

1

Brain plasticity in adulthood-ERP evidence for L1-attribution in lexicon and morphosyntax after predominant L2 use [Recurso electrónico] / Karsten Steinhauer, Kristina Kasparian.

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 187-191.

Since the early 2000s, neurocognitive research on second language (L2) acquisition has been controversial as to how plastic the human brain is after puberty. Recent studies have extended this debate to first language loss (L1 attrition). This article gives an overview of the first event-related brain potential (ERP) studies on L1 attrition and L2 learning and discusses their implications for our understanding of the bilingual brain. We will address the highly controversial question of whether L1 morphosyntax is subject to attrition in adult migrants. One previous ERP study on grammatical gender in German migrants failed to find such effects. However, ERP work on grammatical structures in English-dominant Italian attriters demonstrated that they perceived a grammatical sentence in their L1 as ungrammatical if it violated the L2 grammar. These data suggest that the adult brain remains plastic for both L2 and L1.

Language learning. -- 2020 (June), v.70, supp. 2, p. 171-193

1. First language attrition 2. Event-related potentials 3. Morphosyntax 4. Lexicon 5. Brain plasticity 6. Critical period hypothesis

2

Distinctions in the acquisition of vocabulary and grammar [Recurso electrónico] : an individual differences approach / Neil Walker ... [et al.].

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 245-252.

Learning language requires acquiring the grammatical categories of words in the language, but learning those categories requires understanding the role of words in the syntax. In this study, we examined how this chicken and egg problem is resolved by learners of an artificial language comprising nouns, verbs, adjectives, and case markers following syntactic rules. We also measured individual differences in declarative and procedural memory processing, which have been linked to vocabulary and grammar learning, respectively. The results showed that grammar and vocabulary can be acquired simultaneously, but with distinctive patterns of acquisition: the syntactic role of verbs and their referents first, then other lexical categories, and finally the syntactic function of case markers. Interdependencies in learning were found for word order and verbs, which related to verbal declarative memory, and also for nouns, adjectives, and case markers, which related to procedural memory.

Language learning. -- 2020 (June), v.70, supp. 2, p. 221-254

1. Language acquisition 2. Grammar 3. Vocabulary 4. Declarative memory 5. Procedural memory 6. Cross-situational learning

3

Learning novel word meanings [Recurso electrónico] : an ERP study on lexical consolidation in monolingual, inexperienced foreign language learners / Yushuang Liu, Janet G. van Hell.

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 68-72.

Novel word learning and consolidation was studied in inexperienced language learners, to conceptually replicate and extend a similar study in experienced learners by Bakker, Takashima, Van Hell, Janzen, and McQueen (2015). Participants learned definitions for novel words on Day 1 and for another set of novel words on Day 2. Brain potentials collected in a semantic relatedness task revealed that learned words elicited a late positive component (LPC) priming effect after 24 hours but not on the day of learning. On Day 8, all previously learned words elicited LPC priming effects, but failed to modulate the N400. While LPC modulation emerged immediately after learning in the previous study of experienced learners, novel word meanings were found

lexicalized only on Day 2 for inexperienced learners. Together, the findings suggest that novel word meaning lexicalization is gradual, and that prior language learning experience speeds up the process.

Language learning. -- 2020 (June), v.70, supp. 2, p. 45-74

1. Event-related potentials 2. Late positive component 3. N400 4. Offline consolidation 5. Semantic integration 6. Word learning

4

Longitudinal evidence for simultaneous bilingual language development with shifting language dominance, and how to explain it [Recurso electrónico] / Gary M. Oppenheim ... [et al.].

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References: p. 38-42.

Theories of how language works have shifted from rule-like competence accounts to more skill-like incremental learning accounts. Under these, people acquire language incrementally, through practice, and may even lose it incrementally as they acquire competing mappings. Incremental learning implies that (1) a bilingual's abilities in their languages should depend on how much they practice each (not merely age of acquisition), and (2) using a L2 more could cause a bilingual to gradually "unlearn" their L1. Using timed picture naming and vocabulary measures, we tracked 139 children for several years as they transitioned from mostly-Spanish homes to mostly-English schools. Following their increased English use, many became more proficient in English than Spanish around the third grade, demonstrating continual learning. But their Spanish also improved, showing that L1-attribution is not inevitable. Incremental learning explains both co-improvement and L1-attribution as consequences of experience-driven learning: improvement from continuing L1 use can offset competitive unlearning.

Language learning. -- 2020 (June), v.70, supp. 2, p. 20-44

1. Bilingualism 2. Incremental learning 3. Longitudinal study 4. Shifting language dominance 5. Word production

5

The many shades of bilingualism [Recurso electrónico] : language experiences modulate adaptations in brain structure / Christos Pliatsikas, Vincent DeLuca, Toms Voits.

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 143-147.

Recent years have seen an expansion in the research related to structural brain adaptations related to the acquisition and processing of additional languages. However, the accumulating evidence remains to a great extent inconsistent, with a large variety of cortical, subcortical, and cerebellar effects reported in various studies. Here we propose that the variability in the data can be explained by the differences in the language background and experiences of the tested samples. We also propose that the field should move away from monolithic bilingual versus monolingual comparisons; instead, it should focus on the experiences of the bilingual groups as predictors of structural changes in the brain, and also employ longitudinal designs to test the dynamic effects of active bilingualism. The implications of the proposed approaches for the suggested benefits of bilingualism on ageing and patient populations are also discussed.

Language learning. -- 2020 (June), v.70, supp. 2, p. 133-149

1. Bilingualism 2. Brain structure 3. Individual differences 4. Ageing 5. Neuroplasticity

6

The role of case marking and word order in cross-linguistic structural priming in late L2 acquisition [Recurso electrónico] / Merel Muylle, Sarah Bernolet, Robert J. Hartsuiker.

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 215-218.

Several studies found cross-linguistic structural priming with various language combinations. Here, we investigated the role of two important domains of language variation: case marking and word order, for transitive and ditransitive structures. We varied these features in an artificial language learning paradigm, using three different artificial language versions in a between-subjects design. Priming was assessed between Dutch (no overt case marking, SVO word order) and a) an SVO order version, b) a case marking version, and c) an SOV order version. Similar within-language and cross-linguistic priming was found in all versions for transitives, indicating that cross-linguistic structural priming was not hindered. In contrast, for ditransitives we found similar within-language priming for all versions, but no cross-linguistic priming. The finding that cross-linguistic priming is possible between languages that vary in morphological marking or word order, is compatible with studies showing cross-linguistic priming between natural languages that differ on these dimensions.

Language learning. -- 2020 (June), v.70, supp. 2, p. 194-220

1. Artificial language learning 2. Structural priming 3. Sentence production 4. Syntactic processing

7

The role of conflicting representations and uncertainty in internal error detection during L2 learning [Recurso electrónico] / Sybrine Bultena ... [at al.].

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 97-101.

Internal error monitoring as reflected by the error-related negativity (ERN) component can give insight into the process of learning a second language (L2). Yet, early stages of learning are characterized by high levels of uncertainty, which obscures the process of error detection. We examine how uncertainty about L2 syntactic representations, induced by different levels of language conflict, is reflected in ERN patterns during learning. German learners of Dutch performed a feedback-guided gender decision task in their L2 and provided subjective certainty ratings for their responses. Initially, high-conflict items yielded more uncertainty and ERN modulations were reversed (i.e., correct responses elicited larger amplitudes than errors). Two rounds of feedback resulted in an increase of accuracy, reduced uncertainty, and normalization of the ERN effect, signaling effective error monitoring. These outcomes demonstrate how subjective intuitions about response accuracy affect performance monitoring during L2 learning.

Language learning. -- 2020 (June), v.70, supp. 2, p. 75-103

1. Cognates 2. Feedback-guided learning 3. Performance monitoring 4. Grammatical gender 5. Language conflict 6. Uncertainty 7. Word learning

8

Similar conceptual mapping of novel objects in mixed - and single - language contexts in fluent basque-spanish bilinguals [Recurso electrónico] / Eneko Antón, Guillaume Thierry, María Dimitropoulou, Jon Andoni Duñabeitia.

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 166-168.

Participants learned the meaning of novel objects by listening to two complementary definitions while watching videos of the new object, in a single-language context (all in Spanish) or a mixed-language context (one definition in Basque, one in Spanish). Then, participants were asked to assess the degree of functional relatedness between novel and familiar objects in two conditions: identical (both definitions overlap) or related (single definition overlap). Relatedness ratings differed significantly between conditions, but they were highly similar across language contexts. Furthermore, items in the identical condition elicited a P300-like event-related potential component, while related items elicited a wave of lesser amplitude. Critically, the amplitude differences between conditions did not differ between language contexts. No interaction was found with proficiency level across participants. In line with previous findings, we show no measurable impact of mixing languages during the establishment of a link between novel objects and existing conceptual representations in bilinguals.

Language learning. -- 2020 (June), v.70, supp. 2, p. 150-170

1. Bilingualism 2. Education 3. Language mixing 4. ERP 5. P300 6. Learning

9**The neuroscience of implicit learning [Recurso electrónico] /John N. Williams.**

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 294-306.

Over the past decades, research employing artificial grammar, sequence learning, and statistical learning paradigms has flourished, not least because these methods appear to offer a window, albeit with a restricted view, on implicit learning processes underlying natural language learning. But these paradigms usually provide relatively little exposure, use meaningless stimuli, and do not even necessarily target natural language structures. So the question arises whether they engage the same brain regions as natural language. The aim of this review is to use data from brain imaging, brain stimulation, and the effects of brain damage to identify the main brain regions that show sensitivity to structural regularities in implicit learning paradigms and to consider their relationship to natural language processing and learning.

Language learning. -- 2020 (June), v.70, supp. 2, p. 255-307

1. Artificial grammar learning 2. Statistical learning 3. Sequence learning 4. Serialreaction time task 5. fMRI

10**Using utterance recall to assess second language proficiency [Recurso electrónico] / Gabriel Culbertson, Erik Andersen, Morten H. Christiansen.**

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 126-130.

Obtaining quick and reliable evidence regarding the proficiency of learners is a perennial issue in second language (L2) learning research. In this study, we examined naturalistic utterance recall as a measure of L2 learning proficiency that can be easily extracted from videos and automatically scored using the video's captions. In our recall task, learners listen to audio clips and write down as much of the utterance as they can remember. We evaluated this naturalistic recall task with a sample of English native speakers who are learning Spanish at beginner to advanced levels, as well as Spanish native speakers. The results suggest that our recall measure is a better predictor of a learner's ability to translate heard sentences than a shortened version of a standardized listening multiple-choice comprehension test. Our findings suggest naturalistic utterance recall can offer an accurate and efficient method for predicting foreign language proficiency.

Language learning. -- 2020 (June), v.70, supp. 2, p. 104-132

1. Second language learning 2. Second language proficiency 3. Recall 4. Memory 5. Elicited imitation 6. Sentence repetition
