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Cross-linguistic aspects in child L2 acquisition

Vasiliki Chondrogianni
University of Edinburgh

Nada Vasić
University of Amsterdam

Address for correspondence
Dr Vasiliki Chondrogianni
University of Edinburgh
School of Philosophy, Psychology and Language Sciences
Dugald Stewart Building,
3 Charles Street
Edinburgh EH8 9AD,
Scotland, UK
Email: v.chondrogianni@ed.ac.uk
Abstract

Cross-linguistic effects in successive childhood bilingualism have received increased attention in the last few years. The goal of this special issue is to bring together studies that investigate cross-linguistic influence in child second language (L2) learners by examining how first language (L1) and L2 properties develop and interact in the context of child L2 acquisition. Specifically, the articles in this special issue address the following questions: (a) what is the role of cross-linguistic influence at the syntax-discourse interface, (b) how do target language properties influence L2 developmental paths, (c) does the L2 influence the L1 when acquiring a syntax-semantics interface phenomenon, and (d) what does cross-linguistic influence look like in the context of atypical bilingual acquisition. These questions are answered in the context of diverse child L2 populations growing up in different acquisition settings and with varied degrees of exposure to the two languages.

Keywords

successive childhood bilingualism, cross-linguistic influence, transfer effects, language impairment
Cross-linguistic aspects in child second language acquisition

The last decade has seen a sharp increase in the studies on second language (L2) acquisition in successive bilingual children, that is in children who are exposed to the L2 after the age of three or four years and before the age of seven years (Chondrogianni, 2008; Schwartz, 2004; Unsworth, 2005; see Haznedar & Gavruseva, 2008; Ionin, 2013 for overviews). As Schwartz (2004) observed, the study of successive childhood bilingualism or child L2 acquisition has its own merit as it can provide insights into how the first language (L1) and the L2 develop and interact in a population who is cognitively and maturationally different from both L1 children and L2 adults. The investigation of L2 children and their comparison with L1 children and L2 adults has both theoretical and empirical relevance. On a theoretical level, it can shed light on theories of L1 and L2 acquisition because their validity and explanatory adequacy are tested in a different population. One example is the acquisition of auxiliary BE in English. The acquisition of this morpheme has been shown to be precocious in children who are exposed to English after the age four years, which contrasts with the delayed acquisition of the same morphemes in L1 children (Paradis, 2008). These contrasting findings between children who learn English as their L1 or L2 provide support for maturational constraints in the acquisition tense morphology in L1 children, whereas these constraints are no longer at play when L2 acquisition takes place (Ionin & Wexler 2002).
The investigation of L2 children has empirical merits as well. To date, the comparative examination of child L2 acquisition in relation to other acquisition types such as L1 and adult L2 acquisition (Unsworth, 2005) or atypical acquisition (Paradis, 2010) has shed light on questions such as what are universal developmental paths across different acquisition contexts, whether and how age of onset effects emerge (Unsworth, Argyri, Tsimpi, Cornips & Hulk, 2014), how environmental factors, such as input quality and quantity can affect language acquisition (for an overview see Grüter & Paradis, 2014), as well as what constitutes typical and what atypical language development in bilingual populations (Armon-Lotem, de Jong & Meir, 2015; Paradis, 2010).

The present special issue seeks to follow this line of comparative research but at the same time shift the focus to how L1 and L2 cross-linguistic differences interact in the context of child L2 acquisition, and how this interaction is influenced by the language domain to be acquired, i.e. syntax, morphology, semantics or discourse. By moving away from English-centred studies and by examining similar phenomena crosslinguisitically, the validity and generalisability of different theoretical models is put to test. A novelty of this special issue is that it views cross-linguistic effects as being bidirectional, that is the L1 can influence the L2, in the form of what are know as transfer effects (“L1-to-L2” effects), but at the same time different target language
properties can shape the L2 developmental path (“Target Language” effects) or even affect L1 performance or representations (“L2-to-L1” effects).

Traditionally, cross-linguistic effects in the L2 acquisition literature have been examined in the context of how the L1 can affect the L2 when L2 learners transfer properties, such as abstract features and categories, from their L1 to the L2 (Schwartz & Sprouse, 1996). These transfer effects have been primarily addressed within the areas of core syntax and morphology, and a number of studies have shown that the L1 can influence these domains in both child and adult L2 acquisition (see Foley & Flynn, 2013 for an overview). The issue of how transfer works in L2 acquisition becomes even more interesting in the case of successive childhood bilingualism, as L2 children’s L1 is still developing when they are exposed to the L2. This may result in some L1 phenomena not having been acquired when exposure to the L2 begins, thus making the possibility for L1 transfer less likely; conversely, if the relevant phenomenon has been acquired in the L1 by the time when L2 exposure begins, then L1 transfer, both positive or negative, is expected.

Cross-linguistic effects have also been examined in the context of cross-linguistic influence between the two languages of the bilingual individual when acquiring phenomena that do not belong to the core syntax itself but rather to what are called interface phenomena between the core grammar and other domains, such as discourse and pragmatics (Hulk & Müller, 2000; Müller & Hulk, 2001). According to
Müller & Hulk’s (2001) account, for cross-linguistic influence to occur at the level of syntax-discourse or syntax-pragmatics, two conditions need to be met. First, cross-linguistic influence should occur at the interface between pragmatics or discourse and syntax, and second, the two languages of the bilingual need to exhibit *surface structural overlap*. That is, if the surface structure of language A allows two possible analyses and language B offers strong support for one of the two analyses available in language A, then cross-linguistic influence is predicted from language B to A. This cross-linguistic influence will surface as *delay* in the acquisition of this phenomenon in language A (Müller & Hulk, 2001). This account has been primarily examined in the context of simultaneous bilingual (2L1) children (Serratrice, Sorace, & Paoli, 2004 Sorace, Serratrice, Filiaci, & Baldo, 2009) and near-native L2 adults (Sorace, 2011), and these studies have provided evidence for the vulnerability of syntax-discourse interface phenomena. However, the cause of the vulnerability of this interface has been disputed. Whereas Hulk and Müller (2000) argue for problems at the level of knowledge of the structure, the Interface Hypothesis (IH) proposed by Sorace and Filiaci (2006) and Sorace (2011), suggests that the cause of the instability at the interface is due to processing constraints imposed when integrating information in real-time from multiple domains in order to comprehend or produce these interface structures. Under this account, the hypothesis is that bilinguals are less efficient than monolinguals in the integration of multiple sources of information, and that bilingualism itself, rather than
the particular language combination, may be the underlying cause of the observed differences with monolinguals (Sorace, 2011).

The examination of the syntax-discourse interface in L2 children could shed light into the cause of its vulnerability. If the vulnerability lies at the knowledge level, we expect L2 children who have not fully developed this interface in their L1 to show a delay in the acquisition of this interface in their L2. Conversely, if L2 children have acquired the properties regulating this interface in their L1, then this knowledge may boost acquisition in the L2 and surface as acceleration (Paradis & Genesee, 1996), especially if the L1 and the L2 overlap with respect to their syntax-discourse properties. On the other hand, if processing limitations are at play when acquiring syntax-discourse interface phenomena, we expect these limitations to be accentuated in the case of L2 children, as children are cognitively less mature and have fewer processing capabilities compared to adults. These limitations should be evidenced regardless of the language pair to be acquired.

Focusing on “Target Language” effects on L2 development, recent studies have started to address how different L2 properties can give rise to cross-linguistically different L2 developmental patterns of the same phenomenon (Chondrogianni, Vasić, Marinis, & Blom, 2015; Unsworth et al., 2014). The cross-linguistic study of language development has a long tradition in first language (L1) acquisition (see Slobin, 1985 for an overview of cross-linguistic studies in L1 acquisition). Cross-linguistic studies with
monolingual children have shown that similar phenomena can follow distinct developmental paths due to language-specific properties of the target language (see for example Phillips (1995) on the acquisition of root infinitives cross-linguistically or Guasti, Gavarró, de Lange, & Caprin (2008) on the acquisition of definite articles in Germanic and Romance languages). The acquisition of similar phenomena by L2 children acquiring different target languages has received less attention. This type of study requires that at least two groups of L2 children are compared, whose L1 is constant (e.g. Turkish), whereas their L2s differ with respect to the target phenomenon (e.g. English and Greek on articles) or are similar in this respect (e.g. English and Dutch on definite articles), so that target language effects (or lack of) are revealed. The few studies that have addressed such effects have primarily focused on the nominal domain (Chondrogianni et al., 2015; Unsworth et al., 2014). For example, L1 Dutch-speaking children have been shown to acquire gender much later than L1 Greek-speaking children (Tsimpli & Hulk, 2013) due to the opacity of the Dutch gender system as opposed to the transparency and systematicity of the Greek gender system. The same asynchronous acquisition of the Dutch and the Greek gender systems has also been found in the context of childhood bilingualism by Unsworth et al. (2014), who compared Greek and Dutch 2L1 and L2 children with English as their L1. Conversely, the study by Chondrogianni et al. (2015) reported that Turkish-speaking children in the Netherlands and the UK acquiring L2 Dutch and L2 English definite articles
respectively followed the same developmental patterns, due to the similarities of the semantic properties of the definite article systems in Dutch and in English.

The third directionality of cross-linguistic influence involves how L2 properties can potentially affect L1 performance or even representations (“L2-to-L1 effects”). L2-to-L1 effects have been studied in the context of near-native L2 adults with steady-state grammars acquiring syntax-discourse interface phenomena (Sorace, 2011 for an overview). These effects are expected because near-native L2 speakers have had extensive naturalistic L2 exposure, which usually exceeds L1 exposure and frequency of use. Whether the L2 can influence L1 development in the context of child L2 acquisition is less clear. Recent studies with heritage speakers, that is with speakers whose L1 is a minority language, usually the language of the family or the closer community, and the L2 is the dominant language spoken by the wider community, have shown that the L2 can influence the L1 well before high L2 proficiency is reached (Montrul, 2008). This influence can be stronger in the case of L2 children with the L2 influencing the L1 before the relevant L1 structure has been fully acquired. This influence has been documented in the acquisition of morpho-syntactic phenomena (Montrul 2008 for an overview), suggesting that it can extend to other domains beyond the syntax-discourse interface. Furthermore, recent studies have shown that “naturalistic” exposure can be achieved even in an L2 classroom setting depending on the type and intensity of L2 schooling and can significantly increase L2 performance
(Dahl & Vulchanova, 2014). Whether improvement of L2 performance in such contexts also impacts on L1 competence in L2 children is one of the issues that is addressed in this special issue.

This short review reveals that the study of cross-linguistic effects in successive childhood bilingualism is a complex task because of the different directionalities that cross-linguistic influence can take and because it is affect by factors both internal to the language system being acquired, as well as by language-external factors, such as the length and context of exposure. In the next section, we turn to the articles in the special issue that seek to tackle the complexity of this task.

**The articles in the special issue**

Given the different ways in which cross-linguistic effects can be viewed in the context of L2 acquisition, each of the articles included in this special issue addresses the different directionalities of cross-linguistic influence, that is “L1-to-L2” effects, “Target Language” effects and “L2-to-L1” effects, by answering one or more of the following four questions: (a) what is the role of cross-linguistic influence at the syntax-discourse interface, (b) how do target language properties influence L2 developmental paths, (c) does the L2 influence the L1 when acquiring a syntax-semantics interface phenomenon, and (d) what does cross-linguistic influence look like in the context of atypical bilingual acquisition. The answer to these four questions is pursued by examining a range of
phenomena, from morphology to semantics and syntax in typically developing and impaired L2 children acquiring different languages, e.g. Croatian, Dutch, Greek, Hebrew, Russian, Spanish and English. Additionally, we seek to understand how the answer to these questions can be influenced by factors such as length of exposure to the L2 and quality of input, or by the use of tasks that tap into different modalities, such as production, comprehension or judgments.

The study by Kraš is the first to address the Interface Hypothesis (Sorace, 2000) within the context of child L2 acquisition in two languages, Italian and Croatian, which share the same interpretative properties for null and overt pronouns. Kraš examined the interpretation of intrasentential anaphora in a group of adolescent, native speakers of Italian and in a group of highly proficient L1 Croatian-L2 Italian speakers, who were exposed to L2 Italian between the ages of three and seven years. Italian and Croatian do not differ with respect to the antecedent biases of null and overt subject pronouns in forward and backward intrasentential anaphora. Using a picture selection task, Kraš found that adolescent L2 learners of Italian preferred the same antecedent (i.e. the subject), and to the same degree, as the native speakers in the context of both forward and backward anaphora in the case of null pronouns. In the case of overt pronouns, L2 learners preferred the same antecedent (i.e. the object), and to a similar degree, as the native speakers in forward anaphora, but they differed from the native speakers in backward anaphora. Surprisingly, it was the native speakers, and not the L2 learners
who showed a tendency to overgeneralize overt pronouns to null pronoun contexts. Kraš interprets this finding as evidence for acceleration in the acquisition of the discourse-pragmatic constraints on the use of overt subject pronouns in Italian due to the influence of their L1 Croatian. Note that cases of acceleration have been documented in other bilingual contexts (e.g. Paradis & Genesee, 1996 for 2L1 children) and it is evidenced here in the context of child L2 acquisition. Furthermore, Kraš argues against Sorace’s (2009) account that the instability at the syntax-discourse interface is caused by the learners’ suboptimal processing abilities; if that was the case, then it should be manifested in all L2 learner combinations, regardless of the properties of their L1, and this is not what this study finds.

Blom, Chondrogianni, Marinis and Vasić examined how target language properties, in this case Dutch and Greek, can shape the acquisition of inflectional morphology in the context of subject-verb agreement in two groups of 6-to-8-year-old Turkish-Dutch and Turkish-Greek L2 children. Greek and Dutch differ in the degree to which they encode inflectional information about person and number on the verb. Greek has a rich inflectional paradigm with person being encoded with a distinct morpheme across the singular and the plural, whereas Dutch encodes fewer distinctions across persons and numbers. The authors adopt McCarthy’s (2012) Morphological Underspecification Hypothesis (MUH) to test whether the notion of “default” in child L2 acquisition follows universal or language-specific features. L2 children were tested
on two similar elicited production task targeting subject-verb agreement. Their results are revealing as to how target language properties can shape the acquisition of syntax-morphology phenomena in L2 children. Whereas the Turkish-Greek L2 children’s acquisition pattern adhered to McCarthy’s MUH, that was not the case for the Turkish-Dutch children who opted for a morpho-phonological default following Dutch-specific properties. At the same time, both groups of L2 children had similar accuracies despite the fact that the Turkish-Dutch L2 children had more L2 exposure than the Turkish-Greek L2 children. These results suggest that target language properties can influence both the rate and outcomes of the acquisition process, as well as the nature of the “default” cross-linguistically.

The two final studies in the special issue investigate “L2-to-L1” cross-linguistic influence, focusing on how the L2 can affect L1 performance or representations in the context of child L2 acquisition. To address this question, Aveledo and Athanasopoulos examined the acquisition of a syntax-semantics interface phenomenon and more specifically, the production of manner of motion verbs in 5-to-9-year-old Spanish-English L2 children with an age of onset to the L2 at the age of three in an L2 instruction context. English is a satellite-framed language, which means that it typically encodes path in a satellite position through a prepositional phrase or particle. Spanish is a verb-framed language, meaning that the verb tends to express path of motion, while manner is encoded in adverbial phrases or not expressed at all (Talmy, 1985). By using
a verbal encoding task and a non-verbal similarity judgment task, the authors address whether L2 influences L1 encoding patterns relatively early in child L2 acquisition, or whether such effects can only be observed later in life (Brown & Gullberg, 2010). Furthermore, they tested whether linguistic structure affects non-verbal motion event categorisation in child L2 learners. To date, such cross-linguistic categorisation studies have focused exclusively on monolingual children (Papafragou & Selimis, 2010). Results from the verbal encoding task showed that by the age of 7 years the L1 lexicalisation patterns of the Spanish-English bilingual children had shifted between those of monolingual children of either language, under the joint influence of the L1 and the L2. Results from the similarity judgement task, however, showed no cross-linguistic differences. These results suggest that L2 on L1 effects emerge well before L2 learners reach an advanced level of L2 proficiency; at the same time, they highlight the importance of task effects in the acquisition of the syntax-semantics interface.

Finally, Meir, Walters and Armon-Lotem used two novel sentence repetition tasks in Russian and in Hebrew to disentangle typically developing (TD) Russian-Hebrew children from children with language impairment. The authors also addressed cross-linguistic differences in accuracy and error patterns in L1 Russian and L2 Hebrew. Sentence repetition tasks have been shown to have excellent diagnostic accuracy for typically developing L1 (L1-TD) children and children with developmental language disorders, such as Specific Language Impairment (SLI) (Conti-Ramsden,
Botting, & Faragher, 2001), and their use has been extended to the diagnosis of bilingual children (Armon-Lotem et al, 2015). The L2 typically developing (L2-TD) and SLI (L2-SLI) children in this study performed better in their L2 Hebrew than in their L1 Russian. Crucially, L2-TD children performed similarly to their L1-TD peers in their L2 Hebrew; L2-TD children tested in Russian performed significantly lower than the monolingual Russian TD children. The authors attribute the lower performance in L1 Russian to cross-linguistic influence from L2 Hebrew, which is the dominant and more prestigious language variety in the wider community where the children were tested (Israel). At the same time, however, the two sentence repetition tasks accurately distinguished between bilingual children with typical development and bilingual children with SLI. The two groups differed both in terms of accuracy, with the L2-TD children outperforming the L2-SLI children, but also in terms of error patterns. The L2-SLI children produced more errors of omission of functional elements in both languages, whereas L2-TD children had primarily errors of commission; the majority of the errors in the L2-TD children involved errors of case morphology. According to the authors, these errors are the result of cross-linguistic influence from L2 Hebrew, which carries no morphological case-marking, onto L1 Russian.

**Contribution of the Special Issue**
By bringing together studies that provide diverse perspectives on the directionality and the nature of cross-linguistic effects in child L2 acquisition, we hope to enhance our understanding regarding the processes involved in successive childhood bilingualism and highlight the theoretical and the empirical implications of child L2 research. The unique contribution of this volume is that it expands beyond English-as-L2 contexts to comprise novel language combinations (Croatian-Italian, Russian-Hebrew) and linguistic phenomena that have not been extensively explored in the child L2 acquisition research (motion verbs and complex structures). Finally, by including studies that address both “L1-to-L2” and “L2-to-L1” effects in child L2 acquisition, it underlines the importance of bidirectional and across domain studies to better understand the nature of child L2 development.

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