comprehension effects in comparative judgments. In J. Yuille (ed.), *Imagery, memory and cognition* (pp. 131– 159). Hillsdale, NJ: Erlbaum.
- Deutsch, A., Frost, R., & Forster, K. (1998). Verbs and nouns are organized and accessed differently in the mental lexicon: Evidence from Hebrew. Journal of Experimental Psychology: Learning Memory, and Cognition, 24, 1238–1255.
- Dewaele, J.-M. (2004). The emotional force of swear words and taboo words in the speech of multilinguals. *Journal of Multicultural and Multilingual Development*, 25, 204–222.
  - (2008). The emotional weight of *I love you* in multilinguals' languages. *Journal of Pragmatics*, 40, 1753–1780.
  - (2010). Emotions in multiple languages. Basingstoke, UK: Palgrave MacMillan.
  - (2012). Psychological factors in second language acquisition. In J. Herschensohn & M. Young-Scholten (eds.), *The Cambridge handbook of second language acquisition* (pp. 159–179). Cambridge, UK: Cambridge University Press.
- Dewaele, J.-M. & Costa, B. (2013) Multilingual clients' experience of psychotherapy. *Language and Psychoanalysis*, 2(2), 31–50.
- Dewaele, J.-M., & Pavlenko, A. (2002). Emotion vocabulary in interlanguage. *Language Learning*, 52, 263–322.
- Díaz, B., Mitterer, H., Broersma, M., & Sebastián-Gallés, N. (2012). Individual differences in late bilinguals' L2 phonological processes: From acoustic-phonetic analysis to lexical access. *Learning and Individual Differences*, 22, 680–689.
- Diaz, F. (1985). Extracranial-intracranial bypasses. Journal of Vascular Surgery, 2(1) 234–236.
- Diependaele, K., Duñabeitia, J., Morris, J., & Keuleers, E. (2011). Fast morphological effects in first and second language word recognition. *Journal of Memory and Language*, 64, 344–358.
- Diependaele, K., Lemhöfer, K., & Brysbaert, M. (2013). The word frequency effect in first- and second-language word recognition: A lexical entrenchment account. *Quarterly Journal of Experimental Psychology*, 66 (5), 843–863.
- Diesendruck, G. (2007). Mechanisms of word learning. In E. Hoff & M. Shatz (eds.), *Handbook of language development* (pp. 257–276). New York: Blackwell.

- Dietrich, A. (2014). The role of probabilistic cues in L2 processing: Verb bias in Spanish and English. (Unpublished doctoral dissertation), Pennsylvania State University, University Park.
- Dietrich, R., Klein, W., & Noyau, C. (eds.). (1995). *The acquisition of temporality in a second language*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Dijkstra, T. (2003). Lexical processing in bilinguals and multilinguals: The word selection problem. In J. Cenoz, B. Hufeisen, & U. Jessner (eds.), *The multilingual lexicon* (pp. 11–26). Dordrecht, the Netherlands: Springer.
  - (2005). Bilingual visual word recognition and lexical access. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches*. (pp. 179–201). New York: Oxford University Press.
- Dijkstra, T., De Bruijn, E., Schriefers, H., & Brinke, S. (2000). More on interlingual homograph recognition: Language intermixing versus explicitness of instruction. *Bilingualism: Language and Cognition*, 3(1), 69–78.
- Dijkstra, T., Grainger, J., & van Heuven, W. J. B. (1999). Recognizing cognates and interlingual homographs: The neglected role of phonology. *Journal of Memory and Language*, 41, 496–518.
- Dijkstra, T., Miwa, K., Brummelhuis, B., Sappelli, M., & Baayen, H. (2010). How cross-language similarity and task demands affect cognate recognition. *Journal of Memory and Language*, 62(3), 284–301.
- Dijkstra, T., Moscoso del Prado Martín, F., Schulpen, B., Schreuder, R., & Baayen, H. (2005). A roommate in cream: Morphological family size effects on interlingual homograph recognition. *Language and Cognitive Processes*, 20(1–2), 7–41.
- Dijkstra, T., Timmermans, M., & Schriefers, H. (2000). On being blinded by your other language: Effects of task demands on interlingual homograph recognition. *Journal of Memory and Language*, 42(4), 445–464.
- Dijkstra, T., & van Hell, J. G. (2003). Testing the language mode hypothesis using trilinguals. *International Journal of Bilingual Education and Bilingualism*, 6(1), 2–16.
- Dijkstra, T., & van Heuven, W. (1998). The BIA model and bilingual word recognition. In J. Grainger, & A. Jacobs (eds.), *Localist connectionist approaches to human cognition* (pp. 189–225). Hillsdale, NJ: Erlbaum.
- (2002). The architecture of the bilingual word recognition system: From identification to decision. *Bilingualism: Language and Cognition*, 5, 175–197.
- Dijkstra, T., van Heuven, W., & Grainger, J. (1998). Simulating crosslanguage competition with the bilingual interactive activation model. *Psychologica Belgica*, 38, 177–196.
- Dijkstra, T., Van Jaarsveld, H., & Ten Brinke, S. (1998). Interlingual homograph recognition: effects of task demands and language intermixing. *Bilingualism: Language and Cognition*, 1, 51–66.

- Dillon, B., Dunbar, E., & Idsardi, W. (2013). A single-stage approach to learning phonological categories: Insights from Inuktitut. *Cognitive Science*, 37, 344–377.
- Diniz, A., Wijnants, M., Torre, K., et al. (2011). Contemporary theories of 1/f noise in motor control. *Human Movement Science*, 30(5), 889–905.
- Doerksen, S., & Shimamura, A. P. (2001). Source memory enhancement for emotional words. *Emotion*, 1, 5–11.
- Dong, Y., Gui, S., & MacWhinney, B. (2005). Shared and separate meanings in the bilingual lexical memory. *Bilingualism: Language and Cognition*, 8, 221–238.
- Döpke, S. (1998). Can the principle of one person-one language be disregarded as unrealistically elitist? *Australian Review of Applied Linguistics*, 21(1), 41–56.
- Dörnyei, Z. (2003). Attitudes, orientations, and motivations in language learning: Advances in theory, research, and applications. In Z. Dörnyei (ed.), Attitudes, orientations and motivations in language learning (pp. 3–32). Oxford, UK: Blackwell.
  - (2010). The relationship between language aptitude and language learning motivation. In E. Macaro (ed.), *Continuum companion to second language acquisition* (pp. 247–267). London: Continuum.
  - (2013). Researching complex dynamic systems: 'Retrodictive qualitative modelling' in the language classroom. language teaching. *Language Teaching*, 47(1), 80–91.
- Dörnyei, Z., & Kormos, J. (2000). The role of individual and social variables in oral task performance. *Language Teaching Research*, 4, 275–300.
- Dörnyei, Z., & Tseng, W-T. (2009). Motivational processing in interactional tasks. In A. Mackey and C. Polio (eds.), *Multiple perspectives on interaction. Second language research in honor of Susan M. Gass* (pp. 117–134). London: Routledge.
- Doupe, A., & Kuhl, P. (1999). Birdsong and human speech: common themes and mechanisms. *Annual Review of Neuroscience*, 22(1), 567–631.
- Draganski, B., Gaser, C., Busch, V., Schuierer, G., Bogdahn, U., & May, A. (2004). Neuroplasticity: Changes in grey matter induced by training. *Nature*, 427(6972), 311–312.
- Dreher, J., Koechlin, E., Ali, S., & Grafman, J. (2002). The roles of timing and task order during task switching. *Neuroimage*, 17(1), 95–109.
- Driscoll, I., & Troncoso, J. (2011a). Asymptomatic Alzheimer's disease: a prodrome or a state of resilience? *Current Alzheimer Research*, 8(4), 330–335.
- Dryer, M., & Haspelmath, M. (eds.). (2011). *The world atlas of language structures online*. Munich: Max Planck Digital Library. Retrieved from: http:// wals.info.
- Duffy, S., Henderson, J., & Morris, R. (1989). Semantic facilitation of lexical access during sentence processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15(5), 791–801.

- Duffy, S., Kambe, G., & Rayner, K. (2001). The effect of prior disambiguating context on the comprehension of ambiguous words: Evidence from eye movements. In D. Gorfein (ed.), On the consequences of meaning selection: Perspectives on resolving lexical ambiguity. Decade of behavior (pp. 27– 43). Washington, DC: American Psychological Association.
- Duffy, S., Morris, R., & Rayner, K. (1988). Lexical ambiguity and fixation times in reading. *Journal of Memory and Language*, 27(4), 429–46.
- Dufour, R., & Kroll, J. (1995). Matching words to concepts in two languages: A test of the concept mediation model of bilingual representation. *Memory and Cognition*, 23, 166–180.
- Dumay, N., & Gaskell, M. (2007). Sleep-associated changes in the mental representation of spoken words. *Psychological Science*, 18, 35–39.
- Duñabeitia, J., Dimitropoulou, M., Morris, J., & Diependaele, K. (2013). The role of form in morphological priming: Evidence from bilinguals. *Language and Cognitive Processes*, 28(7), 969–987.
- Duñabeitia, J., Perea, M., & Carreiras, M. (2010). Masked translation priming effects with highly proficient simultaneous bilinguals. *Experimental Psychology*, 57, 98–107.
- Dunlosky, J., Rawson, K., Marsh, E., Nathan, M., & Willingham, D. (2013).
  Improving students' learning with effective learning techniques:
  Promising directions from cognitive and educational psychology.
  Psychological Science in the Public Interest, 14, 4–58.
- Dussias, G., & Sagarra, N. (2007). The effect of exposure on syntactic parsing in Spanish–English bilinguals. *Bilingualism, Language and Cognition*, 10, 101–116.
- Dussias, P. (2001). Sentence parsing in fluent Spanish–English bilinguals. In J. Nicol (ed.), *One mind, two languages: bilingual language processing* (pp. 159–176). Malden, MA: Blackwell.
- Dussias, P. (2003). Syntactic ambiguity resolution in second language learners: Some effects of bilinguality on L1 and L2 processing strategies. *Studies in Second Language Acquisition*, 25(4), 529–557.
- Dussias, P., & Cramer, T. R. (2006). The role of L1 verb bias on L2 sentence parsing. In D. Bamman, T. Magnitskaia, & C. Zaller (eds.), Proceedings of the 30th annual Boston University conference on language development, vol. 1 (pp. 166–177). Somerville, MA: Cascadilla Press.
- Dussias, P., & Cramer Scaltz, T. (2008). Spanish–English L2 speakers' use of subcategorization bias information in the resolution of temporary ambiguity during second language reading. *Acta Psychologica*, 128(3), 501–513.
- Dussias, P., Marful, A., Gerfen, C., & Bajo, M. (2010). Usage frequencies of complement-taking verbs in Spanish and English: Data from Spanish monolinguals and Spanish-English bilinguals. *Behavior Research Methods*, 42(4), 1004–1011.
- Dussias, P., Perrotti, L., & Brown, M. (2013). Re-learning to parse a first language: The role of experience in sentence comprehension. Poster

presented at the International Workshop on Bilingualism and Cognitive Control. Krakow, Poland.

- Dussias, P., & Piñar, P. (2010). Effects of reading span and plausibility in the reanalysis of wh-gaps by Chinese–English second language speakers. *Second Language Research*, 26(4), 443–472.
- Dussias, P., & Sagarra, N. (2007). The effect of exposure on syntactic parsing in Spanish–English bilinguals. *Bilingualism: Language and Cognition*, 10 (1), 101–116.
- Dussias, P., Valdés Kroff, J., Guzzardo Tamargo, R., & Gerfen, C. (2013). When gender and looking go hand in hand. *Studies in Second Language Acquisition*, 35(2), 353–387.
- Duyck, W. (2005). Translation and associative priming with cross-lingual pseudohomophones: Evidence for nonselective phonological activation in bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31, 1340–1359.
- Duyck, W., & Brysbaert, M. (2004). Forward and backward number translation requires conceptual mediation in both balanced and unbalanced bilinguals. *Journal of Experimental Psychology: Human Perception and Performance*, 30, 889–906.
- Duyck, W., Depestel, I., Fias, W., & Reynvoet (2008). Cross-lingual numerical distance priming with second-language number words in nativeto third-language number word translation. *Quarterly Journal of Experimental Psychology*, 61, 1281–1290.
- Duyck, W., & Warlop, N. (2009). Translation priming between the native language and a second language: New evidence from Dutch-French bilinguals. *Experimental Psychology*, 56, 173–179.
- Duyck, W., Van Assche, E., Drieghe, D., & Hartsuiker, R. (2007). Visual word recognition by bilinguals in a sentence context: Evidence for nonselective lexical access. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33, 663–679.
- Duyck, W., Vanderelst, D., Desmet, T., & Hartsuiker, R. (2008). The frequency effect in second-language visual word recognition. *Psychonomic Bulletin & Review*, 15(4), 850–855.
- Dwan, K., Altman, D., Arnaiz, J., et al. (2008). Systematic review of the empirical evidence of study publication bias and outcome reporting. *Plos one*, 1–31.
- Dyer, E. (1971). Color-naming interference in monolinguals and bilinguals. Journal of Verbal Learning and Verbal Behavior, 10, 297–302.
- Eberhard, K. (1999). The accessibility of conceptual number to the processes of subject-verb agreement in English. *Journal of Memory and Language*, 41(4), 560–578.
- Eddington, C., & Tokowicz, N. (2013). Examining English–German translation ambiguity using primed translation recognition. *Bilingualism: Language and Cognition*, 16, 442–457.

- Eddington, C., Martin, K., & Tokowicz, N. (2012). How meaning-based strategies and the generation effect influence German vocabulary learning. Paper presented at the University of Illinois at Chicago BilForum.
- Eddington, D. (2002). Spanish gender assignment in an analogical framework. *Journal of Quantitative Linguistics*, 9(1), 49–75.
- Ehri, L., & Ryan, E. (1980). Performance of bilinguals in a picture-word interference task. *Journal of Psycholinguistic Research*, 9(3), 285–302.
- Eickhoff, S., Laird, A., Grefkes, C., Wang, L., Zilles, K., & Fox, P. (2009). Coordinate-based activation likelihood estimation meta-analysis of neuroimaging data: A random-effects approach based on empirical estimates of spatial uncertainty. *Human Brain Mapping*, 30, 2907–2926.
- Eid, M. (1992). Directionality in Arabic–English code-switching. In A. Rouchdy (ed.), *The Arabic language in America* (pp. 50–70). Detroit, MI: Wayne state University Press.
- Eilola T., & Havelka, J. (2011). Behavioural and physiological responses to the emotional and taboo Stroop tasks in native and non-native speakers of English. *International Journal of Bilingualism*, 15, 353–369.
- Eilola, T., Havelka, J., & Sharma, D. (2007). Emotional activation in the first and second language. *Cognition and Emotion*, 21, 1064–1076.
- Eimas, P., Siqueland, E., Jusczyk, P., & Vigorito, J. (1971). Speech perception in infants. *Science*, 171(3968), 303–306.
- Ellis, N. (1998). Emergentism, connectionism and language learning. *Language Learning*, 48(4), 631–664.
  - (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24(2), 143–188.
  - (2003). Constructions, chunking, and connectionism: The emergence of second language structure. In C. Doughty, & M. Long (eds.), *Handbook of second language acquisition* (pp. 33–68). Oxford, UK: Blackwell.
  - (2006a). Language acquisition as rational contingency learning. *Applied Linguistics*, 27(1), 1–24.
  - (2006b). Selective attention and transfer phenomena in SLA: Contingency, cue competition, salience, interference, overshadowing, blocking, and perceptual learning. *Applied Linguistics*, 27(2), 1–31.
  - (2007). Learned attention in language acquisition: Blocking, salience, and cue competition. Paper presented at the EuroCogSci07, the Second European Cognitive Science Conference, Delphi, Greece.
- Ellis, N., & Cadierno, T. (2009). Constructing a second language. *Annual Review of Cognitive Linguistics*, 7(special section), 111–290.
- Ellis, N., & Ferreira-Junior, F. (2009a). Construction learning as a function of frequency, frequency distribution, and function. *Modern Language Journal*, 93, 370–386.
  - (2009b). Constructions and their acquisition: Islands and the distinctiveness of their occupancy. *Annual Review of Cognitive Linguistics*, 7, 111–139.

- Ellis, N., & Larsen-Freeman, D. (2009). Constructing a second language: Analyses and computational simulations of the emergence of linguistic constructions from usage. *Language Learning*, 59(supplement 1), 93–128.
- Ellis, N., & O'Donnell, M. (2011). Robust language acquisition: An emergent consequence of language as a complex adaptive system. In L. Carlson, C. Hölscher, & T. Shipley (eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 3512–3517). Austin, TX: Cognitive Science Society.
  - (2012). Statistical construction learning: Does a Zipfian problem space ensure robust language learning? In J. Rebuschat, & J. Williams (eds.), *Statistical learning and language acquisition*. Berlin: Mouton de Gruyter.
- Ellis, N., O'Donnell, M., & Römer, U. (2014). The processing of verb-argument constructions is sensitive to form, function, frequency, contingency, and prototypicality. *Cognitive Linguistics*, 25(1), 55–98.
- Ellis, N., & Sagarra, N. (2011). Learned attention in adult language acquisition: A replication and generalization study and meta-analysis. *Studies in Second Language Acquisition*, 33(4), 589–624.
- Elman, J. (1990). Finding structure in time. Cognitive Science, 14, 179-211.
  - (1993). Learning and development in neural networks: The importance of starting small. *Cognition*, 48(1), 71–99.
- Elman, J., Bates, E., Johnson, M., Karmiloff-Smith, A., Parisi, D., & Plunkett, K. (1996). *Rethinking innateness: A connectionist perspective on development*. Cambridge, MA: MIT Press.
- Elston-Güttler, K., Gunter, T., & Kotz, S. (2005). Zooming into L2: Global language context and adjustment affect processing of interlingual homographs in sentences. *Cognitive Brain Research*, 25(1), 57–70.
- Elston-Güttler, K., Paulmann, S., & Kotz, S. (2005). Who's in control?: Proficiency and L1 influence on L2 processing. *Journal of Cognitive Neuroscience*, 17(10), 1593–1610.
- Emmorey, K., Borinstein, H., Thompson, R., & Gollan, T. (2008). Bimodal bilingualism. *Bilingualism: Language and Cognition*, 11, 43–61.
- Emmorey, K., Luk, G., Pyers, J., & Bialystok, E. (2008). The source of enhanced cognitive control in bilinguals Evidence from bimodal bilinguals. *Psychological Science*, **19**, 1201–1206.
- Engel, A., & Singer, W. (2001). Temporal binding and the neural correlates of sensory awareness. *Trends in Cognitive Sciences*, 5(1), 16–25.
- Engle, R., Kane, M., & Tuholski, S. (1999). Individual differences in working memory capacity and what they tell us about controlled attention, general fluid intelligence, and functions of the prefrontal cortex. In A. Miyake & P. Shah (eds.), *Models of working memory* (pp. 102–134). Cambridge, UK: Cambridge University Press.
- Engel de Abreu, P. (2011). Working memory in multilingual children: Is there a bilingual effect? *Memory*, 19, 529–537.

- Engel de Abreu, P., Cruz-Santos, A., Tourinho, C., Martin, R., & Bialystok, E. (2012). Bilingualism enriches the poor: enhanced cognitive control in low-income minority children. *Psychological Science*, 23(11), 1364–71.
- Erlam, R. (2003). Evaluating the effectiveness of structured input and output-based instruction in foreign language learning. *Studies in Second Language Acquisition*, 25, 559–582.
- Ervin, S. (1961). Learning and recall in bilinguals. *The American Journal of Psychology*, 74, 446–451.
- Ervin, S. M., & Osgood, C. E. (1954). Second language learning and bilingualism. In C. E. Osgood, & F. Sebeok (eds.), *Psycholinguistics: A survey of theory and research problems* (pp. 139–146). Baltimore: Waverly Press.
- Ervin-Tripp, S. (1974). Is second language learning like the first? TESOL *Quarterly*, 8, 111–127.
- Escudero, P. (2005). Linguistic perception and second language acquisition: explaining the attainment of optimal phonological categorization. (Unpublished doctoral dissertation), Utrecht University, the Netherlands.
- Escudero, P., Hayes-Harb, R., & Mitterer, H. (2008). Novel second-language words and asymmetric lexical access. *Journal of Phonetics*, 36, 345–360.
- Escudero, P., & Wanrooij, K. (2010). The effect of L1 orthography on nonnative vowel perception. *Language and Speech*, 53, 343–365.
- Eulitz, C., & Lahiri, A. (2004). Neurobiological evidence for abstract phonological representations in the mental lexicon during speech recognition. *Journal of Cognitive Neuroscience*, 16(4), 577–583.
- Evans, J., Workman, L., Mayer, P., & Crowley, K. (2002). Differential bilingual laterality: Mythical monster found in Wales. *Brain and Language*, 83, 291–299.
- Eysenck, M. (1992). Anxiety: The cognitive perspective. Hove, UK: Erlbaum.
- Eysenck, M., & Calvo, M. (1992). Anxiety and performance: The processing efficiency theory. *Cognition and Emotion*, 6, 409–434.
- Eysenck, M. Derekshan, N., Santos, R., & Calvo, M. (2007). Anxiety and performance: Attentional control theory. *Emotion*, 7, 336–353.
- Fabbro, F. (2001). The bilingual brain: Cerebral representation of languages. *Brain and Language*, 79, 211–222.
- Fabbro, F., Peru, A., & Skrap, M. (1997). Language disorders in bilingual patients after thalamic lesions. *Journal of Neurolinguistics*, 10, 347–367.
- Faingold, E. (2004). Multilingualism from infancy to adolescence: Noam's experience. Charlotte, NC: Information Age Publishing.
- Faisal, A., Selen, L., & Wolpert, D. (2008). Noise in the nervous system. Nature Reviews Neuroscience, 9(4), 292–303.
- Fan, J., McCandliss, B., Sommer, T., Raz, A., & Posner, M. (2002). Testing the efficiency and independence of attentional networks. *Journal of Cognitive Neuroscience*, 14(3), 340–347.
- Farley, A. (2005). Structured input. New York: McGraw-Hill.

- Federal Interagency Forum on Child and Family Statistics. (2002). *American's children: Key national indicators of well-being*. Washington, DC: US Government Printing Office.
- Feldman, L., Frost, R., & Pnini, T. (1995). Decomposing words into their constituent morphemes: Evidence from English and Hebrew. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 21, 947–960.
- Feldman, L., Kostić, A., Basnight-Brown, D., Filipović Đurđević, D., & Pastizzo, M. (2010). Morphological facilitation for regular and irregular verb formations in native and non-native speakers: Little evidence for two distinct mechanisms. *Bilingualism: Language and Cognition*, 13(2), 119–135.
- Felser, C., Roberts, L., Marinis, T., & Gross, R. (2003). The processing of ambiguous sentences by first and second language learners of English. *Applied Psycholinguistics*, 24(3), 453–489.
- Fennell, C. (2012). Habituation procedures. In E. Hoff (ed.), *Research methods in child language: A practical guide* (pp. 3–16). Malden, MA: Wiley-Blackwell.
- Fennell, C., & Byers-Heinlein, K. (2014). You sound like Mommy: Bilingual and monolingual infants learn words best from speakers typical of their language environments. *International Journal of Behavioral Development*, 38(4), 309–316.
- Fennell, C., Byers-Heinlein, K., & Werker, J. F. (2007) Using speech sounds to guide word learning: The case of bilingual infants. *Child Development*, 78(5), 1510–1525.
- Fennell, C., & Werker, J. (2003). Early word learners' ability to access phonetic detail in well-known words. *Language & Speech*, 46(2), 245–264.
- Fenson, L., Dale, P., Steven Reznick, J., Thal, D., Bates, E., & Hartung, J. (1993). MacArthur Communicative Development Inventories (1st edn). Baltimore, MD: Brookes.
- Fenson, L., Marchman, V., Thal, D., Dale, P., Steven Reznick, J., & Bates, E. (2007). MacArthur-Bates Communicative Development Inventories (2nd edn). Baltimore, MD: Brookes.
- Fernald, A. (1985). Four-month-old infants prefer to listen to motherese. Infant Behavior and Development, 8(2), 181–195.
- Fernandes, M., Craik, F., Bialystok, E., & Kreuger, S. (2007). Effects of bilingualism, aging, and semantic relatedness on memory under divided attention. *Canadian Journal of Experimental Psychology*, 61, 128–141.
- Fernández, C. (2008). Reexamining the role of explicit information in processing instruction. *Studies in Second Language Acquisition*, 30, 277–305.
- Fernández, E. (2003). Bilingual sentence processing: Relative clause attachment in English and Spanish. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Ferrand, L., & Grainger, J. (1992). Phonology and orthography in visual word recognition: Evidence from masked nonword priming. *Quarterly Journal of Experimental Psychology*, 45A, 353–372.

- Ferré, P., García, T., Fraga, I., Sánchez-Casas, R., & Molero, M. (2010). Memory for emotional words in bilinguals: Do words have the same emotional intensity in the first and in the second language? *Cognition and Emotion*, 24(5), 760–785.
- Ferreira, V., & Pashler, H. (2002). Central bottleneck influences on the processing stages of word production. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 28, 1187–1199.
- Ferstl, E., Neumann, J., Bogler, C., & Von Cramon, D. (2008). The extended language network: A meta-analysis of neuroimaging studies on text comprehension. *Human Brain Mapping*, 29, 581–593.
- Festman, J. (2009). Three languages in mind. Saarbrücken: VMD. (2012). Language control abilities of late bilinguals. Bilingualism: Language and Cognition, 15(3), 580–593.
- Festman, J., & Munte, T. (2012). Cognitive control in Russian–German bilinguals. *Frontiers in Psychology*, 3, 115.
- Festman J., Rodríguez-Fornells A., & Münte T. (2010). Individual differences in control of language interference in late bilinguals are mainly related to general executive abilities. *Behavioral and Brain Functions*, 6(5).
- Filippi, R., Karaminis, T., & Thomas, M. (2014). Language switching in bilingual production: Empirical data and computational modelling. *Bilingualism: Language and Cognition*, 17(2), 294–315.
- Fillmore, C. (1979). On fluency. In D. Kempler, & W. Wang (eds.), *Individual differences in language ability and language behavior* (pp. 85–102). New York: Academic Press.
- Finkbeiner, M., Almeida, J., Janssen, N., & Caramazza, A. (2006). Lexical selection in bilingual speech does not involve language suppression. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32, 1075–1089.
- Finkbeiner, M., Forster, K., Nicol, J., & Nakamura, K. (2004). The role of polysemy in masked semantic and translation priming. *Journal of Memory and Language*, 51, 1–22.
- Finkbeiner, M., Gollan, T., & Caramazza, A. (2006). Lexical access in bilingual speakers: What's the (hard) problem? *Bilingualism: Language and Cognition*, 9, 153–166.
- Finkbeiner, M., & Nicol, J. (2003). Semantic category effects in second language word learning. *Applied Psycholinguistics*, 24, 369–383.
- Flege, J. (1987). The production of "new" and "similar" phones in a foreign language: Evidence for the effect of equivalence classification. *Journal* of Phonetics, 15(1), 47–65.
  - (1995). Second language speech learning: Theory, findings, and problems. In W. Strange (ed.), *Speech perception and linguistic experience: Issues in crosslanguage research* (pp. 233–277). Timonium, MD: York Press.
  - (1999). Age of learning and second-language speech. In D. Birdsong (ed.), Second language acquisition and the Critical Period Hypothesis (pp. 101–131). Mahwah, NJ: Erlbaum.

- (2002). Interactions between the native and second-language phonetic systems. In P. Burmeister, T. Piske, & A. Rohde (eds.), *An integrated view of language development: Papers in honor of Henning Wode* (pp. 217–224). Trier, Germany: Wissenschaftlicher Verlag.
- Flege, J., & Eefting, W. (1987). Cross-language switching in stop consonant perception and production by Dutch speakers of English. *Speech Communication*, 6(3), 185–202.
- Flege, J., Yeni-Komshian, G., & Liu, S. (1999). Age constraints on secondlanguage acquisition. *Journal of Memory and Language*, 41(1), 78–104.
- Flores, C. (2010). The effect of age on language attrition: Evidence from bilingual returnees. *Bilingualism: Language and Cognition*, 13(4), 533–546.
  - (2012). Differential effects of language attrition in the domains of verb placement and object expression. *Bilingualism: Language and Cognition*, 15, 550–567.
- Flynn, S., Foley, C., & Vinnitskaya, I. (2004). The Cumulative-Enhancement Model for language acquisition: Comparing adults' and children's patterns of development in first, second and third language acquisition of relative clauses. *International Journal of Multilingualism*, 1, 3–16.
- Folse, K. (2004). Vocabulary myths: Applying second language research to classroom teaching. Ann Arbor, MI: University of Michigan Press.
- Folstein, M., Folstein, S., & McHugh, P. (1975). Mini-mental state: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12(3), 189–198.
- Footnick, R. (2007). A hidden language: Recovery of a 'lost' language is triggered by hypnosis. In B. Kopke, M. Schmid, M. Keijzer, & S. Dostert (eds.), Language attrition: Theoretical perspectives (pp. 169–187). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Forster, K. (2004). Category size effects revisited: Frequency and masked priming effects in semantic categorization. *Brain and Language*, 90, 276–286.
- Forster, K., & Davis, C. (1984). Repetition priming and frequency attenuation in lexical access. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 10, 680–698.
- Forster, K., & Taft, M. (1994). Bodies, antibodies, and neighborhood density effects in masked form-priming. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 20, 844–863.
- Fortkamp, M. (1999). Working memory capacity and elements of L2 speech production. *Communication and Cognition*, 32, 259–295.
- Foss, D., & Speer, S. (1983). Global and local context effects in sentence processing. In R. Palermo (ed.), *Cognition and the symbolic processes: Applied ecological perspectives* (pp. 115–139). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Foucart, A., & Frenck-Mestre, C. (2011). Grammatical gender processing in L2: Electrophysiological evidenceEvidence from ERPs of the effect of

L1–L2 syntactic similarity. *Bilingualism: Language and Cognition*, 14, 379–399.

- (2012). Can late L2 learners acquire new grammatical features? Evidence from ERPs and eye-tracking. *Journal off Memory and Language*, 66(1), 226–248.
- Francis, G., Hunston, S., & Manning, E. (eds.). (1996). *Grammar patterns 1: Verbs. The COBUILD series.* London: Harper Collins.
- Francis, W., Corral, N., Jones, M., & Sáenz, S. (2008). Decomposition of repetition priming components in picture naming. *Journal of Experimental Psychology*, 137(3), 566–590.
- Francis, W., & Gallard, S. (2005). Concept mediation in trilingual translation: Evidence from response time and repetition priming patterns. *Psychonomic Bulletin & Review*, 12, 1082–1088.
- Francis, W., & Sáenz, S. (2007). Repetition priming endurance in picture naming and translation: Contributions of component processes. *Memory & Cognition*, 35, 481–493.
- Francis, W., Augustini, B., & Sáenz, S. (2003). Repetition priming in picture naming and translation depends on shared processes and their difficulty: Evidence from Spanish–English bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 29, 1283–1297.
- Frazier, L. (1979). On comprehending sentences: Syntactic parsing strategies. (Unpublished doctoral dissertation), University of Connecticut, Storrs.
- Frazier, L. (1987). Sentence processing. In M. Coltheart (ed.), Attention and *performance XII* (pp. 559–586). Hillsdale, NJ: Erlbaum.
  - (1990). Exploring the architecture of the language processing system. In G. Altmann (ed.), *Cognitive models of speech processing* (pp. 409–433). Cambridge, MA: MIT Press.
- Frazier, L., & Clifton Jr., C. (1996). Construal. Cambridge, MA: MIT Press.
- Frazier, L., & Rayner, K. (1982). Making and correcting errors during sentence comprehension: Eye movements in the analysis of structurally ambiguous sentences. *Cognitive Psychology*, 14(2), 178–210.
- French, R. (1998). A simple recurrent network model of bilingual memory. In M. A. Gernsbacher, & S. Derry (eds.), Proceedings of the 20th Annual Conference of the Cognitive Science Society (pp. 368–373). Mahwah, NJ: Erlbaum.
- Frenck, C., & Pynte, J. (1987). Semantic representation and surface forms: A look at cross-language priming in bilinguals. *Journal of Psycholinguistic Research*, 16, 383–396.
- Frenck-Mestre, C. (1999). Examining second language reading: an on-line look. In A. Sorace, C. Heycock, & R. Shillcock (eds.), Language acquisition: Knowledge representation and processing (pp. 474–478). Amsterdam: North-Holland.
  - (2002). An on-line look at sentence processing in the second language. In R. Heredia, & J. Altarriba (eds.), *Bilingual sentence processing* (pp. 217–236). Amsterdam: Elsevier.

- Frenck-Mestre, C., Foucart, A., Carrasco-Ortiz, H., & Herschensohn, J. (2009). Processing of grammatical gender in French as a first and second language: Evidence from ERPs. In L. Roberts, G. Véronique, A. Nilsson, & M. Tellier (eds.), *Eurosla yearbook 9* (pp. 76–106). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Frenck-Mestre, C., & Pynte, J. (1997). Syntactic ambiguity resolution while reading in second and native languages. *Quarterly Journal of Experimental Psychology*, 50A(1), 119–148.
- Friederici, A. (1995). The time course of syntactic activation during language processing: a model based on neuropsychological and neurophysiological data. *Brain and Language*, 50, 259–281.

(2006). What's in control of language? Nature Neuroscience, 9(8), 991–992.

- Friederici, A., & Jacobsen, T. (1999). Processing grammatical gender during language comprehension. *Journal of Psycholinguistic Research*, 28(5), 467– 484.
- Fromm, E. (1970). Age regression with unexpected reappearance of a repressed childhood language. *International Journal of Clinical and Experimental Hypnosis*, **18**, **79–88**.
- Frost, R. (2012). Towards a universal model of reading. *Behavioral and Brain Sciences*, 35, 263–279.
- Frost, R., Deutsch, A., & Forster, K. (2000). Decomposing morphologically complex words in a nonlinear morphology. *Journal of Experimental Psychology Learning Memory, and Cognition*, 26, 751–765.
- Frost, R., & Grainger, J. (2000). Cross-linguistic perspectives on morphological processing. *Language and Cognitive Processes*, 15, 321–328.
- Gahl, S., & Garnsey, S. (2004). Knowledge of grammar, knowledge of usage: Syntactic probabilities affect pronunciation variation. *Language*, 80(4), 748–775.
- Gais, S., Lucas, B., & Born, J. (2006). Sleep after learning aids memory recall. Learning & Memory, 13, 259–262.
- Galbraith, G., & Arroyo, C. (1993). Selective attention and brainstem frequency-following responses. *Biological Psychology*, 37(1), 3–22.
- Galbraith, G., Bhuta, S., Choate, A., Kitahara, J., & Mullen Jr., T. (1998). Brain stem frequency-following response to dichotic vowels during attention. *Neuroreport*, 9(8), 1889–1893.
- Ganzeboom, H. (2010). A new international socio-economic index (ISEI) of occupational status for the International Standard Classification of Occupations 2008 (ISCO-08) constructed with data from the ISSP 2002–2007. Paper presented at the Annual Meeting of the International Social Survey Programme, Lisbon, Portugal.
- Gao, E., & Suga, N. (1998). Experience-dependent corticofugal adjustment of midbrain frequency map in bat auditory system. *Proceedings of the National Academy of Sciences of the United States of America*, 95(21), 12663– 12670.

- (2000). Experience-dependent plasticity in the auditory cortex and the inferior colliculus of bats: role of the corticofugal system. *Proceedings of the National Academy of Sciences of the United States of America*, 97(14), 8081–8086.
- Garbin, G., Costa, A., Sanjuan, A., et al. (2011). Neural bases of language switching in high and early proficient bilinguals. *Brain and Language*, 119(3), 129–135.
- Garbin, G., Sanjuan, A., Forn, C., et al. (2010). Bridging language and attention: Brain basis of the impact of bilingualism on cognitive control. *Neuroimage*, 53(4), 1272–1278.
- García, N., Chelminski, P., & Hernández, E. (2013). The effects of language on attitudes towards advertisements and brands trust in Mexico. *Journal of Current Issues & Research in Advertising*, 34, 77–92.
- García-Orza, J., Perea, M., & Munoz, S. (2010). Are transposition effects specific to letters? *The Quarterly Journal of Experimental Psychology*, 63, 1603–1618.
- Garcia-Sierra, A., Rivera-Gaxiola, M., Percaccio, C., Conboy, B., Romo, H., & Klarman, L. (2011). Bilingual language learning: An ERP study relating early brain responses to speech, language input, and later word production. *Journal of Phonetics*, 39(4), 546–557.
- Gardner, D. (2007). Validating the construct of *word* in applied corpusbased vocabulary search: A critical survey. *Applied Linguistics*, 28(2), 241–265.
- Gardner, H. (1987). The mind's new science: A history of the cognitive revolution. New York: Basic books.
- Gardner, R. (1985). Social psychology and second language learning: The role of attitudes and motivation. London: Edward Arnold.
- Gardner, R., & MacIntyre, P. (1993). On the measurement of affective variables in second language learning. *Language Learning*, 43, 157–194.
- Gardner-Chloros, P. (2009). *Code-switching*. Cambridge, UK: Cambridge University Press.

Garnsey, S., Pearlmutter, N., Myers, E., & Lotocky, M. (1997). The contributions of verb bias and plausibility to the comprehension of temporarily ambiguous sentences. *Journal of Memory and Language*, 37(1), 58–93.

- Gaskell, G., & Dumay, N. (2003). Lexical competition and the acquisition of novel words. *Cognition*, 89, 105–132.
- Gass, S. (1987). The resolution of conflicts among competing systems: A bidirectional perspective. *Applied Psycholinguistics*, 8(4), 329–350.
- Gass, S., & Selinker, L. (eds.). (1983). Language transfer in language learning. Rowley, MA: Newbury House.
- Gathercole, S. (1999). Cognitive approaches to the development of short-term memory. *Trends in Cognitive Sciences*, 3, 410–419.
- Gathercole, V., Thomas, E., Kennedy, I., Prys, C., Young, N., Viñas Guasch et al. (2014). Does language dominance affect cognitive performance in bilinguals? Lifespan evidence from preschoolers through older adults

on card sorting, Simon, and metalinguistic tasks. *Frontiers in Psychology*, 5(11).

- Gauthier, K., Genesee, F., & Kasparian, K. (2012). Acquisition of complement clitics and tense morphology in internationally adopted children acquiring French. *Bilingualism: Language and Cognition*, 15(2), 304– 319.
- Gehrke, B. (2008). Ps in motion: On the semantics and syntax of P elements and motion events. Utrecht, the Netherlands: LOT Publications.
- Genesee, F., Hamers, J., Lambert, W., Mononen, L., Seitz, M., & Starck, R. (1978). Language processing in bilinguals. *Brain and language*, 5(1), 1–12.
- Gennari, S., & MacDonald, M. (2009). Linking production and comprehension processes: The case of relative clauses. *Cognition*, 111(1), 1–23.
- Gentner, D., & Toupin, C. (1986). Systematicity and surface similarity in the development of analogy. *Cognitive science*, 10(3), 277–300.
- Gerard, L., & Scarborough, D. (1989). Language-specific lexical access of homographs by bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15(2), 305–315.
- Gernsbacher, M., & Faust, M. (1991). The mechanism of suppression: A component of general comprehension skill. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 17(2), 245–262.
  - (1995). Skilled suppression. In F. Dempster (ed.) (1995). *Interference and inhibition in cognition* (pp. 295–327). San Diego, CA: Academic Press.
- Gernsbacher, M., & St. John, M. (2001). Modeling suppression in lexical access. In D. Gorfein (ed.), On the consequences of meaning selection: Perspectives on resolving lexical ambiguity (pp. 47–65). Washington, DC: American Psychological Association.
- Gervain, J., Mehler, J., Werker, J., Nelson, C., Csibra, G., & Lloyd-Fox, S. (2011). Near-infrared spectroscopy: A report from the McDonnell infant methodology consortium. *Accident Analysis and Prevention*, 1(1), 22–46.
- Gibson, E. (1998). Linguistic complexity: Locality of syntactic dependencies. *Cognition*, 69, 1–76.
- Gibson, E., Pearlmutter, N., Canseco-Gonzalez, E., & Hickok, G. (1996). Recency preference in the human sentence processing mechanism. *Cognition*, 59(1), 23–59.
- Gibson, E., & Warren, T. (2004). Reading time evidence for intermediate linguistic structure in long distance dependencies. *Syntax*, 7(1), 55–78.
- Gibson, M., & Hufeisen, B. (2003). Investigating the role of prior foreign language knowledge. In J. Cenoz, B. Hufeisen, & U. Jessner (eds.), *The multilingual lexicon* (pp. 87–102). Dordrecht, the Netherlands: Springer Netherlands.
  - (2006). Metalinguistic processing control mechanisms in multilingual learners of English. *International Journal of Multilingualism*, 3, 139–153.

- Gilabert, R., & Muñoz, C. (2010). Differences in attainment and performance in a foreign language: The role of working memory capacity. *International Journal of English Studies*, 10(1), 19–42.
- Gillon-Dowens, M., Guo, T., Guo, J., Barber, H., & Carreiras, M. (2011). Gender and number processing in Chinese learners of Spanish-Evidence from Event Related Potentials. *Neuropsychologia*, 49(7), 1651– 1659.
- Gillon-Dowens, M., Vergara, M., Barber, H., & Carreiras, M. (2010). Morphosyntactic processing in late second-language learners. *Journal* of Cognitive Neuroscience, 22(8), 1870–1887.
- Gilmore, J., Lin, W., Prastawa, M., Looney, C., Vetsa, Y., Knickmeyer, R., & Lieberman, J. (2007). Regional gray matter growth, sexual dimorphism, and cerebral asymmetry in the neonatal brain. *Journal of Neuroscience*, 27(6), 1255–1260.
- Gitelman, D., Nobre, A., Sonty, S., Parrish, T., & Mesulam, M.-M. (2005). Language network specializations: An analysis with parallel task designs and functional magnetic resonance imaging. *NeuroImage*, 26, 975–985.
- Glanzer, M., & Duarte, A. (1971). Repetition between and within languages in free recall. *Journal of Verbal Learning and Verbal Behavior*, 10, 625–630.
- Glazewski, S., & Fox, K. (1996). Time course of experience-dependent synaptic potentiation and depression in barrel cortex of adolescent rats. *Journal of Neurophysiology*, 75(4), 1714–1729.
- Glennen, S., & Masters, M. (2002). Typical and atypical language development in infants and toddlers adopted from eastern Europe. *American Journal of Speech Language Pathology*, 11, 417–433.
- Gloning, I., & Gloning, K. (1983). Aphasia in polyglots contribution to the dynamics of language disintegration as well as to the question of the localization of these impairments. In M. Paradis (ed.), *Readings on aphasia in bilinguals and polyglots* (pp. 681–716). Montreal: Marcel Didier.
- Gogtay, N., Giedd, J., Lusk, L., et al. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. Proceedings of the National Academy of Sciences of the United States of America, 101(21), 8174–8179.
- Gold, B., Kim, C., Johnson, N., Kryscio, R., & Smith, C. (2013). Lifelong bilingualism maintains neural efficiency for cognitive control in aging. *Journal of Neuroscience*, 33(2), 387–396.
- Goldberg, A. (1995). Constructions: A construction grammar approach to argument structure. Chicago, IL: University of Chicago Press.
- Goldberg, A., Casenhiser, D., & Sethuraman, N. (2004). Learning argument structure generalizations. *Cognitive Linguistics*, 15, 289–316.
- Goldinger, S. (1998). Echoes of echoes?: An episodic theory of lexical access. *Psychological Review*, 105, 251–279.
- Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.

- Golestani, N., Molko, N., Dehaene, S., LeBihan, D., & Pallier, C. (2007). Brain structure predicts the learning of foreign speech sounds. *Cerebral Cortex*, 17(3), 575–582.
- Golinkoff, R., Hirsh-Pasek, K., Cauley, K., & Gordon, L. (1987). The eyes have it: Lexical and syntactic comprehension in a new paradigm. *Journal of Child Language*, 14(1), 23–45.
- Golinkoff, R., Ma, W., Song, L., & Hirsh-Pasek, K. (2013). Twenty-five years using the intermodal preferential looking paradigm to study language acquisition: What have we learned? *Perspectives on Psychological Science*, 8 (3), 316–339.
- Gollan, T., & Brown, A. (2006). From tip-of-the-tongue (TOT) data to theoretical implications in two steps: When more TOTs means better retrieval. Journal of Experimental Psychology: General, 135, 462–483.
- Gollan, T., & Ferreira, V. (2009). Should I stay or should I switch? A costbenefit analysis of voluntary language switching in young and aging bilinguals. Journal of Experimental Psychology: *Learning, Memory, and Cognition*, 35, 640–665.
- Gollan, T., Forster, K., & Frost, R. (1997). Translation priming with different scripts: Masked priming with cognates and noncognates in Hebrew-English bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 1122–1139.
- Gollan, T., & Goldrick, M. (2012). Does bilingualism twist your tongue? *Cognition*, 125, 491–497.
- Gollan, T., Montoya, R., & Bonanni, M. (2005). Proper names get stuck on bilingual and monolingual speakers' tip of the tongue equally often. *Neuropsychology*, 19(3), 278–287.
- Gollan, T., Montoya, R., Cera, C., & Sandoval, T. (2008). More use almost always means a smaller frequency effect: Aging, bilingualism, and the weaker links hypothesis. *Journal of Memory and Language*, 58(3), 787– 814.
- Gollan, T., Montoya, R., & Werner, G. (2002). Semantic and letter fluency in Spanish–English bilinguals. *Neuropsychology*, 16(4), 562.
- Gollan, T., Salmon, D., Montoya, R., & Galasko, D. (2011). Degree of bilingualism predicts age of diagnosis of Alzheimer's disease in loweducation but not in highly educated Hispanics. *Neuropsychologia*, 49 (14), 3826–3830.
- Gollan, T., Sandoval, T., & Salmon, D. (2011). Cross-language intrusion errors in aging. *Psychological Science*, 22(9), 1155–1164
- Gollan, T., Schotter, E., Gomez, J., Murillo, M., & Rayner, K. (2014). Multiple levels of bilingual language control: Evidence from language intrusions in reading aloud. *Psychological Science*, 25(2) 585–595.
- Gollub, D., & Healy, A. (1987). Word recall as a function of sentence generation and sentence context. *Bulletin of the Psychonomic Society*, 25, 359–360.

- Goodman, G., Haith, M., Guttentag, R., & Rao, S. (1985). Automatic processing of word meaning: intralingual and interlingual interference. *Child Development*, 56, 103–118.
- Goodz, N. (1989). Parental language mixing in bilingual families. *Infant Mental Health Journal*, 10(1), 1–21.
- Gor, K. (2010). Beyond the obvious: Do second language learners process inflectional morphology? *Language Learning*, 60(1), 1–20.
- Gor, K., & Cook, S. (2010). Non-native processing of verbal morphology: In search of regularity. *Language Learning*, 60(1), 88–126.
- Gor, K., & Jackson, S. (2013). Morphological decomposition and lexical access in a native and second language: A nesting doll effect. *Language and Cognitive Processes*, 28(7), 1065–1091.
- Gor, K., & Lukyanchenko, A. (2013). Inflectional paradigm in native and nonnative processing of nouns: What mediates decomposition? Poster presented at 8th Morphological Processing Conference, Cambridge University.
- Gor, K., Cook, S., & Jackson, S. (2010). Lexical access in highly proficient late L2 learners: Evidence from semantic and phonological auditory priming. Paper presented at the Second Language Research Forum, University of Maryland.
- Goral, M. (2004). First-language decline in healthy aging: Implications for attrition in bilingualism. *Journal of Neurolinguistics*, 17, 31–52.
- Goral, M., Campanelli, L., & Spiro, A. (forthcoming). Language dominance and inhibition abilities in bilingual older adults. *Bilingualism: Language and Cognition*.
- Goral, M., Libben, G., Obler, L., Jarema, G., & Ohayon, K. (2008). Lexical attrition in younger and older bilingual adults. *Clinical Linguistics and Phonetics*, 22, 509–522.
- Goral, M., Spiro, A., Albert, M., Obler, L., & Connor, L. (2007). Change in lexical-retrieval skills in adulthood. *Mental Lexicon*, 2(2), 215–238.
- Gordon, P., Hendrick, R., & Johnson, M. (2004). Effects of noun phrase type on sentence complexity. *Journal of Memory and Language*, 51(1), 97–114.
- Goren, C., Sarty, M., & Wu, P. (1975). Visual following and pattern discrimination of face-like stimuli by newborn infants. *Pediatrics*, 9, 415– 421.
- Gottlob, L., Goldinger, S., Stone, G., & Van Orden, G. (1999). Reading homographs: Orthographic, phonologic, and semantic dynamics. *Journal of Experimental Psychology: Human Perception and Performance*, 25 (2), 561–574.
- Goyvaerts, D. & Zembele, T. (1992). Codeswitching in Bukavu. Journal of Multilingual and Multicultural Development, 13, 71-82.
- Grainger, J. (1987). L'accès au lexique bilingue: Vers une nouvelle orientation de recherche. *L'Année Psychologique*, 87, 553–566.
  - (1990). Word frequency and neighborhood frequency effects in lexical decision and naming. *Journal of Memory and Language*, 29, 228–244.

- (1992). Orthographic neighborhoods and visual word recognition. In R. Frost & L. Katz (eds.), *Orthography, phonology, morphology, and meaning* (pp.131–146). Elsevier: Amsterdam.
- (1993). Visual word recognition in bilinguals. In R. Schreuder, & B. Weltens (eds.), *The bilingual lexicon* (pp. 11–25). Amsterdam/ Philadelphia, PA: John Benjamins.
- (2008). Cracking the orthographic code. *Language and Cognitive Processes*, 23, 1–35.
- Grainger, J., & Beauvillain, C. (1987). Language blocking and lexical access in bilinguals. *Quarterly Journal of Experimental Psychology: Human Experimental Psychology*, 39(2), 295–319.
  - (1988). Associative priming in bilinguals: Some limits of interlingual facilitation effects. *Canadian Journal of Psychology/Revue canadienne de psychologie*, 42, 261–273.
- Grainger, J., & Dijkstra, T. (1992). On the representation and use of language information in bilinguals. In R. J. Harris (ed.), *Cognitive processing in bilinguals* (pp. 207–220). Amsterdam: Elsevier Science Publishers.
- Grainger, J., & Frenck-Mestre, C. (1998). Masked Priming by Translation equivalents in proficient bilinguals. *Language and Cognitive Process*, 13, 601–623.
- Grainger, J., Granier, J.-P., Farioli, F., van Assche, E., & van Heuven, W. (2006). Letter position information and printed word perception: The relative-position priming constraint. *Journal of Experimental Psychology: Human Perception and Performance*, 32, 865–884.
- Grainger, J., & Holcomb, P. (2009). Watching the word go by: On the timecourse of component processes in visual word recognition. *Language and Linguistic Compass*, 3, 128–156.
- Grainger, J., & Jacobs, A. (1996). Orthographic processing in visual word recognition: A multiple read-out model. *Psychological Review*, 103, 518–565.
- Grainger, J. Midgley, K., & Holcomb, P. (2010). Re-thinking the bilingual interactive-activation model from a developmental perspective (BIA-d). In M. Kail, & M. Hickman (eds.), *Language Acquisition across linguistic and cognitive systems* (pp. 267–284). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Grainger, J., Rey, A., & Dufau, S. (2008). Letter perception: from pixels to pandemonium. *Trends in Cognitive Sciences*, 12, 381–387.
- Grainger, J., & Segui, J. (1990). Neighborhood frequency effects in visual word recognition: A comparison of lexical decision and masked identification latencies. *Perception & Psychophysics*, 47(2), 191–198.
- Grainger, J., & van Heuven, W. (2003). Modelling letter position coding in printed word perception. In P. Bonin (ed.), *Mental lexicon: "Some words to talk about words"* (pp. 1–23). New York: Nova Science Publishers.
- Grainger, J., & Ziegler, J. (2011). A dual-route approach to orthographic processing. *Frontiers in Psychology*, 2, 1–13.

- Green, D. (1986). Control, activation, and resource: A framework and a model for the control of speech in bilinguals. *Brain and Language*, 27, 210–223.
  - (1998). Mental control of the bilingual lexico-semantic system. *Bilingualism: Language and Cognition*, 1, 67–81.
  - (2003). The neural basis of the lexicon and the grammar in L2 acquisition. In R. van Hout (ed.), *The lexicon-syntax interface in second language acquisition* (pp. 197–218). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Green, D., & Abutalebi, J. (2008). Understanding the link between bilingual aphasia and language control. *Journal of Neurolinguistics*, 21(6), 558–576.
  - (2013) Language control in bilinguals: The adaptive control hypothesis. *Journal of Cognitive Psychology*, 25, 515–530.
- Green, D., Crinion, J., & Price, C. (2006). Convergence, degeneracy, and control. *Language Learning*, 56(s1), 99–125.
- Greenough, W., Black, J., & Wallace, C. (1987). Experience and brain development. *Child Development*, 58(3), 539–559.
- Gribble, C. (1987). Reading Bulgarian through Russian. Columbus, OH: Slavica.
- Gries, S., & Stefanowitsch, A. (2004). Extending collostructional analysis: A corpus-based perspective on 'alternations.' *International Journal of Corpus Linguistics*, 9, 97–129.
- Gries, S., & Wulff, S. (2005). Do foreign language learners also have constructions? Evidence from priming, sorting, and corpora. *Annual Review* of *Cognitive Linguistics*, 3, 182–200.
  - (2009). Psycholinguistic and corpus linguistic evidence for L2 constructions. Annual Review of Cognitive Linguistics, 7, 164–187.
- Grogan, A., Jones, P., Ali, N., et al. (2012). Structural correlates for lexical efficiency and number of languages in non-native speakers of English. *Neuropsychologia*, 50(7), 1347–1352.
- Grosjean, F. (1982) Life with two languages: An introduction to bilingualism. Cambridge, MA: Harvard University Press.
  - (1989). Neurologists, beware! The bilingual is not two monolinguals in one person. *Brain and Language*, 36, 3–15.
  - (1997). Processing mixed language: issues, findings, and models. In A. de Groot, & J. Kroll (eds.), *Tutorials in bilingualism* (pp. 225–254). Mahwah, NJ: Lawrence Erlbaum.
  - (1998). Studying bilinguals: Methodological and conceptual issues. *Bilingualism: Language and Cognition*, 1, 131–149.
  - (2008). Studying bilinguals. Oxford, UK: Oxford University Press.
- (2010). Bilingual: Life and reality. Cambridge, MA: Harvard University Press.
- Grosjean, F., Kroll, J., Meisel, J., & Muysken, P. (founding eds.) (1998). Bilingualism: Language and Cognition Journal. Cambridge, UK: Cambridge University Press.
- Grosjean, F., & Li, P. (2013). *The psycholinguistics of bilingualism*. New York: John Wiley & Sons.

- Grossi, G., Savill, N., Thomas, E., & Thierry, G. (2010). Posterior N1 asymmetry to English and Welsh words in Early and Late English–Welsh bilinguals. *Biological Psychology*, 85, 124–133.
  - (2012). Electrophysiological cross-language neighborhood density effects in late and early English-Welsh bilinguals. *Frontiers in Psychology*, 3, 408.
- Grüter, T., Lew-Williams, C., & Fernald, A. (2012). Grammatical gender in L2: A production or a real-time processing problem? *Second Language Research*, 28(2), 191–215.
- Guillelmon, D., & Grosjean, F. (2001). The gender marking effect in spoken word recognition: The case of bilinguals. *Memory & Cognition*, 29(3), 503–511.
- Gullberg, M. (2011). Thinking, speaking, and gesturing about motion in more than one language. In A. Pavlenko (ed.), *Thinking and speaking in two languages* (pp. 143–169). Bristol, UK: Multilingual Matters.
- Gullberg, M., Indefrey, P., & Muysken, P. (2009). Research techniques for the study of code-switching. In B. Bullock, & A. Toribio (eds.), *The Cambridge handbook of linguistic code-switching* (pp. 21–39). Cambridge, UK: Cambridge University Press.
- Gullifer, J., Kroll, J., & Dussias, P. (2013). When language switching has no apparent cost: Lexical access in sentence context. *Frontiers in Psychology*, 4, 278.
- Gumperz, J. (1982). Conversational code switching. In J. Gumperz, *Discourse strategies* (pp. 55–4999). Cambridge, UK: Cambridge University Press.
- Guo, J., Guo, T., Yan, Y., Jiang, N., & Peng, D. (2009). ERP evidence for different strategies employed by native speakers and L2 learners in sentence processing. *Journal of Neurolinguistics*, 22(2), 123–134.
- Guo, T., Liu, H., Misra, M., & Kroll, J. (2011). Local and global inhibition in bilingual word production: fMRI evidence from Chinese–English bilinguals. *NeuroImage*, 56, 2300–2309.
- Guo, T., Ma, F., & Liu, F. (2013). An ERP study of inhibition of non-target languages in trilingual word production. *Brain and Language*, 127(1), 12–20.
- Gürel, A. (2004). Selectivity in L2-induced L1 attrition: A psycholinguistic account. *Journal of Neurolinguistics*, 17(1), 53–78.
- Guttentag, R., Haith, M., Goodman, G., & Hauch, J. (1984). Semantic processing of unattended words by bilinguals: A test of the input switch mechanism. *Journal of Verbal Learning and Verbal Behavior*, 23, 178–188.
- Guzzardo Tamargo, R. (2012). Linking comprehension costs to production patterns during the processing of mixed language. (Unpublished doctoral dissertation), Pennsylvania State University, University Park.
- Guzzardo Tamargo, R., & Dussias, P. (2013). Processing of Spanish–English code-switches by late bilinguals. *BUCLD 37 Proceedings*. Somerville, MA: Cascadilla Press.

- Hahne, A. (2001). What's different in second-language processing? Evidence from event-related brain potentials. *Journal of Psycholinguistic Research*, 30(3), 251–266.
- Hahne, A., & Friederici, A. (2001). Processing a second language: Late learners' comprehension mechanisms as revealed by event-related brain potentials. *Bilingualism: Language and Cognition*, 4(2), 123–141.
- Hairston, W., Letowski, T., & McDowell, K. (2013). Task-Related Suppression of the brainstem frequency following response. *PLoS ONE*, 8(2), e55215.
- Hakuta, K., Bialystok, E., & Wiley, E. (2003). Critical evidence: A test of the critical-period hypothesis for second-language acquisition. *Psychological Science*, 14(1), 31–38.
- Hakuta, K., Ferdman, B., & Diaz, R. (1987). Bilingualism and cognitive development: Three perspectives. Advances in Applied Psycholinguistics, 2, 284–319.
- Halberda, J. (2003). The development of a word-learning strategy. *Cognition*, 87(1), B23–B34.
- Hall, C., Derby, C., LeValley, A., Katz, M., Verghese, J., & Lipton, R. (2007). Education delays accelerated decline on a memory test in persons who develop dementia. *Neurology*, 69, 1657–1664.
- Hall, C., Lipton, R., Sliwinski, M., Katz, M., Derby, C., & Verghese, J. (2009). Cognitive activities delay onset of memory decline in persons who develop dementia. *Neurology*, 73, 356–361.
- Hamann, S., & Canli, T. (2004). Individual differences in emotion processing. *Current Opinion in Neurobiology*, 14, 233–238.
- Hamers, J., & Lambert, W. (1972). Bilingual interdependencies in auditory perception. *Journal of Verbal Learning and Verbal Behavior*, 11, 303–310.
- Hammarberg, B., & Hammarberg, B. (1993). Articulatory re-setting in the acquisition of new languages. *PHONUM*, 2, 61–67.
- (2005). Re-setting the basis of articulation in the acquisition of new languages: A third-language case study. In Björn Hammarberg (ed.), *Introductory readings in L3* (pp. 74–85). Edinburgh: University of Edinburgh Press.
- Han, Z.-H., & Peverly, S. (2007). Input processing: A study of ab initio learners with multilingual backgrounds. International Journal of Multilingualism, 4, 17–37.
- Hansen, L., Umeda, Y., & McKinney, M. (2002). Savings in the relearning of second language vocabulary: The effects of time and proficiency. *Language Learning*, 52(4), 653–678.
- Hansen, M., & Markman, E. (2009). Children's use of mutual exclusivity to learn labels for parts of objects. *Developmental Psychology*, 45(2), 592– 596.
- Hanulovà, J., Davidson, D., & Indefrey, P. (2011). Where does the delay in L2 picture naming come from? Psycholinguistic and neurocognitive

evidence on second language word production. *Language and Cognitive Processes*, 26, 902–934.

- Harm, M., & Seidenberg, M. (1999). Phonology, reading acquisition, and dyslexia: Insights from connectionist models. *Psychological Review*, 106, 491–528.
- Harrington, M. (1987). Processing transfer: Language-specific processing strategies as a source of interlanguage variation. *Applied Psycholinguistics*, 8(4), 351–377.
- Harris, C. (2004). Bilingual speakers in the lab: Psychophysiological measures of emotional reactivity. *Journal of Multilingual and Multicultural Development*, 25, 223-247.
- Harris, C., Ayçiçeği, A., & Gleason, J. (2003). Taboo words and reprimands elicit greater autonomic reactivity in a first than in a second language. *Applied Psycholinguistics*, 4, 561–578.
- Harris, C., Gleason, J., & Ayçiçeği, A. (2005). When is a first language more emotional? Psychophysiological evidence from bilingual speakers. In A. Pavlenko (ed.), Bilingual minds: Emotional experience, expression, and representation (pp. 257–283). Clevedon, UK: Multilingual Matters.
- Harris, R. (ed.). (1992). *Cognitive processing in bilinguals*. Amsterdam: North Holland.
- Hartsuiker, R., & Pickering, M. J. (2008). Language integration in bilingual sentence production. *Acta Psychologica*, 128, 479–489.
- Hartsuiker, R., Pickering, M., & Veltkamp, E. (2004). Is syntax separate or shared between languages? Cross-linguistic syntactic priming in Spanish-English bilinguals. *Psychological Science*, 15, 409-414.
- Hasan, K., & Narayana, P. (2003). Computation of the fractional anisotropy and mean diffusivity maps without tensor decoding and diagonalization: Theoretical analysis and validation. *Magnetic Resonance in Medicine*, 50, 589–598.
- Hasegawa, M., Carpenter, P., & Just, M. (2002). An fMRI study of bilingual sentence comprehension and workload. *NeuroImage*, 15, 647–660.
- Hasselgren, A. (1994). Lexical teddy bears and advanced learners: A study into the ways Norwegian students cope with English vocabulary. International Journal of Applied Linguistics, 4, 237–260.
- Hatzidaki, A., Branigan, H., & Pickering, J. (2011). Co-activation of syntax in bilingual language production. *Cognitive Psychology*, 62, 123–150.
- Hauk, O., & Pulvermüller, F. (2004). Effects of word length and frequency on the human event-related potential. *Clinical Neurophysiology*, 115, 1090–1103.
- Hauk, O., Pulvermüller, F., Ford, M., Marslen-Wilson, W., & Davis, M. (2009). Can I have a quick word? Early electrophysiological manifestations of psycholinguistic processes revealed by event-related regression analysis of the EEG. *Biological Psychology*, 80, 64–74.

- Hayes-Harb, R., Nicol, J., & Barker, J. (2010). Learning the phonological forms of new words: Effects of orthographic and auditory input. *Language and Speech*, 53(3), 367–381.
- Haykin, S. (1999). *Neural networks: A comprehensive foundation* (2nd edn). Upper Saddle River, NJ: Prentice Hall.
- Hebb, D. (1949). The organization of behavior: A neuropsychological theory. New York: Wiley.
- Heilenman, L., & McDonald, J. (1993). Processing strategies in L2 learners of French: The role of transfer. *Language Learning*, 43(4), 507–557.
- Henderson, B. (2006). Multiple agreement and inversion in Bantu. Syntax, 9, 275–289.
- Henry, N., Culman, H., & VanPatten, B. (2009). More on the effects of explicit information in processing instruction: A partial replication and response to Fernández (2008). *Studies in Second Language Acquisition*, 31, 359–375.
- Herdina, P., & Jessner, U. (2002). A dynamic model of multilingualism: Perspectives of change in psycholinguistics. Clevedon, UK: Multilingual Matters.
- Heredia, R., & Altarriba, J. (2001). Bilingual language mixing: Why do bilinguals code-switch? Current Directions in Psychological Science, 10, 164–168.
- Hermans, D., Bongaerts, T., de Bot, K., & Schreuder, R. (1998). Producing words in a foreign language: Can speakers prevent interference from their first language? *Bilingualism: Language and Cognition*, 1, 213–229.
- Hermans, D., Ormel, E., Van Besselaar, R., & van Hell, J. (2011). Lexical activation in bilinguals' speech production is dynamic: How language ambiguous words can affect cross-language activation. *Language and Cognitive Processes*, 26, 1687–1709.
- Hernandez, A. (2013). *The bilingual brain*. Oxford, UK: Oxford University Press.
- Hernandez, A., Bates, E., & Avila, L. (1994). On-line sentence interpretation in Spanish–English bilinguals: What does it mean to be "in between?" *Applied Psycholinguistics*, 15(4), 417–446.
- (1996). Processing across the language boundary: A cross modal priming study of Spanish–English bilinguals. *Journal of Experimental Psychology: Learning, Memory, & Cognition,* 22, 846–864.
- Hernandez, M., Costa, A., & Humphreys, G. (2012). Escaping capture: Bilingualism modulates distraction from working memory, *Cognition*, 122, 37–50.
- Hernandez, A., Dapretto, M., Mazziotta, J., & Bookheimer, S. (2001). Language switching and language representation in Spanish-English bilinguals: An fMRI study. *Neuroimage*, 14(2), 510–520.
- Hernandez, A., & Kohnert, K. (1999). Aging and language switching in bilinguals. *Aging, Neuropsychology and Cognition*, 6, 69–83.
- (2000). In search of the language switch: An fMRI Study of picture naming in Spanish–English bilinguals. *Brain and Language*, 73, 421–431.
- Hernandez, A., Li, P., & MacWhinney, B. (2005). The emergence of competing modules in bilingualism. *Trends in Cognitive Sciences*, 9(5), 220–225.
- Hernandez, M., Martin, C., Barcelo, F., & Costa, A. (2013). Where is the bilingual advantage in task-switching?. *Journal of Memory and Language*, 69(3) 257–276. 10.1016/j.jml.2013.06.004
- Hernandez, M., Martin, C., Sebastián-Gallés, N., & Costa, A. (2013). Bilingualism beyond Language: On the impact of bilingualism on executive control. In B. Cedric & K. Kleanthes (eds.), *The Cambridge handbook of neurolinguistics* (pp. 160–178). Cambridge, UK: Cambridge University Press.
- Hernandez, A., Martinez, A., & Kohnert, K. (2000). In search of the language switch: An fMRI study of picture naming in Spanish-English bilinguals. *Brain and Language*, 73, 421–431.
- Hernandez, A., & Meschyan, G. (2006). Executive function is necessary to enhance lexical processing in a less proficient L2: Evidence from fMRI during picture naming. *Bilingualism: Language and Cognition*, 9, 177–188.
- Herschmann, H., & Potzl, O. (1983). Observations on aphasia in polyglots. In M. Paradis (ed.), *Readings on aphasia in bilinguals and polyglots* (pp. 148–154). Montreal: Marcel Didier.
- Hervais-Adelman, A., Moser-Mercer, B., & Golestani, N. (2011). Executive control of language in the bilingual brain: integrating the evidence from neuroimaging to neuropsychology. *Frontiers in Psychology*, 2, 234.
- Hickok, G., & Poeppel, D. (2000). Towards a functional neuroanatomy of speech perception. *Trends in cognitive sciences*, 4(4), 131–138.
- Higby, E., Kim, J., & Obler, L. (2013). Multilingualism and the brain. *Annual Review of Applied Linguistics*, 33, 68–101.
- Hilchey, M., Ivanoff, J., Taylor, T., & Klein, R. (2011). Visualizing the temporal dynamics of spatial information processing for the Simon effect and its amplification by inhibition of return. *Acta Psychologica*, 136, 235–244.
- Hinton, G., & Sejnowski, T. (1999). Unsupervised learning: Foundations of neural computation. Cambridge, MA: MIT Press.
- Hlavac, J. (2011). Hesitation and monitoring phenomena in bilingual speech: A consequence of code-switching or a strategy to facilitate its incorporation? *Journal of Pragmatics*, 43, 3793–3806.
- Hoff, E. (ed.). (2012). Research methods in child language: A practical guide. Malden, MA: Wiley-Blackwell.
- Hoff, E., & Luz Rumiche, R. (2012). Studying children in bilingual environments. In E. Hoff (ed.)., *Research methods in child language: A practical guide* (pp. 300–316). Oxford, UK: Wiley-Blackwell.
- Holcomb, P., & Grainger, J. (2006). On the time course of visual word recognition: an event-related potential investigation using masked repetition priming. *Journal of Cognitive Neuroscience*, 18, 1631–1643.

- Holcomb, P., Grainger, J., & O'Rourke, T. (2002). An electrophysiological study of the effects of orthographic neighborhood size on printed word perception. *Journal of Cognitive Neuroscience*, 15, 938–950.
- Holden, J. (2002). Fractal characteristics of response time variability. *Ecological Psychology*, 14(1–2), 53–86.
- Holton, J. (1954). Portuguese for Spanish Speakers. Hispania, 37, 446-452.
- Holtzheimer, P., Fawaz, W., Wilson, C., & Avery, D. (2005). Repetitive transcranial magnetic stimulation may induce language switching in bilingual patients. *Brain and Language*, 94(3), 274–277.
- Hong, E.-L., & Yelland, G. (1997). The generality of lexical neighbourhood effects. In H.-C. Chen (ed.), *Cognitive processing of Chinese and related Asian languages* (pp. 187–203). Hong Kong: Chinese University Press.
- Hoover, M., & Dwivedi, V. (1998). Syntactic processing by skilled bilinguals. Language Learning, 48(1), 1–29.
- Hopp, H. (2006). Syntactic features and reanalysis in near-native processing. *Second Language Research*, 22(3), 369–397.
  - (2010). Ultimate attainment in L2 inflection: Performance similarities between non-native and native speakers. *Lingua*, 120, 901–931.
  - (2012). The on-line integration of inflection in L2 processing: Predictive processing of German gender. In A. Biller, E. Chung, & A. Kimball (eds.), BUCLD 36: Proceedings of the 36th Annual Boston University Conference on Language Development (pp. 226–241). Somerville, MA: Cascadilla Press.
  - (2013). Grammatical gender in adult L2 acquisition: Relations between lexical and syntactic variability. *Second Language Research*, 29(1), 33–56.
- Hopper, P. (1998). Emergent grammar. In M. Tomasello (ed.), The new psychology of language: Cognitive and functional approaches to language structure (pp. 155–176). Mahwah: Erlbaum.
- Hornickel, J., & Kraus, N. Unstable representation of sound: A biological marker of dyslexia. *Journal of Neuroscience*, 33(8), 3500–3504.
- Horton, W., & Keysar, B. (1996). When do speakers take into account common ground? *Cognition*, 59, 91–117.
- Horwitz, E. (2000). It ain't over 'til it's over: On foreign language anxiety, first language deficits, and the confounding of variables. *Modern Language Journal*, 84, 256–259.
- Horwitz, E., Horwitz, M., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal*, 70, 25–132.
- Hoshino N., & Kroll J. (2008) Cognate effects in picture naming: Does crosslinguistic activation survive a change of script? *Cognition*, 106, 501– 511.
- Hoshino, N., & Thierry, G. (2011). Language selection in bilingual word production: Electrophysiological evidence for cross-language competition, *Brain Research*, 1371, 100–109.

- Houston-Price, C., Caloghiris, Z., & Raviglione, E. (2010). Language experience shapes the development of the mutual exclusivity bias. *Infancy*, 15(2), 125–150.
- Hsieh, S., & Allport, A. (1994). Shifting attention in a rapid visual search paradigm. *Perceptual & Motor Skills*, 79(1, pt 1), 315–335.
- Huang, H.-W., Lee, C.-Y., Tsai, J.-L., Lee, C.-L., Hung, D., & Tzeng, O. G.-L. (2006). Orthographic neighborhood effects in reading Chinese two-character words. *NeuroReport*, 17, 1061–1065.
- Hubbell-Weinhold, J. (2005). L1 attrition and recovery: A case study. In J. Cohen, K. T. McAlister, K. Rolstad, & J. MacSwan (eds.), Proceedings of the 4th International Symposium on Bilingualism (pp. 1045–1052). Somerville, MA: Cascadilla Press.
- Hudon, T., Fennell, C., & Hoftyzer, M. (2013). Quality not quantity of television viewing is associated with bilingual toddlers' vocabulary scores. *Infant Behavior and Development*, 36(2), 245–254.
- Hufeisen, B. (1995). Multilingual language acquisition in Canada and Germany. *Language, Culture and Curriculum*, 8, 175–181.
- Hufeisen, B., & Neuner, G. (2004). *The plurilingualism project: Tertiary language learning-German after English.* Strasbourg, France: Council of Europe.
- Huffman, R., & Henson, O. (1990). The descending auditory pathway and acousticomotor systems: connections with the inferior colliculus. *Brain Research Reviews*, 15(3), 295–323.
- Hulsen, M., de Bot, K., & Weltens, B. (2002). Between two worlds. Social networks, language shift, and language processing in three generations of Dutch migrants in New Zealand. *International Journal of the Sociology of Language*, 153, 27–52.
- Humphrey, A., & Valian, V. (2012). Multilingualism and cognitive control: Simon and flanker task performance in monolingual and multilingual young adults. In 53rd Annual meeting of the Psychonomic Society, Minneapolis, MN.
- Hunt, R., & Ellis, H. (1994). Fundamentals of cognitive psychology. Boston, MA: McGraw Hill.
- Hunter, M., & Ames, E. (1988). A multifactor model of infant preferences for novel and familiar stimuli. *Advances in Infancy Research*, 5, 69–95.
- Hurtado, N., Gruter, T., Marchman, V., & Fernald, A. (2014). Relative language exposure, processing efficiency and vocabulary in Spanish-English bilingual toddlers. *Bilingualism: Language and Cognition*, 17(1), 189–202.
- Hussey, E., & Novick, J. (2012). The benefits of executive control training and the implications for language processing. *Frontiers in Psychology*, 3, 158.
- Huttenlocher, P. (1990). Morphometric study of human cerebral cortex development. *Neuropsychologia*, 28(6), 517–527.
  - (1994). Synaptogenesis in the human cerebral cortex. In G. Dawson, & K. Fischer (eds.), *Human behavior and the developing brain* (pp. 137–152). New York: Guilford Press.

(2009). Neural plasticity: The effects of environment on the development of the cerebral cortex. Cambridge, MA: Harvard University Press.

- Huttenlocher, P., & de Courten, C. (1987). The development of synapses in striate cortex of man. *Hum. Neurobiol.*, 6(1), 1–9.
- Huttenlocher, P., de Courten, C., Garey, L., & Van der Loos, H. (1982a). Synaptic development in human cerebral cortex. *International Journal of Neurology*, 16–17, 144–154.
  - (1982b). Synaptogenesis in human visual cortex: Evidence for synapse elimination during normal development. *Neuroscience Letters*, 33(3), 247–252.
- Hyltenstam, K., Bylund, E., Abrahamsson, N., & Park, H.-S. (2009). Dominant language replacement: The case of international adoptees. *Bilingualism: Language and Cognition*, 12(2), 121–140.
- Ibáñez, A., Macizo, P., & Bajo, M. (2010). Language access and language selection in professional translators. *Acta Psychologica*, 135, 257–266.
- Ihlen, E., & Vereijken, B. (2010). Interaction-dominant dynamics in human cognition: Beyond 1/f(alpha) fluctuation. *Journal of Experimental Psychology: General*, 139(3), 436–463.
- Imai, M., & Gentner, D. (1997). A crosslinguistic study of early word meaning: Universal ontology and linguistic influence. *Cognition*, 62, 169– 200.
- Imai, M., & Mazuka, R. (2003). Re-evaluating linguistic relativity: Languagespecific categories and the role of universal ontological knowledge in the construal of individuation. In D. Gentner & S. Goldin-Meadow (eds.), Language in mind: Advances in the study of language and thought (pp. 429–464). Cambridge, MA: MIT Press.
- Indefrey, P. (2006). A meta-analysis of hemodynamic studies on first and second language processing: Which suggested differences can we trust and what do they mean? *Language Learning*, 56, 279–304.
- Ioup, G. (2001). Exploring age and loss using the savings paradigm. Paper presented at the American Association for Applied Linguistics, Missouri, USA.
- Ip, E., Giza, C., Griesbach, G., & Hovda, D. (2002). Effects of enriched environment and fluid percussion injury on dendritic arborization within the cerebral cortex of the developing rat. *Journal of Neurotrauma*, 19(5), 573–585.
- Isurin, L. (2000). Deserted island or a child's first language forgetting. *Bilingualism: Language and Cognition*, 3(2), 151–166.
- Isurin, L. (2005). Cross linguistic transfer in word order: Evidence from L1 forgetting and L2 acquisition. In J. Cohen, K. McAlister, K. Rolstad, & J. MacSwan (eds.), *Proceedings of the 4th International Symposium on Bilingualism* (pp. 1115–1130). Somerville, MA: Cascadilla Press.
- Isurin, L., Winford, D., & de Bot, K. (2009). *Multidisciplinary approaches to code switching*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.

- Itier, R., Latinus, M., & Taylor, M. (2006). Face, eye and object early processing: What is the face specificity? *NeuroImage*, 29, 667–676.
- Ivanova, I., & Costa, A. (2008). Does bilingualism hamper lexical access in speech production? *Acta Psychologica*, 127(2), 277–288.
- Jackson, C. (2008). Proficiency level and the interaction of lexical and morphosyntactic information during L2 sentence processing. *Language Learning*, 58(4), 875–909.
- Jackson, C., & Dussias, P. (2009). Cross-linguistic differences and their impact on L2 sentence processing. *Bilingualism: Language and Cognition*, 12(1), 65–82.
- Jackson, C., Dussias, P., & Hristova, A. (2012). Using eye-tracking to study the on-line processing of case-marking information among intermediate L2 learners of German. IRAL: International Review of Applied Linguistics in Language Teaching, 50(2), 101–133.
- Jackson, G., Swainson, R., Cunnington, R., & Jackson, S. (2001). ERP correlates of executive control during repeated language switching. *Bilingualism: Language and Cognition*, 4(2), 169–178.
- Jackson, G., Swainson, R., Mullin, A., Cunnington, R. & Jackson, S. (2004). ERP correlates of a receptive language-switching task. *Quarterly Journal* of *Experimental Psychology*, **57A**, 223–240.
- Jackson, S., Berens, M., Benson, S., et al. (2012). *Unit language development:* 2012 annual report (TT082106). College Park, MD: University of Maryland Center for Advanced Study of Language.
- Jacoby, L. (1991). A process dissociation framework: Separating automatic from intentional uses of memory. *Journal of Memory and Language*, 30(5), 513–541
- Jacquet, M., & French, R. (2002). The BIA++: Extending the BIA+ to a dynamical distributed connectionist framework. *Bilingualism*, 5(3), 202–205.
- Jake, J. (2001). Chaupi Lengua: Imbabura Quichua-Spanish convergence in written folktales. Paper presented at the International Workshop in the Study of Stable Mixed languages, University of Manchester, UK.
- Jake, J., & Myers-Scotton, C. (2009). Which language? Participation potentials across lexical categories in codeswitching. In L. Isurin, D. Winford, & K. de Bot (eds.), *Multidisciplinary approaches to code switching* (pp. 307–342). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Jake, J., Myers-Scotton, C., & Gross, S. (2002). Making a minimalist approach to codeswitching work: Adding the Matrix Language. *Bilingualism: Language and Cognition*, 5(1), 69–91.
- Jakobovits, L., & Lambert, W. (1961). Semantic satiation among bilinguals. Journal of Experimental Psychology, 62, 576–582.
- James, C. (1980). Contrastive analysis. London: Longman.
- Jäncke, L., Mirzazade, S., & Joni Shah, N. (1999). Attention modulates activity in the primary and the secondary auditory cortex: a functional

magnetic resonance imaging study in human subjects. *Neuroscience Letters*, 266(2), 125–128.

- Jared, D. (2002). Spelling-sound consistency and regularity effects in word naming. *Journal of Memory and Language*, 46(4), 723–750.
- Jared, D., & Kroll, J. (2001). Do bilinguals activate phonological representations in one or both of their languages when naming words? *Journal of Memory and Language*, 44(1), 2–31.
- Jared, D., Pei Yun Poh, R., & Paivio, A. (2013). L1 and L2 picture naming in Mandarin-English bilinguals: A test of Bilingual Dual Coding Theory. *Bilingualism: Language and Cognition*, 16, 383–396.
- Jared, D., & Szucs, C. (2002). Phonological activation in bilinguals: Evidence from interlingual homograph naming. *Bilingualism: Language and Cognition*, 5(3), 225–239.
- Jarmulowicz, L., & Taran, V. (2013). Lexical morphology: Structure, process, and development. *Topics in Language Disorders*. 33(1), 57–72.
- Jarvis, S. (1998). *Conceptual transfer in the interlingual lexicon*. Bloomington, IN: Indiana University Linguistics Club Publications.
- (2000). Methodological rigor in the study of transfer: Identifying L1 influence in the interlanguage lexicon. *Language Learning*, 50, 245–309.
- Jarvis, S., & Pavlenko, A. (2008). Crosslinguistic influence in language and cognition. New York: Routledge.
- Jennings, J., & Jacoby, L. (1993). Automatic versus intentional uses of memory: Aging, attention, and control. *Psychology and Aging*, 8(2), 283–293.
- Jensen, J. (1989). On the mutual intelligibility of Spanish and Portuguese. *Hispania*, 72, 848–852.
- Jersild, A. (1927). Mental set and shift. Archives of Psychology, 14(89), 81.
- Jessner, U. (1999). Metalinguistic awareness in multilinguals: Cognitive aspects of third language learning. *Language Awareness*, 8, 201–209.
- Jessner, U. (2003). The nature of cross-linguistic interaction in the multilingual system. In J. Cenoz, B. Hufeisen, & U. Jessner (eds.), *The multilingual lexicon* (pp. 45–56). New York: Springer.
- Jessner, U., & Cenoz, J. (2007). Teaching English as a third language. In J. Cummins & C. Davison (eds.), *International handbook of English language teaching* (pp. 155–167). New York: Springer.
- Jia, G., & Aaronson, D. (1999). Age differences in second language acquisition: The dominant language switch and maintenance hypothesis. In A. Greenhill, H. Littlefield, & C. Tano (eds.), Proceedings of the 23rd Annual Boston University Conference on Language Development (pp. 301–312). Somerville, MA: Cascadilla Press.
- Jiang, N. (1999). Testing processing explanations for the asymmetry in masked cross-language priming. *Bilingualism: Language and Cognition*, 2, 59–75.
  - (2004). Morphological insensitivity in second language processing. *Applied Psycholinguistics*, 25(4), 603–634.

- (2007). Selective integration of linguistic knowledge in adult second language learning. *Language Learning*, 57(1), 1–33.
- Jiang, N., & Forster, K. (2001). Cross-Language priming asymmetries in lexical decision and episodic recognition. *Journal of Memory and Language*, 44, 32–51.
- Jimura, K., & Braver, T. (2011). Age-related shifts in brain activity dynamics during task switching. *Cerebral Cortex*, 20(6), 1420–1431.
- Jin, Y.-S. (1990). Effects of concreteness on cross-language priming in lexical decisions. *Perceptual and Motor Skills*, 70, 1139–1154.
- Johnson Jr., G. (1953). Bilingualism as measured by a reaction-time technique and the relationship between a language and a non-language intelligence quotient. *Pedagogical Seminary and Journal of Genetic Psychology*, 82, 3–9.
- Johnson, J., & Newport, E. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive psychology*, 21(1), 60–99.
- Jolles, D., & Crone, E. (2012). Training the developing brain: A neurocognitive perspective. *Frontiers in human neuroscience*, 6(76), 1–13.
- Jones W., & Stewart, W. (1951). Bilingualism and verbal intelligence. British Journal of Psychology, 4, 3–8.
- Jones, M., & Mewhort, D. (2007). Representing word meaning and order information in a composite holographic lexicon. *Psychological Review*, 114, 1–37.
- Jordan, I. (1991). Portuguese for Spanish speakers: A case for contrastive analysis. *Hispania*, 74, 788–792.
- Jouravlev, O. & Jared, D. (2014). Reading Russian–English homographs in sentence contexts: Evidence from ERPs. *Bilingualism: Language and Cognition*, 17(1), 153–168.
- Ju, M., & Luce, P. (2004). Falling on sensitive ears constraints on bilingual lexical activation. *Psychological Science*, 15(5), 314–318.
- Juffs, A. (2005). The influence of first language on the processing of whmovement in English as a second language. *Second Language Research*, 21(2), 121–151.
  - (2009). Second language acquisition of the lexicon. In W. Ritchie & T. Bhatia (eds.), *The new handbook of second language acquisition* (pp. 181–209). Bingley, UK: Emerald Group Publishers.
- Juffs, A., & Harrington, M. (1995). Parsing effects in second language sentence processing. *Studies in Second Language Acquisition*, 17(4), 483–516.
  - (1996). Garden path sentences and error data in second language sentence processing. *Language Learning*, 46(2), 283–323.
  - (2011). Aspects of working memory in L2 learning. *Language Teaching: Reviews and Studies*, 42, 137–166.
- Junker, D., & Stockman, I. (2002). Expressive vocabulary of German-English bilingual toddlers. American Journal of Speech-Language Pathology, 11(4), 381–394.

- Jurafsky, D. (1996). A probabilistic model of lexical and syntactic access and disambiguation. *Cognitive Science*, 20(2), 137–194.
- Jurafsky, D., Bell, A., Gregory, M., & Raymond, W. (2001). Probabilistic relations between words: Evidence from reduction in lexical production. In J. Bybee, & P. Hopper (eds.), Frequency and the emergence of linguistic structure (pp. 229–254). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Juraska, J., & Kopcik, J. (1988). Sex and environmental influences on the size and ultrastructure of the rat corpus callosum. *Brain Research*, 450 (1), 1–8.
- Jürgens, U. (1983). Afferent fibers to the cingular vocalization region in the squirrel monkey. *Experimental Neurology*, 80(2), 395–409.
- Jusczyk, P. (1985). The high-amplitude sucking technique as a methodological tool in speech perception research. In G. Gottlieb & N. Krasnegor (eds.), Measurement of audition and vision in the first year of postnatal life: A methodological overview (pp. 195–222). Westport, CT: Ablex Publishing.
- Just, M., Carpenter, P., & Woolley, J. (1982). Paradigms and processes in reading comprehension. *Journal of Experimental Psychology: General*, 111, 228–38.
- Kaan, E. (2014). Predictive sentence processing in L2 and L1: What is different? *Linguistic Approaches to Bilingualism* 4(2), 257–282.
- Kaan, E., Dallas, A. C., & Wijnen, F. (2010). Syntactic predictions in second-language sentence processing. In J.-W. Zwart, & M. de Vries (eds.), Structure preserved: Studies in syntax for Jan Koster (pp. 208–213). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Kaan, E., Harris, A., Gibson, E., & Holcomb, P. (2000). The P600 as an index of syntactic integration difficulty. *Language and Cognitive Processes*, 15, 159–201.
- Kamwangamamlu, N. (1994). English codeswitching: The matrix language principle and linguistic constraints. *South African Journal of Linguistics*, 17, 256–274.
- Kang, S., Gollan, T., & Pashler, H. (2013). Don't just repeat after me: Retrieval practice is better than imitation in foreign vocabulary learning. *Psychonomic Bulletin & Review*, 20(6):1259–65.
- Kantola, L., & van Gompel, R. (2011). Between-and within-language priming is the same: Evidence for shared bilingual syntactic representations. *Memory & cognition*, 39, 276–290.
- Kapa, L., & Colombo, J. (2013). Attentional control in early and later bilingual children. *Cognitive Development*, 28, 233–246.
- Karpicke, J., & Roediger, H. III (2008). The critical role of retrieval for learning. *Science*, 319, 966–968.
- Karpicke, J., Butler, A., & Roediger, H. III (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory*, 17, 471–479.

- Katz, L., & Frost, R. (1992). The reading process is different for different orthographies: The orthographic depth hypothesis. In R. Frost & L. Katz (eds.), *Orthography, phonology, morphology, and meaning*. Amsterdam: North Holland.
- Kaufman, D., & Aronoff, M. (1991). Morphological disintegration and reconstruction in first language attrition. In H. Seliger, & R. Vago (eds.), *First language attrition* (pp. 175–188). Cambridge, UK: Cambridge University Press.
- Kaushanskaya, M. (2012). Cognitive mechanisms of word learning in bilingual and monolingual adults: The role of phonological memory. *Bilingualism: Language and Cognition*, 15, 470–489.
  - (2007). Bilingual language processing and interference in bilinguals: Evidence from eye tracking and picture naming. *Language Learning*, 57, 119–163.
  - (2009a). Bilingualism reduced native-language interference during novel word learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 829–835.
  - (2009b). The bilingual advantage in novel word learning. *Psychonomic Bulletin & Review*, 16, 705–710.
- Kaushanskaya, M., & Rechtzigel, K. (2012). Concreteness effects in bilingual and monolingual word learning. *Psychonomic Bulletin & Review*, 19, 935–941.
- Kaushanskaya, M., & Yoo, J. (2011). Rehearsal effects in adult word learning. *Language and Cognitive Processes*, 26, 121–148.
- Kaushanskaya, M., Yoo, J., & Van Hecke, S. (2013). Word learning in adults with second-language experience: Effects of phonological and referent familiarity. *Journal of Speech, Language, and Hearing Research*, 56, 667– 678.
- Kavé,, G., Eyal, N., Shorek, A., & Cohen-Mansfield, J. (2008). Multilingualism and cognitive state in the oldest. *Psychology of Aging*, 23, 70–78.
- Kavé, G., Knafo, A., & Gilboa, A. (2010). The rise and fall of word retrieval across the lifespan. *Psychology and Aging*, 25(3), 719–724.
- Kavé, G., & Nussbaum, S. (2012). Characteristics of noun retrieval in picture descriptions across the adult lifespan. *Aphasiology*, 26(10), 1238–1249.
- Kawabata Duncan, K., Twomey, T., Parker Jones, O., et al. (2014). Inter- and intrahemispheric connectivity differences when reading Japanese Kanji and Hiragana. *Cerebral Cortex*, 24(6), 1601–1608.
- Keating, G., VanPatten, B., & Jegerski, J. (2011.) Who was walking on the beach? Anaphora resolution in Spanish heritage speakers and adult second language learners. *Studies in Second Language Acquisition*, 33, 193– 221.
- Keatley, C. (1992). History of bilingualism research in cognitive psychology. In R. Harris (ed.), *Cognitive processing in bilinguals* (pp. 15–49). Amsterdam: Elsevier.

- Keatley, C., & De Gelder, B. (1992). The bilingual primed lexical decision task: Cross-language priming disappears with speeded responses. *European Journal of Cognitive Psychology*, 4, 273–292.
- Keatley, C.. Spinks, J.. & De Gelder, B. (1994). Asymmetrical cross-language priming effects. *Memory and Cognition*, 22(1), 70–84.
- Kellerman, E. (1978). Giving learners a break: Native language intuitions as a source of predictions about transferability. *Working Papers in Bilingualism*, 15, 59–92.
  - (1983). Now you see it, now you don't. In S. Gass & L. Selinker (eds.), *Language transfer and language learning* (pp. 112–134). Rowley, MA: Newbury House.
  - (1995). Crosslinguistic influence: Transfer to nowhere. *Annual Review of Applied Linguistics*, 15, 125–150.
- Kello, C. (2013). Critical branching neural networks. *Psychological review*, 120 (1), 230.
- Kello, C., Anderson, G., Holden, J., & Van Orden, G. (2008). The pervasiveness of 1/f scaling in speech reflects the metastable basis of cognition. *Cognitive Science*, 32(7), 1217–1231.
- Kello, C., Beltz, B., Holden, J., & Van Orden, G. (2007). The emergent coordination of cognitive function. *Journal of Experimental Psychology: General*, 136(4), 551–568.
- Kelly, D., Quinn, P., Slater, A., Lee, K., Ge, L., & Pascalis, O. (2007). The otherrace effect develops during infancy: Evidence of perceptual narrowing. *Psychological Science*, 18, 1084–1089.
- Kemler Nelson, D., Jusczyk, P., Myers, J., Turk, A., & Gerken, L. (1995). The head-turn preference procedure for testing auditory perception. *Infant Behavior and Development*, 18(1), 111–116.
- Kemp, C. (2007). Strategic processing in grammar learning: Do multilinguals use more strategies? International Journal of Multilingualism, 4, 241– 261.
- Kemper, S. (1986). Imitation of complex syntactic constructions by elderly adults. *Applied Psycholinguistics*, 7(3), 277–287.
- Kempermann, G., Kuhn, H., & Gage, F. (1997). More hippocampal neurons in adult mice living in an enriched environment. *Nature*, 386(6624), 493–495.
- Kenji, H., & D'Andrea, D. (1992). Some properties of bilingual maintenance and loss in Mexican background high-school students. *Applied Linguistics*, 13(1), 72–99.
- Kensinger, E., & Corkin, S. (2003). Memory enhancement for emotional words: Are emotional words more vividly remembered than neutral words? *Memory and Cognition*, 31(8), 1169–1180.
- Kerkhofs, R., Dijkstra, T., Chwilla, D., & de Bruijn, E. (2006). Testing a model for bilingual semantic priming with interlingual homographs: RT and N400 effects. *Brain Research*, 1068, 170–183.

- Kerschensteiner, D., Morgan, J., Parker, E., Lewis, R., & Wong, R. (2009). Neurotransmission selectively regulates synapse formation in parallel circuits in vivo. *Nature*, 460(7258), 1016–1020.
- Kersten, A., Meissner, C., Lechuga, J., Schwartz, B., Albrechtsen, J., & Iglesias, A. (2010). English speakers attend more strongly than Spanish speakers to manner of motion when classifying novel objects and events. *Journal of Experimental Psychology: General*, 139, 638–653.
- Kester, J., Benjamin, A., Castel, A., & Craik, F. (2002). Memory in the elderly. In A. Baddeley, B. Wilson, & M. Kopelman (eds.), *Handbook of memory disorders* (2nd edn) (pp. 543–567). Chichester, UK: Wiley.
- Keysar, B., Hayakawa, S., & An, S. (2012). The foreign language effect: Thinking in a foreign language reduces decision biases. *Psychological Science*, 23(6), 661–668.
- Kharkhurin, A. (2008). The effect of linguistic proficiency, age of second language acquisition, and length of exposure to a new cultural environment on bilinguals' divergent thinking. *Bilingualism: Language and Cognition*, 11, 225–243.
- Kidd, E., & Bavin, E. (2002). English-speaking children's comprehension of relative clauses: Evidence for general-cognitive and language-specific constraints on development. *Journal of Psycholinguistic Research*, 31(6), 599–617.
- Kidron, D., Black, S., Stanchev, P., Buck, B., Szalai, J., & Parker, J. (1997). Quantitative MR volumetry in Alzheimer's disease. *Neurology*, 49, 1504–1512.
- Kiefer, M., & Pulvermüller, F. (2012). Conceptual representations in mind and brain: Theoretical developments, current evidence and future directions. *Cortex*, 48(7), 805–825.
- Kiesel, A., Steinhauser, M., Wendt, M., et al. (2010). Control and interference in task switching: A review. *Psychological Bulletin*, 136, 849–874.
- Kim, J., & Davis, C. (2003). Task effects in masked cross-script translation and phonological priming. *Journal of Memory and Language*, 49, 484–499.
- Kim, K., Relkin, N., Lee, K., & Hirsch, J. (1997). Distinct cortical areas associated with native and second languages. *Nature*, 388(6638), 171– 174.
- Kim, S., & Starks, D. (2008). The role of emotions in L1 attrition: The case of Korean-English late bilinguals in New Zealand. *International Journal of Bilingualism*, 12, 303–319.
- Kim, Y., & Tracy-Ventura, N. (2011). Task complexity, language anxiety, and the development of simple past. In P. Robinson (ed.), Second language task complexity: Researching the Cognition Hypothesis of language learning and performance (pp. 287–306). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Kimball, J. (1973). Seven principles of surface structure parsing in natural language. *Cognition*, 2(1), 15–47.

- Kinoshita, S., & Lupker, S.J. (2003). *Masked priming: State of the art*. Psychology Press: New York.
- Kintsch, W. (1970). Recognition memory in bilingual subjects. *Journal of Verbal Learning and Verbal Behavior*, 9(4), 405–409.
- Kiran, S., Graesman, U., Sandberg, C., & Miikkulainen, R. (2013). A computational account of bilingual aphasia rehabilitation. *Bilingualism: Language and Cognition*, 16(2), 325.
- Kirk, N., Scott-Brown, K., & Kempe, V. (2013). Do older Gaelic-English bilinguals show an advantage in inhibitory control? *Proceedings of the Annual Meeting of the Cognitive Science Journal*, 782–787.
- Kirkici, B., & Clahsen, H. (2013). Inflection and derivation in native and non-native language processing: Masked priming experiments on Turkish. Bilingualism: Language and Cognition, 16(4), 776–791.
- Kirsner, K., Brown, H., Abrol, S., Chadha, N., & Sharma, N. (1980). Bilingualism and lexical representation. The Quarterly Journal of Experimental Psychology, 32, 585–594.
- Kirsner, K., Smith, M., Lockhart, R., King, M., & Jain, M. (1984). The bilingual lexicon: Language specific units in an integrated network. *Journal of Verbal Learning and Verbal Behavior*, 23, 519–539.
- Kiyak, H. (1982). Interlingual interference in naming color words. *Journal of Cross-Cultural Psychology*, 13, 125–135.
- Klavans, J. (1985). The syntax of code-switching: Spanish and English. In L. King & C. Maley (eds.), Proceedings of the Linguistic Colloquium on Romance Linguistics (pp. 213–231). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Klein, E. (1995). Second versus third language acquisition: Is there a difference? *Language Learning*, 45, 419–465.
- Klein, W. (1986). Second language acquisition. Cambridge, UK: Cambridge University Press.
- Knickerbocker, H., & Altarriba, J. (2013). Differential repetition blindness with emotion and emotion-laden word types. *Visual Cognition*, 21, 599– 627.
- Knudsen, E. (2004). Sensitive periods in the development of the brain and behavior. *Journal of Cognitive Neuroscience*, 16(8), 1412–1425.
- Ko, I., Wang, M., & Kim, S. (2011). Bilingual reading of compound words. Journal of Psycholinguistic Research, 40, 49–73.
- Koch, I., Prinz, W., & Allport, A. (2005). Involuntary retrieval in alphabetarithmetic tasks: Task-mixing and task-switch costs. *Psychological Research*, 69(4), 252–261.
- Koechlin, E., & Summerfield, C. (2007). An information theoretical approach to prefrontal executive function. *Trends in Cognitive Sciences*, 11(6), 229–235.
- Kohnert, K. (2010). Bilingual children with primary language impairment: Issues, evidence and implications for clinical actions. *Journal of Communication Disorders*, 43(6), 456–473.

- Kohnert, K., Bates, E., & Hernandez, A. (1999). Balancing bilinguals: Lexical-semantic production and cognitive processing in children learning Spanish and English. *Journal of Speech, Language and Hearing Research*, 42, 1400–1413.
- Kohnert, K., Hernandez, A., & Bates, E. (1998). Bilingual performance on the Boston Naming Test: Preliminary norms in Spanish and English. *Brain and Language*, 65, 422–440.

Kohonen, T. (2001). Self-organizing maps (3rd edn). Berlin: Springer.

- Kolers, P. (1963). Interlingual word associations. *Journal of Verbal Learning and Verbal Behavior*, 2, 291–300.
  - (1965). Bilingualism and bicodalism. Language and Speech, 8, 122–126.
  - (1966a). Interlingual facilitation of short-term memory. *Journal of Verbal Learning and Verbal Behavior*, 5, 314–319.
  - (1966b). Reading and talking bilingually. *American Journal of Psychology*, 79, 357–376.
- Kolk, H., & Chwilla, D. (2007). Late positivities in unusual situations. *Brain and Language*, 100, 257–261.
- Kootstra, G. (2012). Code-switching in monologue and dialogue: Activation and alignment in bilingual language production. (Unpublished doctoral dissertation), Radboud University Nijmegen, the Netherlands.
- Kootstra, G., van Hell, J., & Dijkstra, T. (2010). Syntactic alignment and shared word order in code-switched sentence production: Evidence from bilingual monologue and dialogue. *Journal of Memory and Language*, 63, 210–231.
  - (2012). Priming of code-switches in sentences: The role of lexical repetition, cognates, and language proficiency. *Bilingualism: Language and Cognition*, 15(4), 797–819.
  - (under review). Interactive alignment drives lexical triggering of codeswitching in bilingual dialogue.
- Köpke, B., & Schmid, M. (2004). Language attrition: The next phase. In M. Schmid, B. Köpke, M. Keijzer, & L. Weilemar (eds.), First language attrition: Interdisciplinary perspectives on methodological issues (pp. 1–43). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Kormi-Nouri, R., Moniri, S., & Nilsson, L.-G. (2003). Episodic and semantic memory in bilingual and monolingual children. Scandinavian Journal of Psychology, 44, 47–54.
- Kormi-Nouri, R., Shojaei, R., Moniri, S., Gholami, A., Moradi, A., Akbari-Zardkhaneh, S., & Nilsson, L. (2008). The effect of childhood bilingualism on episodic and semantic memory tasks. *Scandinavian Journal of Psychology*, 49(2), 93–109.
- Kormos, J. (1999). Monitoring and self-repair in L2. *Language Learning*, 49, 303–342.
  - (2006). Speech production and second language acquisition. Mahwah, NJ: Lawrence Erlbaum.

- (2011). Speech production and the Cognition Hypothesis. In P. Robinson (ed.), Second language task complexity: Researching the Cognition Hypothesis of language learning and performance (pp. 39–60). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Kormos, J., & Dörnyei, Z. (2004). The interaction of linguistic and motivational variables in second language task performance. *Zeitschrift für Interkulturellen Fremdsprachenunterricht* [online], 9(2), 19.
- Kormos, J., & Sáfár, A. (2008). Phonological short term-memory, working memory and foreign language performance in intensive language learning. *Bilingualism: Language and Cognition*, 11, 261–271.
- Kormos, J., & Trebits, A. (2012). The role of task complexity, modality and aptitude in narrative task performance. *Language Learning*, 61, 439–472.
- Kotz, S. (2009). A critical review of ERP and fMRI evidence on L2 syntactic processing. *Brain and Language*, 109(2), 68–74.
- Kouritzin, S. (1999). *Face[t]s of first language loss*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Kousaie S., & Phillips, N. (2012b). Aging and bilingualism: Absence of a "bilingual advantage" in Stroop interference in a nonimmigrant sample. *Quarterly Journal of Experimental Psychology*, 65, 356–369.
  - (2012a). Conflict monitoring and resolution: Are two languages better than one? Evidence from reaction time and event-related brain potentials. *Brain Research*, 1446, 71–90.
- Kousta, S., Vigliocco, G., Vinson, D., Andrews, M., & Del Campo, E. (2011). The representation of abstract words: Why emotion matters. *Journal of Experimental Psychology: General*, 140, 14–34.
- Kousta, S., Vinson, D., & Vigliocco, G. (2009). Emotion words, regardless of polarity, have a processing advantage over neutral words. *Cognition*, 112(3), 473–481.
- Kovács, Á., & Mehler, J. (2009a). Cognitive gains in 7-month-old bilingual infants. Proceedings of the National Academy of Sciences of the United States of America, 106, 6556–6560.
  - (2009b). Flexible learning of multiple speech structures in bilingual infants. *Science*, 325(5940), 611–612.
- Krakow, R., & Roberts, J. (2003). Acquisition of English vocabulary by young Chinese adoptees. Journal of Multilingual Communication Disorders, 1(3), 169–176.
- Kral, A., & Sharma, A. (2012). Developmental neuroplasticity after cochlear implantation. *Trends in Neurosciences*, 35(2), 111–122.
- Kral, A., Tillein, J., Heid, S., Hartmann, R., & Klinke, R. (2005). Postnatal cortical development in congenital auditory deprivation. *Cerebral Cortex*, 15(5), 552–562.
- Krashen, S., Long, M., & Scarcella, R. (1979). Age, rate and eventual attainment in second language acquisition. *Tesol Quarterly*, 13(4), 573–582.

- Kraus, N., & Chandrasekaran, B. (2010). Music training for the development of auditory skills. *Nature Reviews Neuroscience*, 11(8), 599–605.
- Kray, J., & Lindenberger, U. (2000). Adult age differences in task switching. *Psychology and Aging*, 15(1), 126–147.
- Krishnan, A., Xu, Y., Gandour, J., & Cariani, P. (2005). Encoding of pitch in the human brainstem is sensitive to language experience. *Cognitive Brain Research*, 25(1), 161–168.
- Krizman, J., Marian, V., Shook, A., Skoe, E., & Kraus, N. (2012). Subcortical encoding of sound is enhanced in bilinguals and relates to executive function advantages. *Proceedings of the National Academy of Sciences*, 109 (20), 7877–7881.
- Krizman J., Skoe E., Marian V., & Kraus, N. (2014) Bilingualism increases neural response consistency and attentional control: Evidence for sensory and cognitive coupling. *Brain and Language*, 128, 34–40.
- Kroll, J., & Bialystok, E. (2013). Understanding the consequences of bilingualism for language processing and cognition. *Journal of Cognitive Psychology*, 25(5), 497–514.
- Kroll, J., Bobb, S., Misra, M., & Guo, T. (2008). Language selection in bilingual speech: Evidence for inhibitory processes. *Acta Psychologica*, 128, 416–430.
- Kroll, J., Bobb, S., & Wodniecka, Z. (2006). Language selectivity is the exception, not the rule: arguments against a fixed locus of language selection in bilingual speech. *Bilingualism: Language and Cognition*, 9, 119 – 135.
- Kroll, J., & Curley, J. (1988). Lexical memory in novice bilinguals: The role of concepts in retrieving second language words. In M. Grunebel, P. Morris, & R. Sykes (eds.), *Practical aspects of memory* (pp. 389–395). London: Wiley.
- Kroll J., & de Groot, A. (1997). Lexical and conceptual memory in the bilingual: mapping form to meaning in two languages. In A. de Groot & J. Kroll (eds.), *Tutorials in bilingualism* (pp. 169–199). Mahwah NJ: Lawrence Erlbaum.
- Kroll, J., & de Groot, A. (eds.). (2005). Handbook of bilingualism: Psycholinguistic approaches. New York: Oxford University Press.
- Kroll, J. Dijkstra, A., Janssen, N., & Schriefers, H. (2000). Selecting the language in which to speak: Experiments on lexical access in bilingual production. Paper presented at the 41st Annual Meeting of the Psychonomic Society, New Orleans, LA.
- Kroll, J., & Gollan, T. (2014). Speech planning in two languages: What bilinguals tell us about language production. In V. Ferreira, M. Goldrick, & M. Miozzo (eds.). *The Oxford handbook of language production*. Oxford, UK: Oxford University Press.
- Kroll, J., Michael, E., & Sankaranarayanan, A. (1998). A model of bilingual representation and its implications for second language acquisition. In A. Healy & L. Bourne Jr. (eds.), Foreign language learning: Psycholinguistic

studies on training and retention (pp. 365–395). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

- Kroll, J., & Potter, M. (1984). Recognizing words, pictures, and concepts: A comparison of lexical, object, and reality decisions. *Journal of Verbal Learning & Verbal Behavior*, 23, 39–66.
- Kroll, J., & Stewart, E. (1994). Category interference in translation and picture naming: Evidence for asymmetric connections between bilingual memory representations. *Journal of Memory and Language*, 33, 149– 174.
- Kroll, J., Sumutka, B., & Schwartz, A. (2005). A cognitive view of the bilingual lexicon: Reading and speaking words in two languages. *International Journal of Bilingualism*, 9, 27–48.
- Kroll, J., & Tokowicz, N. (2005). Models of bilingual representation and processing. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 531–553). Oxford, UK: Oxford University Press.
- Kroll, J., van Hell J., Tokowicz, N., & Green, D. (2010). The Revised Hierarchical Model: A critical review and assessment. *Bilingualism: Language and Cognition*, 13, 373–381.
- Kuhl, P. (2009). Early language acquisition: Neural substrates and theoretical models. In M. Gazzaniga (ed.), *The Cognitive Neurosciences* (4th edn) (pp. 837–854). Cambridge, MA: MIT Press.
- (2010). Brain mechanisms in early language acquisition. *Neuron*, 67, 713–727.
- Kuhl, P., Conboy, B., Padden, D., Nelson, T., & Pruitt, J. (2005). Early speech perception and later language development: *Implications for the "critical period." Language Learning and Development*, **1**, 237–264.
- Kuhl, P., & Iverson, P. (1995). Linguistic experience and the "Perceptual Magnet Effect." In W. Strange (ed.), Speech perception and linguistic experience: Issues in cross-language research (pp. 121–154). Timonium, MD: York Press.
- Kuhl, P., & Rivera-Gaxiola, M. (2008). Neural substrates of language acquisition. Annual Review of Neuroscience, 31, 511–534.
- Kuhl, P., Stevens, E., Hayashi, A., Deguchi, T., Kiritani, S., & Iverson, P. (2006). Infants show a facilitation effect for native language phonetic perception between 6 and 12 months. *Developmental Science*, 9(2), F13– F21.
- Kuhl, P., Tsao, F.-M., & Liu, H.-M. (2003). Foreign-language experience in infancy: Effects of short-term exposure and social interaction on phonetic learning. *Proceedings of the National Academy of Sciences*, 100(15), 9096–9101.
- Kuhl, P., Williams, K., Lacerda, F., Stevens, K., & Lindblom, B. (1992). Linguistic experience alters phonetic perception in infants by 6 months of age. *Science*, 255(5044), 606–608.

- Kuhlen, A., Allefeld, C., & Haynes, J. (2012). Content-specific coordination of listeners' to speakers' EEG during communication. *Frontiers in Human Neuroscience*, 6, article 266.
- Kuipers, J., & Thierry, G. (2010). Event-related brain potentials reveal the time-course of language change detection in early bilinguals. *NeuroImage*, 50(4), 1633–1638.
  - (2013). ERP-pupil size correlations reveal how bilingualism enhances cognitive flexibility. *Cortex*, 49(10), 2853–2860.
- Kulman, A., & Tetrault, E. (1992). Language cross-training: Alternatives and permutations. *Cryptologic Quarterly*, 11, 145–153.
- Kurinski, E., & Sera, M. (2011). Does learning Spanish grammatical gender change English-speaking adults' categorization of inanimate objects? *Bilingualism: Language and Cognition*, 14, 203–220.
- Kutas, M., & Federmeier, K. (2000). Electrophysiology reveals semantic memory use in language comprehension. *Trends in Cognitive Neuroscience*, 4, 463–470.
- Kutas, M., & Hillyard, S. (1980). Reading senseless sentences: Brain potentials reflect semantic incongruity. *Science*, 207(4427), 203–205.
- La Heij, W. (2005). Selection processes in monolingual and bilingual lexical access. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 289–307). New York: Oxford University Press.
- La Heij, W., Hooglander, A., Kerling, R., & Van Der Velden, E. (1996). Nonverbal context effects in forward and backward word translation: Evidence for concept mediation. *Journal of Memory and Language*, 35, 648–665.
- La Heij, W., & van den Hof, E. (1995). Picture-word interference increases with target-set size. *Psychological Research*, 58(2), 119–133.
- Labov, W. (1963). The social motivation of a sound change. *Word*, 19, 273–309.
- Lado, R. (1957). Linguistics across cultures: Applied linguistics for language teachers. Ann Arbor, MI: University of Michigan Press.
- Lado, R. (1964). Language teaching: A scientific approach. New York: McGraw-Hill.
- Lagrou, E., Hartsuiker, R., & Duyck, W. (2011). Knowledge of a second language influences auditory word recognition in the native language. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37, 952–965.
- Lallier, M., Carreiras, M., Tainturier, M.-J., Savill, N., & Thierry, G. (2013). Orthographic transparency modulates the grain size of orthographic processing: Behavioral and ERP evidence from bilingualism. *Brain Research*, 10, 47–60.
- Lambert, W. (1955). Measurement of the linguistic dominance of bilinguals. *Journal of abnormal psychology*, 50, 197–200.

C:/ITOOLS/WMS/CUP-NEW/6143877/WORKINGFOLDER//9781107060586RFA.3D 767 [695--828] 13.4.2015 6:03PM

- (1981). Bilingualism and language acquisition. Annals of the New York Academy of Sciences, 379(1), 9–22.
- Lambert, W., Havelka, J., & Crosby, C. (1958). The influence of languageacquisition contexts on bilingualism. *Journal of Abnormal and Social Psychology*, 56, 239–244.
- Lambert, W., Havelka, J., & Gardner, R. (1959). Linguistic manifestations of bilingualism. *American Journal of Psychology*, 72, 77–82.
- Lambert, W., & Moore, N. (1966). Word-association responses: Comparisons of American and French monolinguals with Canadian monolinguals and bilinguals. *Journal of Personality and Social Psychology*, 3, 313.
- Lambert, W., & Rawlings, C. (1969). Bilingual processing of mixed-language associative networks. *Journal of Verbal Learning and Verbal Behavior*, 8, 604–609.
- Landau, S., Mintun, M., Joshi, A., et al. (2012). Amyloid deposition, hypometabolism, and longitudinal cognitive decline. *Annals of Neurology*, 72, 578–586.
- Landauer, T., & Dumais, S. (1997). A solution to Plato's problem: The latent semantic analysis theory of the acquisition, induction, and representation of knowledge. *Psychological Review*, 104, 211–211–240.
- Langacker, R. (1987). Foundations of cognitive grammar: Vol. 1. Theoretical prerequisites. Stanford, CA: Stanford University Press.
  - (1999). Grammar and conceptualization. Amsterdam: Walter De Gruyter.
- (2000). A dynamic usage-based model. In M. Barlow, & S. Kemmer (eds.), Usage-based models of language (pp. 1–63). Stanford, CA: CSLI Publications.
- Larsen, R., Mercer, K., & Balota, D. (2006). Lexical characteristics of words used in emotion Stroop studies. *Emotion*, 6, 62–72.
- Larsen, R., Mercer, K., Balota, D., & Strube, M. (2008). Not all negative words slow down lexical decision and naming speed: Importance of word arousal. *Emotion*, 8(4), 445–452.
- Larsen-Freeman, D. (1985). State of the art on input in second language acquisition. In S. Gass, & C. Madden (eds.), *Input in second language acquisition* (pp. 89–114). Rowley, MA: Newbury House.
- (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18(2), 140–165.
- Larsen-Freeman, D., & Cameron, L. (2008). *Complex systems and applied linguistics*. Oxford, UK: Oxford University Press.
- Laufer, B. (1989). A factor of difficulty in vocabulary learning: Deceptive transparency. *AILA Review*, 6, 10–20.
- Laxén, J., & Lavaur, J.-M. (2010). The role of semantics in translation recognition: Effects of number of translations, dominance of translations and semantic relatedness of multiple translations. *Bilingualism: Language and Cognition*, 13, 157–183.

- Lee, C., & Taft, M. (2011). Subsyllabic structure reflected in letter confusability effects in Korean word recognition. *Psychonomic Bulletin & Review*, 18, 129–134.
- Lee, E., Lu, D., & Garnsey, S. (2013). L1 word order and sensitivity to verb bias in L2 processing. *Bilingualism: Language and Cognition*, 16(4), 761–775.
- Lee, J., & Benati, A. (2013). Individual differences and processing instruction. London: Equinox.
- Lee, J., & VanPatten, B. (1995). *Making communicative language teaching happen* (1st edn). New York: McGraw-Hill.
  - (2003). Making communicative language teaching happen (2nd edn). New York: McGraw-Hill.
- Lee, M., & Williams, J. (2001). Lexical access in spoken word production by bilinguals: Evidence from the semantic competitor priming paradigm. *Bilingualism: Language and Cognition*, 4, 233–248.
- Lee, P. (1996). Cognitive development in bilingual children: A case for bilingual instruction in early childhood education. *Bilingual Research Journal*, 20(3–4), 499–522.
- Lehtonen, M., Hultén, A., Rodríguez-Fornells, A., Cunillera, T., Tuomainen, J., & Laine, M. (2012). Differences in word recognition between early bilinguals and monolinguals: Behavioral and ERP evidence. *Neuropsychologia*, 50, 1362–1371.
- Lemhöfer, K., & Dijkstra, T. (2004). Recognizing cognates and interlingual homographs: Effects of code similarity in language-specific and generalized lexical decision. *Memory & Cognition*, 32(4), 533–550.
- Lemhöfer, K., Dijkstra, T., & Michel, M. (2004). Three languages, one ECHO: Cognate effects in trilingual word recognition. *Language and Cognitive Processes*, 19, 585–611.
- Lemhöfer, K., Spalek, K., & Schriefers, H. (2008). Cross-language effects of grammatical gender in bilingual word recognition and production. *Journal of Memory and Language*, 59(3), 312–330.
- Leminen, A., Leminen, M., Lehtonen, M., Nevalainen, P., Ylinen, S., Kimppa, L. et al. (2011). Spatiotemporal dynamics of the processing of spoken inflected and derived words: A combined EEG and MEG study. *Frontiers in Human Neuroscience*, **5**, **66**.
- Lenneberg, E. (1967). Biological Foundations of Language. New York: Wiley.
- Leopold, W. (1939–1949). Speech development of a bilingual child (4 vols.). Evanston, IL: Northwestern University Press.
- Lev-Ari, S., & Peperkamp, S. (2013). Low inhibitory skill leads to non-native perception and production in bilinguals' native language. *Journal of Phonetics*, 41, 320–331.
- Levelt, W. (1983). Monitoring and self-repair in speech. *Cognition*, 33, 41–103. (1989). *Speaking, from intention to articulation*. Cambridge, MA: MIT Press.
  - (1999). Language production: A blueprint of the speaker. In C. Brown & P. Hagoort (eds.), *Neurocognition of language* (pp. 83–122). Oxford, UK: Oxford University Press.

- Levelt, W. (2001). Spoken word production: A theory of lexical access. *Proceedings of the National Academy of Sciences*, 98(23), 13464–13471.
- Levelt, W., Praamsma, P., Meyer, A., Helenius, P., & Salmelin, R. (1998). An MEG study of picture naming. *Journal of Cognitive Neuroscience*, 10, 553– 557.
- Levelt, W., Roelofs, A., & Meyer, A. (1999). A theory of lexical access in speech production. *Behavioral and Brain Sciences*, 22(1), 1–38.
- Levinson, S. (1996). Relativity in spatial conception and description. In J. Gumperz & S. Levinson (eds.), *Rethinking linguistic relativity* (pp. 177– 202). Cambridge, UK: Cambridge University Press.
  - (2001). Yélî Dnye and the theory of basic color terms. *Journal of Linguistic Anthropology*, 10, 3–55.
- Levy, B., McVeigh, N., Marful, A., & Anderson, M. (2007). Inhibiting your native language: The role of retrieval-induced forgetting during second language acquisition. *Psychological Science*, 18, 29–34.
- Levy, E. (2009). Language experience and consonantal context effects on perceptual assimilation of French vowels by American-English learners of French. *Journal of the Acoustical Society of America*, 125, 1138–52.
- Lew-Williams, C., & Fernald, A. (2007). Young children learning Spanish made rapid use of the grammatical gender in spoken word recognition. *Psychological Science*, 18(3), 193–198.
  - (2010). Real-time processing of gender-marked articles by native and non-native Spanish speakers. *Journal of Memory and Language*, 63(4), 447–464.
- Lewy, N., & Grosjean, F. (2008). The Lewy and Grosjean BIMOLA model. In F. Grosjean (ed.), *Studying bilinguals* (pp. 201–210). Oxford, UK: Oxford University Press.
- Li, L., Mo, L., Wang, R., Luo, X., & Chen, Z. (2009). Evidence for long-term cross-language repetition priming in low fluency Chinese–English bilinguals. *Bilingualism: Language and Cognition*, 12, 13–21.
- Li, P. (2009). Lexical organization and competition in first and second languages: Computational and neural mechanisms. *Cognitive Science*, 33, 629–664.
- Li, P. (ed.). (2013). Computational modelling of bilingualism. A special issue of *Bilingualism: Language and Cognition*, 16(2), 241–366.
  - (forthcoming). Bilingualism as a dynamic process. In B. MacWhinney & W. O'Grady (eds.), *Handbook of language emergence*. New York: Wiley.
- Li, P., & Farkas, I. (2002). A self-organizing connectionist model of bilingual processing. *Advances in Psychology*, 134, 59–85.
- Li, P., Farkas, I., Li, P., Zhao, X., & MacWhinney, B. (2007). Dynamic selforganization and early lexical development in children. *Cognitive Science: A Multidisciplinary Journal*, 31, 581–612.
- Li, P., Farkas, I., & MacWhinney, B. (2004). Early lexical development in a self-organizing neural network. *Neural Networks*, 17, 1345–1362.

- Li, P., & MacWhinney, B. (1996). Cryptotype, overgeneralization and competition: A connectionist model of the learning of English reversive prefixes. *Connection Science*, 8(1), 3–30.
  - (2002). PatPho: A phonological pattern generator for neural networks. Behavior Research Methods, Instruments & Computers, 34(3), 408–415.
- Li, P., & Zhao, X. (2012). Connectionism. In M. Aronoff (ed.), Oxford Bibliographies Online: Linguistics. New York, NY: Oxford University Press.
- Li, Q.-L., Bi, H.-Y., Wei, T.-Q., & Chen, B.-G. (2011). Orthographic neighborhood size effect in Chinese character naming: Orthographic and phonological activations. *Acta Psychologica*, 136, 35–41.
- Libben, G. (2000). Representation and processing in the second language lexicon: The homogeneity hypothesis. In J. Archibald (ed.), *Second language grammars* (pp. 228–248). New York: Blackwell.
  - (2007). Reading complex morphological structures. In S. Andrews (ed.), *From inkmarks to ideas: Current issues in lexical processing* (pp. 192–215). Hove, UK: Psychology Press,
- Libben, M., & Titone, D. (2009). Bilingual lexical access in context: Evidence from eye movement recordings during L2 reading. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 381–390.
- Liepmann, D., & Saegert, J. (1974). Language tagging in bilingual free recall. Journal of Experimental Psychology, 103, 1137–41.
- Lin, S., Chen, H., Zhao, J., Li, S., He, S., & Weng, X. (2011). Left-lateralized N170 response to unpronounceable pseudo but not false Chinese characters-the key role of orthography. *Neuroscience*, 190, 200–206.
- Linck, J., Hughes, M., Campbell, S., et al. (2013). Hi-LAB: A new measure of aptitude for high-level language proficiency. *Language Learning*, 63, 530–566.
- Linck, J., Kroll, J., & Sunderman, G. (2009). Losing access to the native language while immersed in a second language: Evidence for the role of inhibition in second-language learning. *Psychological Science*, 20 (12), 1507–1515.
- Linck, J., Osthus, P., Koeth, J., & Bunting, M. (2014). Working memory and second language comprehension and production: A meta-analysis. *Psychonomic Bulletin & Review*, 21(4), 861–883.
- Linck, J., Schwieter, J. W., & Sunderman, G. (2012). Inhibitory control predicts language switching performance in trilingual speech production. *Bilingualism: Language and Cognition*, 15(3), 651–662.
- Lindsay, S., & Gaskell, M. (2013). Lexical integration of novel words without sleep. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 39, 608–622.
- Lipski, J. (2005). Code-switching of borrowing? No sé so no puedo decir, you know. In L. Sayahi & M. Westmoreland (eds.), Selected Proceedings of the Second Workshop on Spanish Sociolinguistics (pp. 1–15). Somerville, MA: Cascadilla Proceedings project.

- Litcofsky, K. (2013). Sentential code-switching and lexical triggering: A neurocognitive study. (Unpublished master's thesis), Pennsylvania State University.
- Litcofsky, K., & van Hell, J. (in preparation). Sentential code-switching in Spanish–English bilinguals: Behavioral and electrophysiological evidence.
- Litcofsky, K., Midgley, K., Holcomb, P., & Grainger, J. (2009). Exploring language switching with lexical decision and event related potentials. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, March 19–24.
- Liu, C., Zhang, W.-T., Tang, Y.-Y., et al. (2008). The visual word form area: Evidence from an fMRI study of implicit processing of Chinese characters. *NeuroImage*, 40, 1350–1361.
- Liu, H., Bates, E., & Li, P. (1992). Sentence interpretation in bilingual speakers of English and Chinese. *Applied Psycholinguistics*, 13(4), 451–484.
- Liu, L., & Kager, R. (2013). How bilingualism alters non-tone-learning infants' perception in the first year of life. Paper presented at the 37th Annual Boston University Conference on Child Language Development.
- Liu, Y., & Perfetti, C. (2003). The time course of brain activity in reading English and Chinese: An ERP study of Chinese bilinguals. *Human Brain* Mapping, 18(3), 167–175.
- Liu, Y., Perfetti, C., & Wang, M. (2006). Visual analysis and lexical access of Chinese characters by Chinese as second language readers. *Language and Linguistics*, 7, 637–657.
- Llama, R., Cardoso, W., & Collins, L. (2010). The influence of language distance and language status on the acquisition of L3 phonology. *International Journal of Multilingualism* 7(1), 39–57.
- Llamas, C. (2011). Sociolinguistics. In J. Simpson (ed.), Routledge Handbook of applied linguistics (pp. 501–514). London: Routledge.
- Lloyd-Fox, S., Blasi, A., & Elwell, C. (2010). Illuminating the developing brain: The past, present and future of functional near infrared spectroscopy. *Neuroscience & Biobehavioral Reviews*, 34(3), 269–284.
- Loebell, H., & Bock, K. (2003). Structural priming across languages. *Linguistics*, 41, 791–824.
- Long, M. (1990) The least a second language acquisition theory needs to explain. *TESOL Quarterly*, 24, 649–666.
  - (2005). Methodological issues in learner needs analysis. In M. Long (ed.), *Second language needs analysis* (pp. 19–76). Cambridge, UK: Cambridge University Press.
- Lopez, M., & Young, R. K. (1974). The linguistic interdependence of bilinguals. Journal of Experimental Psychology, 102, 981–983.
- Lorenzen, B., & Murray, L. (2008). Bilingual aphasia: A theoretical and clinical review. American Journal of Speech-Language Pathology, 17, 299– 317.

Los, S. (1996). On the origin of mixing costs: Exploring information	1 proces-
sing in pure and mixed blocks of trials. ActaPsychologica, 94(2), 1	145-188.

- Lotto, L., & de Groot, A. (1998). Effects of learning method and word type on acquiring vocabulary in an unfamiliar language. *Language Learning*, 48, 31–69.
- Love, T., & Swinney, D. (1996). Coreference processing and levels of analysis in object-relative constructions; demonstration of antecedent reactivation with the cross-modal priming paradigm. *Journal of Psycholinguistic Research*, 25(1), 5–24.
- Lowie, W. (2012). Dynamic systems theory approaches to second language acquisition. In C. Chapel (ed.), *The encyclopedia of applied linguistics* (pp. 1806–1813). London: Wiley-Blackwell.
- Lowie, W. (under review). L2 phonological development: A plea for a dynamic, process-based methodology.
- Lowie, W., Caspi, T., Van Geert, P., & Steenbeek, H. (2011). Modeling development and change. In M. Verspoor, K. de Bot, & W. Lowie (eds.), A dynamic approach to second language development: Methods and techniques (pp. 22–122). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Luck, S., Heinze, H., Mangun, G., & Hillyard, S. (1990). Visual event-related potentials index focused attention within bilateral stimulus arrays.
  II. Functional dissociation of P1 and N1 components. *Electroencephalography and Clinical Neurophysiology*, 75, 528–542.
- Lucki, N., & Nicolay, C. (2007). Phenotypic plasticity and functional asymmetry in response to grip forces exerted by intercollegiate tennis players. *American Journal of Human Biology*, 19(4), 566–677.
- Lucy, J. (1992). *Grammatical categories and cognition. A case study of the linguistic relativity hypothesis.* Cambridge, UK: Cambridge University Press.
  - (1997). Linguistic relativity. Annual Review of Anthropology, 26, 291–312.
- Luk, G., Anderson, J., Craik, F., Grady, C., & Bialystok, E. (2010). Distinct neural correlates for two types of inhibition in bilinguals: Response inhibition and interference suppression. *Brain and Cognition*, 74, 347–357.
- Luk, G., & Bialystok, E. (2013). Bilingualism is not a categorical variable: Interaction between language proficiency and usage. *Journal of Cognitive Psychology*, 25(5), 605–621.
- Luk, G., Bialystok, E., Craik, F., & Grady, C. (2011). Lifelong bilingualism maintains white matter integrity in older adults. *Journal of Neuroscience*, 31(46), 16808–16813.
- Luk, G., DeSa, E., & Bialystok, E. (2011). Is there a relation between onset age of bilingualism and enhancement of cognitive control? *Bilingualism: Language and Cognition*, 14(4) 588–595.
- Luk, G., Green, D., Abutalebi, J., & Grady, C. (2012). Cognitive control for language switching in bilinguals: A quantitative meta-analysis of

functional neuroimaging studies. *Language and Cognitive Processes*, 27 (10), 1479–1488.

- Lukatela, G., Gligorijević, B., Kostić, A., & Turvey, M. (1980). Representation of inflected nouns in the internal lexicon. *Memory and Cognition*, 8, 415–423.
- Lukyanchenko, A., & Gor, K. (2011). Perceptual correlates of phonological representations in heritage speakers and L2 learners. *Proceedings of the 35th Annual Boston University Conference on Language Development.* Somerville, MA: Cascadilla Press.
- Luo, L., Craik, F., Moreno, S., & Bialystok, E. (2013). Bilingualism interacts with domain in a working memory task: Evidence from aging. *Psychology and Aging*, 28(1), 28–34.
- Luo, L., Luk, G., & Bialystok, E. (2010). Effect of language proficiency and executive control on verbal fluency performance in bilinguals. *Cognition*, 114, 29–41.
- Lupker, S., Brown, P., & Colombo, L. (1997). Strategic control in a naming task: Changing routes or changing deadlines? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 570–590.
- Luria, A. (1966). Higher cortical functions. New York: Basic Book.
- McCallum, W., Farmer, S. & Pocock, P. (1984). The effects of physical and semantic incongruities on auditory event-related potentials. *Electroencephalography and Clinical Neurophysiology*, **59**, 447–488.
- McCandliss, B., Cohen, L., & Dehaene, S. (2003). The visual word form area: Expertise for reading in the fusiform gyrus. *Trends in Cognitive Sciences*, 7, 293–299.
- McCandliss, B., Fiez, J., Protopapas, A., Conway, M., & McClelland, J. (2002).
  Success and failure in teaching the [r]–[l] contrast to Japanese adults: Tests of a Hebbian model of plasticity and stabilization in spoken language perception. *Cognitive, Affective, & Behavioral Neuroscience*, 2(2), 89–108.
- McCann, W., Klein, H., & Stegmann, T. (2003). *EuroComRom: The seven sieves:* How to read all the Romance languages right away (2nd rev. edn). Aachen, Germany: Shaker Verlag.
- McClelland, J. (2009). The place of modeling in cognitive science. *Topics in Cognitive Science*, 1, 11–28.
  - (2014). Explorations in parallel distributed processing: A handbook of models, programs, and exercises. Accessed from http://www.stanford. edu/group/pdplab/pdphandbook.
- McClelland, J., & Rumelhart, D. (1981). An interactive activation model of context effects in letter perception: I. An account of basic findings. *Psychological Review*, 88, 375–407.
- McConkey Robbins, A., Koch, D., Osberger, M., Zimmerman-Phillips, S., & Kishon-Rabin, L. (2004). Effect of age at cochlear implantation on auditory skill development in infants and toddlers. *Archives of Otolaryngology-Head & Neck Surgery*, 130(5), 570.

- McCormack, P. (1977). Bilingual linguistic memory: The independenceinterdependence issue revisited. In P. Hornby (ed.), *Bilingualism: Psychological, social, educational implications* (pp. 57–66). New York: Academic Press.
- McCormack, P., Brown, C., & Ginis, B. (1979). Free recall from mixedlanguage lists by Greek-English and French-English bilinguals. *Bulletin of the Psychonomic Society*, 14, 447–448.
- McCormack, P., & Novell, J. (1975). Free recall from unilingual and trilingual lists. *Bulletin of the Psychonomic Society*, 6, 173–174.
- MacDonald, A., Cohen, J., Stenger, V., & Carter, C. (2000). Dissociating the role of the dorsolateral prefrontal and anterior cingulate cortex in cognitive control. *Science*, 288(5472), 1835–1838.
- McDonald, J. (1987). Sentence interpretation in bilingual speakers of English and Dutch. *Applied Psycholinguistics*, 8(4), 379–413.
  - . (2006). Beyond the critical period: Processing-based explanations for poor grammaticality judgment performance by late second language learners. *Journal of Memory and Language*, 55(3), 381–401.
- McDonald, J., & Heilenman, L. (1991). Determinants of cue strength in adult first and second language speakers of French. *Applied Psycholinguistics*, 12(3), 313–348.
- MacDonald, M. (1994). Probabilistic constraints and syntactic ambiguity resolution. *Language and Cognitive Processes*, 9(2), 157–201.
  - (2013). How language production shapes language form and comprehension. *Frontiers in Psychology*, 4, 1–16.
- MacDonald, M., & Seidenberg, M. (2006). Constraint satisfaction accounts of lexical and sentence comprehension. In M. Traxler & M. Gernsbacher (eds.), *Handbook of psycholinguistics* (2nd edn). (pp. 581– 611). London: Elsevier.
- MacDonald, M., & Thornton, R. (2009). When language comprehension reflects production constraints: Resolving ambiguities with the help of past experience. *Memory & Cognition*, 37(8), 1177–1186.
- McDonald, S., & Shillcock, R. (2001). Rethinking the word frequency effect: The neglected role of distributional information in lexical processing. *Language and Speech*, 44(3), 295–322.
- McDonough, K., & De Vleeschauwer, J. (2012). Prompt type frequency, auditory pattern discrimination, and EFL learners' production of whquestions. *Studies in Second Language Acquisition*, 34(3), 355–377.
- McElree, B., & Griffith, T. (1995). Syntactic and thematic processing in sentence comprehension: Evidence for a temporal dissociation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21(1), 134.–157.
- MacIntyre, P. (1995). How does anxiety affect second language learning? A reply to Sparks and Ganschow. *Modern Language Journal*, 79, 90–99.
  - (2007). Willingness to communicate in a second language: Understanding the decision to speak as a volitional process. *Modern Language Journal*, 91, 564–576.

- MacIntyre, P., Baker, S., Clément, R., & Donovan, L. (2003). Talking in order to learn: Willingness to communicate and intensive language programs. *Canadian Modern Language Review*, 59, 589–607.
- MacIntyre, P., Dörnyei, Z., Clément, R., & Noels, K. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *Modern Language Journal*, 82, 545–562.
- MacIntyre, P., & Gardner, R. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 44, 283–305.
- MacIntyre, P., & Legatto, J. (2011). A dynamic systems approach to willingness to communicate: Developing and idiodynamic approach to capture rapidly changing affect. *Applied Linguistics*, 32, 149–171.
- Macizo, P., Bajo, M., & Martín, M. (2010). Inhibitory processes in bilingual language comprehension: Evidence from Spanish–English interlexical homographs. *Journal of Memory and Language*, 63, 232–244.
- Macizo, P., Bajo, M., & Paolieri, D. (2012). Language switching and language competition. *Second Language Research*, 28(2), 131–149.
- McKenna, F. (1986). Effects of unattended emotional stimuli on colornaming performance. *Current Psychological Research and Reviews*, 5(1), 445–452.
- McKenna, F., & Sharma, D. (2004). Reversing the emotional Stroop effect reveals that it is not what it seems: The role of fast and slow components. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 30(2), 382–382.
- Mackey, A., & Sachs, R. (2012). Older learners in SLA research: A first look at working memory, feedback, and L2 development. *Language Learning*, 61, 704–740.
- Mackey, A., Philp, J., Egi, T., Fujii, A., & Tatsumi, T. (2002). Individual differences in working memory, noticing of interactional feedback, and L2 development. In P. Robinson (ed.), *Individual differences and instructed language learning* (pp.181–209). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- McLaughlin, B., & Heredia, R. (1996). Information processing approaches to the study of second language acquisition. In W. Ritchie, & T. Bhatia (eds.), *Handbook of second language acquisition* (pp. 213–228). New York: Academic Press.
- MacLeod, C. (1976). Bilingual episodic memory: Acquisition and forgetting. Journal of Verbal Learning and Verbal Behavior, 15, 347–364.
  - (1991). Half a century of research on the Stroop effect: An integrative review. *Psychological Bulletin*, 109, 163–203.
- McMurray, B., & Aslin, R. (2004). Anticipatory eye movements reveal infants' auditory and visual categories. *Infancy*, 6(2), 203–229.
- Macnamara, J. (1966). Bilingualism and primary education: A study of Irish experience. Edinburgh: Edinburgh University Press.

- (1967a). The bilingual's linguistic performance-a psychological overview. *Journal of Social Issues*, 23(2), 58–77.
- (1967b). The linguistic independence of bilinguals. *Journal of Verbal Learning and Verbal Behavior*, 6, 729–736.
- Macnamara, J., Krauthammer, M., & Bolgar, M. (1968). Language switching in bilinguals as a function of stimulus and response uncertainty. *Journal of Experimental Psychology*, 78, 208–215.
- MacNamara, J., & Kushnir, S. L. (1971). Linguistic independence of bilinguals: The input switch. *Journal of Verbal Learning and Verbal Behavior*, 10 (5), 480–487.
- McQueen, J., Cutler, A., & Norris, D. (2006). Phonological abstraction in the mental lexicon. *Cognitive Science*, 30, 1113–1126.
- McRae, K., Cree, G., Seidenberg, M., & McNorgan, C. (2005). Semantic feature production norms for a large set of living and nonliving things. *Behavior Research Methods*, 37(4), 547–559.
- MacSwan, J. (2000). The architecture of the bilingual language faculty: Evidence from intrasentential code switching. *Bilingualism, Language and Cognition* 3, 37–74.
- MacWhinney, B. (1987a). Applying the competition model to bilingualism. *Applied Psycholinguistics*, 8(4), 315–327.
  - (1987b). The Competition Model. In B. MacWhinney (ed.), *Mechanisms of language acquisition* (pp. 249–308). Hillsdale, NJ: Erlbaum.
  - (2000). *The CHILDES Project: The database* (3rd edn). Mahwah, NJ: Lawrence Erlbaum.
  - (2001). Emergentist approaches to language. In J. Bybee & P. Hopper (eds.), *Frequency and the emergence of linguistic structure* (pp. 449–470). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2005). A unified model of language acquisition. In J. Kroll, & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 49–67). Oxford University Press.
  - (2010). Computational models of child language learning: An introduction. *Journal of Child language*, 37(3), 477.
  - (n.d.) Bilingual Corpora: Biling. Accessed from http://childes.psy.cmu. edu/manuals/04biling.pdf.
- MacWhinney, B., & Bates, E. (1989). *The cross-linguistic study of sentence processing*. New York: Cambridge University Press.
- MacWhinney, B., Bates, E., & Reinhold, K. (1984). Cue validity and sentence interpretation in English, German, and Italian. *Journal of Verbal Learning & Verbal Behavior*, 23(2), 127–150.
- Madden, D., Costello, M., Dennis, N., et al. (2010). Adult age differences in functional connectivity during executive control. *Neuroimage*, 52(2), 643–657.
- Mägiste, E. (1979). The competing language systems of the multilingual: A developmental study of decoding and encoding processes. *Journal of Verbal Learning and Verbal Behavior*, 18, 79–89.

- (1984). Stroop tasks and dichotic translation: The development of interference patterns in bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 10, 304–315.
- (1985). Development of intra-and interlingual interference in bilinguals. Journal of Psycholinguistic Research, 14, 137–154.
- Magnuson, J., Tanenhaus, M., Aslin, R., & Dahan, D. (1999). Spoken word recognition in the visual world paradigm reflects the structure of the entire lexicon. In *Proceedings of the Twenty First Annual Conference of the Cognitive Science Society* (pp. 331–336). Hillsdale, NJ: Lawrence Erlbaum.
- Maheshwari, M., Klein, A., & Ulmer, J. (2012). White matter: Functional anatomy of key tracts functional neuroradiology. New York: Springer.
- Malt, B., & Sloman, S. (2003). Linguistic diversity and object naming by nonnative speakers of English. *Bilingualism: Language and Cognition*, 6, 47– 68.
- Mandonnet, E., Nouet, A., Gatignol, P., Capelle, L., & Duffau, H. (2007). Does the left inferior longitudinal fasciculus play a role in language? *A brain stimulation study. Brain*, 130(3), 623–629.
- Mangun, G., Buonocore, M., Girelli, M., & Jha, A. (1998). ERP and fMRI measures of visual spatial selective attention. *Human Brain Mapping*, 6, 383–389.
- Mani, I., & Pustejovski, J. (2012). Interpreting motion: Grounded representations for spatial language. Oxford, UK: Oxford University Press.
- Marantz, A. (2013). No escape from morphemes in morphological processing. *Language and Cognitive Processes*, 28(7), 905–916.
- Marchman, V., & Martinez-Sussmann, C. (2002). Concurrent validity of caregiver/parent report measures of language for children who are learning both English and Spanish. *Journal of Speech, Language and Hearing Research*, 45(5), 983.
- Marchman, V., Martinez-Sussmann, C., & Dale, P. (2004). The languagespecific nature of grammatical development: Evidence from bilingual language learners. *Developmental Science*, 7(2), 212–224.
- Marian, V., Blumenfeld, H., & Kaushanskaya, M. (2007). The Language Experience and Proficiency Questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. *Journal of Speech*, *Language and Hearing Research*, 50(4), 940.
- Marian, V., Blumenfeld, H., Mizrahi, E., Kania, U., & Corder, A.-K. (2013). International Journal of Multilingualism, 10, 82–104.
- Marian, V., & Kaushanskaya, M. (2004). Self-construal and emotion in bicultural bilinguals. *Journal of Memory and Language*, 51, 190–201.
- (2009). The bilingual advantage in novel word learning. *Psychonomic Review Bulletin*, 16(4), 705–710.
- Marian, V., & Neisser, U. (2000). Language-dependent recall of autobiographical memories. *Journal of Experimental Psychology: General*, 129(3), 361.
- Marian, V., & Spivey, M. (2003a). Bilingual and monolingual processing of competing lexical items. *Applied Psycholinguistics*, 24(2), 173–193.

- (2003b). Competing activation in bilingual language processing: Withinand between-language competition. *Bilingualism: Language and Cognition*, 6(2), 97–115.
- Marian, V., Spivey, M., & Hirsch, J. (2003). Shared and separate systems in bilingual language processing: Converging evidence from eyetracking and brain imaging. *Brain and language*, 86(1), 70–82.
- Marí-Beffa, P., Cooper, S., & Houghton, G. (2011). Unmixing the Mixing Cost: Contributions from dimensional relevance and stimulusresponse suppression. *Journal of Experimental Psychology: Human Perception and Performance*, 38(2), 478–488.
- Mariën, P., Abutalebi, J., Engelborghs, S., & De Deyn, P. (2005). Pathophysiology of language switching and mixing in an early bilingual child with subcortical aphasia. *Neurocase*, 11, 385–398.
- Marinis, T. (2010). Using on-line processing methods in language acquisition research. *Experimental Methods in Language Acquisition Research*, 27, 139.
- Marinis, T., Roberts, L., Felser, C., & Clahsen, H. (2005). Gaps in second language sentence processing. *Studies in Second Language Acquisition*, 27 (1), 53–78.
- Markham, J., Herting, M., Luszpak, A., Juraska, J., & Greenough, W. (2009). Myelination of the corpus callosum in male and female rats following complex environment housing during adulthood. *Brain Research*, 1288, 9–17.
- Markham, J., & Wachtel, G. F. (1988). Children's use of mutual exclusivity to constrain the meanings of words. *Cognitive Psychology*, 20(2), 121–157.
- Marois, R., & Ivanoff, J. (2005). Capacity limits of information processing in the brain. *Trends in cognitive sciences*, 9(6), 296–305.
- Mårtensson, J., Eriksson, J., Bodammer, N., et al. (2012). Growth of language-related brain areas after foreign language learning. *NeuroImage*, 63,(1), 240–244.
- Martin, C., Barcelo, F., Hernandez, M., & Costa, A. (2011). The time course of the asymmetrical "local" switch cost: Evidence from event-related potentials. *Biological Psychology*, 86(3), 210–218.
- Martin, C., Dering, B., Thomas, E., & Thierry, G. (2009). Brain potentials reveal semantic priming in both the 'active' and the 'non-attended' language in early bilinguals. *NeuroImage*, 47, 326–333.
- Martin, C., Strijkers, K., Santesteban, M., Escera, C., Hartsuiker, R., & Costa, A. (2013). The impact of early bilingualism on controlling a language learned late: An ERP study. *Frontiers*, 4, 815.
- Martin, C., Thierry, G., Kuipers, J., Boutonnet, B., Foucart, A., & Costa, A. (2013). Bilinguals reading in their second language do not predict upcoming words as native readers do. *Journal of Memory and Language*, 69(4), 74–588.
- Martin, K., & Ellis, N. (2012). The roles of phonological short-term memory and working memory in L2 grammar and vocabulary learning. *Studies in Second Language Acquisition*, 34, 379–413.

- Martin, M., & Bialystok, E. (2003). The development of two kinds of inhibition in monolingual and bilingual children: Simon vs. Stroop. Poster presented at Meeting of the Cognitive Development Society, Park City, Utah.
- Martín, M., Bajo, M., & Kroll, J. (2013). When bilinguals chose the words they speak: Evidence for multiple control mechanisms. Poster presented at 54th Annual Meeting of the Psychonomic Society, Toronto, Canada.
- Martín, M., Macizo, P., & Bajo, M. (2010). Time course of inhibitory processes in bilingual language processing. *British Journal of Psychology*, 101, 679–693.
- Martín, M., Macizo, P., Bajo, M., & Kroll, J. (under review). Two contexts for bilingualism: How language immersion and expertise in translation influence language control.
- Martinovic, I., & Altarriba, J. (2012). Bilingualism and emotion: Implications for mental health. In T. Bhatia & W. Ritchie (eds.), *The handbook of bilingualism and multilingualism* (2nd edn) (pp. 292–320). Oxford, UK: Blackwell.
- Martin-Rhee, M., & Bialystok, E. (2008). The development of two types of inhibitory control in monolingual and bilingual children. *Bilingualism:* Language and Cognition, 11(1) 81–93.
- Martohardjono, G., Otheguy, R., Gabriele, A., et al. (2005). The role of syntax in reading comprehension: A study of bilingual readers. *Proceedings of the 4th International Symposium on Bilingualism* (pp. 1522–1544). Somerville, MA: Cascadilla Press.
- Marzecová, A., Asanowicz, D., Krivá, L., & Wodniecka, Z. (2013). The effects of bilingualism on efficiency and lateralization of attentional networks. *Bilingualism: Language and Cognition*, 16, 608–623
- Massol, S., Dunabeitia, J., Carreiras, M., & Grainger, J. (2013). Evidence for letter-specific position coding mechanisms. *PLoS ONE*, 8, e68460.
- Matsumoto, D., Anguas-Wong, A., & Martinez, E. (2008). Priming effects of language on emotion judgments in Spanish–English bilinguals. *Journal of Cross-Cultural Psychology*, 39(3), 335–342.
- Mattock, K., Polka, L., Rvachew, S., & Krehm, M. (2010). The first steps in word learning are easier when the shoes fit: Comparing monolingual and bilingual infants. *Developmental Science*, 13(1), 229–243.
- Maurer, U., Brem, S., Bucher, K., & Brandeis, D. (2005). Emerging neurophysiological specialization for letter strings. *Journal of Cognitive Neuroscience*, 17, 1532–1552.
- Maurer, U., Rossion, B., & McCandliss, B. (2008). Category specificity in early perception: Face and word n170 responses differ in both lateralization and habituation properties. *Frontiers in Human Neuroscience*, 2, 1–7.
- Maurer, U., Zevin, J., & McCandliss, B. (2008). Left-lateralized N170 effects of visual expertise in reading: Evidence from Japanese syllabic and logographic scripts. *Journal of Cognitive Neuroscience*, 20, 1878–1891.

- Mayor, J., & Plunkett, K. (2010). A neurocomputational account of taxonomic responding and fast mapping in early word learning. *Psychological Review*, 117(1), 1–31.
- Mayr, R., & Escudero, P. (2010). Explaining individual variation in L2 perception: Rounded vowels in English learners of German. *Bilingualism: Language and Cognition*, 13(3), 279–297.
- Mayr, U., & Keele, S. (2000). Changing internal constraints on action: The role of backward inhibition. *Journal of Experimental Psychology: General*, 129(1), 4–26.
- Mechelli, A., Crinion, J., Noppeney, U., et al. Price, C. (2004). Neurolinguistics: Structural plasticity in the bilingual brain. *Nature*, 431(7010), 757–757.
- Mecklinger, A. (2010). The control of long-term memory: brain systems and cognitive processes. *Neuroscience and Biobehavioral Review*, 34(7), 1055–1065.
- Mecklinger, A., von Cramon, D., Springer, A., & Matthes-von Cramon, G. (1999). Executive control functions in task switching: Evidence from brain injured patients. *Journal of Clinical & Experimental Neuropsychology*, 21(5), 606–619.
- Mehler, J., Jusczyk, P., Lambertz, G., Halsted, N., Bertoncini, J., & Amiel-Tison, C. (1988). A precursor of language acquisition in young infants. *Cognition*, 29, 143–178.
- Meijer, P., & Fox Tree, J. (2003). Building syntactic structures in speaking: A bilingual exploration. *Experimental Psychology*, 50, 184–195.
- Meiran, N. (1996). Reconfiguration of processing mode prior to task performance. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 22(6), 1423–1442.
- Meiran, N. (2000). Modeling cognitive control in task-switching. *Psychological Research*, 63(3–4), 234–249.
- Merino, B. (1983). Language loss in bilingual Chicano children. Journal of Applied Developmental Psychology, 4(3), 277–294.
- Meschyan, G., & Hernandez, A. (2006). Impact of language proficiency and orthographic transparency on bilingual word reading: An fMRI investigation. *NeuroImage*, 29, 1135–1140.
- Mesgarani, N., & Chang, E. (2012). Selective cortical representation of attended speaker in multi-talker speech perception. *Nature*, 485 (7397), 233–236.
- Meuter, R., & Allport, A. (1999). Bilingual language switching in naming: Asymmetrical costs of language selection. *Journal of Memory and Language*, 40(1), 25–40.
- Meyer, D., & Ruddy, M. (1974). Bilingual word recognition: Organization and retrieval of alternative lexical codes. Paper presented at Annual Meeting of the Eastern Psychological Association, Philadelphia.
- Meyer, L. (2000). Barriers to meaningful instruction for English learners. *Theory into practice*, 39(4), 228–236.

- Miccio, A., Hammer, C., & Rodriguez, B. (2009). Code-switching and language disorders in bilingual children. In B. Bullock & A. Toribio (eds.), *The Cambridge handbook of linguistic code-switching* (pp. 241–252). Cambridge, UK: Cambridge University Press.
- Midgley, K., Holcomb, P., & Grainger, J. (2011). Effects of cognate status on word comprehension in second language learners: An ERP investigation. *Journal of Cognitive Neuroscience*, 23, 1634–1647.
- Midgley, K., Holcomb, P., van Heuven, W., & Grainger, J. (2008). An electrophysiological investigation of cross-language effects of orthographic neighborhood. *Brain Research*, 1246, 123–135.
- Miikkulainen, R. (1997). Dyslexic and category-specific aphasic impairments in a self-organizing feature map model of the lexicon. *Brain and Language*, 59, 334–366.
- Miikkulainen, R., & Kiran, S. (2009). Modeling the bilingual lexicon of an individual subject. In Lecture notes in Computer Science 5629: Proceedings of the Workshop on Self-Organizing Maps (WSOM'09, St. Augustine, FL). Berlin: Springer.
- Mikulski, A. (2010). Age of onset of bilingualism, language use, and the volitional subjunctive in heritage learners of Spanish. *Heritage Language Journal*, 7(1), 28–46.
- Milian, S. (1995). Spanish-English codeswitching. (Unpublished corpus.).
- Milin, P., Filipović Đurđević, D., & Moscoso del Prado Martín, F. (2009). The simultaneous effects of inflectional paradigms and classes on lexical recognition: Evidence from Serbian. *Journal of Memory and Language*, 60, 50–64.
- Miller, E., & Cohen, J. (2001). An integrative theory of prefrontal cortex function. *Neuroscience*, 24(1), 167.
- Miller, G. (1990). WordNet: An on-line lexical database. *International Journal* of *Lexicography*, 3, 235–312.
- (2009). WordNet-About us. Accessed from http://wordnet.princeton.edu.
- Mimura, K., Kimoto, T., & Okada, M. (2003). Synapse efficiency diverges due to synaptic pruning following overgrowth. *Physical Review E*, 68(3), 031910.
- Minkowski, M. (1983). A clinical contribution to the study of polyglot aphasia especially with respect to Swiss-German. In M. Paradis (ed.), *Readings on aphasia in bilinguals and polyglots* (pp. 205–232). Montreal: Marcel Didier.
- Misra, M., Guo, T., Bobb, S., & Kroll, J. (2012). When bilinguals choose a single word to speak: Electrophysiological evidence for inhibition of the native language. *Journal of Memory and Language*, 67, 224–237.
- Miyake, A., Friedman, N., Emerson, M., Witzki, A., Howerter, A., & Wager, T. (2000). The unity and diversity of executive functions and their contributions to complex "frontal lobe" tasks: A latent variable analysis. *Cognitive Psychology*, 41, 49–100.
- Miyawaki, K., Jenkins, J., Strange, W., Liberman, A., Verbrugge, R., & Fujimura, O. (1975). An effect of linguistic experience: The

discrimination of [r] and [l] by native speakers of Japanese and English. *Perception & Psychophysics*, 18(5), 331–340.

Mizera, G. (2006). Working memory and L2 oral fluency. (Unpublished doctoral dissertation), University of Pittsburgh, PA.

Mohades, S., Struys, E., Van Schuerbeek, P., Mondt, K., Van De Craen, P., & Luypaert, R. (2012). DTI reveals structural differences in white matter tracts between bilingual and monolingual children. *Brain Research*, 1435, 72–80.

Monner, D., Vatz, K., Morini, G., Hwang, S., & DeKeyser, R. (2013). A neural network model of the effects of entrenchment and memory development on grammatical gender learning. *Bilingualism: Language and Cognition*, 16(2), 246.

Monsell, S. (1996). Control of mental processes. In V. Bruce (ed.), *Unsolved mysteries of the mind: Tutorial essays in cognition* (pp. 93–148). Mahwah. NJ: Lawrence Erlbaum.

- Monsell, S. (2003). Task switching. Trends in Cognitive Sciences, 7(3), 134-140.
- Monsell, S., Patterson, K., Graham, A., Hughes, C., & Milroy, R. (1992). Lexical and sub-lexical translation of spelling to sound: Strategic anticipation of lexical status. *Journal of Experimental Psychology Learning Memory and Cognition*, 18(3), 452–467
- Monsell, S., Yeung, N., & Azuma, R. (2000). Reconfiguration of task-set: Is it easier to switch to the weaker task? *Psychological Research*, 63, 250–264.
- Montalbetti, M. (1984). After binding: On the interpretation of pronouns. (Unpublished doctoral dissertation), Massachusetts Institute of Technology, Cambridge, MA.
- Montrul, S. (2005). Second language acquisition and first language loss in adult early bilinguals: Exploring some differences and similarities. *Second Language Research*, 21(3), 199–249.
  - (2010). Current issues in heritage language acquisition. *Annual Review of Applied Linguistics*, 30, 3–23.
  - (2011). First language retention and attrition in an adult Guatemalan adoptee. *Interaction and Acquisition*, 2(2), 276–311.
- Moon, C., Cooper, R., & Fifer, W. (1993). Two-day-olds prefer their native language. *Infant Behavior and Development*, 16, 495–500.
- Moon, C., & Jiang, N. (2012). Nonselective lexical access in different-script bilinguals. *Bilingualism: Language and Cognition*, 15, 173–180.
- Mooney, R. (1999). Sensitive periods and circuits for learned birdsong. *Current Opinion in Neurobiology*, 9(1), 121–127.
- Morales, J., Calvo, A., & Bialystok, E. (2013). Working memory development in monolingual and bilingual children. *Journal of Experimental Child Psychology*, 114(2) 187–202.
- Morales, L., Paolieri, D., Dussias, P., Valdés Kroff, J., Gerfen, C., & Bajo, M. (under review). The gender congruency effect during bilingual spoken-word recognition.

- Mordkoff, J., & Hazeltine, E. (eds.). (2011). Responding to the Source of Stimulation: J. Richard Simon and the Simon Effect [Special Issue]. *Acta Psychologica*, 136(2).
- Moreno, E., Federmeier, K., & Kutas, M. (2002). Switching languages, switching Palabras (words): An electrophysiological study of code switching. *Brain and Language*, 80(2), 188–207.
- Morford, J., Wilkinson, E., Villwock, A., Piñar, P., & Kroll, J. (2011). When deaf signers read English: Do written words activate their sign translations? *Cognition*, 118, 286–292.
- Morgan Short, K., Sanz, C., Steinhauer, K., & Ullman, M. (2010). Second language acquisition of gender agreement in explicit and implicit training conditions: An event-related potential study. *Language Learning*, 60(1), 154–193.
- Moriizumi, T., & Hattori, T. (1991). Pallidotectal projection to the inferior colliculus of the rat. *Experimental Brain Research*, 87(1), 223–226.
- Morris, J., Frank, T., Grainger, J., & Holcomb, P. (2007) Semantic transparency and masked morphological priming: An ERP investigation. *Psychophysiology*, 44, 506–521.
- Morris, N., & Jones, D. (1990). Memory updating in working memory: The role of the central executive. *British Journal of Psychology*, 81, 111–121.
- Morton, J., & Harper, S. (2009). Bilinguals show an advantage in cognitive control: The question is why. *Developmental Science*, 12(4), 502–503.
- Morton, J., & Johnson, M. (1991). Conspec and conlern: A two process theory of infant face recognition. *Psychological Review*, 98, 164–181.
- Mota, M. (1995). Working memory capacity and L2 fluent speech production. (Unpublished MA dissertation), Universidade Federal de Santa Catarina, Florianopolis, Brazil.
- Muysken, P. (1997). Media Lengua. In S. Thompson (ed.), *Contact languages: A wider perspective* (pp. 356–426). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Myers-Scotton, C. & Jake, J. (eds.) (1995). Matching lemmas in a bilingual competence and performance model: Evidence from intrasentential code switching. *Linguistics*, 33, 981–1024.
- Myers-Scotton, C. (1988). Swahili-English Nairobi CS corpus.
  - (1993a, [1997]). Duelling languages, grammatical structure in codeswitching. Oxford, UK: Oxford University Press.
  - (1993b). Social motivations for codeswitching: Evidence from Africa. Oxford, UK: Oxford University Press.
  - (2002a). Contact linguistics, bilingual encounters and grammatical outcomes. Oxford, UK: Oxford University Press.
  - (2002b). Frequency and intentionality in (un)marked choices in codeswitching: 'This is a 24-hour country.' *International Journal of Bilingualism*, 6, 205–219.
  - (2004). Xhosa-English bilingual corpus. (Unpublished manuscript), University of South Carolina.

- (2005a). Embedded language elements in Acholi/English codeswitching: What's going on? *Language Matters*, 36, 3–18.
- (2005b). Supporting a differential access hypothesis: Code switching and other contact data. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism, psycholinguistic approaches* (pp. 326–358). New York: Oxford University Press.
- (2013). Swahili-English Nairobi CS corpus. (Unpublished corpus), Michigan State University, MI.
- Myers-Scotton, C., & Jake, J. (2000a). Four types of morpheme: Evidence from intrasentential codeswitching. *Linguistics*, 38(6), 1053–1100.
- Myers-Scotton, C., & Jake, J. (eds.) (2000b). Testing a model of morpheme classification with language contact data. Special issue: *International Journal of Bilingualism*, 4(1), 1–8.
  - (2001). Explaining aspects of code-switching and implications. In J. Nichol (ed.), *One mind, two languages: Bilingual language processing* (pp. 84–116). Oxford, MA: Blackwell.
  - (2009). A universal model of code-switching and bilingual language processing and production. In B. Bullock & A. Toribio (eds.) *The Cambridge handbook of linguistic code-switching* (pp. 336–357). Cambridge, UK: Cambridge University Press.
  - (2014). Nonfinite verbs and negotiating bilingualism in codeswitching: Implications for a language production model. *Bilingualism, Language and Cognition*, 17(3), 511–525.
- Myers-Scotton, C., Jake, J., & Okasha, M. (1996). Arabic and constraints on codeswitching. In M. Eid, & D. Parkinson (eds.), *Perspectives on Arabic Linguistics IX: Papers from the Ninth Annual Symposium on Arabic Linguistics* (pp. 9–43). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Naigles, L. (2012). Not sampling, getting it all. In E. Hoff (ed.), *Research methods in child language: A practical guide* (pp. 240–253). Malden, MA: Wiley-Blackwell.
- Nakhleh, L., Ringe, D., & Warnow, T. (2005). Perfect phylogenetic networks: A new methodology for reconstructing the evolutionary history of natural languages. *Language*, 81, 382–420.
- Nas, G. (1983). Visual word recognition in bilinguals: Evidence for a cooperation between visual and sound based codes during access to a common lexical store. *Journal of Verbal Learning and Verbal Behavior*, 22, 526–534.
- Nazzi, T., Bertoncini, J., & Mehler, J. (1998). Language discrimination by newborns: Toward an understanding of the role of rhythm. *Journal of Experimental Psychology, Human Perception and Performance*, 24, 756–766.
- Nazzi, T., Jusczyk, P., & Johnson, E. (2000). Language discrimination by English-learning 5-month-olds: Effects of rhythm and familiarity. *Journal of Memory and Language*, 43, 1–19.
- Neely, J., Keefe, D., & Ross, K. (1989). Semantic priming in the lexical decision task: Roles of prospective prime-generated expectancies

and retrospective semantic matching. *Journal of Experimental Psychology: Learning, Memory, & Cognition,* 15(6), 1003–1019.

Neisser, U. (1894). Interpreting Harry Bahrick's discovery: What confers immunity against forgetting? *Journal of Experimental Psychology: General*, 113, 32–35.

Nelson, J., Balass, M., & Perfetti, C. A. (2005). Differences between written and spoken input in learning new words. *Written Language & Literacy*, 8, 25–44.

- Nelson, J., Liu, Y., Fiez, J., & Perfetti, C. A. (2009). Assimilation and accommodation patterns in ventral occipitotemporal cortex in learning a second writing system. *Human Brain Mapping*, 30, 810–820.
- Nelson, T.(1978). Detecting small amounts of information in memory: Savings for non-recognized items. *Journal of Experimental Psychology: Human Learning and Memory*, 4(5), 453–468.
- Neubauer, K., & Clahsen. H. (2009). Decomposition of inflected words in a second language. *Studies in Second Language Acquisition*, 31, 403–435.
- Neufeld, G. (1976). The bilingual's lexical store. *ITL Review of Applied Linguistics*, 14, 15–35.
- Newmeyer, F. (2006). On Gahl and Garnsey on grammar and usage. Language, 82(2), 399–404.
- Nicol, J., & Greth, D. (2003). Production of subject-verb agreement in Spanish as a second language. *Experimental Psychology*, 50(3), 196–203.
- Nicoladis, E., & Grabois, H. (2002). Learning English and losing Chinese: A case study of a child adopted from China. *International Journal of Bilingualism*, 6, 441–454.
- Nilsson, M., Perfilieva, E., Johansson, U., Orwar, O., & Eriksson, P. (1999). Enriched environment increases neurogenesis in the adult rat dentate gyrus and improves spatial memory. *Journal of Neurobiology*, 39(4), 569–578.
- Ninio, A. (1999). Pathbreaking verbs in syntactic development and the question of prototypical transitivity. *Journal of Child Language*, 26, 619–653.
- Nir-Sagiv, B., Bar-Ilan, L., & Berman, R. (2008). Vocabulary development across adolescence: Text-based analyses. In A. Stavans, & I. Kupferberg (eds.), Studies in language and language education: Essays in honor of Elite Olshtain (pp 47–74). Jerusalem: Magnes Press.
- Niwa, Y. (2000). Reasoning demands of L2 tasks and L2 narrative production: Effects of individual differences in working memory, intelligence, and aptitude. (Unpublished master's dissertation), Aoyama Gakuin University, Tokyo.
- Nixdorf-Bergweiler, B., Wallhäusser-Franke, E., & DeVoogd, T. (1995). Regressive development in neuronal structure during song learning in birds. *Journal of Neurobiology*, 27(2), 204–215.
- Noble, K., Norman, M., & Farah, M. (2005). Neurocognitive correlates of socioeconomic status in kindergarten children. *Developmental Science*, 8(1) 74–87.
- Norman, D., & Shallice, T. (1980). Attention to action: willed and automatic control of behavior. Center for Human Information Processing (Technical report No. 99). (Reprinted in revised form) in R. Davidson, G. Schartz, & D. Shapiro (eds.), *Consciousness and self-regulation, advances in research* (pp. 1–18). New York/London: Plenum Press.
- Norris, D. (2013). Models of visual word recognition. *Trends in Cognitive Sciences*, 17, 517–524.
- Norris, D., McQueen, J., & Cutler, A. (2000). Merging information in speech recognition: Feedback is never necessary. *Behavioral and Brain Sciences*, 23, 299–325.
- Nott, C., & Lambert, W. (1968). Free recall of bilinguals. *Journal of Verbal Learning and Verbal Behavior*, 7, 1065–1071.
- Novick, J., Hussey, E., Teubner-Rhodes, S., Harbison, J., & Bunting, J. (2014). Clearing the garden-path: Improving sentence processing through cognitive control training. *Language and Cognitive Processes*, 29(2), 186–217.
- Novoa, L., Fein, D., & Obler, L. (1988). Talent in foreign languages: A case study. In L. Obler, & D. Fein (eds.), *The exceptional brain: Neuropsychology of talent and special abilities* (pp. 294–303). New York: Guilford.
- Oatman, L. (1976). Effects of visual attention on the intensity of auditory evoked potentials. *Experimental Neurology*, 51(1), 41–53.
- O'Brien, I., Segalowitz, N., Collentine, J. & Freed, B. (2006). Phonological memory and lexical narrative, and grammatical skills in second language oral production by adult learners. *Applied Psycholinguistics*, 27, 377–402.
- Ochsner, K., & Gross, J. (2005). The cognitive control of emotion. *Trends* in Cognitive Sciences, 9(5), 242–249.
- Ochsner, K., Silvers, J., & Buhle, J. (2012). Functional imaging studies of emotion regulation: a synthetic review and evolving model of the cognitive control of emotion. *Annals of the New York Academy of Sciences*, 1251, E1-24.
- Odlin, T. (1989). Language transfer. New York: Cambridge University Press. (2003). Cross-linguistic influence. In C. Doughty, & M. Long (eds.), *The handbook of second language acquisition* (pp. 436–486). Oxford, UK: Blackwell.
  - (2008). Conceptual transfer and meaning extensions. In P. Robinson & N. C. Ellis (eds.), *Handbook of cognitive linguistics and second language acquisition* (pp. 306–340). London: Routledge.
- Oh, J. Au, T., & Jun, S. (2010). Early childhood language memory in the speech perception of international adoptees. *Journal of Child Language*, 37, 1123–1132.
- Oh, J., Jun, S.-A., Knightly, L., & Au, T. (2003). Holding on to childhood language memory. *Cognition*, 86(3), B53–B64.
- Okano, K., Grainger, J., & Holcomb, P. (2013). An ERP investigation of visual word recognition in syllabary scripts. *Cognitive, Affective, & Behavioral Neuroscience*, 13, 390–404.

Okasha, M. (1998). Arabic-English data. (Unpublished corpus.).

- (1999). Structural constraints on Arabic–English codeswitching: Two generations. (Unpublished doctoral dissertation), University of South Carolina, Columbia.
- Onifer, W., & Swinney, D. (1981). Accessing lexical ambiguities during sentence comprehension: Effects of frequency of meaning and contextual bias. *Memory and Cognition*, 9(3), 225–236.
- Orfanidou, E., & Sumner, P. (2005). Language Switching and the Effects of Orthographic Specificity and Response Repetition. *Memory & Cognition*, 33, 355–369.
- Osgood, C. (1952). The nature and measurement of meaning. *Psychological Bulletin*, 49, 197–237.
- Ossher, L., Bialystok, E., Craik, F., Murphy, K., Troyer, A. (2013). The effect of bilingualism on amnestic mild cognitive impairment. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 68, 8–12.
- Osterhout, L., & Holcomb, P. (1992). Event-related brain potentials elicited by syntactic anomaly. *Journal of Memory and Language*, 31(6), 785–806.
- Osterhout, L., Poliakov, A., Inoue, K., McLaughlin, J., Valentine, G., Pitkanen, I, & Hirschensohn, J. (2008). Second-language learning and changes in the brain. *Journal of Neurolinguistics*, 21(6), 509–521.
- Ota, M., Hartsuiker, R., & Haywood, S. (2009). The key to the rock: Nearhomophony in nonnative visual word recognition. *Cognition*, 111, 263– 269.
- Otheguy, R., & Lapidus, N. (2003). An adaptive approach to noun gender in New York contact Spanish. In R. Nuñez-Cedeño, & L. López (eds.), A Romance perspective on language knowledge and use (pp. 209–229). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Paap, K. (2014). The role of componential analysis, categorical hypothesising, replicability and confirmation bias in testing for bilingual advantages in executive functioning. *Journal of Cognitive Psychology*, 26(3), 242–255.
- Paap, K., & Greenberg, Z. (2013). There is no coherent evidence for a bilingual advantage in executive processing. *Cognitive psychology*, 66, 232–258.
- Packard, M., & Knowlton, B. (2002). Learning and memory functions of the basal ganglia. *Annual Review of Neuroscience*, 25(1), 563–593.
- Pagani, M., Lombardi, F., Guzzetti, S. et al. (1986) Power spectral analysis of heart rate and arterial pressure variabilities as a marker of sympathovagal interaction in man and conscious dog. *Circulation Research*, 59, 178–93.
- Paivio, A. (1971). Imagery and verbal processes. New York: Holt, Rinehart, & Winston.
- Paivio, A., Clark, J., & Lambert, W. (1988). Bilingual dual-coding theory and semantic repetition effects on recall. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 14, 163–172.

- Paivio, A., & Desrochers, A. (1980). A dual-coding approach to bilingual memory. *Canadian Journal of Psychology*, 34, 388–399.
- Paivio, A., & Lambert, W. (1981). Dual coding and bilingual memory. *Journal* of Verbal Learning and Verbal Behavior, 20, 532–539.
- Pallier, C. (2007). Critical periods in language acquisition and language attrition. In B. Köpke, M. Schmid, M. Keijzer, & S. Dostert (eds.), *Language attrition: Theoretical perspectives* (pp. 99–120). Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Pallier, C., Bosch, L., & Sebastián-Gallés, N. (1997). A limit on behavioral plasticity in speech perception. *Cognition*, 64, B9–B17.
- Pallier, C., Colomé, A., & Sebastián-Gallés, N. (2001). The influence of native-language phonology on lexical access: Exemplar-based versus abstract lexical entries. *Psychological Science*, 12, 445–449.
- Pallier, C., Dehaene, S., Poline, J.-B., et al. (2003). Brain imaging of language plasticity in adopted adults: Can a second language replace the first? *Cerebral Cortex*, 13(2), 155–161.
- Palmer, A. (1979). Compartmentalized and integrated control: An assessment of some evidence for two kinds of competence and implications for the classroom. *Language Learning*, 29(1), 169–180.
- Panayiotou, A. (2004). Switching codes, switching code: Bilinguals' emotional responses in English and Greek. *Journal of Multilingual and Multicultural Development*, 25, 124–139.
- Paolicelli, R., Bolasco, G., Pagani, F. et al. (2011). Synaptic pruning by microglia is necessary for normal brain development. *Science*, 333 (6048), 1456–1458.
- Papadopoulou, D., & Clahsen, H. (2003). Parsing strategies in L1 and L2 sentence processing. *Studies in Second Language Acquisition*, 25(4), 501–528.
- Papagno, C., & Vallar, G. (1995). Verbal short-term memory and vocabulary learning in polyglots. *The Quarterly Journal of Experimental Psychology*, 48, 98–107.
- Paradis, J., Genesee, F., & Crago, M. (2010). Dual language development and disorders: A handbook on bilingualism and second language learning. Baltimore: Brookes.
- Paradis, M. (1978). The stratification of bilingualism. In M. Paradis (ed.), *Aspects of bilingualism* (pp. 165–176). Columbia, SC: Hornbeam Press.
  - (1987). Neurolinguistic perspectives on bilingualism. In M. Paradis & G. Libben (eds.), *The assessment of bilingual aphasia* (pp. 1–17). Hillsdale, NJ: Lawrence Erlbaum.
  - (1997). The cognitive neuropsychology of bilingualism. In A. de Groot, & J. Kroll (eds.), *Tutorials in bilingualism. Psycholinguistic perspectives* (pp. 331–354). Mahwah, NJ: Lawrence Erlbaum.
  - (2002). The bilingual Loch Ness Monster raises its non-asymmetric head again or, why bother with such cumbersome notions as validity and reliability? Comments on Evans et al. (2002). *Brain and Language*, 87, 441–448.

- (2007). L1 attrition features predicted by a neurolinguistic theory of bilingualism. In B. Köpke, M. Schmid, M. Keijzer, & S. Dostert (eds.), *Language attrition: Theoretical perspectives* (pp. 121-133). Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Paradis, M., & Libben, G. (1987). *The assessment of bilingual aphasia*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Park, D., & Reuter-Lorenz, P. (2009). The adaptive brain: Aging and neurocognitive scaffolding. *Annual Review of Psychology*, 60, 173–196.
- Parker Jones, O., Green, D., Grogan, A., et al. (2012). Where, when and why brain activation differs for bilinguals and monolinguals during picture naming and reading aloud. *Cerebral Cortex*, 22, 892–902.
- Pashler, H., Bain, P., Bottge, B., Graesser, A., Koedinger, K., McDaniel, M., & Metcalfe, J. (2007). Organizing instruction and study to improve student learning (NCER 2007–2004). Washington, DC: National Center for Education Research, Institute of Education Sciences, U.S. Department of Education.
- Patel, A. (1998). Syntactic processing in language and music: different cognitive operations, similar neural resources? *Music Perception*, 16(1), 27–42.
- Patterson, J. (2000). Observed and reported expressive vocabulary and word combinations in bilingual toddlers. *Journal of Speech, Language and Hearing Research*, 43, 121–1288.
  - (2004). Comparing bilingual and monolingual toddlers' expressive vocabulary size: Revisiting Rescorla & Achenbach (2002). *Journal of Speech, Language and Hearing Research*, 47(5), 1213–1215.
- Paulesu, E., McCrory, E., Fazio, F., Menoncello, L., Brunswick, N., Cappa, S., & Frith, U. (2000). A cultural effect on brain function. *Nature Neuroscience*, 3, 91–96.
- Pavlenko, A. (1999). New approaches to concepts in bilingual memory. *Bilingualism: Language and Cognition*, 2, 209–230.
- Pavlenko, A. (2005a). Bilingualism and thought. In J. Kroll, & A. de Groot (eds.), Handbook of bilingualism: Psycholinguistic approaches (pp. 433–453). Oxford, UK: Oxford University Press.
  - (2005b). Emotions and multilingualism. New York: Cambridge University Press.
  - (2008). Emotion and emotion-laden words in the bilingual lexicon. *Bilingualism: Language and Cognition*, 11, 147–164.
  - (2009). Conceptual representation in the bilingual lexicon and second language vocabulary learning. In A. Pavlenko (ed.), *The bilingual mental lexicon: Interdisciplinary approaches* (pp. 125–160). Clevedon, UK: Multilingual Matters.
  - (2012). Affective processing in bilingual speakers: Disembodied cognition? International Journal of Psychology, 47, 405–428.
- Pavlenko, A., & Driagina, A. (2007). Russian emotion vocabulary in American learners' narratives. *Modern Language Journal*, 91, 213–234.

- Pavlenko, A., & Malt, B. (2011). Kitchen Russian: Crosslinguistic differences and first language object naming by Russian-English bilinguals. *Bilingualism: Language and Cognition*, 14, 19–45.
- Pavlik, P., & Anderson, J. (2005). Practice and forgetting effects on vocabulary memory. *Cognitive Science*, 29, 559–586.
- Peal, E., & Lambert, W. (1962). The relation of bilingualism to intelligence. *Psychological Monographs: General and Applied*, 76, 1–23.
- Pearlmutter, N., & Gibson, E. (2001). Recency in verb phrase attachment. Journal of Experimental Psychology: Learning, Memory, and Cognition, 27(2), 574–590.
- Pearson, B. (1998). Assessing lexical development in bilingual babies and toddlers. *International Journal of Bilingualism*, 2(3), 347–372.
  - (2008). Raising a bilingual child. New York, NY: Random House.
- Pearson, B., Fernández, S., & Oller, D. (1993). Lexical development in bilingual infants and toddlers: Comparison to monolingual norms. *Language Learning*, 43(1), 93–120.
  - (1995). Cross-language synonyms in the lexicons of bilingual infants: One language or two? *Journal of Child Language*, 22(2), 345–368.
- Peeters, D., Dijkstra, T., & Grainger, J. (2013). The representation and processing of identical cognates by late bilinguals: RT and ERP effects. *Journal of Memory and Language*, 68(4), 315–332.
- Peltola, M., Kujala, T., Tuomainen, J., Ek, M., Aaltonen, O., & Näätänen, R. (2003). Native and foreign vowel discrimination as indexed by the mismatch negativity (MMN) response. *Neuroscience Letters*, 352(1), 25–28.
- Peltola, M., Tamminen, H., Toivonen, H., Kujala, T., & Näätänen, R. (2012). Different kinds of bilinguals-Different kinds of brains: The neural organisation of two languages in one brain. *Brain and Language*, 121 (3), 261–266.
- Penfield, W. (1950). The physical basis of mind. Oxford, UK: Basil Blackwell.
- Penfield, W., & Roberts, L. (1959). *Speech and brain mechanisms*. Princeton, NJ: Princeton University Press.
- Peng, C., Havlin, S., Hausdorff, J., Mietus, J., Stanley, H., & Goldberger, A. (1995). Fractal mechanisms and heart rate dynamics: Long-range correlations and their breakdown with disease. *Journal of Electrocardiology*, 28, 59–65.
- Perdue, C. (ed.). (1993). Adult language acquisition: Crosslinguistic perspectives. Cambridge, UK: Cambridge University Press.
- Perea, M., & Lupker, S. (2003). Transposed-letter confusability effects in masked form priming. In S. Kinoshita & S. Lupker (eds.), *Masked priming*: State of the art (pp. 97–120). Hove, UK: Psychology Press.
- Perea, M., & Pollatsek, A. (1998). The effects of neighborhood frequency in reading and lexical decision. *Journal of Experimental Psychology: Human Perception and Performance*, 24, 767–779.

- Perea, M., & Rosa, E. (2000). The effects of orthographic neighborhood in reading and laboratory word identification tasks: A review. *Psicológica*, 21, 327–340.
- Perea, M., Duñabeitia, J., & Carreiras, M. (2008). Masked associative/semantic priming effects across languages with highly proficient bilinguals. *Journal of Memory and Language*, 58, 916–930.
- Perea, M., Nakatani, C., & van Leeuwen, C. (2011). Transposition effects in reading Japanese Kana: Are they orthographic in nature? *Memory & Cognition*, 39, 700–707.
- Pérez-Leroux, A., & Glass, W. (1999). Null anaphora in Spanish second language acquisition: Probabilistic versus generative approaches. Second Language Research, 15, 220–249.
- Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading*, 11(4), 357–383.
- Perfetti, C., Liu, Y., Fiez, J., Nelson, J., Bolger, D., & Tan, L. (2007). Reading in two writing systems: Accommodation and assimilation of the brain's reading network. *Bilingualism: Language and Cognition*, 10, 131–146.
- Perfetti, C., Liu, Y., & Tan, L. (2005). The lexical constituency model: Some implications of research on Chinese for general theories of reading. *Psychological Review*, 112, 43–59.
- Perziosa-Di Quinzio, I. (1992). Teoreticamentela firma la indietro: Frammisitione di Italiano e Schwyzertötsch nella convesazione di figli di emigrati. Universitá di Zurigo, Facoltá di Lettere e di Filosofia: Vavoro di licenza in linguistica italiana.
- Petersen, J. (1988). Word-internal code-switching constraints in a bilingual child's grammar. *Linguistics*, 26(3), 479–494.
- Petit, J.-P., Midgley, K., Holcomb, P., & Grainger, J. (2006). On the time course of letter perception: A masked priming ERP investigation. *Psychonomic Bulletin & Review*, 13, 674–681.
- Petitto, L., Berens, M., Kovelman, I., Dubins, M., Jasinska, K., & Shalinsky, M. (2011). The "Perceptual Wedge Hypothesis" as the basis for bilingual babies' phonetic processing advantage: New insights from fNIRS brain imaging. *Brain and Language*, 121(2), 1–14.
- Pexman, P., & Lupker, S. (1999). Ambiguity and visual word recognition: Can feedback explain both homophone and polysemy effects? *Canadian Journal of Experimental Psychology*, 53(4), 323–334.
- Peyer, E., Kaiser, I., & Berthele, R. (2010). The multilingual reader: Advantages in understanding and decoding German sentence structure when reading German as an L3. International Journal of Multilingualism, 7, 225–239.
- Pfaff, C. (1979). Constraints on language mixing: Intrasentential codeswitching and borrowing in Spanish/English. *Language*, 55(2), 291–318.
- Philipp, A., Gade, M., & Koch, I. (2007). Inhibitory processes in language switching: Evidence from switching language-defined response sets. *European Journal of Cognitive Psychology*, 19, 395–416.

- Philipp, A., & Koch, I. (2006). Task inhibition and task repetition in task switching. *European Journal of Cognitive Psychology*, 18(4), 624–639.
  - (2009). Inhibition in language switching: What is inhibited when switching between languages in naming tasks? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 1187–1195.
- Phillips, E. (1992). The effects of language anxiety on students' oral test performance and attitudes. *Modern Language Journal*, 76, 14–26.
- Piaget, J. (1954). *The construction of reality in the child* (M. Cook, trans.). New York: Basic Books.
  - (1970). *Genetic epistemology* (E. Duckworth, trans.). New York: Columbia University Press.
- Pickering, M., & Branigan, H. (1998). The representation of verbs: Evidence from syntactic priming in language production. *Journal of Memory and Language*, 39(4), 633–651.
- Pierrehumbert, J. (2001). Exemplar dynamics: Word frequency, lenition and contrast. In J. Bybee & P. Hopper (eds.), *Frequency and the emergence* of linguistic structure (pp. 137–157). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Pinker, S. (1989). Learnability and cognition: The acquisition of argument structure. Cambridge, MA: Bradford Books.
- Pisoni, D., & Cleary, M. (2004). Learning, memory, and cognitive processes in deaf children following cochlear implantation. In F. Zeng, A. Popper, & R. Fay (eds.), *Springer Handbook of Auditory Research* (pp. 377–426). New York: Springer.
- Pivneva, I., Mercier, J., & Titone, D. (2014). Executive control modulates cross-language lexical activation during L2 Reading: Evidence from eye movements. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 40(3), 787–796.
- Place, S., & Hoff, E. (2010). Properties of dual language exposure that influence two-year-olds' bilingual proficiency. *Child Development*, 82 (6), 1834–1849.
- Plat, R., Lowie, W., & de Bot, K. (under review). L2 word naming and semantic processing: A Dynamic Systems Approach.
- Plaut, D. (1997). Structure and function in the lexical system: Insights from distributed models of word reading and lexical decision. *Language and Cognitive Processes*, 12, 767–808.
- Plaut, D., McClelland, J., Seidenberg, M., & Patterson, K. (1996). Understanding normal and impaired word reading: Computational principles in quasi-regular domains. *Psychological Review*, 103, 56–115.
- Pliatsikas, C., & Marinis, T. (2013). Processing empty categories in a second language: When naturalistic exposure fills the (intermediate) gap. *Bilingualism: Language and Cognition*, 16(1), 167–182.
- Plunkett, K., & Elman, J. (1997). Exercises in rethinking innateness: A handbook for connectionist simulations. Cambridge, MA: MIT Press.

- Poarch, G., & van Hell, J. (2012). Cross-language activation in children's speech production: Evidence from second language learners, bilinguals, and trilinguals. *Journal of Experimental Child Psychology*, 111, 419–438.
- Poeppel, D., Idsardi, W., & van Wassenhove, V. (2008). Speech perception at the interface of neurobiology and linguistics. *Philosophical Transactions* of the Royal Society, 363, 1071–1086.
- Polivanov, E. (1931). La perception des sons d'une langue étrangère (The perception of the sounds of a foreign language). *Travaux du Cercle Linguistique de Prague*, 4, 79–96.
- Popiel, S. (1987). Bilingual comparative judgments: Evidence against the switch hypothesis. *Journal of Psycholinguistic Research*, 16, 563–576.
- Poplack, S. (1980). Sometimes I'll start a sentence in Spanish y termino en español: Toward a typology of code-switching. *Linguistics*, 18(7), 581–618.
- Poplack, S., & Meechan, M. (eds.). (1998). How languages fit together in codemixing. *International Journal of Bilingualism*, 2, 127–138.
- Port, R., & van Gelder, T. (1995). *Mind as motion: Exploration in the dynamics of cognition.* Cambridge, MA: Bradford.
- Portin, M., Lehtonen, M., Harrer, G., Wande, E., Niemi, J., & Laine, M. (2008). L1 effects on the processing of inflected nouns in L2. *Acta Psychologica*, 128(3), 452–465.
- Portin, M., Lehtonen, M., & Laine, M. (2007). Processing of inflected nouns in late bilinguals. *Applied Psycholinguistics*, 28(1), 135–56.
- Posner, M. (1978). Chronometric explorations of mind. New York: Oxford University Press.
- Posner, M., & Keele, S. (1970). Retention of abstract ideas. Journal of Experimental Psychology, 83, 304–308.
- Posner, M., & Petersen, S. (1990). The attention system of the human brain. *Annual Review of Neuroscience*, 13, 25–42.
- Posner, M., & Raichle, M. (1994). *Images of mind*. New York: Scientific American Library/Scientific American Books.
- Postman, W. (2004). Processing of complex sentences in a case of aphasia in Indonesian: Thematic vs. linear strategies. *Journal of Neurolinguistics*, 17(6), 455–489.
- Potts, R., & Shanks, D. (2012). Can testing immunize memories against interference? Journal of Experimental Psychology: Learning, Memory, and Cognition, 38, 1780–1785.
- Potzl, O. (1983). Aphasia and multilingualism. In M. Paradis (ed.), *Readings* on aphasia in bilinguals and polyglots (pp. 301–316). Montreal: Marcel Didier.
- Poulin-Dubois, D., Bialystok, E., Blaye, A., Polonia, A., & Yott, J. (2012). Lexical access and vocabulary development in very young bilinguals. *International Journal of Bilingualism*, 17(1), 1–15.

- Poulin-Dubois, D., Blaye, A., Coutya, J., & Bialystok, E. (2011). The effects of bilingualism on toddlers' executive functioning. *Journal of Experimental Child Psychology*, 108(3), 567–579.
- Poulisse, N., & Bongaerts, T. (1994). First language use in second language production. *Applied Linguistics*, 15(1), 36–57.
- Preston, D. (1996). Variationist perspectives on second language acquisition. In R. Bayley & D. Preston (eds.), Second language acquisition and linguistic variation (pp. 1–45). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2002). A variationist perspective on second language acquisition. In R. Kaplan (ed.), *The Oxford handbook of applied linguistics* (pp. 141–159). Oxford, UK: Oxford University Press.
- Preston, M., & Lambert, W. (1969). Interlingual interference in a bilingual version of the Stroop color-word task. *Journal of Verbal Learning and Verbal Behavior*, 8, 295–301.
- Price, C., Green, D., & Von Studnitz, R. (1999). A functional imaging study of translation and language switching. *Brain*, 122, 2221–2235.
- Price, M. (1991). The subjective experience of foreign language anxiety: Interviews with highly anxious students. In D. Young & E. Horwitz (eds.), *Language anxiety: From theory and research to classroom implications* (pp. 101–108). Englewood Cliffs, NJ: Prentice Hall.
- Prior, A., & Gollan, T. (2011). Good language-switchers are good taskswitchers: Evidence from Spanish-English and Mandarin-English bilinguals. *Journal of the International Neuropsychological Society*, 17(4), 682–691.
- Prior, A., Kroll, J., & MacWhinney, B. (2013). Translation ambiguity but not word class predicts translation performance. *Bilingualism: Language and Cognition*, 16, 458–474.
- Prior, A., & MacWhinney, B. (2010). A bilingual advantage in task switching. *Bilingualism: Language and Cognition*, 13, 253–262.
- Prior, A., MacWhinney, B., & Kroll, J. (2007). Translation norms for English and Spanish: The role of lexical variables, word class, and L2 proficiency in negotiating translation ambiguity. *Behavior Research Methods*, 39, 1029–1038.
- Pritchett, B. (1992). *Grammatical competence and parsing performance*. Chicago, IL: University of Chicago Press.
- Proverbio, A., Adorni, R., & Zani, A. (2009). Inferring native language from early bio-electrical activity. *Biological Psychology*, 80, 52–63.
- Proverbio, A., Cok, B., & Zani, A. (2002). Electrophysiological measures of language processing in bilinguals. *Journal of Cognitive Neuroscience*, 14, 994–1017.
- Proverbio, A., Leoni, G., & Zani, A. (2004). Language switching mechanisms in simultaneous interpreters: An ERP study. *Neuropsychologia*, 42(12), 1636–1656.

- Pulido, D. (2003). Modeling the role of second language proficiency and topic familiarity in second language incidental vocabulary acquisition through reading. *Language Learning*, 53, 233–284.
- Pulvermüller, F. (2003). The neuroscience of language: On brain circuits of words and serial order. Cambridge, MA: Cambridge University Press.
- (2005): Brain mechanisms linking language and action. *Nature Reviews Neuroscience*, 6, 576–582.
- Pulvermüller, F., & Fadiga, L. (2010). Active perception: Sensorimotor circuits as a cortical basis for language. *Nature Reviews Neuroscience*, 11, 351–360.
- Puntoni, S., de Langhe, B., & van Osselaer, S. (2009). Bilingualism and the emotional intensity of advertising language. *Journal of Consumer Research*, 35, 1012–1025.
- Qin, J. (2008). The effect of processing instruction and dictogloss tasks on acquisition of the English passive voice. *Language Teaching Research*, 12, 61–82.
- Quay, S. (2001). Managing linguistic boundaries in early trilingual development. In J. Cenoz & F. Genesee (eds.), *Trends in bilingual acquisition* (pp. 149–199). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Rah, A. (2010). Transfer in L3 sentence processing: Evidence from relative clause attachment ambiguities. *International Journal of Multilingualism*, 7, 147–161.
- Raizada, R., & Poldrack, R. (2007). Challenge-driven attention: interacting frontal and brainstem systems. Frontiers in Human Neuroscience, 1(3), 1– 8.
- Rajagopal, M., Holland, S., Walz, N., Staat, M., Altaye, M., & Wade, S. (2013). A functional magnetic resonance imaging study of language function in international adoptees. *Journal of Pediatrics*, 163(5), 1458–1464.
- Rakic, P., Bourgeois, J.-P., & Goldman-Rakic, P. (1994). Synaptic development of the cerebral cortex: implications for learning, memory, and mental illness. *Progress in Brain Research*, 102, 227–243.
- Ramon-Casas, M., & Bosch, L. (2010). Are non-cognate words phonologically better specified than cognates in the early lexicon of bilingual children? Selected Proceedings of the 4th Conference on Laboratory Approaches to Spanish Phonology, 31–36.
- Ramon-Casas, M., Swingley, D., Sebastián-Gallés, N., & Bosch, L. (2009). Vowel categorization during word recognition in bilingual toddlers. *Cognitive Psychology*, 59, 96–121.
- Ramus, F., Hauser, M., Miller, C., Morris, D., & Mehler, J. (2000). Language discrimination by human newborns and by cotton-top tamarin monkeys. *Science*, 288, 349–351.
- Ransdell, S., & Fischler, I. (1987). Memory in a monolingual mode: When are bilinguals at a disadvantage? *Journal of Memory and Language*, 26(4), 392–405.

- Rastle, K., & Davis, M. (2008). Morphological decomposition based on the analysis of orthography. *Language and Cognitive Processes*, 23, 942–971.
- Rayner, K. (1997). Understanding eye movements in reading. *Scientific Studies of Reading*, 1(4), 317–339.
  - (1998). Eye movements in reading and information processing: 20 years of research. *Psychological Bulletin*, 124(3), 372.
- Rayner, K., & Duffy, S. (1986). Lexical complexity and fixation times in reading: Effects of word frequency, verb complexity, and lexical ambiguity. *Memory & Cognition*, 14, 191–201.
- Rayner, K., Pacht, J., & Duffy, S. (1994). Effects of prior encounter and global discourse bias on the processing of lexically ambiguous words. *Journal* of Memory and Language, 33, 527–544.
- Raz, N. (2000). Aging of the brain and its impact on cognitive performance: Integration of structural and functional findings. In F. Craik & T. Salthouse (eds.), *The handbook of aging and cognition* (2nd edn) (pp. 1– 90). Mahwah, NJ: Erlbaum.
- Rebuschat, P., & Williams, J. (eds.). (2012). *Statistical learning and language acquisition*. Berlin: Mouton de Gruyter.
- Redgrave, P., Prescott, T., & Gurney, K. (1999). The basal ganglia: A vertebrate solution to the selection problem? *Neuroscience*, 89(4), 1009–1023.
- Redouane, R. (2005). Linguistic constraints on codeswitching and codemixing of bilingual Moroccan Arabic-French speakers in Canada. In J. Cohen, K. McAlister, K. Rolsted, & J. MacSwan (eds.), *Proceedings of the 4th International Symposium on Bilingualism* (pp. 1921–1933). Somerville, MA: Cascadilla Press.
- Regan, V. (2013). Variation. In J. Herschensohn & M. Young-Scholten (eds.), The Cambridge handbook of second language acquisition (pp. 272–291). Cambridge, UK: Cambridge University Press.
- Reitan, R. (1958). Validity of the Trail Making Test as an indicator of organic brain damage. *Perceptual and Motor Skills*, 8, 271–276.
- Reiterer, S., Hu, X., Erb, M., Rota, G., Nardo, D., Grodd, W., & Ackermann, H. (2011). Individual differences in audio-vocal speech imitation aptitude in late bilinguals: Functional neuro-imaging and brain morphology. *Frontiers in Psychology*, 2, 271.
- Rescorla, R., & Wagner, A. (1972). A theory of Pavlovian conditioning: Variations in the effectiveness of reinforcement and nonreinforcement. In A. Black & W. Prokasy (eds.), *Classical conditioning II: Current theory and research* (pp. 64–99). New York: Appleton-Century-Crofts.
- Ressel, V., Pallier, C., Ventura-Campos, N., et al. (2012). An effect of bilingualism on the auditory cortex. *Journal of Neuroscience*, 32(47), 16597– 16601.
- Rey, A., Dufau, S., Massol, S., & Grainger, J. (2009). Testing computational models of letter perception with item-level event-related potentials. *Cognitive Neuropsychology*, 26, 7–22.

- Rhodes, T., & Turvey, M. (2007). Human memory retrieval as Lévy foraging. Physica A: Statistical Mechanics and its Applications, 385(1), 255–260.
- Ricciardelli, L. (1992) Bilingualism and cognitive development in relation to threshold theory. *Journal of Psycholinguistic Research*, 21, 301–16.
- Richardson, D., & Dale, R. (2005). Looking to understand: The coupling between speakers' and listeners' eye movements and its relationship to discourse comprehension. *Cognitive Science*, 29(6), 1045–1060.
- Richardson, D., Dale, R., & Kirkham, N. (2007). The art of conversation is coordination common ground and the coupling of eye movements during dialogue. *Psychological Science*, 18(5), 407–413.
- Richardson, D., Dale, R., & Spivey, M. (2007). Eye movements in language and cognition: A brief introduction. In M. Gonzalez-Marquez, S. Coulson, I. Mittelberg, & M. Spivey (eds.), *Methods in Cognitive Linguistics* (pp. 323–344). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Richardson, F., Seghier, M., Leff, A., Thomas, M., & Price, C. (2011). Multiple routes from occipital to temporal cortices during reading. *Journal of Neuroscience*, 31, 8239–8247.
- Richter, F., & Yeung, N. (2012). Memory and cognitive control in task switching. *Psychological Science*, 23(10), 1256–1263.
- Ringbom, H. (2001). Lexical transfer in L3 production. In J. Cenoz,
  B. Hufeisen, & U. Jessner (eds.), *Cross-linguistic influence in third language* acquisition: Psycholinguistic perspective (pp. 59–68). Clevedon, UK: Multilingual Matters.
  - (2007). Cross-linguistic similarity in foreign language learning. Clevedon, UK: Multilingual Matters.
- Rinne, T., Balk, M., Koistinen, S., Autti, T., Alho, K., & Sams, M. (2008). Auditory selective attention modulates activation of human inferior colliculus. *Journal of Neurophysiology*, 100(6), 3323–3327.
- Ritter, H., & Kohonen, T. (1989). Self-organizing semantic maps. *Biological Cybernetics*, 61, 241–254.
- Rivers, W. (1996). Self-directed language learning and third language learner. Retrieved from: http://eric.ed.gov/?id=ED411679.
- Rivers, W., & Golonka, E. (2009). Third language acquisition theory and practice. In M. Long & C. Doughty (eds.), *The handbook of language teaching* (pp. 250–266). Oxford, UK: Blackwell.
- Roberson, D., Davies I., & Davidoff, J. (2000). Colour categories are not universal: Replications and new evidence from a Stone-Age culture. *Journal of Experimental Psychology: General*, 129, 369–398.
- Robinson, P. (2001). Individual differences: Cognitive abilities, aptitude complexes and learning conditions in second language acquisition. *Second Language Research*, 17, 368–392.
  - (2005). Aptitude and second language acquisition. *Annual Review of Applied Linguistics*, 25, 45–73.

- (2007). Task complexity, theory of mind, and intentional reasoning: Effects on L2 speech production, interaction, uptake and perceptions of task difficulty. *International Review of Applied Linguistics*, 45, 237–257.
- Robinson, P., & Ellis, N. (2008b). Conclusion: Cognitive linguistics, second language acquisition and L2 instruction Issues for research. In P. Robinson & N. Ellis (eds.), *Handbook of cognitive linguistics and second language acquisition* (pp. 489–546). London: Routledge.
- Robinson, P., & Ellis, N. (eds.) (2008a). A handbook of cognitive linguistics and second language acquisition. London: Routledge.
- Rodd, J., Gaskell, G., & Marslen Wilson, W. (2002). Making sense of semantic ambiguity: Semantic competition in lexical access. *Journal of Memory and Language*, 46(2), 245–266.
- Rodríguez Festman, J., Rodríguez-Fornells, A., & Münte, T. (2008).
  Performance accuracy affected by control over bilingual language production: A study of balanced L2 users. In S. Van Daele, A. Housen, F. Kuiken et al. (eds.), *Complexity, accuracy and fluency in second language use, learning & teaching* (pp. 65–76). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Rodríguez-Fornells, A., Kramer, U., Lorenzo-Seva, U., Festman, J., & Munte, T. (2011). Self-assessment of individual differences in language switching. *Frontiers in Psychology*, 2, 388.
- Rodríguez-Fornells, A., Rotte, M., Heinze, H., Nösselt, T., & Münte, T. (2002). Brain potential and functional MRI evidence for how to handle two languages with one brain. *Nature*, 415, 1026–1029.
- Rodríguez-Fornells, A., Van der Lugt, A., Rotte, M., Britti, B., Heinze, H.-J., & Münte, T. (2005). Second language interferes with word production in fluent bilinguals: Brain potential and functional imaging evidence. *Journal of Cognitive Neuroscience*, 17, 422–433.
- Roediger, H., & Butler, A. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences*, 15, 20–27.
- Roelofs, A. (1992). A spreading-activation theory of lemma retrieval in speaking. *Cognition*, 42, 107–142.
- Roelofs, A. (2010). Attention and facilitation: Converging information versus inadvertent reading in Stroop task performance. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 411–422.
- Rogalsky, C., & Hickok, G. (2011). The role of Broca's area in sentence comprehension. *Journal of Cognitive Neuroscience*, 23(7), 1664–1680.
- Rogers, R., & Monsell, S. (1995). Costs of a predictable switch between simple cognitive tasks. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31, 1477–1491.
- Römer, U., O'Donnell, M., & Ellis, N. (2013). Using COBUILD grammar patterns for a large-scale analysis of verb-argument constructions: Exploring corpus data and speaker knowledge. In M. Charles, N. Groom, & S. John (eds.), Corpora, Grammar, Text and Discourse: In

Honour of Susan Hunston. Amsterdam/Philadelphia, PA: John Benjamins Publishing.

- (under review). Second language learner knowledge of verb-argument constructions: Effects of language transfer and typology.
- Ronjat, J. (1913). Le développement du langage observé chez un enfant bilingue. Paris: Champion.
- Rosch, E., & Mervis, C. (1975a). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 7(4), 573–605.
  - (1975b). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General*, 104, 192–233.
- Rosch, E., Mervis, C., Gray, W., Johnson, D., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive Psychology*, 8, 382–439.
- Rose, R., & Carroll, J. (1974). Free recall of mixed language list. *Bulletin of the Psychonomic Society*, 3, 267–268.
- Rossell, S., & Nobre, A. (2004). Semantic priming of different affective categories. *Emotion*, 4(4), 354–363.
- Rossion, B., Joyce, C., Cottrell, G., & Tarr, M. (2003). Early lateralization and orientation tuning for face, word, and object processing in the visual cortex. *NeuroImage*, 20, 1609–1624.
- Rothman, J. (2010). On the typological economy of syntactic transfer: Word order and relative clause high/low attachment preference in L3 Brazilian Portuguese. *IRAL*, 48, 245–273.
- (2011). L3 syntactic transfer selectivity and typological determinacy: The typological primacy model. *Second Language Research*, 27, 107–127.
- Rousselet, G., Macé, M., & Fabre-Thorpe, M. (2004). Animal and human faces in natural scenes: How specific to human faces is the N170 ERP component? *Journal of Vision*, 4, 13–21.
- Ruben, R. (1997). A time frame of critical/sensitive periods of language development. *Acta Oto-Laryngologica*, 117(2), 202–205.
- Rubin, O., & Meiran, N. (2005). On the origins of the task mixing cost in the cuing task-switching paradigm. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31(6), 1477–1491.
- Rueda, M., Fan, J., McCandliss, B. et al. (2004). Development of attentional networks in childhood. *Neuropsychologia*, 42(8), 1029–1040.
- Ruh, N., & Westermann, G. (2009a). Simulating German verb inflection with a constructivist neural network. In J. Mayor, N. Ruh, & K. Plunkett (eds.), *Connectionist models of behavior and cognition* (pp. 313–324). London: World Scientific.
  - (2009b). OXlearn: A new MATLAB-based simulation tool for connectionist models. *Behavior Research Methods, Instruments & Computers*, 41, 1138– 1143.
- Rumelhart, D. (1989). The architecture of mind: A connectionist approach. In M. Posner (ed.), *Foundations of cognitive science*. Cambridge, MA: MIT Press.

- Rumelhart, D., Hinton, G., & Williams, R. (1986). Learning internal representations by error propagation. In D. Rumelhart, J. McClelland, & the PDP Research Group (eds.), Parallel distributed processing: explorations in the microstructures of cognition (pp. 318–362). Cambridge, MA: MIT Press.
- Rumelhart, D., McClelland, J., & the PDP Research Group (eds.). (1986). Parallel distributed processing: Explorations in the microstructure of cognition. Vol. 1, foundations. Cambridge, MA: MIT Press.
- Runnqvist, E., & Costa, A. (2012). Is retrieval-induced forgetting behind the bilingual disadvantage in word production. *Bilingualism: Language and Cognition*, 15(2), 365–377.
- Runnqvist, E., Gollan, T., Costa, A., Ferreira, V. (2013). A disadvantage in bilingual sentence production modulated by syntactic frequency and similarity across languages. *Cognition*, 129, 256–63.
- Rüschemeyer, S.-A., Zysset, S., & Friederici, A. (2006). Native and nonnative reading of sentences: An fMRI experiment. *NeuroImage*, 31, 354–365.
- Ruz, M., & Nobre, A. (2008). Attention modulates initial stages of visual word processing. *Journal of Cognitive Neuroscience*, 20, 1727–1736.
- Sabourin, L., & Stowe, L. (2008). Second language processing: When are first and second languages processed similarly? *Second Language Research*, 24(3), 397–430.
- Saegert, J., Kazarian, S., & Young, R. (1973). Part/whole transfer with bilinguals. *The American Journal of Psychology*, 86, 537–546.
- Saegert, J., Obermeyer, J., & Kazarian, S. (1973). Organizational factors in free recall of bilingually mixed lists. *Journal of Experimental Psychology*, 97, 397–399.
- Saer, D. (1923). The effects of bilingualism on intelligence. British Journal of Psychology, 14, 25–38.
- Sakai, M., & Suga, N. (2001). Plasticity of the cochleotopic (frequency) map in specialized and nonspecialized auditory cortices. *Proceedings of the National Academy of Science*, 98(6), 3507–3512.
- Sakurai, Y., Momose, T., Iwata, M., Sudo, Y., Ohtomo, K., & Kanazawa, I. (2000). Different cortical activity in reading of Kanji words, Kana words and Kana nonwords. *Cognitive Brain Research*, 9, 111–115.
- Salaberry, M. (1997). The role of input and output practice in second language acquisition. *Canadian Modern Language Review*, 53, 422–451.
- Salamoura, A., & Williams, J. (2007). Processing verb argument structure across languages: Evidence for shared representations in the bilingual lexicon. *Applied Psycholinguistics*, 28, 627.
- Salvatierra, J., & Rosselli, M. (2011). The effect of bilingualism and age on inhibitory control. *International Journal of Bilingualism*, 15, 26–37.
- Sanchez, M., Hearn, E., Do, D., Rilling, J., & Herndon, J. (1998). Differential rearing affects corpus callosum size and cognitive function of rhesus monkeys. *Brain Research*, 812(1), 38–49.

- Sánchez-Casas, R., Davis, C., & García-Albea, J. (1992). Bilingual lexical processing: Exploring the cognate/non-cognate distinction. *European Journal of Cognitive Psychology*, 4, 293–310.
- Sánchez-Casas, R., & García-Albea, J. (2005). The representation of cognate and noncognate words in bilingual memory: Can cognate status be characterized as a special kind of morphological relation? In J. Kroll, & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 226–250). New York: Oxford University Press.
- Sanders, A., Hall, C., Katz, M., & Lipton, R. (2012). Non-native language use and risk of incident dementia. *Journal of Alzheimer's Disease*, 29(1), 99–108.
- Sandoval, T., Gollan, T., Ferreira, V., & Salmon, D. (2010). What causes the bilingual disadvantage in verbal fluency? The dual-task analogy. *Bilingualism: Language and Cognition*, 13(2), 231–252.
- Sandra, D. (1994). The morphology of the mental lexicon: Internal word structure viewed from a psycholinguistic perspective. In D. Sandra & M. Taft (eds.), *Morphological structure, lexical representation and lexical access*. Hove, UK: Lawrence Erlbaum Associates.
- Santiago-Rivera, A., & Altarriba, J. (2002). The role of language in therapy with the Spanish–English bilingual client. *Professional Psychology: Research and Practice*, 33, 30–38.
- Santiago-Rivera, A., Altarriba, J., Poll, N., Gonzalez-Miller, N., & Cragun, C. (2009). Therapists' views on working with bilingual Spanish–English speaking clients: A qualitative investigation. *Professional Psychology: Research and Practice*, 40, 436–443.
- Sanz, C., & Morgan-Short, K. (2004). Positive evidence vs. explicit rule presentation and explicit negative feedback: A computer assisted study. *Language Learning*, 54, 35–78.
- Sasaki, Y. (1994). Paths of processing strategy transfers in learning Japanese and English as foreign languages. *Studies in Second Language Acquisition*, 16(1), 43–72.
- Sato, S., Gygax, P., & Gabriel, U. (2013). Gender inferences: Grammatical features and their impact on the representation of gender in bilinguals. *Bilingualism: Language and Cognition*, 16(4), 792–807.
- Scarborough, D., Gerard, L., & Cortese, C. (1984). Independence of lexical access in bilingual word recognition. *Journal of Verbal Learning & Verbal Behavior*, 23, 84–99.
- Scarmeas, N., Albert, S., Manly, J., & Stern, Y. (2006). Education and rates of cognitive decline in incident Alzheimer's disease. *Journal of Neurology*, *Neurosurgery, and Psychiatry*, 77, 308–316.
- Schacht, A., & Sommer, W. (2009). Time course and task dependence of emotion effects in word processing. *Cognitive, Affective, and Behavioral Neuroscience*, 9(1), 28–43.
- Schäffler, L., Lüders, H., Dinner, D., Lesser, R., & Chelune, G. (1993). Comprehension deficits elicited by electrical stimulation of Broca's area. *Brain*, 116(3), 695–715.

- Scheepers, C. (2003). Syntactic priming of relative clause attachments: Persistence of structural configuration in sentence production. *Cognition*, 89(3), 179–205.
- Schlaug, G. (2001). The brain of musicians. A model for functional and structural adaptation. *Annals of the New York Academy of Sciences*, 930, 281–299.
- Schlaug, G., Norton, A., Overy, K., & Winner, E. (2005). Effects of music training on the child's brain and cognitive development. *Annals of the New York Academy of Sciences*, 1060, 219–230.
- Schlegel, A., & Rudelson, J. (2012). White matter structure changes as adults learn a second language. *Journal of Cognitive Neuroscience*, 24(8), 1664–1670.
- Schmid, M. (2002). First language attrition, use and maintenance: The case of *German Jews in Anglophone countries*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2010). Languages at play: The relevance of L1 attrition to the study of bilingualism. *Bilingualism: Language and Cognition*, 13,1–7.
  - (2012). The impact of age and exposure on bilingual development in international adoptees and family migrants: A perspective from Holocaust survivors. *Linguistic Approaches to Bilingualism*, 2(2), 177–208.
- Schmid, M., Köpke, B., Keijzer, M., & Weilemar, L. (eds.) (2004). First language attrition: Interdisciplinary perspectives on methodological issues. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Schmid, S. (2005). Code-switching and Italian abroad: Reflections on language contact and bilingual mixture. *Italian Journal of Linguistics*, 17, 113–155.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 129–158.
  - (2001). Attention. In P. Robinson (ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge, UK: Cambridge University Press.
- Schmidt, R., & Bjork, R. (1992). New conceptualizations of practice: Common principles in three paradigms suggest new concepts for training. *Psychological Science*, 3, 207–217.
- Schmiedtová, B., von Stutterheim, C., & Carroll, M. (2011). Languagespecific patterns in event construal of advanced second language speakers. In A. Pavlenko (ed.), *Thinking and speaking in two languages* (pp. 66–107). Bristol, UK: Multilingual Matters.
- Schneider, D., & Anderson, J. (2010). Asymmetric switch costs as sequential difficulty effects. The Quarterly Journal of Experimental Psychology, 63(10), 1873–1894.
- Schoonbaert, S., Duyck, W., Brysbaert, M., & Hartsuiker, R. (2009). Semantic and translation priming from a first language to a second and back: Making sense of the findings. *Memory & Cognition*, 37(5), 569– 586.

- Schoonbaert, S., Hartsuiker, R., & Pickering, M. (2007). The representation of lexical and syntactic information in bilinguals: Evidence from syntactic priming. *Journal of Memory and Language*, 56, 153–171.
- Schoonbaert, S., Holcomb, P., Grainger, J., & Hartsuiker, R. (2011). Testing asymmetries in noncognate translation priming: Evidence from RTs and ERPs. *Psychophysiology*, 48, 74–81
- Schreuder, R., & Weltens, B. (1993). *The bilingual lexicon*. Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Schriefers, H., Meyer, A., & Levelt, W. (1990). Exploring the time course of lexical access in language production: Picture-word interference studies. *Journal of Memory and Language*, 29, 86–102.
- Schroeder, S., & Marian, V. (2012). A bilingual advantage for episodic memory in older adults. *Journal of Cognitive Psychology*, 24(5), 591–601.
- Schwanenflugel, P., & Rey, M. (1986). Interlingual semantic facilitation: Evidence for a common representational system in the bilingual lexicon. *Journal of Memory and Language*, 25, 605–618.
- Schwartz, A., & Arêas da Luz Fontes, A. (2008). Cross-language mediated priming: Effects of context and lexical relationship. *Bilingualism: Language and Cognition*, 11, 95–110.
- Schwartz, A., & Kroll, J. (2006). Bilingual lexical activation in sentence context. *Journal of Memory and Language*, 55, 197–212.
- Schwartz, A., Kroll, J., & Diaz, M. (2007). Reading words in Spanish and English: Mapping orthography to phonology in two languages. Language & Cognitive Processes, 22(1), 106–129.
- Schwartz, A., Yeh, L., & Shaw, M. (2008). Lexical representation of second language words: Implications for second language vocabulary and use. *The Mental Lexicon*, 3(3), 309–324.
- Schwartz, B. (2010). The effects of emotion on tip-of-the-tongue states. *Psychonomic Bulletin & Review*, 17, 82–87.
- Schweinberger, M. (2011). The discourse marker LIKE in Irish English. In
  B. Migge & M. Chiosáin (eds.), *New perspectives on Irish English* (pp. 179–202). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Schweizer, T., Ware, J., Fischer, C., Craik, F., & Bialystok, E. (2012). Bilingualism as a contributor to cognitive reserve: Evidence from brain atrophy in Alzheimer's disease. *Cortex*, 48, 991–996.
- Schwieter, J. W. (2013). Lexical inhibition in trilingual speakers. In J. Tirkkonen & E. Anttikoski (eds.), Proceedings of the 24th Conference of Scandinavian Linguistics. Publications of the University of Eastern Finland: Reports and Studies in Education, Humanities, and Theology (pp. 249–260). Joensuu, Finland: University of Eastern Finland Press.
- Schwieter, J. W. (founding series ed.) (2014). *Bilingual Processing and Acquisition*. Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Schwieter, J. W., & Ferreira, A. (2013). Language selection, control, and conceptual-lexical development in bilinguals and multilinguals. In J. Schwieter (ed.), *Innovative research and practices in second language*

acquisition and bilingualism (pp. 241–266). Amsterdam/Philadelphia, PA: John Benjamins Publishing.

- Schwieter, J. W., & Sunderman, G. (2008). Language switching in bilingual speech production: In search of the language-specific selection mechanism. *Mental Lexicon*, 3(2), 214–238.
  - (2009). Concept selection and developmental effects in bilingual speech production. *Language Learning*, 59(4), 897–927.
  - (2011). Inhibitory control processes and lexical access in trilingual speech production. *Linguistic Approaches to Bilingualism*, 1, 391–412.
- Scott, W. (1962). Cognitive complexity and cognitive flexibility. *Sociometry*, 25(4), 405–414.
- Sebastián, R., Laird, A., & Kiran, S. (2011). Meta-analysis of the neural representation of first language and second language. *Applied Psycholinguistics*, 32(4), 799–819.
- Sebastián-Gallés, N. (2013). Eyes wide shut: Linking brain and pupil in bilingual and monolingual toddlers. *Trends in Cognitive Sciences*, 17(5), 197–198.
- Sebastián-Gallés, N., Albareda-Castellot, B., Weikum, W., & Werker, J. (2012). A bilingual advantage in visual language discrimination in infancy. *Psychological Science*, 23(9), 994–999.
- Sebastián-Gallés, N., & Bosch, L. (2002). Building phonotactic knowledge in bilinguals: Role of early exposure. *Journal of Experimental Psychology: Human Perception and Performance*, 28(4), 974–989.
  - (2009). Developmental shift in the discrimination of vowel contrasts in bilingual infants: Is the distributional account all there is to it? *Developmental Science*, 12(6), 874–887.
- Sebastián-Gallés, N., Bosch, L., & Pons, F. (2008). Early bilingualism. In M. Haith & J. Benson (eds.), Encyclopedia of infant and early childhood development (pp.172–182). San Diego: Elsevier.
- Sebastián-Gallés, N., & Díaz, B. (2012). First and second language speech perception: Graded learning. *Language Learning*, 62, 131–147.
- Sebastián-Gallés, N., Echeverría, S., & Bosch, L. (2005). The influence of initial exposure on lexical representation: Comparing early and simultaneous bilinguals. *Journal of Memory and Language*, 52, 240–255.
- Sebastián-Gallés, N., Rodríguez-Fornells, A., de Diego Balaguer, R., & Díaz, B.
   (2006). First- and second-language phonological representations in the mental lexicon. *Journal of Cognitive Neuroscience*, 18(8), 1277–1291.
- Sebastián-Gallés, N., & Soto-Faraco, S. (1999). Online processing of native and non-native phonemic contrasts in early bilinguals. *Cognition*, 72, 111–123.
- Segalowitz, N. (2010). Cognitive bases of second language fluency. Oxon, NY: Routledge.
- Segalowitz, N., Watson, V., & Segalowitz, S. (1995). Vocabulary skill: Singlecase assessment of automaticity of word recognition in a timed lexical decision task. *Second Language Research*, 11(2), 121–136.

- Segalowitz, S., & Zheng, X. (2009). An ERP study of category priming: Evidence of early lexical semantic access. *Biological Psychology*, 80, 122–129.
- Seidenberg, M., & McClelland, J. (1989). A distributed developmental model of word recognition and naming. *Psychological Review*, 96, 523–568.
- Seidl, J. (1937). The effect of bilingualism on the measurement of intelligence. (Unpublished doctoral dissertation), Fordham University, New York City.
- Seliger, H., & Vago, R. (1991). *First language attrition*. New York: Cambridge University Press.
- Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics*, 10, 209–230.
- Sereno, S., O'Donnell, P., & Rayner, K. (2006). Eye movements and lexical ambiguity resolution: Investigating the subordinate-bias effect. *Journal* of Experimental Psychology: Human Perception and Performance, 32(2), 335– 350.
- Sereno, S., Rayner, K., & Posner, M. (1998). Establishing a time-line of word recognition: Evidence from eye movements and event-related potentials. *Neuroreport*, 9, 2195–2200.
- Servan-Schreiber, D., Cleeremans, A., & McClelland, J. (1991). Graded state machines: The representation of temporal contingencies in simple recurrent networks. *Machine Learning*, 7, 161–193.
- Shafer, V., Yu, Y., & Datta, H. (2011). The development of English vowel perception in monolingual and bilingual infants: Neurophysiological correlates. *Journal of Phonetics*, 39(4), 527–545.
- Shafer, V., Yu, Y., & Garrido-Nag, K. (2012). Neural mismatch indices of vowel discrimination in monolingually and bilingually exposed infants: Does attention matter? *Neuroscience Letters*, 526(1), 10–14.
- Shallice, T. (1982). Specific impairments of planning. *Philosophical Transactions of the Royal Society London B*, 298, 199–209.
- (1988). From neuropsychology to mental structure. Cambridge, UK: Cambridge University Press.
- Shanks, D. (1995). *The psychology of associative learning*. New York: Cambridge University Press.
- Shea, C., & Curtin, S. (2010). Discovering the relationship between context and allophones in a second language: Evidence for distribution-based learning. *Studies in Second Language Acquisition*, 32, 581–606.
- Sheen, Y. (2008). Recasts, language anxiety, modified output and L2 learning. *Language Learning*, 58, 835–874.
- Sheng, L., Lu, Y., & Kan, P. (2011). Lexical development in Mandarin-English bilingual children. Bilingualism: Language and Cognition, 14(4), 579–587.
- Shimron, J. (2003). Semitic languages: Are they really root-based? In J. Shimron (ed.), Language Processing and Acquisition in Languages of

*Semitic, Root-based, Morphology* (pp. 1–28). Amsterdam/Philadelphia, PA: John Benjamins Publishing.

Shin, J., & Christianson, K. (2009). Syntactic processing in Korean-English bilingual production: Evidence from cross-linguistic structural priming. Cognition, 112, 175–180.

Shin, N., & Cairns, H. (2009). Subject pronouns in child Spanish and continuity of reference. In J. Collentine, M. García, B. Lafford, & F. Marín (eds.), Selected proceedings of the 11th Hispanic Linguistics Symposium (pp. 155–164). Somerville, MA: Cascadilla Press.

- Shinskey, J., & Munakata, Y. (2003). Are infants in the dark about hidden objects? *Developmental Science*, 6(3), 273–282.
- Shipstead, Z., Redick, T., & Engle, R. (2012). Is working memory training effective? *Psychological Bulletin*, 138, 628–654.
- Shockley, K., Santana, M., & Fowler, C. (2003). Mutual interpersonal postural constraints are involved in cooperative conversation. *Journal of Experimental Psychology: Human Perception and Performance*, 29(2), 326– 332.
- Sholl, A., Sankaranarayanan, A., & Kroll, J. (1995). Transfer between picture naming and translation: A test of asymmetries in bilingual memory. *Psychological Science*, 6, 45–49.
- Shook, A., & Marian, V. (2012). Bimodal bilinguals co-activate both languages during spoken comprehension. *Cognition*, 124(3), 314–324.
  - (2013). The bilingual language interaction network for comprehension of speech. *Bilingualism: Language and Cognition*, 16(2), 304–324.
- Showalter, C., & Hayes-Harb, R. (2013). Unfamiliar orthographic information and second language word learning: A novel lexicon study. *Second Language Research*, 29, 185–200.
- Shultz, T. (2003). Computational developmental psychology. Cambridge, MA: MIT Press.
- Silva, R., & Clahsen, H. (2008). Morphologically complex words in L1 and L2 processing: Evidence from masked priming experiments in English. *Bilingualism: Language and Cognition*, 11, 245–260.
- Silverberg, S., & Samuel, A. (2004). The effect of age of second language acquisition on the representation and processing of second language words. *Journal of Memory and Language*, 51, 381–398.
- Simango, R. (1995). Chichewa-English dataset. (Unpublished.).
- Simcox, T., Pilotti, M., Mahamane, S., & Romero, E. (2012). Does the language in which aversive stimuli are presented affect their processing? *International Journal of Bilingualism*, 16, 419–427.
- Simões, A. (2008). Pois não: Brazilian Portuguese course for Spanish speakers, with basic reference grammar. Austin, TX: University of Texas Press.
- Simon, G., Bernard, C., Lalonde, R., & Rebaï, M. (2006). Orthographic transparency and grapheme-phoneme conversion: An ERP study in Arabic and French readers. *Brain Research*, 1104, 141–152.

- Simon, G., Bernard, C., Largy, P., Lalonde, R., & Rebaï, M. (2004). Chronometry of visual word recognition during passive and lexical decision tasks: An ERP investigation. *International Journal of Neuroscience*, 114, 1401–1432.
- Simon, G., Petit, L., Bernard, C., & Rebaï, M. (2007). N170 ERPs could represent a logographic processing strategy in visual word recognition. *Behavioral and Brain Functions*, 3, 1–11.
- Simon, J., & Wolf, J. (1963). Choice reaction time as a function of angular stimulus-response correspondence and age. *Ergonomics*, 6(1), 99–105.
- Singh, L. (2014). One world, two languages: Cross-language semantic priming in bilingual toddlers. *Child Development*, 85(2), 755–766.
- Singh, L., & Foong, J. (2012). Influences of lexical tone and pitch on word recognition in bilingual infants. *Cognition*, 124(2), 128–142.
- Singleton, D. (2005). The critical period hypothesis: A coat of many colours. IRAL, 43, 269–285.
- Siok, W., Kay, P., Wange, W., Chana, A., Chen, L., Luke, K.-K., & Tan, L. (2009). Language regions of brain are operative in color perception. *Proceedings of the National Academy of Sciences*, 106, 8140–8145.
- Siok, W., Spinks, J., Jin, Z., & Tan, L. (2009). Developmental dyslexia is characterized by the co-existence of visuospatial and phonological disorders in Chinese children. *Current Biology*, 19, 890–892.
- Skehan, P. (1986). Cluster analysis and the identification of learner types. In V. Cook (ed.), *Experimental approaches to second language acquisition* (pp. 81–94). Oxford, UK: Pergamon.
- Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency and lexis. *Applied Linguistics*, 30, 510– 532.
- Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (ed.), Cognition and second language instruction (pp. 183–205). Cambridge, UK: Cambridge University Press.
- Slabakova, R. (2013). The effect of construction frequency and native transfer on second language knowledge of the syntax-discourse interface. *Applied Psycholinguistics*, 1–29.
- Slamecka, N., & Graf, P. (1978). The generation effect: Delineation of a phenomenon. *Journal of Experimental Psychology: Human Learning and Memory*, 4, 592–604.
- Slobin, D. (1993). Adult language acquisition: A view from child language study. In C. Perdue (ed.), Adult language acquisition: cross-linguistic perspectives (pp. 239–252). Cambridge, UK: Cambridge University Press.
  - (1996). From "thought and language" to "thinking for speaking." In J. Gumperz & S. Levinson (eds.), *Rethinking linguistic relativity* (pp. 70–96). Cambridge, UK: Cambridge University Press.
  - (2003). Language and thought online: Cognitive consequences of linguistic relativity. In D. Gentner & S. Goldin-Meadow (eds.), *Language in*

mind: Advances in the study of language and thought (pp. 157–192). Cambridge, MA: MIT Press.

- (2003). Language and thought online: Cognitive consequences of linguistic relativity. In D. Gentner & S. Goldin-Meadow (eds.), *Language in Mind: Advances in the Study of Language and Thought* (pp. 157–192). Cambridge, MA: MIT Press.
- Slobin, D., Dasinger, L., Küntay, A., & Toupin, C. (1993). Native language reacquisition in early childhood. In E. Clark (ed.), *The Proceedings of the Twenty-Fourth Annual Child Language Research Forum* (pp. 179–196). Stanford, CA: Center for the Study of Language and Information.
- Smith, F. (1923). Bilingualism and mental development. *British Journal of Psychology*, 13, 270–282.
- Smith, M., & Kirsner, K. (1982). Language and orthography as irrelevant features in colour-word and picture-word Stroop interference. Quarterly Journal of Experimental Psychology: Human Experimental Psychology, 34, 153–170.
- Snedeker, J., & Yuan, S. (2008). Effects of prosodic and lexical constraints on parsing in young children (and adults). *Journal of Memory and Language*, 58(2), 574–608.
- Snodgrass, J. (1984). Concepts and their surface representations. *Journal of Verbal Learning & Verbal Behavior*, 23, 3–22.
- Soares, C., & Grosjean, F. (1984). Bilinguals in a monolingual and a bilingual speech mode: The effect on lexical access. *Memory & Cognition*, 12 (4), 380–386.
- Soffié, M., Hahn, K., Terao, E., & Eclancher, F. (1999). Behavioural and glial changes in old rats following environmental enrichment. *Behavioural Brain Research*, 101(1), 37–49.
- Soja, N., Carey, S., & Spelke, E. (1991). Ontological categories guide young children's inductions of word meaning: Object terms and substance terms. *Cognition*, 38, 179–211.
- Sommers, M., & Barcroft, J. (2007). An integrated account of the effects of acoustic variability in first language and second language: Evidence from amplitude, fundamental frequency, and speaking rate variability. *Applied Psycholinguistics*, 28, 231–249.
  - (2013). Effects of referent token variability on L2 vocabulary learning. *Language Learning*, 63, 186–210.
- Song, Y., Bu, Y., Hu, S., Luo, Y., & Liu, J. (2010). Short-term language experience shapes the plasticity of the visual word form area. *Brain Research*, 1316, 83–91.
- Sorace, A. (2005). Selective optionality in language development. In L. Cornips & K. P. Corrigan (eds.), Syntax and variation: Reconciling the biological and the social (pp. 55–80). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Soveri, A, Rodríguez., Rodriguez-Fornells, A., & Laine, M. (2011). Is there a relationship between language switching and executive functions in

bilingualism? Introducing a within-group analysis approach. *Frontiers in Psychology*, 2, 1–8.

Sowell, E., Peterson, B., Thompson, P., Welcome, S., Henkenius, A., & Toga, A. (2003). Mapping cortical change across the human life span. *Nature Neuroscience*, 6, 309–315.

Sparks, R., & Ganschow, L. (1991). Foreign language learning differences: Affective or native language aptitude. *Modern Language Journal*, 75, 2–16.

- Spector, A., & Biederman, I. (1976). Mental set and mental shift revisited. *American Journal of Psychology*, 89(4), 669–679.
- Spielberger, C. (1983). *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Spier, L., Hallowell, A., & Newman, S. (1941). Language, culture, and personality: Essays in memory of Edward Sapir. Menasha, WI: Sapir Memorial Publication Fund.
- Spivey, M. (2007). The continuity of mind. New York: Oxford University Press.
- Spivey, M., Grosjean, M., & Knoblich, G. (2005). Continuous attraction toward phonological competitors. *Proceedings of the National Academy* of Sciences of the United States of America, 102(29), 10393–10398.
- Spivey, M., & Marian, V. (1999). Cross talk between native and second languages: Partial activation of an irrelevant lexicon. *Psychological Science*, 10, 281–284.
- Spivey, M., Tanenhaus, M., Eberhard, K., & Sedivy, J. (2002). Eye movements and spoken language comprehension: Effects of visual context on syntactic ambiguity resolution. *Cognitive Psychology*, 45(4), 447–481.
- Spivey-Knowlton, M., & Sedivy, J. (1995). Resolving attachment ambiguities with multiple constraints. *Cognition*, 55(3), 227–267.
- Spoelman, M., & Verspoor, M. (2010). Dynamic patterns in the development of accuracy and complexity: A longitudinal case study on the acquisition of Finnish. *Applied Linguistics*, 31(4), 532–553.
- Stager, C., & Werker, J. (1997). Infants listen for more phonetic detail in speech perception than in word-learning tasks. *Nature*, 388(6640), 381–382.
- Starreveld, P. (2000). On the interpretation of onsets of auditory contexts in word production. *Journal of Memory and Language*, 42, 497–525.
- Stefanowitsch, A., & Gries, S. (2003). Collostructions: Investigating the interaction between words and constructions. *International Journal of Corpus Linguistics*, 8, 209–243.
- Starreveld, P., de Groot, A., Rossmark, B., & van Hell, J. G. (2014). Parallel language activation during word processing in bilinguals: Evidence from word production in sentence context. *Bilingualism: Language and Cognition*, 17(2), 258–276.
- Starreveld, P., & La Heij, W. (1995). Semantic interference, orthographic facilitation, and their interaction in naming tasks. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21, 686–698.

- (1996). Time-course analysis of semantic and orthographic context effects in picture naming. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 22, 896–918.
- Stein, M., Federspiel, A., Koenig, et al. (2012). Structural plasticity in the language system related to increased second language proficiency. *Cortex*, 48(4), 458–465.
- Stengel, E., & Zelmanowicz, J. (1933). On polyglot motor aphasia. In M. Paradis (ed.), *Readings on aphasia in bilinguals and polyglots* (pp. 356– 375). Montreal: Marcel Didier.
- Stern, Y. (2002). What is cognitive reserve? Theory and research application of the reserve concept. *Journal of the International Neuropsychological Society*, 8, 448–460.
  - (2009). Cognitive reserve. Neuropsychologia, 47, 2015-2028.
- Sternberg, S. (1969). The discovery of processing stages: Extensions of Donder's method. *Acta Psychologica*, 30, 276–315.
- Stolberg, D., & Münch, A. (2010). "Die Muttersprache vergisst man nicht" or do you? A case study in L1 attrition and its (partial) reversal. *Bilingualism: Language and Cognition*, 13(1), 19–31.
- Stowe, L., & Sabourin, L. (2006). Imaging the processing of a second language: Effects of maturation and proficiency on the neural processes involved. *International Review of Applied Linguistics*, 43, 329–353.
- Strijkers, K., Costa, A., & Thierry, G. (2010). Tracking lexical access in speech production: Electrophysiological correlates of word frequency and cognate effects. *Cerebral Cortex*, 20, 912–928.
- Stroop, J. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology*, 18, 643–662.
- Stuss, D., & Benson, D. (1986). The frontal lobes. New York: Raven Press.
- Stuss, D., & Knight, R. (eds.) (2012). *Principles of Frontal Lobe Function* (2nd edn). New York: Oxford University Press.
- Styles, S., & Plunkett, K. (2009). How do infants build a semantic system? *Language and Cognition*, 1(1), 1–24.
- Su, I. (2001). Transfer of sentence processing strategies: A comparison of L2 learners of Chinese and English. *Applied Psycholinguistics*, 22(1), 83–112.
- Su, I.-F., Mak, S.-C., Cheung, L.-Y., & Law, S.-P. (2012). Taking a radical position: evidence for position-specific radical representations in Chinese character recognition using masked priming ERP. *Frontiers in Psychology*, 3, 333.
- Suga, N. (2008). The neural circuit for tone-specific plasticity in the auditory system elicited by conditioning. *Learning & Memory*, 15(4), 198–201.
- Sundara, M., Polka, L., & Molnar, M. (2008). Development of coronal stop perception: Bilingual infants keep pace with their monolingual peers. *Cognition*, 108(1), 232–242.
- Sundara, M., & Scutellaro, A. (2011). Rhythmic distance between languages affects the development of speech perception in bilingual infants. *Journal of Phonetics*, 39(4) 505–513.

- Sunderman, G., & Kroll, J. F. (2006). First language activation during second language lexical processing: An investigation of lexical form, meaning, and grammatical class. *Studies in Second Language Acquisition*, 28, 387–422.
- Sutton, T., & Altarriba, J. (2011). The automatic activation and perception of emotion in word processing: Evidence from a modified dot probe paradigm. *Journal of Cognitive Psychology*, 23, 736–747.
- Sutton, T., Altarriba, J., Gianico, J., & Basnight-Brown, D. (2007). Emotional Stroop effects in monolingual and bilingual speakers. *Cognition and Emotion*, 21, 1077–1090.
- Svirsky, M., Teoh, S.-W., & Neuburger, H. (2004). Development of language and speech perception in congenitally, profoundly deaf children as a function of age at cochlear implantation. *Audiology and Neurotology*, 9 (4), 224–233.
- Swain, M. (1993) The output hypothesis: Just speaking and writing aren't enough. *Canadian Modern Language Review*, 50, 158–164.
- (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (eds.), *Principle and practice in applied linguistics: Studies in honour of H. G. Widdowson.* Oxford, UK: Oxford University Press.
- Swinney, D. (1979). Lexical access during sentence comprehension: (re) consideration of context effects. *Journal of Verbal Learning and Verbal Behavior*, 18(6), 645–659.
- Tabossi, P. (1988). Accessing lexical ambiguity in different types of sentential contexts. *Journal of Memory and Language*, 27(3), 324–340.
- Tabossi, P., & Johnson-Laird, P. (1980). Linguistic context and the priming of semantic information. *Quarterly Journal of Experimental Psychology*, 32 (4), 595–603.
- Tabossi, P., & Zardon, F. (1993). Processing ambiguous words in context. *Journal of Memory and Language*, 32, 359–372.
- Tabossi, P., Colombo, L., & Job, R. (1987). Accessing lexical ambiguity: Effects of context and dominance. *Psychological Research*, 49(2–3), 161– 167.
- Taft, M., & Zhu, X. (1997). Submorphemic processing in reading Chinese. Journal of Experimental Psychology: Learning, Memory, and Cognition, 23, 761–775.
- Taft. M. (2004). Morphological decomposition and the reverse base frequency effect. *The Quarterly Journal of Experimental Psychology*, 57(4), 745–765.
- Talamas, A., Kroll, J., & Dufour, R. (1999). From form to meaning: Stages in the acquisition of second-language vocabulary. *Bilingualism: Language and Cognition*, 2, 45–58.
- Talmy, L. (1985). Lexicalization patterns: Semantic structure in lexical form. In T. Shopen (ed.), *Language typology and syntactic description: Grammatical categories and the lexicon* (pp. 57–149). Cambridge, UK: Cambridge University Press.

- Talmy, L. (2000). Toward a cognitive semantics: Typology and process in concept structuring. Cambridge MA: MIT Press.
- Tan, L., Laird, A., Li, K., & Fox, P. (2005). Neuroanatomical correlates of phonological processing of Chinese characters and alphabetic words: A meta-analysis. *Human Brain Mapping*, 25, 83–91.
- Tan, L., Liu, H., Perfetti, C., Spinks, J., Fox, P., & Gao, J. (2001). The neural system underlying Chinese logograph reading. *NeuroImage*, 13, 836–846.
- Tan, L., Spinks, J., Eden, G., Perfetti, C., & Siok, W. (2005). Reading depends on writing, in Chinese. Proceedings of the National Academy of Sciences, 102, 8781–8785.
- Tan, T. X., & Yang, Y. (2005). Language development of Chinese adoptees 18–35 months old. *Early Childhood Research Quarterly*, 20(1), 57–68.
- Tanaka, J. W., & Curran, T. (2001). A Neural Basis for Expert Object Recognition. *Psychological Science*, 12, 43–47.
- Tanenhaus, M., Spivey-Knowlton, M., Eberhard, K., & Sedivy, J. (1995). Integration of visual and linguistic information in spoken language comprehension. *Science*, 268(5217), 1632–1634.
- Tanenhaus, M. K., & Trueswell, J. C. (1995). Sentence comprehension. In J. L. Miller & P. D. Eimas (eds.), Speech, language, and communication: Handbook of perception and cognition (pp. 217–262). San Diego, CA: Academic Press.
- Tarlowski, A., Wodniecka, Z. Marzecova, A. (2013). Language switching in the production of phrases. *Journal of Psycholinguistic Research*, 42(2), 103–118.
- Tarone, E. (1979). Interlanguage as chameleon. *Language Learning*, 29, 181–191.
  - (1988). Variation in interlanguage. London: Edward Arnold.
  - (2007). Sociolinguistic approaches to second language acquisition research 1997–2007. *Modern Language Journal*, 91, 837–848.
- Taylor, I. (1971). How are words from two languages organized in bilinguals' memory? *Canadian Journal of Psychology/Revue canadienne de psychologie*, 25, 228–240.
  - (1976). Similarity between French and English words: A factor to be considered in bilingual language behavior? *Journal of Psycholinguistic Research*, 5, 85–94.
- Taylor, J. (2002). Cognitive grammar. Oxford, UK: Oxford University Press.
- Tees, R., & Werker, J. (1984). Perceptual flexibility: Maintenance or recovery of the ability to discriminate non-native speech sounds. *Canadian Journal of Psychology*, 38(4), 579–590.
- Teinonen, T., Fellman, V., Näätänen, R., Alku, P., & Huotilainen, M. (2009). Statistical language learning in neonates revealed by event-related brain potentials. *BMC Neuroscience*, 10(1), 21.
- Thierry, G., & Wu, Y. (2007). Brain potentials reveal unconscious translation during foreign-language comprehension. *Proceedings of the National Academy of Sciences*, 104, 12530–12535.

- Thierry, G., Athanasopoulos, P., Wiggett, A., Dering, B., & Kuipers, J. (2009). Unconscious effects of language-specific terminology on pre-attentive colour perception. *Proceedings of the National Academy of Sciences*, 106, 4567–4570.
- Thomas, J. (1988). The role played by metalinguistic awareness in second and third language learning. *Journal of Multilingual and Multicultural Development*, 9, 235–247.
- Thomas, M. (1997). Connectionist networks and knowledge representation: The case of bilingual lexical processing. (Unpublished doctoral dissertation), Oxford University, UK.
- Thomas, M., & Allport, A. (2000). Language switching costs in bilingual visual word recognition. *Journal of Memory and Language*, 43, 44–66.
- Thomas, M., & van Heuven, W. (2005). Computational models of bilingual comprehension. In J. Kroll & A. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 202–225). New York: Oxford University Press.
- Thordardottir, E. (2011). The relationship between bilingual exposure and vocabulary development. *International Journal of Bilingualism*, 15, 426–445.
- Tight, D. (2012). The first-noun principle and ambitransitive verbs. *Hispania*, 95(1), 103–115.
- Timm, L. (1983). Does code switching take time? A comparison of results in experimental and natural settings, with some implications for bilingual language processing. *Hispanic Journal of Behavioral Sciences*, 5, 401– 416.
- Tinkham, T. (1993). The effect of semantic clustering on the learning of second language vocabulary. *System*, 21, 371–380.
  - (1997). The effects of semantic and thematic clustering on the learning of second language vocabulary. *Second Language Research*, 13, 138–163.
- Titone, D., Libben, M., Mercier, J., Whitford, V., & Pivneva, I. (2011). Bilingual lexical access during L1sentence reading: The effects of L2 knowledge, semantic constraint, and L1–L2 intermixing. Journal of Experimental Psychology: Learning, Memory, and Cognition, 37, 1412–1431.
- Tkachenko, N. (2001). The relative influence of English (L2) vs. Russian (L1) on the translation from Swedish (L3) into Russian depending on proficiency in L3. (Unpublished master's thesis), Lund University, Sweden.
- Tobias, S. (1986). Anxiety and cognitive processing of instruction. In R. Schwarzer (ed.), *Self-related cognition in anxiety and motivation* (pp. 35–54). Hillsdale, NJ: Erlbaum.
- Tokowicz, N. (2013). Translation ambiguity affects language processing, learning, and representation. In R. Miller, K. Martin, C. Eddington et al. (eds.), Selected Proceedings of the 2012 Second Language Research Forum: Building Bridges Between Disciplines (pp. 170–180). Somerville, MA: Cascadilla Press.

- Tokowicz, N., & Degani, T. (2010). Translation ambiguity: Consequences for learning and processing. In B. VanPatten & J. Jegerski (eds.), *Research on second language processing and parsing* (pp. 281–293). Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Tokowicz, N., & Jarbo, K. (2009). The generation effect applied to second language vocabulary learning. Poster presented at *The Fiftieth Annual Meeting of the Psychonomic Society*, Boston, MA.
- Tokowicz, N., & Jarbo, K. (under review). Generation improves second language vocabulary learning.
- Tokowicz, N., & Kroll, J. (2007). Number of meanings and concreteness: Consequences of ambiguity within and across languages. *Language and Cognitive Processes*, 22, 727–779.
- Tokowicz, N., Kroll, J., de Groot, A., & van Hell, J. (2002). Number-oftranslation norms for Dutch-English translation pairs: A new tool for examining language production. *Behavior Research Methods, Instruments, & Computers,* 34, 435-451.
- Tomiyama, M. (2001). Detecting a savings effect in longitudinal L2 attrition data. Paper presented at AAAL Symposium, Reactivating a Forgotten Language: The savings-paradigm applied, Missouri, USA.
- Toribio, A. (2000), Setting parametric limits on dialectal variation in Spanish. *Lingua*, 10, 315-341.
- Toro, J., Trobalon, J., & Sebastián-Gallés, N. (2003). The use of prosodic cues in language discrimination tasks by rats. *Animal Cognition*, 6, 131–136.
- Towell, R., & Hawkins, R. (1994). *Approaches to second language acquisition*. Clevedon: Multilingual Matters.
- Townsend, C. (1995). Teaching the Czech language though Russian: Преподавание ческого языка посредством русского (Prepodavanije čeśkogo jazyka posredstvom russkogo). Columbus, OH: Slavica.
- Tran, V. (2010). English gain vs. Spanish loss? Language assimilation among second-generation Latinos in young adulthood. *Social Forces*, 89(1), 257–284.
- Trehub, S. (1976). The discrimination of foreign speech contrasts by infants and adults. *Child Development*, 47(2), 466–472.
- Treiman, R., Clifton, C., Meyer, A., & Wurm, L. (2003). Language comprehension and production. In A. Healy, & R. Proctor (eds.), *Comprehensive* Handbook of Psychology (pp. 527–548). New York: John Wiley & Sons, Inc.
- Trousdale, G., & Hoffmann, T. (eds.). (2013). *The Oxford handbook of construction grammar*. Oxford, UK: Oxford University Press.
- Trueswell, J., & Kim, A. (1998). How to prune a garden path by nipping it in the bud: Fast priming of verb argument structure. *Journal of Memory and Language*, 39(1), 102–123.
- Trueswell, J., & Tanenhaus, M. (1994). Toward a lexicalist framework of syntactic ambiguity resolution. In C. Clifton, L. Frazier, & K. Rayner (eds.), *Perspectives on sentence processing* (pp. 155–180). Hillsdale, NJ: Erlbaum.

- Trueswell, J., Tanenhaus, M., & Kello, C. (1993). Verb-specific constraints in sentence processing: Separating effects of lexical preference from garden-paths. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 19(3), 528–553.
- Truscott, J. (1998). Noticing in a second language: A critical review. Second Language Research, 14, 103–135.
- Truscott, J., & Sharwood Smith, M. (2004), Acquisition by processing: A modular perspective on language development. *Bilingualism: Language and Cognition*, 7, 1–20.
  - (2011) Input, intake, and consciousness: The quest for a theoretical foundation. *Studies in Second Language Acquisition*, 33(4), 497–528.
- Tsai, J.-L., Lee, C.-Y., Lin, Y.-C., Tzeng, O., & Hung, S. (2006). Neighborhood size effects of Chinese words in lexical decision and reading. *Language and Linguistics*, 7, 659–675.
- Tsao, F., Liu, H., & Kuhl, P. (2004). Speech perception in infancy predicts language development in the second year of life: A longitudinal study. *Child Development*, 75, 1067–1084.
- Tse, C., & Pu, X. (2012). The effectiveness of test-enhanced learning depends on trait test anxiety and working-memory capacity. *Journal of Experimental Psychology: Applied*, 18, 253–264.
- Tse, C.-S., & Altarriba, J. (2009). The word concreteness effect occurs for positive, but not negative, emotion words in immediate serial recall. *British Journal of Psychology*, 100, 91–109.
- Tseng, A., Chang, L.-Y., & Tokowicz, N. (2014). Translation ambiguity between English and Mandarin Chinese: The roles of proficiency and word characteristics. In J. W. Schwieter & A. Ferreira (eds.), *The devel*opment of translation competence: Theories and methodologies from psycholinguistics and cognitive science (pp. 107–165). Newcastle, UK: Cambridge Scholars Publishing.
- Tseng, A., Doppelt, M., & Tokowicz, N. (under review). Lexical and semantic interconnections aid adult second language vocabulary learning.
- Tsuneishi, S., & Casaer, P. (2000). Effects of preterm extrauterine visual experience on the development of the human visual system: A flash VEP study. *Developmental Medicine & Child Neurology*, 42(10), 663–668.
- Tulving, E., & Colotla, V. (1970). Free recall of trilingual lists. *Cognitive Psychology*, 1, 86–98.
- Turkeltaub, P., Eden, G., Jones, K., & Zeffiro, T. (2002). Meta-analysis of the functional neuroanatomy of single-word reading: method and validation. *Neuroimage*, 16, 765–780.
- Türker, E. (2005). Resisting the grammatical change: Nominal groups in Turkish-Norwegian codeswitching. International Journal of Bilingualism, 9, 453–476.
- Uddin, L., Iacoboni, M., Lange, C., & Keenan, J. (2007). The self and social cognition: The role of cortical midline structures and mirror neurons. *Trends in Cognitive Sciences*, 11(4), 153–157.

- Ullman, M. (2001). The neural basis of lexicon and grammar in first and second language: The declarative/procedural model. *Bilingualism:* Language and Cognition, 4, 105–22.
  - (2012). The declarative/procedural model. In P. Robinson (ed.), *Routledge encyclopedia of second language acquisition* (pp. 160–164). New York & London: Routledge.
- Ulsh, J. (2011). From Spanish to Portuguese. Madison, CT: Audio-Forum, Jeffrey Norton Publishers, Inc.
- Uludag, O., & VanPatten, B. (2012). The comparative effects of processing instruction and dictogloss on the acquisition of the English passive by speakers of Turkish. *International Review of Applied Linguistics*, 50, 187–210.
- Umbel, V., Pearson, B., Fernández, M., & Oller, D. (1992). Measuring bilingual children's receptive vocabularies. *Child Development*, 63(4), 1012– 1020.
- Unsworth, N., & Spillers, G. (2010). Working memory capacity: Attention, memory, or both? A direct test of the dual-component model. *Journal of Memory and Language*, 62, 392–406.
- Unsworth, S. (2013). Assessing the role of current and cumulative exposure in simultaneous bilingual acquisition: The case of Dutch gender. *Bilingualism: Language and Cognition*, 16(1), 86–110.
- Uriagareka, J. (1995). Aspects of the syntax of clitic placement in Western Romance. *Linguistic Inquiry*, 26, 79–123.
- Upshur, J., & Palmer, A. (1974). Measures of accuracy, communicatively, and social judgment for two classes of foreign language speakers. *Selected papers from the third international congress of applied linguistics*, Vol. 2 (pp. 201–221) Heidelberg: Julius Gross Verlag.
- Vaid, J. (1988). Bilingual memory representation: A further test of dual coding theory. *Canadian Journal of Psychology*, 42, 84–90.
- Vaid, J., & Frenck-Mestre, C. (2002). Do orthographic cues aid language recognition? A laterality study with French-English bilinguals. *Brain* and Language, 82, 47–53.
- Vaid, J., & Genesee, F. (1980). Neuropsychological approaches to bilingualism: A critical review. *Canadian Journal of Psychology*, 34, 417–445.
- Vainio, S., Pajunen, A., & Huönä, J. (2013). L1 and L2 word recognition in Finnish: Examining L1 effects on L2 processing of morphological complexity and morphophonological transparency. *Studies in Second Language Acquisition*, 36, 133–162.
- Valdés Kroff, J. (2012). Using eye-tracking to study auditory comprehension in codeswitching: Evidence for the link between comprehension and production. (Unpublished doctoral dissertation), Pennsylvania State University, University Park, PA.
- Valenzuela, M., Matthews, F., Brayne, et al. (2012). Multiple biological pathways link cognitive lifestyle to protection from dementia. *Biological Psychiatry*, 71, 783–791.

- Valenzuela, M., & Sachdev, P. (2006a). Brain reserve and cognitive decline: A non-parametric systematic review. *Psychological Medicine*, 36(8), 1065– 1073.
  - (2006b). Brain reserve and dementia: A systematic review. *Psychological Medicine*, 36(4), 441–454.
- Valenzuela, M., Sachdev, P., Wen, W., Chen, X., & Brodaty, H. (2008). Lifespan mental activity predicts diminished rate of hippocampal atrophy. *PLoS ONE*, 3, e2598.
- Van Assche, E., Drieghe, D., Duyck, W., Welvaert, M., & Hartsuiker, R. (2011). The influence of semantic constraints on bilingual word recognition during sentence reading. *Journal of Memory and Language*, 64(1), 88–107.
- Van Assche, E., Duyck, W., & Brysbaert, M. (2013). Verb processing by bilinguals in sentence context. Studies in Second Language Acquisition, 35, 237–259.
- Van Assche, E., Duyck, W., & Gollan, T. (2013). Whole-language and itemspecific control in bilingual language production. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 39(6), 1781– 1792.
- Van Assche, E., Duyck, W., Hartsuiker, R., & Diependaele, K. (2009). Does bilingualism change native-language reading? cognate effects in a sentence context. *Psychological Science*, 20(8), 923–927.
- Van Berkum, J. (1996). The psycholinguistics of grammatical gender: Studies in language comprehension and production. (Unpublished doctoral dissertation), Max Planck Institute for Psycholinguistics, the Netherlands.
- Van den Noort, M., Bosch, M., & Hugdahl, K. (2006). Foreign language proficiency and working memory capacity. *European Psychologist*, 11, 289–296.
- Van der Hoeven, N., & de Bot, K. (2012). Relearning in the elderly: Agerelated effects on the size of savings. *Language Learning*, 62(1), 42–67.
- Van der Meij, M., Cuetos, F., Carreiras, M., & Barber, H. (2011). Electrophysiological correlates of language switching in second language learners. *Psychophysiology*, 48, 44–54.
- Van Dijk, M. (2003). Child language cuts capers. Variability and ambiguity in early child development. (Unpublished doctoral dissertation), University of Groningen, the Netherlands.
- Van Dijk, M., & van Geert, P. (2002). Focus on variability: New tools to study intra-individual variability in developmental data. *Infant Behavior and Development*, 25(4), 340–375.
  - (2007). Wobbles, humps and sudden jumps: A case study of continuity, discontinuity and variability in early language development. *Infant and Child Development*, 16(1), 7–33.
- Van Dyke, J., & McElree, B. (2006). Retrieval interference in sentence comprehension. *Journal of Memory and Language*, 55(2), 157–166.

- Van Geert, P. (2008). The dynamic systems approach in the study of L1 and L2 acquisition: An introduction. *Modern Language Journal*, 92, 179–199. (2011). The contribution of complex dynamic systems to development. *Child Development Perspectives*, 5(4), 273–278.
- Van Hell, J., & Candia Mahn, A. (1997). Keyword mnemonics versus rote rehearsal in learning concrete and abstract foreign words by experienced and inexperienced foreign language learners. *Language Learning*, 47, 507–546.
- Van Hell, J., & de Groot, A. (1998a). Conceptual representation in bilingual memory: Effects of concreteness and cognate status in word association. Bilingualism: Language and Cognition, 1, 193–211.
  - (1998b). Disentangling context availability and concreteness in lexical decision and word translation. *Quarterly Journal of Experimental Psychology, Section A: Human Experimental Psychology*, 51A, 41–63.
  - (2008). Sentence context modulates visual word recognition and translation in bilinguals. *Acta Psychologica*, 128(3), 431–451.
- Van Hell, J., & Dijkstra, T. (2002). Foreign language knowledge can influence native language performance in exclusively native contexts. *Psychonomic Bulletin and Review*, 9(4), 780–789.
- Van Hell, J., & Mahn, A. (1997). Keyword mnemonics versus rote rehearsal: Learning concrete and abstract foreign words by experienced and inexperienced learners. *Language Learning*, 47, 507–546.
- Van Hell, J., Sánchez-Casas, R., & Ting, C. (in preparation). Enrique Iglesias tops the charts with newly released canción!: How socio-contextual information facilitates code-switching.
- Van Hell, J., & Tanner, D. (2012). Second language proficiency and crosslanguage lexical activation. *Language Learning*, 62,148–171.
- Van Hell, J., & Witteman, M. (2009). The neurocognition of switching between languages: A review of electrophysiological studies. In L. Isurin, D. Winford, & K. de Bot (eds.), *Multidisciplinary approaches to code-switching* (pp. 53–84). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
- Van Heuven, W. (2005). Bilingual interactive activation models of word recognition in a second language. In V. Cook & B. Bassetti (eds.), Second language writing systems (pp. 260–288). Clevedon, UK: Multilingual Matters.
- Van Heuven, W., Conklin, K., Coderre, E., Guo, T., & Dijkstra, T. (2011). The influence of cross-language similarity on within- and between-Language Stroop effects in trilinguals. *Frontiers in Psychology*, 2, 1–15.
- Van Heuven, W., & Dijkstra, A. (2001). The semantic, orthographic, and phonological interactive activation model. Poster presented at 12th Conference of the European Society for Cognitive Psychology, Edinburgh, Scotland.

- Van Heuven, W., & Dijkstra, T. (2003). Modeling bilingual visual word recognition: The SOPHIA model. Paper presented at 13th Meeting of the European Society for Cognitive Psychology. Granada, Spain.
  - (2010). Language comprehension in the bilingual brain: fMRI and ERP support for psycholinguistic models. *Brain Research Reviews*, 64, 104–122.
- Van Heuven, W., Dijkstra, T., & Grainger, J. (1998). Orthographic neighborhood effects in bilingual word recognition. *Journal of Memory and Language*, 39(3), 458–483.
- Van Heuven, W., Dijkstra, T., Grainger, J., & Schriefers, H. (2001). Shared neighborhood effects in masked orthographic priming. *Psychonomic Bulletin and Review*, 8(1), 96–101.
- Van Heuven, W., Schriefers, H., Dijkstra, T., & Hagoort, P. (2008). Language conflict in the bilingual brain. *Cerebral Cortex*, 18(11), 2706–2716.
- Van Kesteren, R., Dijkstra, T., & de Smedt, K. (2012). Markedness effects in Norwegian–English bilinguals: Task-dependent use of languagespecific letters and bigrams. *Quarterly Journal of Experimental Psychology*, 65, 2129–2154.
- Van Leerdam, M., Bosman, A., & de Groot, A. (2009). When MOOD rhymes with ROAD: Dynamics of phonological coding in bilingual visual word perception. *Mental Lexicon*, 4, 303–335.
- Van Orden, G., Holden, J., & Turvey, M. (2003). Self-organization of cognitive performance. *Journal of Experimental Psychology: General*, 132(3), 331.
- Vanderwart, M. (1984). Priming by pictures in lexical decision. *Journal of Verbal Learning & Verbal Behavior*, 23, 67–83.
- VanPatten, B. (1984). Learners' comprehension of clitic object pronouns: More evidence for a word order strategy. *Hispanic Linguistics*, 1, 57–67.
  - (2004). Input processing in second language acquisition. In B. VanPatten (ed.), *Processing instruction: Theory, research, and commentary* (pp. 5–31). Mahwah, NJ: Lawrence Erlbaum & Associates.
  - (2007). Input processing in adult second language acquisition. In B. VanPatten & J. Williams (eds.), *Theories in second language acquisition* (pp. 115–136). Mahwah, NJ: Erlbaum.
  - (2009). Processing matters. In T. Piske & M. Young-Scholten (eds.), *Input matters* (pp. 47–61). Clevedon, UK: Multilingual Matters.
  - (2013). Mental representation and skill in instructed SLA. In J. W. Schwieter (ed.), *Innovative research and practices in second language acquisition and bilingualism* (pp. 3–22). Amsterdam/Philadelphia, PA: John Benjamins Publishing.
  - (2014). Input processing in adult SLA. In B. VanPatten & J. Williams (eds.), Theories in second language acquisition (2nd edn). New York: Routledge.
- VanPatten, B., Borst, S., Collopy, E., Qualin, A., & Price, J. (2013). Explicit information, grammatical sensitivity, and the first-noun Principle: A cross-linguistic study in processing instruction. *Modern Language Journal*, 97, 504–525.

- VanPatten, B., & Cadierno, T. (1993). Explicit instruction and input processing. *Studies in Second Language Acquisition*, 15, 225–243.
- VanPatten, B., & Farmer, J., & Clardy, C. (2009). Processing instruction and meaning-based output instruction: A response to Keating & Farley (2008). *Hispania*, 92, 116–126.
- VanPatten, B., & Fernández, C. (2004.) The long-term effects of processing instruction. In B. VanPatten (ed.), *Processing instruction: theory, research, and commentary* (pp. 273–289). Mahwah, NJ: Lawrence Erlbaum Associates.
- VanPatten, B., & Inclezan, D., Salazar, H. & Farley, A. (2009). Processing instruction and dictogloss: A study on object pronouns and word order in Spanish. Foreign Language Annals, 42, 557–575.
- VanPatten, B., Keating, G., & Leeser, M. (2012). Missing verbal inflections as a representational issue: Evidence from on-line methodology. *Linguistic Approaches to Bilingualism*, 2, 109–140.
- VanPatten, B., & Oikkenon, S. (1996). Explanation versus structured input in processing instruction. *Studies in Second Language Acquisition*, 18, 495–510.
- VanPatten, B., & Rothman, J. (2014). Against "rules." In A. Benati, C. Laval, & M. J. Arche (eds.), The grammar dimension in instructed second language acquisition: Theory, research, and practice (pp. 15–35). London: Bloomsbury.
- VanPatten, B., & Sanz, C. (1995). From input to output: Processing instruction and communicative tasks. In F. Eckman, D. Highland, P. Lee, J. Milcham, & R. Ruthkowski Weber (eds.), Second language acquisition theory and pedagogy (pp.169–85). Mahwah, NJ: Lawrence Erlbaum Associates.
- VanPatten, B., & Uludag, O. (2011). Transfer of training and processing instruction: from input to output. *System*, 39, 44–53.
- Vatz, K., Tare, M., Jackson, S., & Doughty, C. (2013). Aptitude-treatment interaction studies in second language acquisition: Findings and methodology. In G. Granena & M. Long (eds.), Sensitive periods, language aptitude, and ultimate L2 attainment (pp. 273–292). Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Veivo, O., & Järvikivi, J. (2013). Proficiency modulates early orthographic and phonological processing in L2 spoken word recognition. *Bilingualism: Language and Cognition*, 16(4), 864–883.
- Ventureyra, V., Pallier, C., & Yoo, H.-Y. (2004). The loss of first language phonetic perception in adopted Koreans. *Journal of Neurolinguistics*, 17(1), 79–91.
- Vergara-Martínez, M., & Swaab, T. (2012). Orthographic neighborhood effects as a function of word frequency: An event-related potential study. *Psychophysiology*, 49, 1277–1289.
- Verhoef, K., Roelofs, A., & Chwilla, D. (2009). Role of inhibition in language switching: Evidence from event-related brain potentials in overt picture naming. *Cognition*, 110(1), 84–99.

- (2010). Electrophysiological evidence for endogenous control of attention in switching between languages in overt picture naming. *Journal* of Cognitive Neuroscience, 22(8), 1832–1843.
- Verspoor, M., Lowie, W., & de Bot, K. (eds.). (2010). A dynamic approach to second language development: Methods and techniques. Amsterdam/ Philadelphia, PA: John Benjamins Publishing.
- Verspoor, M., Lowie, W., & van Dijk, M. (2008). Variability in second language development from a dynamic systems perspective. *Modern Language Journal*, 92(2), 214–231.
- Vigliocco, G., Antonini, T., & Garrett, M. (1997). Grammatical gender is on the tip of Italian tongues. *Psychological science*, 8(4), 314–317.
- Vigliocco, G., Kousta, S., Della Rosa, et al. (2013). The neural representation of abstract words: The role of emotion. *Cerebral Cortex*, 24(7), 1767–1777.
- Vihman, M., Thierry, G., Lum, J., Keren-Portnoy, T., & Martin, P. (2007). Onset of word form recognition in English, Welsh, and English–Welsh bilingual infants. *Applied Psycholinguistics*, 28(3), 475–493.
- Vincente, A., & Ziamari, K. (2008). L'arabe morocain au contact du français de l'espagnol. In S. Procházka & V. Ritt-Benmimoun (eds.), Between the Atlantic and Indian Oceans: Studies in contemporary Arabic dialects. Proceedings of the 7th AIDA Conference (2006), Neue Beihefte zur Wiener Zeitschrift för die Kunde des Morgenlandes, 4, 457–469.
- Vingerhoets, G., Van Borsel, J., Tesink, C. et al. (2003). Multilingualism: An fMRI study. *NeuroImage*, 20, 2181–2196.
- Vitali, P., Tettamanti, M., Abutalebi, J. et al. (2010). Generalization of the effects of phonological training for anomia using structural equation modelling: A multiple single-case study. *Neurocase*, 16(2), 93–105.
- Voga, M., & Grainger J. (2007). Cognate status and cross-script translation priming. *Memory & Cognition*, 35, 938–952.
- Vogel, A., Church, J., Power, J., Miezin, F., Petersen, S., & Schlaggar, B. (2013). Functional network architecture of reading-related regions across development. *Brain and Language*, 125, 231–243.
- Von Holzen, K., & Mani, N. (2012). Language nonselective lexical access in bilingual toddlers. *Journal of Experimental Child Psychology*, 113, 569–586.
- Von Studnitz, R. & Green, D. (1997). Lexical decision and language switching. International Journal of Bilingualism, 1, 3–24.
- (2000a). Interlingual homograph interference in German-English bilinguals: Its modulation and locus of control. *Bilingualism: Language and Cognition*, 5(1), 1–23.
- Von Studnitz, R., & Green, D. (2002b). The cost of switching language in a semantic categorization task. *Bilingualism: Language and Cognition*, 5, 241–251.
- Vouloumanos, A., & Werker, J. (2004). Tuned to the signal: The privileged status of speech for young infants. *Developmental Science*, 7(3), 270–276.
- Vu, H., Kellas, G., & Paul, S. (1998). Sources of sentence constraint on lexical ambiguity resolution. *Memory & Cognition*, 26(5), 979–1001.
- Vu, H., Kellas, G., Metcalf, K., & Herman, R. (2000). The influence of global discourse on lexical ambiguity resolution. *Memory & Cognition*, 28(2), 236–252.
- Waegenmaker, E. (2013). Real-time processing: The dynamics of productive and perceptive vocabulary knowledge in L1 and L2. (Unpublished master's thesis), University of Amsterdam, the Netherlands.
- Wagenmakers, E., Farrell, S., & Ratcliff, R. (2005). Human cognition and a pile of sand: A discussion on serial correlations an self-organized criticality. *Journal of Experimental Psychology: General*, 134(1), 108–116.
- Wakefield, J., Bradley, P., Yom, B., & Doughtie, E. (1975). Language switching and constituent structure. *Language and Speech*, 18, 14–19.
- Wang, X., & Forster, K. (2010). Masked translation priming with semantic categorization: Testing the Sense Model. *Bilingualism: Language and Cognition*, 13, 327–340.
- Wang, Y., Kuhl, P., Chen, C., & Dong, Q. (2009). Sustained and transient language control in the bilingual brain. *NeuroImage*, 47, 414–422.
- Wang, Y., Xue, G., Chen, C., Xue, F., & Dong, Q. (2007). Neural bases of asymmetric language switching in second-language learners: An ERfMRI study. *NeuroImage*, 35, 862–870.
- Waninge, F., Dörnyei, Z., & de Bot, K. (forthcoming). Motivational dynamics in language learning: Change, stability and context. *Modern Language Journal.*
- Waring, R. (1997). The negative effects of learning words in semantic sets: A replication. *System*, 25, 261–274.
- Warren, T., & Gibson, E. (2002). The influence of referential processing on sentence complexity. *Cognition*, 85(1), 79–112.
- Wartenburger, I., Heekeren, H., Abutalebi, J., Cappa, S., Villringer, A., & Perani, D. (2003). Early setting of grammatical processing in the bilingual brain. *Neuron*, 37, 159–170.
- Weber, A., & Cutler, A. (2004). Lexical-competition in non-native spokenword recognition. *Journal of Memory and Language*, 50, 1–25.
- Weber, A., & Paris, G. (2004). The origin of the linguistic gender effect in spoken-word recognition: Evidence from non-native listening. In K. Forbus, D. Gentner, & T. Regier (eds.), *Proceedings of the twenty-sixth annual meeting of the Cognitive Science Society* (pp. 1446–1451). Mahwah, NJ: Lawrence Erlbaum.
- Weber-Fox, C., & Neville, H. (1996). Maturational constraints on functional specializations for language processing: ERP and behavioral evidence in bilingual speakers. *Journal of Cognitive Neuroscience*, 8(3), 231–256.
- Wei, L. (2000). Types of morphemes and their implications for second language acquisition. *International Journal of Bilingualism* 4, 29–43.
- Wei, L., & Moyer, M. (eds.). (2008). Blackwell guide to research methods in bilingualism and multilingualism. Malden, MA: Blackwell.

- Weikum, W., Oberlander, T., Hensch, T., & Werker, J. (2012). Prenatal exposure to antidepressants and depressed maternal mood alter trajectory of infant speech perception. *Proceedings of the National Academy of Sciences of the United States of America*, 109(2), 17221–17227.
- Weikum, W., Vouloumanos, A., Navarra, J., Soto-Faraco, S., Sebastián-Gallés, N., & Werker, J. (2007). Visual language discrimination in infancy. Science, 316 (5828), 1159–1159.
- Weinrich, M., Boser, K., & McCall, D. (1999). Representation of linguistic rules in the brain: Evidence from training an aphasic patient to produce past tense verb morphology. *Brain and Language*, 70(1), 144–158.
- Weinreich, U. (1953). Languages in contact: Findings and problems. The Hague: Mouton.
- Weisleder, A., & Fernald, A. (2011). Variation in early language experience influences processing and language growth. Paper presented at 24th Annual CUNY Conference on Human Sentence Processing, Stanford University, CA.
  - (2013). Talking to children matters: Early language experience strengthens processing and builds vocabulary. *Psychological Science*, 1–22.
- Weissberger, G., Wierenga, C., Bondi, M., & Gollan, T. (2012). Partially overlapping mechanisms of language and task control in young and older bilinguals. *Psychology and Aging*, 27(4), 959–974.
- Werker, J. & Gervain, J. (2013). Language acquisition: Perceptual foundations in infancy. In P. Zelazo (ed.), *The Oxford handbook of developmental psychology* (pp. 909–925). Oxford, UK: Oxford University Press.
- Werker, J. (2012). Perceptual foundations of bilingual acquisition in infancy. *Annals of the New York Academy of Sciences*, 1251(1), 50–61.
- Werker, J., & Byers-Heinlein, K. (2008). Bilingualism in infancy: First steps in perception and comprehension. *Trends in Cognitive Sciences*, 12(4), 144–151.
- Werker, J., Byers-Heinlein, K., & Fennell, C. (2009). Bilingual beginnings to learning words. Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences, 364(1536), 3649–3663.
- Werker, J., Cohen, L., Lloyd, V., Casasola, M., & Stager, C. (1998). Acquisition of word-object associations by 14-month-old infants. *Developmental Psychology*, 34(6), 1289–1309.
- Werker, J., & Curtin, S. (2005). PRIMIR: A developmental framework of infant speech processing. *Language Learning and Development*, 1(2), 197–234.
- Werker, J., Gilbert, J., Humphrey, K., & Tees, R. (1981). Developmental aspects of cross-language speech perception. *Child Development*, 52, 349–355.
- Werker, J., & Tees, R. (1984). Cross-language speech perception: Evidence for perceptual reorganization during the first year of life. *Infant behavior and development*, 7(1), 49–63.

- (2005). Speech perception as a window for understanding plasticity and commitment in language systems of the brain. *Developmental Psychobiology*, 46(3), 233–251.
- West, R., & Stanovich, K. (1982). Source of inhibition in experiments on the effect of sentence context on word recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 8(5), 385.
- Westbury, C., & Hollis, G. (2007). Putting Humpty together again: Synthetic approached to nonlinear variable effects underlying lexical access. In G. Jarema & G. Libben (eds.) *The mental lexicon: Core perspectives*. Amsterdam: Elsevier.
- White, J. (forthcoming) The effect of input-based instruction type on the acquisition of Spanish accusative clitics. *Hispania*.
- White, J., & DeMil, A. (2013a). Transfer of training in PI: The role of FREI. *Studies in Second Language Acquisition*, 35, 519–544.
  - (2013b). Primary and secondary effects of PI: A replication of Leeser and DeMil (2013). *International Journal of Language Studies*, 7, 59–88.
- Whitman, R., & Jackson, K. (1972). The unpredictability of contrastive analysis. *Language Learning*, 22, 29–41.
- Whorf, B. (1956). *Language, thought, and reality: Selected writings of Benjamin Lee Whorf* (J. B. Carroll, Ed.). Cambridge, MA: MIT Press.
- Williams, J. (1994). The relationship between word meanings in the first and second language: Evidence for a common, but restricted, semantic code. *European Journal of Cognitive Psychology*, 6, 195–220.
  - (1996). Is automatic priming semantic? European Journal of Cognitive Psychology, 8, 113–161.
  - (2006). Incremental interpretation in second language sentence processing. *Bilingualism: Language and Cognition*, 9(1), 71–88.
- Williams, J., Möbius, P., & Kim, C. (2001). Native and non-native processing of English wh-questions: Parsing strategies and plausibility constraints. *Applied Psycholinguistics*, 22(4), 509–540.
- Wilson, D., & Sperber, D. (1993). Linguistic form and relevance. *Lingua*, 90, 1–25.
  - (2012). *Meaning and Relevance*. Cambridge, UK: Cambridge University Press.
- Wilson, M., & Garnsey, S. (2009). Making simple sentences hard: Verb bias effects in simple direct object sentences. *Journal of Memory and Language*, 60(3), 368–392.
- Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition*, 13(1), 103–128.
- Wingfield, A., & Stine-Morrow, E. (2000). Language and speech. In F. Craik, & T. Salthouse (eds.), *The handbook of aging and cognition* (2nd edn) (pp. 359–416). Mahwah, NJ: Erlbaum.
- Winograd, E., Cohen, C., & Barresi, J. (1976). Memory for concrete and abstract words in bilingual speakers. *Memory & Cognition*, 4, 323–329.

- Winskel, H. (2013). The emotional Stroop task and emotionality rating of negative and neutral words in late Thai–English bilinguals. *International Journal of Psychology*, 48(6), 1090–1098.
- Witteman, M., & van Hell, J. (2008). Code switching in bilinguals: An electrophysiological and behavioral study of lexical and discourse triggering. *Abstracts of the Psychonomic Society*, 49th Annual Meeting, 13, 119.
- Witzel, J., Witzel, N., & Nicol, J. (2012). Deeper than shallow: Evidence for structure-based parsing biases in second-language sentence processing. *Applied Psycholinguistics*, 33(2), 419–456.
- Witzel, N., & Forster, K. (2012). How L2 words are stored: The episodic L2 hypothesis. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 38, 1608–1021.
- Wodniecka, Z., Craik, F., Luo, L., & Bialystok, E. (2010). Does bilingualism help memory? Competing effects of verbal ability and executive control. International Journal of Bilingual Education and Bilingualism, 13, 575– 595.
- Woldorff, M., Gallen, C., Hampson et al. (1993). Modulation of early sensory processing in human auditory cortex during auditory selective attention. *Proceedings of the National Academy of Sciences*, 90(18), 8722– 8726.
- Wong, A., Gauthier, I., Woroch, B., DeBuse, C., & Curran, T. (2005). An early electrophysiological response associated with expertise in letter perception. *Cognitive, Affective, & Behavioral Neuroscience*, 5, 306–318.
- Wong, P., Warrier, C., Penhune, V. et al. (2008). Volume of left Heschl's Gyrus and linguistic pitch learning. *Cerebral Cortex*, 18(4), 828–836.
- Wong, W. (2004). The nature of processing instruction. In B. VanPatten (ed.), *Processing instruction: Theory, research, and commentary* (pp. 33–63). Mahwah, NJ: Lawrence Erlbaum Associates.
  - (2005). Input enhancement: From theory and research to classroom practice. New York: McGraw-Hill.
  - (2010). The effects of discourse level SI activities on the French Causative. In A. Benati, & J. Lee (eds), *Processing Instruction and Discourse Level Input* (pp. 198–216). London: Continuum Press.
- Woodrow, L. (2006). Anxiety and speaking in English as a second language. RELC Journal, 37, 308–328.
- Woolley, S., Fremouw, T., Hsu, A., & Theunissen, F. (2005). Tuning for spectro-temporal modulations as a mechanism for auditory discrimination of natural sounds. *Nature Neuroscience*, 8(10), 1371–1379.
- Woolley, S., Gill, P., & Theunissen, F. (2006). Stimulus-dependent auditory tuning results in synchronous population coding of vocalizations in the songbird midbrain. *Journal of Neuroscience*, 26(9), 2499–2512.
- Woolley, S., Hauber, M., & Theunissen, F. (2010). Developmental experience alters information coding in auditory midbrain and forebrain neurons. *Developmental neurobiology*, 70(4), 235–252.

- Workman, L., Brookman, F., Mayer, P., Rees, V., & Bellin, W. (2000). Language laterality in English/Welsh bilinguals: Languageacquisitional and language-specific factors in the development of lateralisation. *Laterality*, 5, 289–313.
- Wu, C., Weissman, D., Roberts, K., & Woldorff, M. (2007). The neural circuitry underlying the executive control of auditory spatial attention. *Brain Research*, 1134(1), 187.
- Wu, C.-Y., Ho, M.-H., & Chen, S.-H. (2012). A meta-analysis of fMRI studies on Chinese orthographic, phonological, and semantic processing. *NeuroImage*, 63, 381–391.
- Wu, Y., & Thierry, G. (2010). Investigating bilingual processing: The neglected role of language processing contexts. *Frontiers in Psychology*, 1(178), 1–6.
  - (2012). How reading in a second language protects your heart. *Journal of Neuroscience*, 32, 6485–6489.
  - (2013). Fast modulation of executive function by language context in bilinguals. *Journal of Neuroscience*, 33, 13533–13537.
- Wulfeck, B., Juarez, L., Bates, E., & Kilborn, K. (1986). Sentence interpretation strategies in healthy and aphasic bilingual adults. In J. Vaid (ed.), *Language processing in bilinguals: Psycholinguistic and neuropsychological perspectives* (pp. 199–220). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Yang, C., & Roeper, T. (2011). Minimalism and language acquisition. In C. Boeckx (ed.), *The Oxford handbook of linguistic minimalism* (pp. 551–573). Oxford, UK: Oxford University Press.
- Yang, J., McCandliss, B., Shu, H., & Zevin, J. (2009). Simulating languagespecific and language-general effects in a statistical learning model of Chinese reading. *Journal of Memory and Language*, 61, 238–257.
- Yang, J., Shu, H., McCandliss, B., & Zevin, J. (2013). Orthographic influences on division of labor in learning to read Chinese and English: Insights from computational modeling. *Bilingualism: Language and Cognition*, 16, 354–366.
- Yang, S., Yang, H., Lust, B. (2011). Early childhood bilingualism leads to advances in executive attention: Dissociating culture and language. *Bilingualism: Language and Cognition*, 14, 412–422.
- Yarkoni, T., Balota, D., & Yap, M. (2008). Moving beyond Coltheart's N: A new measure of orthographic similarity. *Psychonomic Bulletin & Review*, 15, 971–979.
- Yashima, T., Zenuk-Nishide, L., & Shimizu, K. (2004). The influence of attitudes and affect on willingness to communicate and second language communication. *Language Learning*, 54, 119–152.
- Yermolayeva, Y., & Rakison, D. (2013). Connectionist modeling of developmental changes in infancy: Approaches, challenges, and contributions. *Psychological Bulletin*, 140(1), 224–255.
- Yonelinas, A. (2002). The nature of recollection and familiarity: A review of 30 years of research. *Journal of Memory and Language*, 46(3), 441–517

- Yoshida, H., Tran, D., Benitez, V., & Kuwabara, M. (2011). Inhibition and adjective learning in bilingual and monolingual children. *Frontiers in Psychology*, 2, 210.
- Young, R., & Navar, M. (1968). Retroactive inhibition with bilinguals. Journal of experimental psychology, 77, 109–115.
- Ytsma, J. (2001). Towards a typology of trilingual primary education. International Journal of Bilingual Education and Bilingualism, 4(1), 11–22.
- Yudes, C., Macizo, P., & Bajo, M. (2011). The influence of expertise in simultaneous interpreting on non-verbal executive processes. *Frontiers in Psychology*, 2, 1–9.
- Yum, Y., Holcomb, P., & Grainger, J. (2011). Words and pictures: An electrophysiological investigation of domain specific processing in native Chinese and English speakers. *Neuropsychologia*, 49, 1910–1922.
- Zacks, R., Hasher, L. & Li, K. (2000). Human memory. In F. Craik, & T. Salthouse (eds.), *The handbook of aging and cognition* (pp. 293–357). Mahwah, NJ: Erlbaum.
- Zahodne, L., Schofield, P., Farrell, M., Stern, Y., Manly, J.. (2013). Bilingualism does not alter cognitive decline or dementia risk among Spanish-speaking immigrants. *Neuropsychology*, 28(2), 238–246.
- Zeelenberg, R., & Pecher, D. (2003). Evidence for long-term cross-language repetition priming in conceptual implicit memory tasks. *Journal of Memory and Language*, 49, 80–94.
- Zhang, S., Morris, M., Cheng, C.-Y., & Yap, A. (2013). Heritage-culture images disrupt immigrants' second language processing, fostering first-language intrusion. *Proceedings of the National Academy of Sciences*, 110, 11272–11277.
- Zhang, T., van Heuven, W., & Conklin, K. (2011). Fast automatic translation and morphological decomposition in Chinese–English bilinguals. *Psychological Science*, 22, 1237–1242.
- Zhao, J., Li, Q.-L., & Bi, H.-Y. (2012). The characteristics of Chinese orthographic neighborhood size effect for developing readers. *PLoS ONE*, 7, e46922.
- Zhao, X., & Li, P. (2009). An online database of phonological representations for Mandarin Chinese. *Behavior Research Methods*, 41, 575–583.
  - (2010). Bilingual lexical interactions in an unsupervised neural network model. International Journal of Bilingual Education and Bilingualism. 13, 505–524.
- Zhao, X., Doyle-Smith, N., & Li, P. (2011). A comparative study of semantic representations across three languages. Paper presented at 41st Annual Meeting of the Society for Computers in Psychology, Seattle, WA.
- Zhao, X., Li, P., & Kohonen, T. (2011). Contextual self-organizing map: Software for constructing semantic representation. *Behavior Research Methods*, 43, 77–88.

- Zhou, H., Chen, B., Yang, M., & Dunlap, S. (2010). Language nonselective access to phonological representations: Evidence from Chinese– English bilinguals. *Quarterly Journal of Experimental Psychology*, 63, 2051–2066.
- Zhu, C., Livote E., Scarmeas, N. et al. (2013). Long-term associations between cholinesterase inhibitors and memantine use and health outcomes among patients with Alzheimer's disease. *Alzheimer's and Dementia*, 9(6), 733–740.
- Ziamari, K. (2007). Development and linguistic change in Moroccan Arabic-French code switching. In C. Miller, D. Caubert, J. Watson, & A. Wer (eds.), *Arabic in the city* (pp. 275–290). London: Routledge.
  - (2008). Le code switching arabe marocain/français au Maroc: L'arab marocain au contact du français. Paris: L'harmattan.
- Ziegler, J., & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: A psycholinguistic grain size theory. *Psychological Bulletin*, 131, 3–29.
- Ziegler, J., Muneaux, M., & Grainger, J. (2003). Neighborhood effects in auditory word recognition: Phonological competition and orthographic facilitation. *Journal of Memory & Language*, 48, 779–793.
- Zipf, G. (1935). The psycho-biology of language: An introduction to dynamic philology. Cambridge, MA: MIT Press.
- Zobl, H. (1982). A direction for contrastive analysis: The comparative study of developmental sequences. *TESOL Quarterly*, 16(2), 169–183.
- Zou, L., Ding, G., Abutalebi, J., Shu, H., & Peng, D. (2012). Structural plasticity of the left caudate in bimodal bilinguals. *Cortex*, 48(9), 1197–1206.
- Zuo, Y., Yang, G., Kwon, E., & Gan, W.-B. (2005). Long-term sensory deprivation prevents dendritic spine loss in primary somatosensory cortex. *Nature*, 436(7048), 261–265.