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The acquisition and processing of pragmatics in multilinguals and third language learners

1 Introduction

Recently, there has been an upsurge of research on how the experience of acquiring and using two (bilingualism) or more languages (multilingualism) affects language and non-verbal cognition (e.g., Bialystok, 2017; Cenoz, 2017; de Houwer & Ortega, 2018; Wright et al., 2017). This growing research interest has developed in response to an increasing awareness that the majority of today's world population is bi- or multilingual (e.g., Cenoz, 2008; Grosjean & Li, 2013). In this chapter, we review the research on multilingualism that focused on a particular aspect of cognitive functioning; that is, pragmatic performance, which broadly refers to the effective production and interpretation of meaning in context (Taguchi, 2009). We take a wide view of bi- and multilingualism as subsuming not only individuals who started using two or more languages in childhood, but also second language (L2) or third language (L3) learners, who started using their additional language(s) later in life.

Bilingualism and *multilingualism* have a lot in common and the two terms are often used interchangeably, but the multilingual experience is different from that of bilinguals in various respects (Cenoz, 2008; Cenoz, 2013; Rothman et al., 2019; Safont-Jordà, 2013a). A first main difference lies in crosslinguistic influence, that is, the effect of one language on another at the competence and/or performance level (Rothman et al., 2019); specifically, in multilingualism, crosslinguistic influence can occur between multiple rather than between only two languages (e.g., from the L1 to the L3, from the L3 to both L1 and L2, and so on). Secondly, multilingualism presents more variability than bilingualism. In terms of age of acquisition, for example, bilingualism involves only two possibilities—simultaneous

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development of two languages from birth or sequential acquisition of a second language sometime after birth—but in multilingualism there are four; that is, all three languages can be acquired simultaneously from birth or sequentially (L1, then L2, then L3) or two languages might be learned simultaneously before the L3 (L1 and L2 from birth, then L3) or after the L1 (L1 from birth, then L1 and L2). Levels of exposure to and use of each language are also different in multilinguals compared to bilinguals and monolinguals, because language experience is divided across more languages. This suggests that multilinguals might exhibit performance in each language that differs in some respects from bilinguals or monolinguals. For instance, bilinguals are often reported to exhibit a slower developmental rate in some aspects of language or slower lexical access than monolinguals, when each of their languages is considered separately (e.g., Bialystok et al., 2009). This finding has been attributed to the different amount and quality of experience that bilinguals have in each of their languages compared to monolinguals (e.g., Bialystok et al., 2009). Thirdly, learning an L3 as a bilingual is distinct from acquiring an L2 as a monolingual, in that bilinguals have already been through the process of learning an additional language. In this regard, bilinguals are more experienced language learners and they have likely developed language learning skills and strategies, which they can use in the task of acquiring an L3 (e.g., Cenoz, 2013; Rothman et al., 2019). Finally, bilinguals learning an L3 can bring to the L3 acquisition process an altered, compared to monolinguals, set of general cognitive skills that can affect aspects of language learning. For instance, even though the evidence is still mixed, bilingualism has been associated with (1) enhanced metalinguistic awareness, that is, the ability to explicitly reflect on language and manipulate it (e.g., Adesope et al., 2010); (2) better executive functions, a set of cognitive processes including working memory (the ability to hold and use at the same time information in memory), inhibition (the skill to ignore non-relevant information), and switching (the ability to seamlessly shift attention from one task to another;

e.g., Bialystok, 2017); and (3) advanced Theory of Mind, a cognitive system which is responsible for attributing mental states, such as intentions and feelings, to oneself and to others, and for understanding behavior by considering these mental states (e.g., Schroeder, 2018). Moreover, some evidence suggests that bilingual children exhibit more sensitivity to the speakers' communicative needs (Genesee et al., 1975), a better-developed ability to detect communicatively infelicitous utterances (Siegal et al., 2009) and to use pragmatic cues such as the interlocutor's perspective or gaze direction for inferring their referential intention (e.g., Fan et al., 2015; Yow & Markman, 2011b); and an increased reliance on pragmatic, relative to purely linguistic, cues when processing or acquiring language (e.g., Yow & Markman, 2011a). All these cognitive skills and linguistic strategies may affect general facets of language acquisition and processing, as well as pragmatic development and performance in particular (see e.g., in Antoniou, 2019; Antoniou & Milaki, 2021).

In the next sections, we provide some background on pragmatics and then move on to research that has focused on specific aspects of pragmatic performance in multilinguals. The bulk of research on multilingualism and pragmatics has examined speech acts, but we also consider studies that have investigated other pragmatic phenomena, such as using the appropriate language with different interlocutors in the early years of child multilingual acquisition; and the comprehension of pragmatically implied meanings (implicatures) in children and adults. Moreover, this research has examined pragmatic performance using traditional behavioral measures, including child speech samples during conversations (e.g., Montanari, 2008; Safont-Jordà, 2011), response rates to questionnaires (e.g., Tiv et al., 2019), rates of target responses in production tasks (e.g., Safont-Jordà, 2003; 2005a; Zand-Moghadam & Adeg, 2020), appropriateness ratings of target expressions (e.g., Portolés-Falomir, 2015; Safont-Jordà, 2003), and rates of correct responses or manual response times to target utterances in comprehension tests (Antoniou & Katsos, 2007; Antoniou, 2022).

Newer psycho- and neurolinguistic methods, such as eye-tracking and Event-Related Potentials, have not, to date, appeared in this field. We return to this issue briefly in the final section of this chapter, where we discuss directions for moving research in this area forward. This is not intended to be an exhaustive review of all research on multilingual pragmatics. Rather, we selectively focus on key studies and topics in this body of work to present central lines of research and main findings, as well as to identify avenues for future research.

2 Pragmatic Performance, Speech Acts, and Implicature

Pragmatic performance includes a wide array of skills related to the use of context—the characteristics of the speaker and listener, aspects of the physical setting, or other shared information between interlocutors—alongside explicit language, to convey and comprehend intentions or intended meanings (e.g., Grice, 1989).

In this regard, pragmatic performance encompasses the ability to perform speech acts; that is, to produce utterances that communicate a specific intended meaning and have a certain effect on the interlocutor, such as requests, refusals, apologies, or compliments (Austin, 1962; Searle, 1969). Speech acts are potentially face-threatening communicative acts, in that they carry the risk of damaging the face, that is, the public self-image, of the speaker or the addressee (e.g., Brown & Levinson, 1987). They can be formulated with linguistic strategies varying from direct to indirect and with additional linguistic items to reduce their negative, face-threatening force. The choice of strategy and the use of linguistic mitigation items depend on contextual factors and, specifically, on politeness considerations, such as the power relation or degree of familiarity between the interlocutors (e.g., Alcón-Soler et al., 2005). For example, requests such as in (1) are a specific type of speech act used by the speaker to get the listener to perform an action for the speaker's benefit (see Portolés-Falomir, 2015:48–53). Since requests may threaten the addressee's freedom (Brown &

Levinson, 1987), they can be mitigated with linguistic items such as *please*. More specifically, requests may comprise of two parts. First, the head act, which is the main part of the utterance performing the function of requesting and, second, the peripheral linguistic devices which are optional and can be used to soften, mitigate, or aggravate the face-threatening nature of the request. The head act might be realized through a direct (e.g., *Close the window, please*), conventionally indirect (e.g., *Would you please close the window? I do appreciate it*), or an indirect (*It's really cold in here, isn't it?*) strategy. Also, the peripheral linguistic items might be internal, in that they appear within the head act, or external, in that they appear either before or after the core act. Indirect strategies and mitigation items might be used in high face-threatening contexts—such as when the interlocutor is of higher social status relative to the speaker—because they make the utterance more polite (e.g., Portolés-Falomir, 2015). Moreover, because of their structural complexity, conventionally indirect strategies and the use of modification items appear more consistently later in development during first language (L1) and L2 acquisition and depend on proficiency level in the target language (e.g., Portolés-Falomir, 2015). The example in (1) illustrates a conventionally indirect request and its components.

Head act

(1) Could you do me a favor? Would you please drive me home?

External modification item Internal modification item

Pragmatic performance further entails the ability to communicate and interpret implied meanings. *Conversational implicature* is a term introduced by Grice (1989) to describe cases in communication in which the speaker intentionally conveys information that is not part of what they explicitly said, and the listener understands this implied speaker's meaning through an inference-making process about the speaker's intentions behind the

utterance. According to Grice, this reasoning process is triggered by the assumption that the speaker, in producing an utterance, has been cooperative and has adhered to certain conversational rules, which he calls *maxims*. These maxims exhort speakers to be relevant; to give no less and no more information than is needed for the purpose of the talk exchange; to be brief, orderly and avoid ambiguity, and obscurity; and to provide information that is true and for which they have adequate evidence. These correspond to the maxim of relevance, the first and second maxims of quantity, and the maxim of manner and of quality, respectively. For instance, consider the following dialogue in the context of a scenario where B returns home looking very disappointed after a very bad job interview.

(2) A: How did the interview go?

B: It went fantastic!

(3) The interview went terribly.

B's utterance in (2), possibly accompanied by further cues such as a distinctive intonation, will be understood as implying (3), even though this has not been stated explicitly. Within the Gricean account, the implied proposition is an implicature—specifically, an ironic interpretation—that is derived by exploiting the maxim of quality: It is obvious to A that B said something they do not believe to be true; however, since B is cooperative, this means that they are trying to get across a different, truthful proposition. The most obviously related truthful proposition is the contradictory to what B explicitly said.

Grice (1989) approached communication and conversational implicatures from a philosophical perspective. However, recent pragmatic accounts have developed Grice's ideas into cognitive-psychological models of language interpretation, production, and communication (e.g., Sperber & Wilson, 2002); specifically, Relevance Theory has made

two important claims about pragmatic comprehension: (1) that it requires cognitive effort, which has been interpreted by some researchers as longer processing time (e.g., Bott & Noveck, 2004) and/or the use of additional cognitive resources (e.g., de Neys & Schaeken, 2007) when interpreting implicatures relative to literal meanings; and (2) that, since pragmatic comprehension involves understanding the speaker's intentions in producing an utterance, it further draws on Theory of Mind skills (Sperber & Wilson, 2002).

In this context, the time course of and the cognitive factors that underpin pragmatic interpretation have been the subject of ongoing debate. Much work on the time course of pragmatic understanding has focused on a specific implicature type, scalar implicatures, such as when the use of the scalar term *some* implies *not all*. This research has provided some evidence that scalar implicatures (SI) are associated with a cost in terms of processing time, using a range of measures, such as manual reaction times from sentence judgment tasks (e.g., Bott & Noveck, 2004), reading times from the self-paced reading paradigm (e.g., Breheny et al., 2006), mouse-tracking (Tomlinson, et al., 2013), and eye movements in the visual world paradigm (e.g., Huang & Snedeker, 2009). However, other studies with similar methods, specifically, eye tracking and self-paced reading, indicate that, in some contexts, SI can be accessed as fast as literal meanings (e.g., see in Breheny, 2019). A similar picture emerges for other pragmatic phenomena, including metaphors and irony (see e.g., in Gibbs & Colston, 2012: 58-127). Finally, research on the cognitive underpinnings of pragmatic comprehension in children and adults has revealed effects of working memory (e.g., Antoniou & Milaki, 2021; Antoniou et al., 2020; Chiappe, & Chiappe, 2007; Marty & Chemla, 2013) and Theory of Mind (e.g., Fairchild & Papafragou, 2020; Filippova, 2014; Spotorno & Noveck, 2014), even though, again, these results are not always reported (see e.g., in Matthews et al., 2018). Overall, the mixed findings suggest that pragmatic interpretation is in some cases costly, but that various linguistic and extralinguistic cues

(e.g., certain linguistic expressions, contextual support) may combine to increase or decrease processing effort (e.g., Gibbs & Colston, 2012: 58-127).

3 Multilingualism and Pragmatic Differentiation

An important aspect of bilingual and multilingual children's pragmatic competence is the skill to pragmatically differentiate their languages; that is, to use the appropriate language with speakers of different languages. Bilingual children can adjust their language use based on their interlocutor's language by around the age of two (e.g., Comeau et al., 2003; Genesee & Nicoladis, 2007; Genesee et al., 1995). Montanari (2008) and Quay (2008) have shown that similar findings hold for simultaneous trilingual children.

The two studies examined children's spontaneous speech in simultaneous interactions with speakers of different languages from the age of 1;10 until 2;4. In both studies, there was evidence that children pragmatically differentiated their languages. In Montanari (2008), for instance, the child, Kathryn, modified her language use with each of her interlocutors; specifically, she used the most Tagalog with her Tagalog-speaking mother, the most English with her English-speaking interlocutor, and the most Spanish with her Spanish-speaking relatives. Similarly, Xiaoxiao, the child in Quay (2008), used more Mandarin than her other languages when addressing her mother, who was a Mandarin native speaker; and more English with her father, a native speaker of English. Furthermore, when addressing both parents, Xiaoxiao predominantly relied on Japanese. Quay (2008) attributed this preference to the fact that Japanese was Xiaoxiao's dominant language, as well as to the child's awareness that this was a language shared by her parents. Finally, for Xiaoxiao, further evidence of context sensitivity was found when comparing her language production at home and at her monolingual Japanese-speaking daycare; specifically, the child almost exclusively used Japanese at daycare despite using all her languages at home.

For both children, there were also instances of language mixing; that is, use of elements from more than one language in a context where only one language was appropriate. However, even these cases were justifiable and indicated pragmatic sensitivity to the speaker. Montanari (2008) argued that Kathryn's inappropriate language choices were driven by three factors: (1) her proficiency in each language, as she often relied on her dominant language or resorted to an inappropriate language to fill lexical gaps in the relevant language; (2) her interlocutors' attitude towards language mixing; and (3) her awareness that her interlocutors were multilinguals. Kathryn's inappropriate language use was particularly evident with her father and paternal grandmother, who were more accommodating of her language mixing. Moreover, her mother, father, and paternal grandmother often used English—their non-native language—to communicate with each other, hence providing the child with cues that they were multilinguals. These factors rendered language mixing an appropriate and effective communication strategy with these interlocutors.

Xiaoxiao's mixing behavior also provided evidence for pragmatic differentiation. Xiaoxiao mainly mixed English and Japanese when addressing her English-Japanese bilingual father, but used each of these languages in dual combinations with Mandarin when addressing her Mandarin-speaking trilingual mother. In addition, her mixed utterances to her trilingual mother included more triadic combinations of languages than to her bilingual father. These findings indicate that the child was sensitive to her parents' language proficiencies, even in her mixing.

Thus, evidence suggests that multilingual children can adjust their language use to their interlocutors and context. Language mixing does occur in their speech, particularly in multilingual situations where speakers of different languages are present. However, this does not indicate confusion or a fused, undifferentiated language system. Rather, multilingual children often mix their languages because they borrow words from a non-relevant language

to fill lexical gaps in the target language. Multilingual children's language mixing also shows a great deal of pragmatic sensitivity, being guided by the interlocutor's attitude towards inappropriate language choices, by attention to the specific language context, and by an awareness of the addressee as multilingual and of the interlocutor's language proficiency and preference.

4 Multilingualism and Implicature

Research on implicature has mainly focused on bilinguals and L2 learners (e.g., Antoniou, 2019; Taguchi & Yamaguchi, 2019). Two broad accounts regarding bilingual pragmatics emerge from this literature. According to the first view, bilinguals enjoy a pragmatic advantage. This account is mainly supported by research with preschoolers showing that bilinguals outperform monolinguals in the comprehension of SI (e.g., Siegal et al., 2007) and other pragmatic skills (see *Introduction*). Explanations for this benefit include bilinguals' superior executive control (e.g., Siegal et al., 2009), their increased experience in using the appropriate language with speakers of different languages (e.g., Yow & Markman, 2001b), and a compensation process that makes up for bilingual's slower language development with accelerated pragmatic acquisition (e.g., Siegal et al., 2012).

The second account proposes a unified model of pragmatic development, representation, and processing in bilinguals and L2 learners. Drawing on previous theoretical work on bilingualism, L2 learning, and pragmatics (e.g., Grice, 1989; Kesckes, 2015; Slabakova, 2010; Sperber & Wilson, 2002; Sorace, 2011; 2012 Tomassello, 2008), this account suggests that bilinguals and language learners develop a single pragmatic system—at least for pragmatic knowledge which might be considered universal, such as Grice's

maxims—that is independent from their languages², and is acquired and functions in a similar way to monolinguals or native speakers (Antoniou, 2019; Antoniou et al., 2020). On this view, non-verbal pragmatics is indistinguishable in bilinguals, language learners, and monolinguals in terms of real-time use, rate, and path of acquisition. However, linguistic pragmatics depends to some extent on target language proficiency, because, arguably, some degree of language processing is necessary for pragmatic interpretation to proceed. This language proficiency effect is particularly evident, for monolinguals, bilinguals, and language learners alike, during initial stages of language acquisition and/or for difficult pragmatic phenomena. At this phase, language is less developed in terms of competence and automaticity and, thus, gaps in language knowledge and increased demands of language processing may negatively affect pragmatic performance. Moreover, some aspects of language develop slower in bilinguals (e.g., Bialystok et al., 2009). Thus, this account suggests that, during initial stages of language acquisition, when bilinguals and language learners have markedly lower target language proficiency than monolinguals or native speakers, they will exhibit lower pragmatic understanding skills. This difference, however, is not in pragmatic processing or knowledge *per se*, but is due to insufficient proficiency in the target language, and will be overcome when bilinguals and language learners attain adequate command of the target language for language processing, to the degree necessary, to proceed unobstructed and allow further pragmatic processing. This view is based on two empirical findings: first, target language proficiency effects on pragmatic performance in bilinguals and L2 learners; and, second, that bilinguals and L2 learners are often reported to exhibit

²By *independent*, we simply mean that pragmatics can be dissociated from core language (lexicon, morphosyntax, phonology) in various respects, such as in development, representation, processing, and pathology (see e.g., in Antoniou et al., 2020: 15). However, we do not commit to a particular mental architecture and way of interaction between core language and pragmatics (see e.g., Sperber & Wilson, 2002, for one such proposal that also entails independence of core language from pragmatics).

performance comparable to monolinguals or native speakers in the comprehension of various types of implicatures (Antoniou, 2019; Syrett et al., 2017).

A third view stems from a general account of bilingual language processing, the Interface Hypothesis (Sorace, 2011; 2012; Sorace & Serratrice, 2009). According to the Interface Hypothesis (IH), computationally demanding linguistic phenomena, typically at the interface of language-internal (e.g., syntax) and external domains (e.g., pragmatics), are the locus of particular difficulties in bilinguals and language learners, which may not be overcome even at the highest level of language proficiency. Such linguistic processes are particularly problematic in bilinguals and language learners because, for them, language processing is less automatic and because, perhaps relatedly, they need to devote effort in managing competition from the non-target language. In this respect, bilinguals and language learners have fewer resources to allocate to the language interpretation process. A prediction that may derive from the IH, then, is that bilinguals and language learners are likely to exhibit difficulties in pragmatic comprehension, even at near-native levels of language proficiency. This is because (1) there are theoretical reasons and some empirical evidence to suggest that the interpretation of pragmatic meanings is resource demanding; and (2) pragmatic phenomena involve the interaction of language with extralinguistic factors (see *Introduction*).

Studies that examined implicature comprehension in multilinguals can be divided into two groups: (1) research that compared multilinguals and monolinguals (e.g., Antoniou & Katsos, 2017); and (2) work that examined various multilingual experiences on a continuous scale without a monolingual or native comparison group (e.g., Tiv et al., 2019). The results from two studies that took the comparative approach are more in line with the second account of bilingual pragmatics (Antoniou & Katsos, 2017; Antoniou, 2022); specifically, they suggest that multilinguals can exhibit similar to monolinguals pragmatic performance, even for linguistic processes such as irony, which depends on non-linguistic factors and is

evidently demanding from a theoretical, developmental, and processing perspective (Antoniou & Milaki, 2021; Filippova, 2014; Spotorno & Noveck, 2014).

The two studies compared multilingual, bi-dialectal, and monolingual participants. Multilinguals were bi-dialectal speakers of two Greek dialects—Cypriot and Standard Greek—and also used one or more languages. The first study tested school-aged children and reported no group differences in the comprehension of manner, relevance, scalar implicatures, and novel metaphors (Antoniou & Katsos, 2017). Target language proficiency was also a positive predictor of overall pragmatic performance in this study. Similar results were obtained in the second study with young adults, which focused specifically on the accuracy and speed of processing irony (Antoniou, 2022). Irony comprehension in this study was difficult for all participants, shown by lower accuracy rate and slower reaction times for ironic compared to literal items. However, once more, there were no group differences in irony processing.

Research that examined multilingualism as a continuous, multicomponent rather than a dichotomous experience has not exclusively focused on multilinguals, but we review this work here because it used mixed samples of bilinguals and multilinguals (Tiv et al., 2021; Tiv et al., 2019). Tiv et al. (2019) found that L2 proficiency positively predicted general use of sarcastic irony—a particular form of verbal irony—as measured with a self-report questionnaire, across multilinguals' languages. Further analyses revealed that multilinguals used sarcastic irony largely with the same communicative functions as monolinguals, such as, for example, for frustration and embarrassment diffusion. Another study by Tiv et al. (2021) examined the interpretation of two types of ironic utterances in the L1: Ironic compliments—cases of irony where the speaker says something negative to communicate the opposite—and ironic criticisms—where the speaker says something positive to mean something negative. Their results showed that participants were slower to decide whether ironic compliments

made sense; and were also likelier to judge them as less sensible than ironic criticisms. This finding replicated past findings with monolinguals (Tiv et al., 2021). Finally, Tiv et al. (2021) reported that higher L2 proficiency predicted greater accuracy in evaluating whether statements made sense for both irony types, and shorter reaction times for ironic compliments.

Overall, results from research that has examined implicature in multilinguals compared to monolinguals show that the predictions of the second account of bilingual pragmatics (Antoniou, 2019) further hold for multilinguals. First, there is some evidence for a positive effect of target language proficiency on pragmatic interpretation, and second, findings reveal that multilinguals have implicature understanding skills comparable to monolinguals, at least in one of their languages (Antoniou & Katsos, 2017). This is also true for particularly demanding pragmatic phenomena such as irony (Antoniou, 2022). Moreover, the two studies that treated multilingualism as a continuous experience reported that increased multilingualism—as reflected in higher L2 proficiency—is positively associated with greater use of sarcastic irony across languages and better L1 irony comprehension (Tiv et al., 2019; Tiv et al., 2021). At face value, the latter results are more consistent with the bilingual pragmatic advantage account. These findings, however, indicate a relative advantage for more proficient compared to less proficient multilinguals, but do not necessarily show an absolute multilingual advantage relative to monolinguals or native speakers. All three accounts relevant to bilingual pragmatics express their predictions with reference to monolingual or native speakers, and, hence, for their predictions to be tested, a comparison with a monolingual or native group is necessary. Thus, the findings of studies that adopted a continuum approach cannot adjudicate between the different views. However, they do show that certain aspects of multilingualism influence pragmatic performance and need to be incorporated in these accounts.

5 Multilingualism and Speech Acts

The bulk of studies on multilingualism and pragmatics have focused on speech acts. We review this work by compartmentalizing it into three sections: studies focusing on the bilingual advantage in L3 pragmatic acquisition, research examining crosslinguistic influence and the effect of target language factors on pragmatic processing in that language; and studies that investigated pragmatic performance through a multilingual approach that considers all languages spoken by multilinguals. We divide the literature this way solely for ease of exposition and do not necessarily imply that the studies in each section represent discrete lines of research. To the contrary, the studies in the three sections have often offered complementary perspectives and insights on various aspects of multilingual speech act performance and acquisition.

5.1 The Bilingual Advantage in L3 Pragmatic Acquisition

A key question in the field of multilingualism and speech acts has been whether bilinguals exhibit an advantage over monolinguals in acquiring the pragmatics of an additional language. Research on this topic has predominantly focused on two aspects of pragmatic ability—*pragmatic production*, that is, the use of contextually appropriate utterances to convey specific intentions; and *metapragmatic awareness*, one's conscious, reflective, explicit knowledge of pragmatics (e.g., Alcón-Soler, 2012; Safont-Jordà, 2005a).

The educational context of learning English as a foreign language (EFL)—that is, learning English in a non-naturalistic setting—has proven especially fruitful for studying the effect of bilingualism on the acquisition of additional-language pragmatics. As such, some of the noteworthy contributions to this topic have come from a series of studies comparing Spanish monolingual and Catalan-Spanish bilingual EFL learners in the Valencian

community of Spain (Alcón-Soler, 2012; Safont-Jordà 2003; 2005a, b; 2007; Safont-Jordà & Alcón-Soler, 2012). This line of work has provided support for the bilingual advantage in acquiring the pragmatics of an additional language, with bilingual learners exhibiting higher levels of both metapragmatic awareness and pragmatic production in English compared to monolingual learners. For studies examining request acts, the bilingual advantage in metapragmatic awareness has been evident in bilinguals identifying a greater number of appropriate and inappropriate request act utterances; in providing more reasons related to pragmatic issues such as politeness to justify their evaluation; and in giving a wider range of appropriate alternative formulations than monolinguals (Safont-Jordà, 2003; 2005a, b). Moreover, the advantage in pragmatic production has manifested as a higher rate of requests, and specifically of indirect and conventionally indirect formulations; and an increased use of modifiers in general and of external modification items in particular (Safont-Jordà, 2003; 2005a, b). This research has also reported a positive effect of L3 English proficiency on L3 pragmatic production, even though bilingualism seems to have a facilitative impact beyond this effect (Safont-Jordà, 2005a). Notably, the bilingual advantage in L3 pragmatics has been also found for other speech acts; specifically, for refusals—utterances that express non-compliance with a request, invitation, offer, or suggestion (Safont-Jordà & Portolés-Falomir, 2013). Moreover, this benefit has been further reported for bilinguals speaking different pairs of languages in different sociolinguistic contexts, including German-speaking EFL learners in Germany (Trebits, 2019) and Turkmen-Persian bilingual learners of English in Iran (Zand-Moghadam & Adeg, 2020). This suggests that the bilingual advantage manifests irrespective of the combination of languages spoken and cultural setting.

Another manifestation of the bilingual advantage is that bilinguals benefit more from explicit pragmatic instruction compared to monolingual learners in acquiring the pragmatics of an additional language. The findings reported by Safont-Jordà and Alcón-Soler (2012)

exemplify this; specifically, even though all participants in this study—bilingual and monolingual learners—benefitted from explicit pragmatic training in the additional language, bilinguals displayed a more marked increase in the amount and range of modification devices in L3 request act performance after instruction. Furthermore, there is evidence that this advantage in explicit instruction is linked to degree of bilingualism: Productive bilinguals—who were exposed to and regularly used two languages in daily life—have shown greater improvement in metapragmatic awareness after explicit teaching than receptive bilinguals—who did not regularly use two languages, even though they had knowledge of a second language (Alcón-Soler, 2012; Safont-Jordà & Portolés-Falomir, 2013). Indeed, the bilingual advantage in L3 pragmatics may be linked to more nuanced aspects of the bilingual experience. Metapragmatic awareness in the additional language, for instance, has been also positively associated with a higher degree of multilingualism and frequency of code-switching in the other languages (Trebits, 2019).

Some work, however, has failed to detect this bilingual advantage. Rahimi Domakani and colleagues (2013), for example, reported no association between bilingualism and pragmatics in the additional language in a study conducted in the context of Iran. Yet the authors point to features of this particular sociolinguistic setting that may explain the null effect; specifically, the Iranian context can be considered a case of subtractive bilingualism, whereby the dominant language is promoted at the expense of minority languages, therefore reducing the chances of bilinguals attaining adequate proficiency in all their languages. This explanation aligns with previous results indicating that a higher degree of multilingualism in the other languages is linked to higher L3 pragmatic performance (Trebits, 2019) and, more importantly, with the advantage of productive bilinguals in the Valencian community, where the minority L1 is part of the educational process, thus potentially leading to balanced bilingualism (e.g., Alcón-Soler, 2012; Safont-Jordà, 2005a, b; Safont-Jordà & Portolés-

Falomir, 2013). Such an explanation is also consistent with findings from the wider literature on the effect of bilingualism on additional language learning, which indicate that the bilingual advantage is mostly found in additive bilingual contexts—where both languages are valued and developed—but rarely surfaces in subtractive bilingual contexts (Cenoz, 2003).

In sum, the above findings show that—at least for speech acts—bilinguals display greater pragmatic ability in the L3 than monolingual learners do in the L2, in terms of both metapragmatic awareness and pragmatic production. There is also some evidence that bilinguals benefit more from explicit pragmatic instruction during the acquisition of pragmatics in an additional language (Safont-Jordà, 2005a). Crucially, the bilingual advantage has been found to persist beyond the effect of target language proficiency (Safont-Jordà, 2005a). However, the benefit seems to be constrained by the degree and possibly the context of bilingualism, since it has been more prominent in additive bilingual settings and among productive bilinguals (Alcón-Soler, 2012; Safont-Jordà, 2005a; Safont-Jordà & Portolés-Falomir, 2013; Trebits, 2019). Explanatory mechanisms that have been proposed to be responsible for the bilingual advantage in L3 pragmatic acquisition include bilinguals' past language-learning experience, and the skills and techniques developed from this experience; their enhanced metalinguistic awareness; their increased communication skills and sensitivity to contextual cues; and their advanced general cognitive skills, such as, for example, in executive functioning and information retention (Alcón-Soler, 2012; Trebits, 2019; Safont-Jordà, 2003).

5.2 Target Language Effects and Crosslinguistic Influence

Other research has examined speech acts in multilinguals through another perspective, focusing on topics such as the effect of target-language factors on pragmatic functioning in that language, crosslinguistic influence on speech act performance, and transfer effects on the

L3. Existing research is limited but some evidence suggests that increased target language experience has a positive effect on speech act performance in that language. Moreover, this work has identified some complex patterns of transfer effects on the L2 and L3, yet no consistent pattern of crosslinguistic influence has emerged so far.

Stavans and Webman Shafran (2018) is one example of this body of research, with its interest on how additional-language pragmatic skills relate to variables such as order of acquisition (L2 or L3), proficiency, and daily experience with the target language, English. The authors found that trilinguals for whom English was their L2 had a higher preference for indirect requests than trilinguals with English as the L3, indicating a better ability to approximate native English. This group difference was possibly related to the higher proficiency and exposure to English characterizing the L2 group.

Another study by Webman Shafran (2019) examined the effect of the interlocutor's social status on English request production and how this effect might be altered by the presence of a different L1 in L1 Hebrew-L2 English and L1 Arabic-L3 English trilinguals. The authors reported that, for speech act strategy, there were L1 transfer effects, but these effects were similar for the two groups and were not modulated by the presence of a different L1; specifically, in contrast to the speech style of English native speakers, both groups exhibited sensitivity to social status through a preference for direct styles with interlocutors of lower status, and conventionally indirect styles for higher-status interlocutors. This was similar in the two groups despite the fact that Arabic is known to be more sensitive to status than Hebrew. However, different L1 transfer effects were visible in the use of the politeness marker *please*, as the L1 Arabic speakers used it more often toward speakers of higher status than the L1 Hebrew speakers did. This aligns with the sensitivity to authority that is more typical of Arabic culture. The fact that the two groups differed in their use of the marker *please* but not in English request strategies suggests that differences in the L1 may not

equally and identically affect all speech act aspects in the additional language. The author distinguishes *please* from the more complex structures required for formulating different speech act strategies, and argues that the versatility and simplicity of this lexical politeness marker makes it more susceptible to L1 transfer effects.

Finally, other work has failed to identify robust transfer effects from previously acquired languages to L3 speech act performance; specifically, Koike and Palmiere (2011), looking at the production of requests and apologies, reported very few instances of pragmatic transfer from the L1 or L2 on L3 speech act performance, and little evidence that transfer effects consistently occurred from the L1 or the language more similar to the target L3.

Overall, there is some evidence that request act performance in multilinguals is positively affected by more experience in the target language. Moreover, the present literature illustrates the complexities of transfer effects in multilingual speech act formulations. Currently, the few studies on this topic provide inconsistent evidence for crosslinguistic influence and the factors modulating transfer effects in multilinguals. However, these studies set a precedent for more detailed considerations of crosslinguistic influence in speech acts in multilinguals, as well as the cultures and languages involved. Such nuanced investigations are important because transfer effects are likely to vary between different multilingual groups and may also interact with syntactic and lexical factors related to the possible speech act formulations themselves (e.g., Webman Shafran, 2019).

5.3 Speech Act Performance from a Multilingual Perspective

The research reviewed so far has typically targeted pragmatic performance in only one of the multilinguals' languages. Other researchers, however, have advocated for investigations of multilingual language acquisition and linguistic behavior, which are more holistic and independent from direct comparisons to monolinguals or native speakers. Such approaches

consider all languages known by a speaker, in addition to their interactions, thereby treating multilinguals as a population in their own right, with unique competences, particular characteristics and complexities (Cenoz, 2013; Cenoz & Gorter, 2019; Safont-Jordà, 2013a; 2017).

This nuanced outlook on multilingualism has been also applied to investigations of pragmatic development in multilingual children. In a notable series of such studies, Safont-Jordà (2011; 2012; 2013b) showed that speech act development in sequential multilingualism bore considerable similarities to native-language development, and—most importantly—was marked by characteristics unique to multilingual pragmatic development, as well as early pragmatic differentiation of the acquired languages. These studies centered around the development of request acts in a pre-literate child, Pau, up to the age of 5;6 and throughout his sequential acquisition of L1 Catalan, L2 Spanish, and L3 English.

There were two main changes in Pau's request styles between the ages of 2;6–3;6. Firstly, Pau showed an increasing shift toward indirect request styles in all three languages, which aligned with his improved command of the syntactic complexities required for such formulations in all of his languages. Secondly, his use of modification items in Catalan and Spanish exhibited a U-shaped change, in that mitigation devices decreased at age 2;8-3 and then increased after age 3;4 (see e.g., Liu & Kager, 2017; Marcus et al., 1992, for similar U-shape patterns in bilingual and monolingual language development, respectively). These changes—the decrease in modification items and the increase in conventionally indirect requests in Spanish and Catalan—largely coincided with the introduction of the L3 English. Safont-Jordà (2011) argued that these changing patterns in Pau's pragmatic production in his L1 Spanish and L2 Catalan indicate that the inclusion of L3 English affected the child's pragmatic performance in the L1 and L2. More specifically, Safont-Jordà (2011) attributed the increasing rate of conventionally indirect requests to the fact that the newly introduced

English language is generally described as negative politeness oriented. This means that requests in English are considered more face-threatening acts and, hence, require the use of modification items and indirect strategies to mitigate their force. Spanish and Catalan, in contrast, are positive-politeness, more direct languages.

Additionally, there was evidence that Pau modified his requests in English from the very beginning, using a variety of mitigation devices. This contrasts to past research with monolingual children and L2 learners of English, which suggests that modification items appear relatively late in acquisition. Finally, Safont-Jordà (2012) reported that the types of external modification devices used were more similar and correlated in the child's L1 and L2 than with his L3. According to Safont-Jordà (2012), this indicates that the child started differentiating his languages based on politeness orientation.

With time, Pau's languages showed increasing pragmatic differentiation. After the age of 4;3, Pau adopted request styles that were consistent with the politeness orientation of each language, namely a preference for conventionally indirect over direct requests in English, but with the opposite pattern in Spanish and Catalan (Safont-Jordà, 2012). Moreover, the child used indirect strategies in all three languages, a finding that research with monolingual children generally documented at a later age. There was also a more complex pattern of differences between the two types of languages with regards to indirect strategies, but, generally, results pointed to a greater amount of indirect strategy use in English compared to the other languages.

Pau's case study illustrates successful pragmatic differentiation in a sequential trilingual child. For the L3, this manifested early on but was increasingly evident with time. Moreover, the example of Pau demonstrates how the interaction between the pragmatic systems acquired by a multilingual child may lead to qualitative differences in the path and pace of multilingual compared to monolingual and bilingual pragmatic development.

Further evidence for multilingual children's early pragmatic competence comes from Portolés-Falomir's (2015) work on speech acts among sequential preschool- and school-aged trilingual children. As seen through their judgements of the appropriateness of request act formulations, these trilingual children showed a relatively high degree of pragmatic awareness in all three languages. This was particularly noteworthy for English, given that the children were beginner learners of the language as an L3 and their proficiency was limited. The author suggests that L3 metapragmatic awareness was promoted by the participants' bilingual background. Furthermore, the study concluded that children who were mainly instructed in the minority language—Catalan—at school, showed more positive attitudes to and higher pragmatic awareness in English compared to pupils of Spanish-based schools. Portolés-Falomir (2015), in line with Alcón-Soler (2012), suggests that Catalan-based schooling results in productive and thereby balanced bilingualism—since Spanish is the dominant language outside school—which is highly beneficial for L3 acquisition.

To sum, studies that used a multilingual approach tend to confirm the findings from other studies that focused on only one language in multilinguals, but also add some novel insights. The introduction of an L3 in Pau's linguistic repertoire affected his pragmatic performance in his other languages (Safont-Jordà, 2011). This provides evidence for crosslinguistic influence in multilingual pragmatic development, but further shows that the influence can happen not only from the L1 or L2 to the L3, but also from the L3 to the other languages in young children. In addition, this line of work provides further evidence that increased target language proficiency is associated with better pragmatic performance in that language, whether this is an L1, L2 or L3 (Safont-Jordà, 2011; 2013b). However, this linear relation in the L1 or L2 might be affected by the inclusion of an L3. This is indicated in Pau's U-shape development of mitigation device use in his L1 and L2, which was possibly caused by the introduction of English in his input (Safont-Jordà, 2011).

Moreover, Pau, a sequential trilingual child, showed signs of pragmatically differentiating his L3 from the early moments of acquisition, consistent with the findings from simultaneous trilingual children (Quay, 2008; Montanari, 2009). Furthermore, the studies in this section reported indications of accelerated L3 pragmatic performance for bilinguals. This was evidenced, for instance, in Pau's early use of mitigation items in his L3 English (Safont-Jordà, 2011) and in the relatively high pragmatic awareness of beginner learners of L3 English in Portolés-Falomir (2015). Finally, this research further confirmed that an additive bilingual context and productive bilingualism have a positive effect on learning the pragmatics of an additional language (Portolés-Falomir, 2015).

6 Conclusions and Directions for Future Research

This chapter provided an overview of research on pragmatic competence, processing, and acquisition in multilinguals. In this concluding section, we briefly summarize and synthesize the main findings from this literature, pointing, where appropriate, to the differences and similarities of multilingual relative to bilingual and monolingual pragmatic performance. We close this section by suggesting directions for future work.

Studies that examined pragmatic differentiation in simultaneous multilingual children have generally shown that these children, just as previously reported for simultaneous bilingual children, can differentially and appropriately use each of their languages in a context-sensitive manner, from around the age of two. Code-mixing is evident in multilingual children's language production, but this does not indicate a lack of pragmatic awareness. Rather, inappropriate language use might be caused by proficiency gaps in the contextually relevant language and is often pragmatically guided (Montanari, 2008; Quay, 2008). For instance, multilingual children code-mix more when the communicative environment provides them with cues that such linguistic behavior is an acceptable and effective

communicative strategy, such as when their interlocutors are accepting of their code-mixing and/or are multilinguals. Moreover, some evidence from speech acts suggests that sequential multilingual children exhibit similar pragmatic differentiation, in that they can differentiate and appropriately use their L3 pragmatic system from the early moments of L3 learning (Safont-Jordà, 2011).

The evidence from research on implicature reveals that multilinguals exhibit pragmatic interpretation skills comparable to monolinguals, at least in one of their languages (Antoniou & Katsos, 2017; Antoniou, 2022). However, this work further indicates that degree of multilingualism, measured continuously through L2 proficiency, positively affects general use of sarcastic irony across languages and L1 irony understanding (Tiv et al., 2019; 2021). This evidence does not necessarily demonstrate a multilingual pragmatic advantage compared to monolinguals, but does show that additional factors are at play during multilingual pragmatic processing compared to monolinguals. Moreover, the work on implicature, but also studies on speech acts, have further shown that, like what has been found with bilinguals, pragmatic skills in the target language (L1, L2 or L3) are positively influenced by increasing target language proficiency (e.g., Safont-Jordà, 2005a; Stavans & Webman Shafran, 2018). However, this linear association for the L1 and L2 might be disrupted with the introduction of an L3 in young children (Safont-Jordà, 2011).

Studies that have examined speech acts from the perspective of crosslinguistic influence have provided some evidence that the L1 can affect L2 and L3 speech act performance through the transfer of socio-pragmatic elements from the L1 to the L2 and L3, though the evidence is mixed (Koike & Palmiere, 201; Webman Shafran, 2019). Furthermore, this crosslinguistic influence is not unidirectional, but can also occur from the L3 to the L1 and L2 as Pau's case study illustrates (Safont-Jordà, 2011). Moreover, the literature on speech act performance has shown that bilinguals, and especially productive or

balanced bilinguals, enjoy an advantage relative to monolinguals in learning the pragmatics of an additional language (e.g., Alcón-Soler, 2012; Safont-Jordà, 2005a; Trebits, 2019). Thus, this research identifies bilingualism as an experience that is uniquely relevant to multilingual pragmatic performance and acquisition. Finally, the research on speech acts indicates that explicit pragmatic instruction positively influences pragmatic acquisition in an additional language, even though bilinguals learning an L3 might benefit more than monolinguals learning an L2 (e.g., Alcón-Soler, 2012; Safont-Jordà, 2005a).

Clearly, the work conducted so far has contributed significantly towards a better understanding of multilingual pragmatic performance and development. However, various questions remain open and await further investigation. A first issue is methodological and relates to how the concepts of interest—multilingualism, specific multilingual experiences, and pragmatic performance—are measured. For instance, much of the reviewed research has focused on language proficiency as an attribute relevant to bilingual and multilingual pragmatics. This construct arguably involves multiple knowledge (e.g., morphosyntax, lexicon) and skill (e.g., listening, speaking) components (Hulstijn, 2010). However, language proficiency in the reviewed studies has been often evaluated through single assessments, such as vocabulary tests, that only partially reflect its multidimensional nature (e.g., Antoniou, 2022). Relatedly, the reported work has examined pragmatic performance by exclusively relying on behavioral measures, which only crudely reflect the end-product of pragmatic processing. Other psycho- and neurolinguistic tools, such as, for instance, eye tracking and Event-Related Potentials, have, to our knowledge, not been employed in this field. This is despite their past use in and the knowledge accumulated from monolingual studies (see Section 2), which could inform the work in this research area. Moreover, such methods have the potential to measure performance on a more fine-grained level of analysis and to examine multilingual effects on the stream of processing (e.g., Grey & Tagarelli, 2018). This may

reveal subtle multilingual effects that could not be detected in past research. Thus, future studies should examine the effect of multilingualism and multilingual experiences by using measures that account for the multicomponent nature of these constructs; and by taking advantage of other techniques from psycho- and neurolinguistics. This work may increase confidence in or revise past findings and conclusions but either way it will certainly enhance our understanding of multilingual pragmatics.

Second, research on the bilingual advantage in L3 pragmatic learning has exclusively focused on speech acts. Hence, it is important for future work to investigate whether this benefit generalizes to other pragmatic phenomena. Moreover, it is still unclear from this literature which factors are responsible for bilinguals' superior performance in L3 pragmatics. Possible explanations include the skills and strategies acquired from bilinguals' past language learning experience, and their enhanced metalinguistic awareness, executive control, and communicative sensitivity (e.g., Alcón-Soler, 2012; Safont-Jordà, 2003:59; 2005a; Trebits, 2019). Opinions on this matter have been so far speculative, with no direct empirical studies. Moreover, another issue is whether bilingualism merely accelerates the rate of pragmatic acquisition in an additional language, leading to an initial advantage over monolingual learners, which disappears with time or whether bilingualism affects the pragmatic system in a more permanent way.

Third, current research on crosslinguistic influence in multilingual pragmatic performance has offered inconsistent evidence about transfer effects and the factors involved in such influence (e.g., proficiency level, language similarity; Koike & Palmiere, 2011; Stavans & Webman Shafran, 2019). Future work using well-characterized multilingual groups, should more closely examine the conditions under and the direction in which multilinguals' languages influence each other in terms of pragmatics.

Finally, it is necessary to investigate multilingual pragmatics by taking a holistic approach that examines not only one, but all languages spoken by multilinguals (Cenoz, 2013; Cenoz & Gorter, 2019; Safont-Jordà, 2013a; 2017). So far, this approach has been employed only in studies on speech acts (e.g., Portolés-Falomir, 2015; Safont-Jordà, 2011). Evidently, such a perspective, adopted in investigations of different pragmatic phenomena and with different multilingual groups, would reveal a clearer and more complete picture of multilingual pragmatic knowledge, processing, and acquisition.

References

- Adesope, O. 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*, 207–245.
- Alcón-Soler, E. (2012). Teachability and bilingualism effects on third language learners' pragmatic knowledge. *Intercultural Pragmatics, 9*, 511–541.
<https://doi.org/10.1515/ip-2012-0028>
- Alcón-Soler, E., Safont-Jordà, M. P., & Martínez-Flor, A. (2005). Towards a typology of modifiers for the speech act of requesting: A socio-pragmatic approach. *RAEL, Revista Electrónica de Lingüística Aplicada, 4*, 1–35.
- Antoniou, K. (2019). Multilingual pragmatics: Implicature comprehension in adult L2 learners and multilingual children. In N. Taguchi (Ed.), *The Routledge Handbook of Pragmatics and Second Language Acquisition* (pp. 495–510). New York: Routledge.
- Antoniou, K. (2022). Multilingual and bi-dialectal irony processing. In *Proceedings of the Annual Meeting of the Cognitive Science, 44*(44).
- Antoniou, K., Cummins, C., & Katsos, N. (2016). Why only some adults reject under-informative utterances. *Journal of Pragmatics, 99*, 78–95.

- Antoniou, K., & Katsos, N. (2017). The effect of childhood multilingualism and bidialectalism on implicature understanding. *Applied Psycholinguistics*, 38, 787–833.
<https://doi.org/10.1017/S014271641600045X>
- Antoniou, K., & Milaki, E. (2021). Irony comprehension in bidialectal speakers. *The Modern Language Journal*, 105, 697-719.
- Antoniou, K., Veenstra, A., Kissine, M., & Katsos, N. (2020). How does childhood bilingualism and bi-dialectalism affect the interpretation and processing of pragmatic meanings?. *Bilingualism: Language and Cognition*, 23, 186–203.
- Austin, J. L. (1962). *How to do things with words*. Oxford: Oxford University Press.
- Bialystok, E. (2017). The bilingual adaptation: How minds accommodate experience. *Psychological bulletin*, 143, 233–262.
- Bialystok, E., Craik, F. I., Green, D. W., & Gollan, T. H. (2009). Bilingual minds. *Psychological science in the public interest*, 10, 89–129.
- Bott, L., & Noveck, I. A. (2004). Some utterances are underinformative: The onset and time course of scalar inferences. *Journal of memory and language*, 51, 437-457.
- Breheny, R. E. (2019). *Scalar Implicatures*. In N. Katsos & C. Cummins, (Eds.), *Handbook of Experimental Pragmatics* (pp. 39-62). Oxford University University Press.
- Breheny, R., Katsos, N., & Williams, J. (2006). Are generalised scalar implicatures generated by default? An on-line investigation into the role of context in generating pragmatic inferences. *Cognition*, 100, 434-463.
- Breheny, R., Ferguson, H. J., & Katsos, N. (2013). Taking the epistemic step: Toward a model of on-line access to conversational implicatures. *Cognition*, 126, 423–440.
- Brown, P., & Levinson, S. (1987). *Universals in language use: Politeness phenomena*. Cambridge University Press.

- Cenoz, J. (2003). The additive effect of bilingualism on third language acquisition: A review. *International Journal of Bilingualism*, 7, 71–87.
- Cenoz, J. (2008). The acquisition of pragmatic competence and multilingualism in foreign language contexts. In *Intercultural language use and language learning* (pp. 123–140). Dordrecht: Springer.
- Cenoz, J. (2013). The influence of bilingualism on third language acquisition: Focus on multilingualism. *Language teaching*, 46, 71.
- Cenoz, J. (2017). Bilingualism and multilingualism. In A. Barron, Y. Gu & G. Steen (Eds.), *The Routledge handbook of pragmatics* (pp. 139–150). Taylor & Francis.
- Cenoz, J., & Gorter, D. (2019). Multilingualism, translanguaging, and minority languages in SLA. *The Modern Language Journal*, 103, 130–135.
- Cenoz, J., Hufeisen, B., & Jessner, U. (2001). *Cross-Linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives*. Multilingual Matters.
- Chiappe, D. L., & Chiappe, P. (2007). The role of working memory in metaphor production and comprehension. *Journal of Memory and Language*, 56, 172–188.
- Comeau, L., Genesee, F., & Lapaquette, L. (2003). The modeling hypothesis and child bilingual codemixing. *International Journal of Bilingualism*, 7, 113–126.
- de Houwer, A., & Ortega, L. (2018). *The Cambridge handbook of bilingualism*. Cambridge University Press.
- de Neys, W., & Schaeken, W. (2007). When people are more logical under cognitive load: Dual task impact on scalar implicature. *Experimental Psychology*, 54, 128–133.
- Fairchild, S., & Papafragou, A. (2021). The Role of Executive Function and Theory of Mind in Pragmatic Computations. *Cognitive Science*, 45, e12938.
- Fan, S. P., Liberman, Z., Keysar, B., & Kinzler, K. D. (2015). The exposure advantage: Early exposure to a multilingual environment promotes effective communication.

Psychological science, 26, 1090-1097.

- Filippova E (2014) Irony production and understanding. In D Matthews (ed.), *Pragmatic Development in First Language Acquisition* (pp. 261–278). Amsterdam/Philadelphia: John Benjamins.
- Genesee, F., & Nicoladis, E. (2007). Bilingual first language acquisition. In E. Hoff & M. Shatz (Eds.), *Handbook of Language Development* (pp. 324–342). Malden, MA: Blackwell Publishing.
- Genesee, F., Nicoladis, E., & Paradis, J. (1995). Language differentiation in early bilingual development. *Journal of child language*, 22, 611–631.
- Genesee, F., Tucker, G. R., & Lambert, W. E. (1975). Communication skills of bilingual children. *Child development*, 1010–1014.
- Gibbs, R. W., & Colston, H. L. (2012). *Interpreting figurative meaning*. New York: Cambridge University Press.
- Grey, S. & Tagarelli, K.M. (2018). *Psycholinguistic Methods*. In A. Phakiti, P. De Costa, L. Plonsk, S. Starfield (Eds.), *The Palgrave Handbook of Applied Linguistics Research Methodology* (pp. 287-312). London: Palgrave Macmillan.
- Grodner, D., Klein, N., Carbary, K., & Tanenhaus, M. (2010). “Some,” and possibly all, scalar inferences are not delayed: Evidence for immediate pragmatic enrichment. *Cognition*, 116, 42
- Grosjean, F., & Li, P. (2013). *The Psycholinguistics of Bilingualism*. New York: Wiley-Blackwell.
- Grice, H. P. (1989). *Studies in the Way of Words*. Cambridge, MA: Harvard University Press.
- Huang, Y., & Snedeker, J. (2009). Online interpretation of scalar quantifiers: Insight into the semantics-pragmatics interface. *Cognitive Psychology*, 58, 376–415.

- Hulstijn, J. H. (2010). Measuring second language proficiency. In E. Blom & S. Unsworth (Eds.), *Experimental methods in language acquisition research*, (pp. 185-199). Amsterdam/Philadelphia: John Benjamins.
- Kecskes, I. (2015). How does pragmatic competence develop in bilinguals?. *International Journal of Multilingualism* 12, 419–434.
- Koike, D. A., & Palmiere, D. T. (2011). First and second language pragmatics in third language oral and written modalities. *Foreign language annals*, 44, 80–104.
- Liu, L., & Kager, R. (2017). Perception of tones by bilingual infants learning non-tone languages. *Bilingualism: Language and Cognition*, 20, 561–575.
- Marcus, G. F., Pinker, S., Ullman, M., Hollander, M., Rosen, T. J., Xu, F., & Clahsen, H. (1992). Overregularization in language acquisition. *Monographs of the Society for Research in Child Development*, 57, 228.
- Marty, P. P., & Chemla, E. (2013). Scalar implicatures: Working memory and a comparison with only. *Frontiers in Psychology*, 4, 403.
- Matthews, D., Biney, H., & Abbot-Smith, K. (2018). Individual differences in children's pragmatic ability: A review of associations with formal language, social cognition, and executive functions. *Language Learning and Development*, 14, 186-223.
- Montanari, S. (2008). Pragmatic differentiation in early trilingual development. *Journal of Child Language*, 36, 597–627.
- Politzer-Ahles, S. (2020). What can electrophysiology tell us about the cognitive processing of scalar implicatures?. *Language and Linguistics Compass*, 14, 1-22.
- Portolés-Falomir, L. (2015). *Multilingualism and Very Young Learners*. Berlin, Boston: De Gruyter Mouton.
- Quay, S. (2008). Dinner conversations with a trilingual two-year-old: Language socialization in a multilingual context. *First Language*, 28, 5–33.

- Rahimi Domakani, M., Hashemian, M., & Mansoori, S. (2013). Pragmatic awareness of the request speech act in English as an additional language: Monolinguals or bilinguals?. *Research in Applied Linguistics*, 4, 88–110.
- Rothman, J., Alonso, J. G., & Puig-Mayenco, E. (2019). *Third language acquisition and linguistic transfer*. Cambridge University Press.
- Safont-Jordà, M. P. (2003). Metapragmatic awareness and pragmatic production of third language learners of English: A focus on request acts realizations. *The International Journal of Bilingualism*, 7, 43–69.
- Safont-Jordà, M. P. (2005a). *Third language learners: Pragmatic production and awareness* (Vol. 12). Multilingual Matters.
- Safont-Jordà, M. P. (2005b). Pragmatic production of third language learners of English: A focus on request acts modifiers. *International Journal of Multilingualism*, 2, 84–104.
- Safont-Jordà, M. P. (2007). Pragmatic production of third language learners: A focus on request external modification items. In M. P. Safont-Jordà & E. Alcón-Soler (Eds.), *Intercultural language use and language learning* (pp. 167–189). Dordrecht: Springer.
- Safont-Jordà, M. P. (2011). Early requestive development in a consecutive third language learner. *International Journal of Multilingualism*, 8, 256–276.
- Safont-Jordà, M. P. (2012). A longitudinal analysis of Catalan, Spanish and English request modifiers in early third language learning. In D. Gabrys-Barker (Ed.), *Cross-linguistic Influences in Multilingual Language Acquisition* (pp. 99–114). Dordrecht: Springer.
- Safont-Jordà, M. P. (2013a). Pragmatic Competence in Multilingual Contexts. In C. Chappelle (Ed.), *The Encyclopaedia of Applied Linguistics* (pp. 4510–4516). Wiley: Blackwell.

- Safont-Jordà, M. P. (2013b). Early stages of trilingual pragmatic development. A longitudinal study of requests in Catalan, Spanish and English. *Journal of pragmatics*, 59, 68–80.
- Safont-Jordà, M. P. (2017). Third language acquisition in multilingual contexts. In J. Cenoz, D. Gorter & S. May (Eds.), *Language Awareness and multilingualism* (pp. 137–148). Cham, Switzerland: Springer.
- Safont-Jordà, M. P. & Alcón-Soler, E. (2012). Teachability of request act peripheral modification devices in third language learning contexts. In M. Economidou-Koetsidis & H. Woodfield (Eds.), *Interlanguage Request Modification* (pp. 275–314). Amsterdam: John Benjamins.
- Safont-Jordà, M. P. & Portolés-Falomir, L. (2013). Research methods effects on third language learners' refusals. In O. Martí & P. Salazar (Eds.), *Refusals in instructional contexts and beyond* (pp. 213–235). Amsterdam: Rodopi.
- Schroeder, S. R. (2018). Do bilinguals have an advantage in theory of mind? A meta-analysis. *Frontiers in Communication*, 3, 36.
- Searle, J. R. (1969). *Speech Acts*. Cambridge: Cambridge University Press.
- Searle, J. R. (1976). The classification of illocutionary acts. *Language in Society*, 5, 1–24.
- Siegal, M., Iozzi, L., & Surian, L. (2009). Bilingualism and conversational understanding in young children. *Cognition*, 110, 115–122.
- Siegal, M., Matsuo, A., Pond, C., & Otsu, Y. (2007). Bilingualism and cognitive development: Evidence from scalar implicatures. In Y. Otsu (Ed.), *Proceedings of the Eighth Tokyo Conference on Psycholinguistics* (pp. 265–280). Tokyo, Japan: Hituzi Syobo.
- Siegal, M., Tallandini, M.A., Pelizzoni, S., & Michelin, C. (2012). Exploring the effects of bilingualism on children's conversational understanding and moral sense. In M.

- Siegal & L. Surian (Eds.), *Access to language and cognitive development* (pp. 219-240). New York: Oxford University Press.
- Slabakova, R. (2010). Scalar implicatures in second language acquisition. *Lingua*, *120*, 2444-2462.
- Sorace, A. (2011). Pinning down the concept of ‘interface’ in bilingualism. *Linguistic Approaches to Bilingualism*, *1*, 1–33.
- Sorace, A. (2012). Pinning down the concept of interface in bilingual development: A reply to peer commentaries. *Linguistic approaches to bilingualism*, *2*, 209-217.
- Sorace, A., & Serratrice, L. (2009). Internal and external interfaces in bilingual language development: Beyond structural overlap. *International Journal of Bilingualism*, *13*, 195–210.
- Spotorno, N. & Noveck, I.A. (2014) When is irony effortful? *Journal of Experimental Psychology: General* *143*, 1649.
- Sperber, D., & Wilson, D. (2002). Pragmatics, modularity and mind-reading. *Mind & Language*, *17*, 3–23.
- Stavans, A., & Webman Shafran, R. (2018). The pragmatics of requests and refusals in multilingual settings. *International Journal of Multilingualism*, *15*, 149–168.
- Syrett, K., Lingwall, A., Perez-Cortes, S., Austin, J., Sánchez, L., Baker, H., Germak, C., & Arias-Amaya, A. (2017). Differences between Spanish monolingual and Spanish-English bilingual children in their calculation of entailment-based scalar implicatures. *Glossa: A Journal of General Linguistics*, *2*, 31.
- Taguchi, N. (2009). *Pragmatic competence*. Berlin, Germany: Mouton de Gruyter.
- Taguchi, N., & Yamaguchi, S. (2019). Comprehension of implicature in L2 pragmatics research. In N. Taguchi (Ed.), *The Routledge handbook of Second Language Acquisition and pragmatics* (pp. 31–46). London/New York: Routledge.

- Tiv, M., Deodato, F., Rouillard, V., Wiebe, S., & Titone, D. (2021). Second language experience impacts first language irony comprehension among bilingual adults. *Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale*, 75, 126.
- Tiv, M., Rouillard, V., Vingron, N., Wiebe, S., & Titone, D. (2019). Global second language proficiency predicts self-perceptions of general sarcasm use among bilingual adults. *Journal of Language and Social Psychology*, 38, 459–478.
- Tomasello, M. (2008). *Origins of Human Communication*. MIT Press
- Tomlinson Jr, J. M., Bailey, T. M., & Bott, L. (2013). Possibly all of that and then some: Scalar implicatures are understood in two steps. *Journal of memory and language*, 69, 18-35.
- Trebits, A. (2019). Degree of multilingualism, code-switching and intensity of target language contact predict pragma-linguistic awareness in an English as a foreign language context. *International Journal of Multilingualism*.
- Trosborg, A. (1995). *Interlanguage pragmatics: Requests, complaints, and apologies*. New York: Mouton de Gruyter.
- Webman Shafran, R. (2019). Level of directness and the use of please in requests in English by native speakers of Arabic and Hebrew. *Journal of Pragmatics*, 148, 1–11.
- Wright, W. E., Boun, S., & García, O. (2017). *The handbook of bilingual and multilingual education*. Malden, MA: John Wiley & Sons.
- Yow, W. Q., & Markman, E. M. (2011a). Bilingualism and children's use of paralinguistic cues to interpret emotion in speech. *Bilingualism: Language and Cognition*, 14, 562–569.
- Yow, W. Q., & Markman, E. M. (2011b). Young bilingual children's heightened sensitivity to referential cues. *Journal of Cognition and Development*, 12, 12–31.

Zand-Moghadam, A., & Akeh, A. (2020). Investigating pragmatic competence, metapragmatic awareness and speech act strategies among Turkmen-Persian bilingual and Persian monolingual EFL learners: A cross-cultural perspective. *Journal of Intercultural Communication Research*, 49, 22–40.