Research Article

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L3 acquisition of aspect: the influence of structural similarity, analytic L2 and general L3 proficiency

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Abstract: Research has shown that many factors influence the transfer process in L3 acquisition (e.g., language distance, L2-status, proficiency in the L2/L3). Regarding the L2/L3 acquisition of aspect, a lot of research on the influence of the L1 has been conducted; however, to date, only a very limited amount of studies has analysed the influence an L2 exerts on the acquisition of aspect in an L3. The present study, therefore, focuses on L3 acquisition of perfective/imperfective aspect. We investigated 109 German-speaking learners of L3 Spanish with previous linguistic L2 knowledge in English. Data were elicited by means of a language background questionnaire, a c-test for overall proficiency measures in the L3, an oral retelling of two picture-based narratives, and two semantic interpretation tasks to measure the participants’ knowledge of aspect in the L2 and the L3 (i.e., analytic proficiency). The findings provide empirical evidence that L2 English positively influences the acquisition of aspect in L3 Spanish if structural similarities between the L2 and the L3 exist. However, positive L2 transfer seems to depend on L2 and L3 proficiency levels.

Keywords: L2/L3 proficiency; Spanish past tenses; tense and aspect; third language (L3) acquisition; transfer/cross-linguistic influence

1 Introduction

In the last 30 years, there has been an increased interest in how previous linguistic knowledge affects L3 acquisition.1 It has been shown that many different factors

1 According to Hammarberg (2010: 97) we use the term third language (L3) as a cover-term referring “to a non-native language which is currently being used or acquired in a situation where the person already has knowledge of one or more L2s in addition to one or more L1s”.

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influence the transfer process (e.g., Williams and Hammarberg 1998; De Angelis 2007). Bardel and Sánchez (2020), for example, have demonstrated that the proficiency level in the L2 and the L3 plays a major role (e.g., transfer from the L2 to the L3 seems to be more likely to occur in high L2 proficiency levels). However, empirical evidence – especially in the framework of tense-aspect-studies – is still scarce. Although the influence of the L1 in L2 acquisition of Romance past tenses has been extensively investigated (e.g., Amenós Pons et al. 2019; Diaubalick and Guijarro-Fuentes 2019), there are only a few studies that have focused on the influence of the L1 and the L2 in L3 acquisition of Spanish (e.g., Diaubalick et al. 2020; Eibensteiner 2019, 2021).

In the present study, we therefore focus on the L3 acquisition of perfective/imperfective aspect in Spanish. We essentially concentrate on the influence of structural similarity, analytic proficiency in the L2/L3 (i.e., knowledge of aspect) and general proficiency in the L3. The paper is organised as follows: The introduction is followed by some notes on the marking of aspect in German, English and Spanish. Subsequently, we give a state-of-the-art review on transfer in L3 acquisition and comment on previous L3 studies in the realms of tense and aspect. Then, we present the methodological aspects of the study and its results. Finally, we discuss the findings and some limitations, and present some pedagogical implications for foreign language teaching.

2 The encoding of aspect in German, English and Spanish

Tense is the grammaticalized expression of time, whereas (grammatical) aspect\(^{2}\) “concerns the different perspectives which a speaker can take” (Klein 1994: 16). Perfective aspect views the situation in its totality, whereas imperfective aspect makes “explicit reference to the internal temporal structure of a situation, viewing a situation from within” (Comrie 1976: 24). Imperfective aspect is usually subcategorized into habitual and continuous meaning. The former describes “a regular iteration of an event, such that the resulting habit is regarded as a characteristic property of a given referent” (Bertinetto and Lenci 2012: 852). The latter is further

\(^{2}\) In the literature, grammatical aspect is usually differentiated from lexical aspect (i.e., the inherent semantics of the verb and its arguments). In the L2/L3 literature on the acquisition of tense and aspect, most authors refer to Vendler’s (1957) classification, who distinguishes four lexical aspectual classes (so-called ‘time schemata’): states (stative, durative, atelic), activities (dynamic, durative, atelic), accomplishments (dynamic, durative, telic) and achievements (dynamic, punctual, telic).
divided into progressive and (non-progressive) continuous meaning (Arche 2014: 810–811; Deo 2012: 165). In general, progressive and continuous meanings are similar, both referring to events that are “progressing dynamically over a time frame” (Mair 2012: 803). The main difference between both is that the latter is combinable with stative predicates (e.g., to be), whereas progressivity generally is not. Progressivity can therefore be defined as progressive meaning in combination with dynamic predicates (e.g., to speak), whereas – in our definition – (non-progressive) continuity combines with stative predicates only.

In general, all languages of the world can express aspectual distinctions; however, they differ with regard to whether they rely on pragmatic, lexical or grammatical devices. German, for example, is a so-called non-aspect language (e.g., Andersson 2004), and does therefore not possess any grammatical devices to express grammatical aspect. As a consequence, both German past tenses, the compound Perfekt (ger. *er hat gesprochen,* ‘he has spoken’) and the synthetic Präteritum (ger. *er sprach,* ‘he spoke’) respectively, convey the temporal notion of pastness, without marking aspect at all. Consequently, by using lexical or pragmatic devices, both tenses can convey the semantic notions of perfectivity, habituality, progressivity and continuity, irrespectively of lexical aspect. For instance, in the first sentence the context in combination with the adverbial (ger. *gestern,* ‘yesterday’) triggers a perfective interpretation of the situation, whereas in the second example the subordinate phrase starting with the conjunction *while* has to be interpreted imperfectively:

(1) **Gestern sprach sie mit Rafael.**

Yesterday spoke$_{PST}$ she with Rafael.

‘Yesterday she spoke with Rafael.’

(2) **Während sie mit ihm sprach, begann er zu lachen.**

While she with him spoke$_{PST}$ started$_{PST}$ he to laugh.

‘While she was speaking with him, he started to laugh.’

English, in contrast, possesses an obligatory and fully grammaticalized progressive aspect. In the past domain, the aspectual opposition is expressed by the non-progressive Simple Past and the progressive periphrasis (*be + V-ing*) (e.g., Declerck 2006). The former conveys perfective meaning and is combinable with all lexical aspectual classes, whereas the latter denotes progressive meaning and is generally not compatible with stative predicates. Interestingly, and in contrast to Spanish, continuity is conveyed by the Simple Past and not by an imperfective form (Domínguez et al. 2017: 434–437). Finally, the notion of habituality is expressed by the periphrases *used to/would + infinitive* or the Simple Past in combination with a repetitive adverb like *habitually* (e.g., Declerck 2006).
In Spanish, the aspectual distinction between perfective and imperfective is grammaticalized in the past domain only (e.g., Zagona 2012). The perfective part of the opposition is expressed by the Preterit (sp. habló, ‘(s)he spoke’), whereas the imperfective one by the Imperfect (sp. hablaba; ‘(s)he was speaking/used to speak’):

(3)  
Ayer habló con Rafael.  
Yesterday (s)he spoke_{PFV} with Rafael.  
‘Yesterday (s)he spoke with Rafael.’

(4)  
Mientras hablaba empezó a reírse.  
While (s)he was speaking_{IPFV} he started_{PFV} to laugh.  
‘While she was speaking, he started to laugh.’

In example 3, the use of habló denotes a perfective viewpoint, whereas hablaba emphasises the action of talking without expressing the boundaries of the situation (i.e., imperfective viewpoint). As stated above, the Spanish Imperfect conveys habitual, continuous and progressive meaning. Like English, Spanish additionally possesses periphrastic constructions for the expression of progressive (i.e., estar + gerund) and habitual meaning (i.e., soler + infinitive). It is important to note that estar + gerund can be used interchangeably with the Imperfect in progressive contexts with dynamic predicates.4

In sum, Table 1 shows that in German both past tense forms can be applied in order to denote perfective, habitual, continuous and progressive meaning, whereas English speakers are forced to mark aspect in a grammatical way (Simple Past vs. be + V-ing). The same is true for Spanish speakers who, in contrast, have to make a distinction between the Preterit (perfective) and the Imperfect (imperfective).5

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3 The compound perfect (sp. ha hablado, ‘(s)he has spoken’) is used to talk about situations with present relevance (e.g., resultative or hodiernal meanings). The analysis of the acquisition of this target language form is interesting, but out of the scope of the present paper.

4 An anonymous reviewer wanted me to point out that in Spanish, in contrast to English, the auxiliary estar can be provided in its perfective as well as in its imperfective form (e.g., Ana estuvo jugando dos horas ella sola; ‘Ana was playing for 2 h all by herself’; see Bertinetto 2000: 571). In this sense, the Spanish aspect system differs from its English counterpart. However, both languages use periphrastic constructions in order to express progressive meaning and are, in this sense, comparable.

5 Table 1 presents the differences between German, English and Spanish regarding the forms they use to express the basic aspectual notions of perfectivity and imperfectivity. Due to space limitations, some periphrases have not been considered in the table (e.g., habitual periphrases such as used/would to + infinitive or soler + infinitive).
3 Transfer in L3 acquisition

3.1 Factors affecting transfer in L3 acquisition

Linguistic transfer has traditionally been described as “the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired” (Odlin 1989: 27). Consequently, transfer is a highly complex phenomenon, which is influenced by many different factors (e.g., De Angelis 2007; Jarvis and Pavlenko 2010; Rothman et al. 2019 for an overview).

In a pioneer study, Williams and Hammarberg (1998) argue that four aspects are especially important for the selection of a language as the main transfer source: typology, proficiency, recency\(^6\) and the L2-status. They introduce the L2-status-factor as they realize that their only participant relies mainly on the L2 (German) – and not on the L1 (English) – for lexical construction attempts in the L3 (Swedish). In line with the argumentation of Williams and Hammarberg (1998), the idea of an L2-status-factor-model for transfer in L3 acquisition has been advanced (e.g., Falk and Bardel 2010). In this vein, Bardel and Falk (2012: 65) argue that “the L2 can in some situation outrank the L1 and become a more important transfer source” for the L3. Their argumentation is based on declarative/procedural models of language acquisition (e.g., Paradis 2009; Ullman 2015), which assume that the “processing of linguistic forms that are computed grammatically by procedural memory in L1 is expected to be dependent to a greater extent upon declarative memory in L2” (Ullman 2001: 109). Bardel and Falk (2012: 70–74), then, argue that the learning principles underlying L2 and L3 learning share many similarities (i.e., age of onset, learning conditions, etc.), and are consequently quite different in comparison to L1 acquisition. As a result, L3 learners mainly rely on their L2 and not on their L1 for language transfer. Supporters of the L2-status-factor-model do not claim that L1 transfer is impossible. However, it is thought to be unlikely,

\(^6\) The recency factor is not discussed due to space constraints.

### Table 1: Forms used to express the basic aspectual notions: A comparison of German, English and Spanish.

<table>
<thead>
<tr>
<th>Meanings</th>
<th>German</th>
<th>English</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective/past</td>
<td>Perfekt/Präteritum</td>
<td>Simple Past</td>
<td>Preterit</td>
</tr>
<tr>
<td>Habitual</td>
<td>Perfekt/Präteritum</td>
<td>Simple Past</td>
<td>Imperfect</td>
</tr>
<tr>
<td>Continuous</td>
<td>Perfekt/Präteritum</td>
<td>Simple Past</td>
<td>Imperfect</td>
</tr>
<tr>
<td>Progressive</td>
<td>Perfekt/Präteritum</td>
<td>Be + V-ing</td>
<td>Imperfect/estar + gerund</td>
</tr>
</tbody>
</table>

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unless the learners have high explicit metalinguistic L1 knowledge at their disposal and change their learning strategy (Falk et al. 2015).

Another important factor regarding transfer in L3 acquisition is that of language distance used here as a cover term for typological/structural similarities and differences between languages. In the generative framework, the Typological Primacy Model (e.g., Rothman 2010) argues that typological similarities between two languages are highly influential regarding the occurrence of transfer. Rothman (2010: 112) claims that the “[s]yntactic properties of the closest (psycho)typological language, either the L1 or L2, constitute the initial state hypotheses in multilingualism”. In his opinion, transfer from the closest (psycho)typological language is holistic (i.e., all syntactic properties of the selected language are transferred) and can be facilitative (positive) or non-facilitative (negative). Independently of the research framework, most authors agree that language distance plays an important role in L3 acquisition. In this context, Kellerman (1983: 114) introduces the concept of psychotypology, which refers to the “learner’s [subjective] perception of language distance”. According to the author, psychotypology and not actual linguistic similarities are the driving force for transfer. Consequently, whether transfer is positive or negative depends strongly on the learners’ analyses of the language systems under consideration. In sum, it can be said that (positive) transfer seems to be more likely to occur whenever learners perceive linguistic structures (or languages in general) as similar.

Furthermore, the influence of proficiency levels in an L2/L3 has been widely discussed in the literature (e.g., Angelovska et al. 2020; Bardel and Sánchez 2020). It has already been argued in Williams and Hammarberg (1998) that a background language, in which the learners have obtained high proficiency levels is more likely to influence the L3 (e.g., Aribas and Cele 2019; Müller-Lancé 2006; Sanz et al. 2015; Tremblay 2006; Woll 2016). However, it has also been demonstrated that high L2 proficiency is not a prerequisite for transfer. For example, Sánchez (2020) focusses on syntactic transfer from L2 German to L3 English by Spanish-Catalan speakers. She divided her participants into two groups according to their L2 proficiency in the syntactic properties under consideration. The data show that negative transfer occurs more frequently in low than in high levels of L2 proficiency. With respect to proficiency levels in the L3, most authors maintain that transfer is more likely to occur at low proficiency levels as the learners need to fill knowledge gaps in the target language (henceforth TL) (e.g., De Angelis 2007; Sánchez 2015).

7 It should be mentioned here that within the generative framework several L3 transfer models have been developed such as the Cumulative Enhancement Model (Flynn et al. 2004), the Scalpel Model (Slabakova 2017) or the Linguistic Proximity Model (Westergaard et al. 2017).
Finally, it has to be mentioned that several authors distinguish between general proficiency (i.e., looking at proficiency holistically) and proficiency in relation to specific aspects of a language (i.e., analytic approaches focussing on the proficiency regarding a specific grammatical phenomenon) (see Sánchez 2020: 215–216 for a detailed discussion of different definitions of proficiency). The measurement of analytic proficiency is especially important if the study analyses positive transfer effects, because positive transfer of a grammatical phenomenon will only take place if the learners have a sufficiently high (analytic) proficiency level in the grammatical phenomenon under consideration (e.g., Falk and Bardel 2010). In the next chapter, we will review to what extent the factors presented in this Section influence the acquisition of aspect in a Romance L3.

### 3.2 Transfer in the acquisition of tense and aspect in a Romance L3

The literature on the acquisition of tense and aspect in Romance languages has a long time mainly analysed the influence of lexical aspect, discourse principles, syntactic properties, language cognition (e.g., frequency of forms), information structure and L1 transfer (Bardovi-Harlig and Comajoan 2020; Comajoan 2014; Salaberry 2008). Recently, some studies focussing on the L3 acquisition of tense and aspect in Romance languages appeared (Comajoan 2019; Diaubalick et al. 2020; Eibensteiner 2019, 2021; Fessi 2014; Foote 2009; Lu et al. 2019; Salaberry 2005, 2020; Toth 2019, 2020; Vallerossa 2021; Vallerossa et al. 2021). However, many of the papers cited in parentheses define the TL as an L3, but do not explicitly answer questions related to L3 acquisition. In the following, we will review those studies that are relevant for our purposes.

Foote (2009) examined whether imperfective meaning from one Romance language could be transferred to another. She analysed data from several learner groups elicited by a sentence conjunction judgment task. Overall, her results show that participants who were able to resort to a Romance language (irrespectively of whether the source language was the L1 or the L2) had significantly better results on the test than learners who could not fall back on a Romance language (i.e., Anglophone L2 learners). She interprets these findings as positive transfer of the “semantic contrasts between Romance past tenses from the previously known Romance language” (Foote 2009: 109).

Salaberry (2005) investigated the influence of L2 Spanish on the acquisition of L3 Portuguese by L1 English speakers. His results illustrate that the learners generally achieved a high level of proficiency in the selection of past tense aspectual marking in the L3. Nevertheless, there was a discrepancy with stative predicates, where L3 learners were less consistent in their choices than native speakers of Portuguese. “Hence, it appears that the influence of the L1 English
conceptualisation of aspectual knowledge […] had an effect on the conceptualisation of non-prototypical markers of states” (Salaberry 2020: 57). In line with the argumentation supplied by declarative/procedural models of language acquisition (Paradis 2009; Ullman 2015), Salaberry claims that only prototypical meanings can be fully acquired in an L2/L3 because these notions can be learned with the help of explicit learning processes provided by declarative memory. Hence, non-prototypical meanings cannot be fully acquired in an L2/L3, because learners have to rely on specific implicit learning mechanisms that are only available in L1 acquisition. Following these lines of reasoning, only prototypical meanings can be transferred from an L2 to an L3, simply because these are the only notions that can be fully acquired by L2 learners. Consequently, with regard to transfer of non-prototypical meanings, L3 learners have to rely on their L1 (Salaberry 2020).

The assumptions presented above were the starting point for the study of Diaubalick et al. (2020) in which the influence of prototypicality on transfer of (im-)perfective meaning from a Romance L2 to L3 Spanish was investigated. The authors conducted a written 40-item discourse-based forced-choice task with 73 Germanophone multilinguals learning Spanish as L3 and a monolingual Spanish-speaking native control group (n = 149). The experimental group was divided into three groups according to the participants’ general proficiency in their Romance L2s (i.e., no knowledge, basic, or advanced knowledge in at least one Romance L2 based on self-assessments). The results show that in prototypical contexts the choices of learners who had advanced knowledge of a Romance L2 overlap most often with those of native speakers, whereas learners with basic or without knowledge of a Romance L2 contrast significantly with them. For the non-prototypical contexts, in contrast, no positive effects of knowledge in a Romance L2 were found. The authors interpret their findings as showing positive L2 transfer in prototypical, and negative L1 transfer in non-prototypical contexts.

Eibensteiner (2019) measures the participants’ proficiency in relation to their knowledge of aspect in L2 English and L3 Spanish (i.e., analytic proficiency). He elicited data among 36 German-speaking learners of L3 Spanish by means of two semantic interpretation tasks (one for the L2 and one for the L3). The participants were then divided into two L2 proficiency groups (i.e., one group with basic and one group with advanced L2 knowledge of aspect in English). The results generally show that aspectual knowledge (henceforth AK) acquired through L2 English positively influenced the acquisition of aspectual distinctions in L3 Spanish. However, positive transfer was restricted to form-meaning-mappings with perfective (Simple

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8 In the tense-aspect literature, prototypical meanings are usually defined as the combination of imperfective aspect with atelic predicates or perfective aspect with telic ones; non-prototypical meanings, in turn, can be defined as the combination of perfective aspect with atelic predicates or imperfective aspect with telic ones (e.g., McManus 2013).
Past ↔ Preterit), progressive (be + V-ing ↔ estar + gerund) and habitual (used to/ would + infinitive ↔ Imperfect) semantics (Eibensteiner 2019). Additionally, the author interprets the rather low ratings in continuous contexts as a negative transfer effect of the learners’ L2 English, as in this specific semantic context the learners have to remap form-meaning-associations between the source and the TL.

Finally, there are two studies from Vallerossa and colleagues that are worth mentioning. Vallerossa et al. (2021) investigated 34 Swedish-speaking learners of Italian as additional language. In order to analyse the influence of L2 knowledge, the authors divided the participants into different subgroups based on the previous linguistic knowledge in Romance languages and their knowledge of aspect in L2 English measured by a semantic interpretation task. The AK in the TL was also measured by an interpretation task including perfective, habitual und progressive semantics. Overall, the results show significant differences between the Romance and non-Romance group especially in habitual contexts. This is interpreted as positive transfer from a Romance L2. Additionally, the learners with high AK in English generally outperformed those with low AK indicating that L2 English influenced the learners’ performance in L3 Italian positively. Additionally, Vallerossa (2021) analysed 25 undergraduate multilingual learners of Italian with Swedish as L1. The participants had to retell a picture story and were then divided into four groups according to their proficiency in the TL and their knowledge of a Romance L2. On the one hand, he interprets his results as showing evidence for L1 transfer especially with regard to the overgeneralization of temporal meaning in the low proficiency group (i.e., the Default Past Tense Hypothesis; Salaberry 2008). On the other hand, he also acknowledges positive effects of a Romance L2 among both low and high proficient learners corroborating the results presented in Vallerossa et al. (2021).

In sum, the review of studies focussing on L3 acquisition of tense and aspect in a Romance language has illustrated that L2 transfer of aspectual meaning is in principle possible. First empirical evidence also suggests that it mainly occurs in prototypical contexts and that a sufficiently high proficiency level in the L2 seems necessary in order to transfer form-meaning-mappings to the L3. However, to date, the relationship between L2/L3 proficiency and transfer has not been sufficiently addressed and the empirical data regarding the influence of L2 English on the acquisition of L3 Spanish is still scarce.

4 The current study

4.1 Predictions

The present study aims at investigating the relationship between L2/L3 proficiency and transfer in the acquisition of (im-)perfective aspect in L3 Spanish by German-speaking learners with L2 knowledge in English. In other words, we
analyse the influence of aspectual L2 knowledge on the learners’ knowledge of aspect in the L3 (i.e., analytic proficiency), and whether such transfer effects depend on general proficiency in the L3. We argue that in this specific language combination, the learners mainly rely on L2 English and not on L1 German for (positive) transfer to the L3 for reasons relied to the L2 status as well as typological/structural similarities (see Section 3.1): Positive transfer from German to Spanish seems unlikely as the learners cannot draw on any grammaticalized aspectual forms in their L1. In their L2 English, in turn, they encounter aspectual distinctions marked grammatically, which can be transferred to the L3 resulting in positive transfer effects. In short, we hypothesize that form-meaning-mappings from L2 English will be transferred to L3 Spanish, which will result in positive transfer if the form-meaning-pairings between the L2 and the L3 are similar. We therefore predict positive L2 English influence in perfective and progressive periphrasis contexts (i.e., progressive contexts in which estar + gerund is used), but not in continuous, habitual and progressive Imperfect contexts (see Section 4.2), because the Imperfect is a verb form not existent in English, and Spanish learners can therefore not rely on any pre-existent linguistic L2 knowledge. We additionally claim that positive L2 influence is related to advanced understandings of aspect in the L2 (i.e., high analytic proficiency) and that, in general, it will be found primarily within low levels of general L3 proficiency.

4.2 Task design: instruments and data coding

The battery of tests employed in the data collection consisted of a c-test for an overall proficiency measure in L3 Spanish, a background questionnaire to get further information about the learners’ language learning biography (e.g., details about their previous linguistic knowledge), two oral story-retellings of the picture-based narratives Tus vacaciones and Nati y Pancho⁹ (e.g., Domínguez et al. 2013), and two semantic interpretation tasks (henceforth SIT) for L2 English and L3 Spanish respectively. The oral story-retellings as well as the SITs were used in order to measure the participants’ knowledge of aspect in the L2 as well as in the L3. This procedure is important to analyse the influence of L2 analytic proficiency (i.e., the independent variable operationalized by the English SIT) on L3 analytic proficiency (i.e., the dependent variable operationalized by the Spanish SIT and the story-retellings). Additionally, the results of the c-tests are

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⁹ Both narratives are inspired by tasks used by the SPLLOC research team (e.g., Domínguez et al. 2013). Tus vacaciones is based on Las hermanas and Nati y Pancho on the Cat Story (Langley, 2000). They were used with the permission of Laura Domínguez and Jonathan Langley.
used to operationalize the construct “general Spanish proficiency” (i.e., the second independent variable).

4.2.1 Retelling of picture-based narratives

For the collection of oral production data, one controlled (Tus vacaciones) and one impersonal narrative (Nati y Pancho) were used (see Eibensteiner 2021 for more detailed information). This decision is based on the fact that narratives are past-oriented by definition and have an internal structure, often referred to as foreground and background (Bardovi-Harlig 2013: 230), which is important for the elicitation of past tense morphology. The picture-based story, Tus vacaciones, consisted of 26 different pictures and provided prompts in order to force the participants to produce prototypical and non-prototypical combinations of lexical and grammatical aspect. Nati y Pancho, in turn, contained 40 pictures and was primarily designed to elicit Spanish past tense forms in naturally occurring contexts.

The participants had approximately ten minutes for each story to prepare their oral speech. After that, they were asked to retell the story. All speech was audio-recorded, transcribed and coded for lexical aspect and forms produced (Preterit (PS), Imperfect (IMP), progressive periphrasis (GER) etc.), which were also coded for grammatical appropriateness (i.e., the occurrence of the forms in the corresponding semantic contexts). The forms produced were counted and accuracy rates (in percentages) were calculated. In order to analyse between-group differences (see Section 4.3 for a description of the different groups), ANOVAs with Tukey-HSD and Games-Howell post-hoc tests were carried out.

4.2.2 Semantic interpretation tasks (SIT)

The production data was complemented by experimental data in order to get a fuller picture of the learners’ interlanguage as it gives the researcher the opportunity to investigate semantic contexts that are not sufficiently produced in the production data. The SITs were used in order to assess the participants’ knowledge of aspect in L2 English and L3 Spanish. They consisted of a German context followed by two sentences in English or Spanish (depending on the TL of the task). The participants filled in the different tests (paper-and-pencil format) and

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10 Consequently, the study basically provides data on reflective, conscious L3 knowledge (i.e., no spontaneous use of L3 Spanish was tested).
11 We decided not to provide the context in the TL for two reasons: First, providing the context in German ensures that also less experienced learners are able to understand the situation properly, which is important for judging the acceptability of the sentences. Additionally, as Domínguez et al. (2013: 570) point out, we are not sure that introducing the context in the TLs would have been
had to rate the acceptability of the two sentences on a Likert scale from −2 (totally unacceptable) to +2 (totally acceptable).

As aforementioned, the English SIT was used to determine the participants’ analytic proficiency of AK in the L2. In order to operationalize the construct “knowledge of aspect in English”, the difference between the Simple Past and the Past Progressive as the only fully grammaticalized aspectual distinction in English was tested. The task consisted of 15 items including five past and seven past progressive contexts (six activity and six telic predicates plus three distractor items) as exemplified in Table 2.12

**Table 2:** Semantic contexts of the English SIT.

<table>
<thead>
<tr>
<th>Semantic contexts</th>
<th>Contexts and sentences to be rated on the Likert scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Past</strong></td>
<td>Paul is a construction worker. Last month, with the help of his colleagues, he finally built the bridge.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Paul and his colleagues built the bridge.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Paul and his colleagues were building the bridge.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
<tr>
<td><strong>Past progressive</strong></td>
<td>Lena was writing an e-mail to Bernhard. However, she was not able to finish writing, because her mother entered the room and interrupted her.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>She wrote an e-mail.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>She was writing an e-mail.</td>
</tr>
<tr>
<td></td>
<td>−2 −1 0 1 2</td>
</tr>
</tbody>
</table>

In contrast to the English SIT, the Spanish one was used to measure the participants’ knowledge of aspect in the TL (see Table 3). It consisted of 35 items with four semantic contexts categorized into five conditions: ten perfective (condition A), twelve progressive (i.e., progressive periphrasis (condition B)) and progressive Imperfect (condition C), four continuous (condition D) and four habitual (condition E) contexts (eleven telic, eleven activity and eight stative predicates plus five distractor items).13

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12 In the original tasks (the English and Spanish SITs), the contexts were given in German and not in English; for the purpose of the present article, all German contexts were translated into English. The typical preferences of native speakers are underlined.

13 Some items are based on Montrul and Slabakova (2002), Salaberry (2011) as well as on a task constructed by the SPLLOC research team (e.g., Domínguez et al. 2013).
Table 3: Semantic contexts (conditions) of the Spanish SIT.

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<thead>
<tr>
<th>Semantic contexts (conditions)</th>
<th>Contexts and sentences to be rated on the Likert scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Past perfective (A)</strong></td>
<td>My sister and I went to the ‘Bodensee’ to swim. We spent the whole weekend there, and we enjoyed the cold water.</td>
</tr>
<tr>
<td></td>
<td>Mi hermana y yo nadamos en el lago.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Mi hermana y yo nadábamos en el lago.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>(‘My sister and I swam/were swimming in the lake.’)</td>
</tr>
<tr>
<td><strong>Past progressive peripherasis (B)</strong></td>
<td>I was swimming ten laps in the swimming pool. After five laps I had no strength anymore, and I had to take a break.</td>
</tr>
<tr>
<td></td>
<td>Nadé diez largos.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Estaba nadando diez largos.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>(‘I swam/was swimming ten laps.’)</td>
</tr>
<tr>
<td><strong>Past progressive Imperfect (C)</strong></td>
<td>On Sunday Mario helped me to build a tree house. Shortly before we were done, a storm arose, which made it impossible for us to finish the construction.</td>
</tr>
<tr>
<td></td>
<td>Construimos una casa en el árbol, pero la tormenta nos interrumpió.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Construíamos una casa en el árbol, pero la tormenta nos interrumpió.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>(‘We built/were building a tree house, but the storm interrupted us.’)</td>
</tr>
<tr>
<td><strong>Past continuous (D)</strong></td>
<td>My grandpa was hiding, and I had to look for him. Since he used to hide behind a certain pillar, I went in that direction to look for him there.</td>
</tr>
<tr>
<td></td>
<td>Fui a buscarlo donde estuvo aquella columna.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>Fui a buscarlo donde estaba aquella columna.</td>
</tr>
<tr>
<td></td>
<td>-2 -1 0 1 2</td>
</tr>
<tr>
<td></td>
<td>(‘I went looking for him where it was that pillar.’)</td>
</tr>
</tbody>
</table>

An anonymous reviewer correctly points out that besides the main aspectual meanings presented in Section 2, other interpretations are possible. One of them is the prospective, which has a future-in-the-past meaning (i.e., it depicts a situation that was scheduled to take place at some ulterior time). In fact, for one of the sample items, the reviewer proposes to categorize it as prospective Imperfect (i.e., *La película era a las siete, pero empezó a las siete y media*, which means that the film was scheduled to begin at seven, but it started at half past seven). The implications of this issue on the results are discussed in Section 7.
The responses given by each participant were counted and the mean average of each chosen option in each experimental condition was calculated. For statistical analyses, ANOVAs with Tukey-HSD and Games-Howell post-hoc tests were performed.

### 4.3 Participants

All participants ($N = 109$) were monolingually raised German-speaking instructed learners of Spanish attending high school in southern Germany or Austria (Table 4). They were 14–19 years old (36 male and 73 female) and had received between approximately 240 and 560 h of formal instruction in Spanish. Consequently, all of them had been taught the aspectual difference between the Preterit and the Imperfect. All participants had been learning English as their first foreign language for at least 3.5 years; therefore, the overall English proficiency was higher than the Spanish one. Additionally, more than the half of them had previous linguistic knowledge in Latin or French.\(^{15}\) For the analysis of the data, they were divided into four groups according to their general Spanish proficiency and their knowledge of aspect in L2 English. Participants who scored below the mean of 69 points in the C-test (total points: 125) were categorized as low-intermediate learners (A2/B1 level according to the CEFR; henceforth lowIntS), and those who obtained ratings above the aforementioned mean were regarded as upper-intermediate learners (B1+/B2

---

15 We are aware that Latin and French might have influenced the results. As many other studies in L3 acquisition (e.g., Williams and Hammarberg 1998; Vallerossa et al. 2021), however, we focus on the influence of one L2 on one L3 and leave other possible L2 influence for future research.
level; henceforth *upIntS*).\(^\text{16}\) As shown in Table 4, upper-intermediate learners are generally a bit older, received more hours of instruction in Spanish and achieved more points in the Spanish C-test.

Additionally, the participants were categorized according to their knowledge of aspect in L2 English measured by the results of the English SIT. Those participants who obtained accuracy rates below 80\% were put into the groups for low aspectual knowledge in English (henceforth *lowAspE*), and those who achieved scores above the aforementioned intersection point were regarded as having advanced knowledge of aspect in L2 English (henceforth *highAspE*).\(^\text{17}\) As Table 4 shows, the AK in English of the *lowAspE*-groups differed from that of the *highAspE*-groups:

\[\text{Table 4: Participants.}\]

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Age</th>
<th>Hours of instruction</th>
<th>C-test (points)</th>
<th>AK English (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lowIntS/lowAspE</td>
<td>29</td>
<td>15.5</td>
<td>309.0</td>
<td>58.5</td>
<td>64.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.6</td>
<td>81.0</td>
<td>6.6</td>
<td>10.7</td>
</tr>
<tr>
<td>lowIntS/highAspE</td>
<td>30</td>
<td>15.9</td>
<td>337.3</td>
<td>59.5</td>
<td>89.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4</td>
<td>101.8</td>
<td>5.7</td>
<td>5.3</td>
</tr>
<tr>
<td>upIntS/lowAspE</td>
<td>26</td>
<td>16.5</td>
<td>376.9</td>
<td>83.0</td>
<td>71.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.6</td>
<td>101.1</td>
<td>9.8</td>
<td>8.1</td>
</tr>
<tr>
<td>upIntS/highAspE</td>
<td>24</td>
<td>16.0</td>
<td>380.8</td>
<td>81.8</td>
<td>91.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3</td>
<td>94.8</td>
<td>13.3</td>
<td>6.2</td>
</tr>
</tbody>
</table>

5 Results

5.1 Production data

Section 5.1 describes the combined results of the two oral tasks. As mentioned above, we conducted ANOVAs with Tukey-HSD and Games-Howell post-hoc tests in order to analyse whether there were significant differences between the groups in the different conditions. As the participants hardly produced any verb forms in progressive contexts, no statistical analyses could be carried out for condition B and C.

\[\text{16}\] The categorization of the learners with regard to the CEFR was based on the information provided by the participants’ teachers.

\[\text{17}\] The cut-off value of 80\% is supposed to be a hint whether the learners had acquired the aspectual distinction in English or not (see, e.g., Montrul and Slabakova 2002 for a similar procedure).
First, for perfective contexts, we hypothesized that L2 English exerts a positive influence especially in the low-intermediate L3 proficiency group. In order to statistically prove this claim, we conducted a two-way between-groups ANOVA with accuracy rates in the perfective condition set as the dependent variable and Spanish proficiency (C-test results; lowIntS vs. upIntS) and knowledge of aspect in L2 English (English SIT; lowAspE vs. highAspE) as the independent variables. There was a statistically significant main effect for Spanish proficiency (F(1,105) = 7.094, p = 0.009) and AK in English (F(1,105) = 4.308, p = 0.040), but no interaction between both (F(1,105) = 0.428, p = 0.514). This means that both variables, Spanish proficiency and AK in English, have an impact in the perfective condition, independently from each other.

We then conducted one-way ANOVAs in order to test whether the learner groups differed significantly from each other. As Figure 1 shows, within the low-intermediate learners, the lowIntS/highAspE group (x̄ = 69.07) outperforms the lowIntS/lowAspE group (x = 56.76). The former obtains similar accuracy rates as compared to upper-intermediate learners of Spanish (especially as compared to upIntS/lowAspE, x̄ = 71.73). This shows that advanced knowledge of aspect in L2 English can foster the acquisition of perfective meaning in L3 Spanish and boosts low-intermediate learners to acquisitional stages similar to upper-intermediate ones. A one-way ANOVA confirms that there are significant differences between the groups (F(3,105) = 3.942, p = 0.010). Although the only significant difference lies between the lowIntS/lowAspE and upIntS/highAspE group (Post-hoc Games-Howell: p = 0.005), the accuracy rates depicted in Figure 1 indicate that there is a clear difference between the lowIntS/lowAspE and the lowIntS/highAspE group, which points to a positive L2 influence.

![Figure 1: Accuracy rates in perfective contexts (production data).](image-url)
Second, for continuous/habitual contexts no positive L2 influence was predicted as form-meaning-mappings between L2 English and L3 Spanish differ. For continuous contexts, a two-way ANOVA with the accuracy rates in continuous contexts set as dependent variable reveals a significant main effect for Spanish proficiency (F(1,105) = 6.355, p = 0.013), but no effect for AK in English (F(1,105) = 0.367, p = 0.546) nor an interaction between the two variables (F(1,105) = 2.519, p = 0.116). This confirms that only the proficiency level in the L3 and not the level of AK in the L2 has an impact on the dependent variable. Figure 2 additionally shows that within the low-intermediate learners the lowIntS/highAspE group (x̄ = 50.16) obtains lower accuracy rates than the lowIntS/lowAspE group (x̄ = 60.68). This indicates that, as predicted, AK in L2 English does not exert a positive effect; the results even seem to suggest that high AK in English might have a negative impact on the performance in the continuous condition for low-intermediate learners. This negative effect, however, seems to be neutralized for upper-intermediate learners, who outperform the low-intermediate ones independently of their knowledge of aspect in L2 English (see significant main effect for Spanish proficiency presented above). The findings of a one-way ANOVA confirm this claim, as the differences between the groups (F(3,105) = 3.141, p = 0.028) can be attributed to a significant difference between lowIntS/highAspE and upIntS/highAspE as shown by the results of a Tukey-HSD post-hoc test (p = 0.024).

Finally, in habitual contexts we find a similar pattern as with continuous semantics. A two-way ANOVA with accuracy rates in habitual contexts set as dependent variable yields a significant main effect for Spanish proficiency (F(1,105) = 9.410, p = 0.003), but not for AK in English (F(1,105) = 0.306, p = 0.582) nor an interaction...
between the two (F(1,105) = 0.528, p = 0.469). Figure 3 shows an apparent negative effect related to AK in English within low-intermediate learners demonstrated by the low accuracy rates of the lowIntS/highAspE group (x̄ = 41.98). Similar to continuous contexts, this negative effect cannot be found within the upper-intermediate groups who, on the whole, outperform the low-intermediate groups. According to a one-way ANOVA, the differences between the groups (F(1,105) = 3.457, p = 0.019) can be attributed to a significant difference between lowIntS/highAspE and upIntS/highAspE as shown by the results of a Tukey-HSD post-hoc test (p = 0.044); the p-value between lowIntS/highAspE and upIntS/lowAspE nearly reaches a significant value as well (p = 0.052).

![Figure 3: Accuracy rates in habitual contexts (production data).](image)

In sum, L2 AK seems to positively influence the acquisition of perfective meaning for low-intermediate learners of L3 Spanish. In the next chapter, we will analyse the results of the interpretation task.

### 5.2 Interpretation data

With the interpretation data the same hypotheses as with the production data were tested. Regarding the perfective condition, we conducted a two-way ANOVA with acceptance/rejection rates in perfective contexts of the Spanish SIT set as dependent variable and Spanish proficiency and knowledge of aspect in L2 English as the independent variables. The ANOVA was not significant (F(3,105) = 1.700, p = 0.172). This suggests that, in contrast to the production data, knowledge of
aspect in the L2 and general proficiency in the L3 did not have an impact on the learners’ choices in the Spanish SIT in this semantic context. If we look at the data in Figure 4, one can see that all learner groups behave similarly with slightly higher ratings for the lowIntS/highAspE group.

![Perfective contexts graph]

**Figure 4:** Acceptance/rejection rates in perfective contexts (interpretation data).

Regarding progressive periphrasis contexts, we also conducted a two-way ANOVA which shows a significant main effect for Spanish proficiency (F(1,105) = 13.027, p < 0.001) and AK in English (F(1,105) = 4.038, p = 0.047) as well as a significant interaction between both variables (F(1,105) = 4.998, p = 0.027). To investigate the interaction further, we conducted two one-way ANOVAs, which revealed relevant differences for both, the rejection of the Preterit (F(3,105) = 6.285, p < 0.001) as well as the acceptance of the progressive form (F(3,105) = 6.041, p < 0.001). Post-hoc analyses show that the significant differences lie between upIntS/highAspE and all the other groups (e.g., for the acceptance of the periphrasis, i.e., p < 0.001 for lowIntS/lowAspE and upIntS/highAspE; p < 0.001 for lowIntS/highAspE and upIntS/highAspE; p = 0.014 for upIntS/lowAspE and upIntS/highAspE) (see also Figure 5). The fact that no difference between the lowIntS/lowAspE and the lowIntS/highAspE group was found indicates that positive transfer only occurs within higher L3 proficiency levels. Interestingly, positive transfer from L2 English in progressive periphrasis contexts in the interpretation task seems to be restricted to higher proficiency levels in L3 Spanish, whereas for the perfective condition in the production data, the positive effect arises especially at lower L3 levels.
In the third condition (i.e., progressive Imperfect contexts) (see Figure 6), the ratings of all participants are rather low, and all groups have difficulties in distinguishing the Preterit from the Imperfect, especially in rejecting the Preterit (keeping in mind some minimal advantages of the upIntS/highAspE group). The fact that all groups apparently behave alike (irrespective of their knowledge of aspect in the L2 and their general proficiency in the L3) is confirmed by a non-significant two-way ANOVA ($F(1,105) = 1.415, p = 0.243$). This finding suggests that the association of the Imperfect with progressive meaning is a form-meaning combination that causes persistent difficulties for all participants.

Figure 5: Acceptance/rejection rates in progressive periphrasis contexts (interpretation data).

In the third condition (i.e., progressive Imperfect contexts) (see Figure 6), the ratings of all participants are rather low, and all groups have difficulties in distinguishing the Preterit from the Imperfect, especially in rejecting the Preterit (keeping in mind some minimal advantages of the upIntS/highAspE group). The fact that all groups apparently behave alike (irrespective of their knowledge of aspect in the L2 and their general proficiency in the L3) is confirmed by a non-significant two-way ANOVA ($F(1,105) = 1.415, p = 0.243$). This finding suggests that the association of the Imperfect with progressive meaning is a form-meaning combination that causes persistent difficulties for all participants.

Figure 6: Acceptance/rejection rates in progressive imperfect contexts (interpretation data).
Turning now to continuous contexts, a two-way ANOVA shows a significant main effect for Spanish proficiency (F(1,105) = 21.625, p < 0.001), but no effects for knowledge of aspect in L2 English (F(1,105) = 0.312, p = 0.577) nor an interaction between the two (F(1,105) = 2.049, p = 0.155). Figure 7 demonstrates that in this condition the learners of the low-intermediate group have difficulties in differentiating the Preterit from the Imperfect (i.e., they slightly tend to accept the Preterit as well as the Imperfect). However, as L3 proficiency increases, the participants learn to distinguish both tenses as shown by the higher ratings of the upper-intermediate groups as well as by the significant main effect for Spanish proficiency reported above. This is additionally confirmed by the results of two one-way ANOVAs (F(3,105) = 7.879, p < 0.001 for the rejection of PS and F(3,105) = 5.510, p = 0.001 for the acceptance of IMP) resulting in significant differences between upIntS/highAspE and lowIntS/lowAspE (p = 0.004 for the rejection of PS; p = 0.010 for the acceptance of IMP), upIntS/highAspE and lowIntS/highAspE (p < 0.001 for the rejection of PS; p = 0.004 for the acceptance of IMP) as well as between upIntS/lowAspE and lowIntS/highAspE (p = 0.015 for the rejection of PS). It is important to note that no differences between lowIntS/lowAspE and lowIntS/highAspE (p = 0.803 for the rejection of PS; p = 0.991 for the acceptance of IMP) nor between upIntS/lowAspE and upIntS/highAspE (p = 0.555 for the rejection of PS; p = 0.651 for the acceptance of IMP) were found. Consequently, no positive influence of AK in L2 English can be reported.

![Continuous contexts](image)

**Figure 7:** Acceptance/rejection rates in continuous contexts (interpretation data).
Finally, in comparison to continuous contexts, in habitual ones, the learners obtain generally rather high ratings and both proficiency groups can differentiate between the past tense forms. A two-way ANOVA shows a significant main effect for Spanish proficiency only (F(1,105) = 13.583, p < 0.001). No effect for AK in English was found (F(1,105) = 0.303, p = 0.583). As Figure 8 illustrates, the ratings of the upper-intermediate group are higher than those of the low-intermediate one leading to significant differences between the learner groups as demonstrated by two one-way ANOVAs (F(3,105) = 4.768, p = 0.004 for the acceptance of IMP; F(3,105) = 4.031, p = 0.009 for the rejection of PS). Post-hoc comparisons show significant differences between lowIntS/lowAspE and upIntS/highAspE (p = 0.019 for the rejection of PS; p = 0.039 for the acceptance of IMP) as well as between lowIntS/highAspE and upIntS/highAspE (p = 0.027 for the acceptance of IMP). As with continuous semantics, no differences in relation to AK in English were found.

![Habitual contexts](image)

Figure 8: Acceptance/rejection rates in habitual contexts (interpretation data).

All in all, we only found a positive influence of L2 AK in English in the progressive periphrasis condition for upper-intermediate learners of L3 Spanish. We will now turn to the discussion of the results.

### 6 Discussion

In sum, our data provide empirical evidence for positive L2 English transfer in those contexts in which form-meaning-mappings between English and Spanish are
similar (i.e., perfective and progressive periphrasis contexts). We found, however, important differences between the production and the interpretation data. In those conditions in which no form-meaning similarities between the L2 and the L3 exist (i.e., the association of the Imperfect with progressive, continuous, and habitual meanings) no positive effects were found. Consequently, our hypothesis that the positive influence of AK in L2 English (i.e., analytic proficiency) is related to form-meaning-similarities between the L2 and the L3 can be confirmed. With regard to the influence of L3 proficiency, we claimed that positive L2 transfer evokes a boosting effect especially within low-intermediate learners of Spanish, which was true for the perfective condition with the production data only, but not for the progressive periphrasis one with the interpretation data. In the latter, interestingly, the positive L2 effect for progressive periphrasis contexts was found within the upper-intermediate group. After this brief summary, we will now continue with a detailed discussion of the results.

First of all, our data could be interpreted in the framework of Salaberry’s Default Past Tense Hypothesis (2000, 2008), in which he claims that “learners will be initially inclined to transfer whatever inflectional or periphrastic markers of aspectual meaning they have in their native language“ (Salaberry 2008: 213; emphasis in the original). Although Salaberry (2000, 2008) elaborated his hypothesis in the context of anglophone L2 learners of Spanish and did not widen it to L3 acquisition, we can carefully use his thoughts in order to explain our results. If we follow his argumentation, we would need to opt for default L1 transfer of the German temporal system which would lead to neutral or even negative transfer in all semantic contexts (i.e., aspect is no grammatical option in German). In this interpretation, English intervenes positively when, first, form-function contiguity between the L2 and the TL exists (i.e., in perfective and progressive periphrasis contexts), and second, when learners possess a sufficiently high level of AK in the L2. Such an approach would speak for initial default transfer of the tense-aspect-system of the L1 which is then replenished by L2 transfer on a structure-by-structure basis.

Even though we cannot completely exclude such an interpretation, it is unclear why Germanophone L3 learners of Spanish with L2 knowledge in English should rely on an L1 as the default transfer source that is typologically more distant to Spanish than the L2 and that does not possess any grammatical devices for the encoding of aspectual meanings. In fact, our data show patterns similar to those of Anglophone learners of Spanish in L2 acquisition indicating that our participants were mainly influenced by their L2 English and not by their L1. To give an example: The Anglophone learners of Spanish in Domínguez et al.’s study (2017) have persistent problems with past tense marking in continuous and habitual contexts. The authors argue that “English speakers would have problems dissociating the
'continuous' and the 'habitual' from the Preterit since these meanings are expressed with forms that also convey perfectivity in English” (Domínguez et al. 2017: 451). As with Domínguez et al.’s (2017) data, our low-intermediate learners show problems with continuous semantics in the production as well as in the interpretation data; for habitual contexts, in turn, problems arise especially in the former. Additionally, the association of the Imperfect with progressive meaning is also challenging indicating that the non-existence of a synthetic imperfective form in English causes problems for the learners. Moreover, as the German Perfekt serves as the main past tense form in oral speech (it basically has lost its perfect meaning) one would assume Germanophone speakers overgeneralize the Spanish compound form (sp. ha hablado, 'she has talked') in their oral speech production, because other studies with different L1s have reported L1 transfer in such cases (e.g., Amenós Pons et al. 2017 for L1 French and L2 Spanish). However, no such uses of the Spanish compound form were found in our data. Interestingly, other studies with German-speaking learners of Spanish do not report this kind of L1 transfer either (Diaubalick and Guijarro-Fuentes 2016; Eibensteiner and Koch 2018); L1 transfer in our language combination seems therefore unlikely. There are, however, some studies investigating the acquisition of aspect in Spanish by German-speaking learners that reported L1 transfer (e.g., Diaubalick 2019; Diaubalick and Guijarro-Fuentes 2019). Although probably all participants of these studies had quite advanced knowledge of L2 English, the authors did not look at L2 English transfer in more detail. As Diaubalick (2019: 337) mentions himself, it is therefore possible that his results could in fact be attributed to an influence of L2 English and not L1 German.

As a corollary, our findings provide empirical evidence that German-speaking learners of L3 Spanish transfer form-meaning-mappings present in their L2 English. This is in line with transfer models emphasizing the important role of the L2 (e.g., Bardel and Falk 2012) as well as with models arguing for typological primacy (e.g., Rothman 2010). If we think together such models arguing for holistic transfer with Salaberry’s (2000, 2008) Default Past Tense Hypothesis, one could argue for an Extended Default Past Tense Hypothesis for L3 acquisition (Eibensteiner 2021), in which L3 learners primarily transfer the aspectual system which is more relevant for the L3 (i.e., the most economic option; in our case L2 English). In our view, such a holistic default transfer scenario (especially in the beginning stages) of the acquisition of the L3 aspect system does not contradict a structural analysis – quite the contrary. The holistic transfer of one aspectual system could be the result of a preliminary structural analysis of the corresponding languages (see Rothman 2015 for a similar claim). In other words: L3 learners analyse the new aspectual forms and compare them with their already existing linguistic knowledge. Based on several form-meaning-similarities between English and Spanish they conclude
that the most economic option is to initially transfer the entire L2 aspect system. In our view, however, this does not mean that transfer is restricted to one language system throughout the whole acquisition process.

After providing this general interpretation regarding the influence of the L2 system, we now turn to the impact of AK in the L2 on L3 acquisition. In sum, our data show that learners with high knowledge of aspect in L2 English outperform those with low AK in the L2 in those contexts in which form-meaning pairings between the L2 and the L3 are similar. This is in line with other studies that have observed positive L2 transfer of the semantic aspectual contrasts from one Romance language to another (e.g., Diaubalick et al. 2020; Foote 2009) as well as with studies that have found positive L2 influence from English to Spanish/Italian (Eibensteiner 2019, 2021; Vallerossa 2021; Vallerossa et al. 2021). However, we identified important differences between the Preterit in the perfective condition and the progressive periphrasis in the progressive one. Regarding the perfective condition, positive L2 transfer occurs within the low-intermediate Spanish group in the production data leading to a boosting effect shown by similar accuracy rates of the lowIntS/highAspE learners as compared to learners of the upper-intermediate Spanish proficiency group (i.e., upIntS/lowAspE and upIntS/highAspE). In the progressive periphrasis condition, in turn, the positive influence of AK in English is restricted to the upper-intermediate group in the interpretation data. Consequently, and in contrast to our prediction, the expected boosting effect for low-intermediate learners occurs in the perfective, but not in the progressive periphrasis condition.

These different outcomes can be interpreted in relation to the Developmentally Moderated Transfer Hypothesis (e.g., Pienemann et al. 2016) which is a component of Processability Theory (Pienemann 1998). The key assumption of Processability Theory is that L2 (or in our case L3) learners can produce only those linguistic forms for which they have acquired the corresponding processing procedures. In this context, Pienemann and Lenzing (2015: 176) argue that L1 (or in our case L2) structures can only be transferred when the learners begin to process the corresponding structures in the TL. In other words: transfer depends on processing constraints in the TL. Developmental studies on the acquisition of aspect in Spanish show that the Preterit is generally acquired before the Imperfect (including its different semantic notions) (e.g., Salaberry 2008). As a corollary, even beginning or low-intermediate learners of Spanish are able to profit from their L2 English knowledge in the perfective condition because they are able to process the forms and the corresponding meanings in their L3 from the very beginning on. The progressive construction and its meaning, in turn, is acquired at later stages, and our low-intermediate learners were still not developmentally ready for processing the progressive construction in the L3, and therefore, L2 transfer was not
possible. The upper-intermediate learners, in contrast, were able to process the construction in their L3 and, as a result, transfer of their L2 knowledge occurred.

This interpretation highlights the important role of L2/L3 proficiency and suggest that the learners need to be developmentally ready in their L2 and their L3. In this connection, our findings indicate that analytic L2 proficiency positively influences the acquisition of an L3, which is in line with general claims made in the literature (e.g., Aribas and Cele 2019; Tremblay 2006). In this context, it has been argued that for positive transfer from an L2 to an L3 a sufficiently high (analytic) proficiency level in the grammatical phenomenon under consideration seems necessary (e.g., Falk and Bardel 2010). Our findings point in this direction; nonetheless, we cannot exclude transfer effects within low L2 proficiency levels either. It would therefore be interesting to further investigate whether some kind of threshold level necessary for positive L2 effects in L3 acquisition exists (for similar claims in L2 acquisition initially Cummins 1979; for L3 acquisition Cenoz 2003: 82; De Angelis 2007: 34; Sánchez 2020: 25–28). Although a concrete definition of what is meant by a threshold level is still missing and the concept rests therefore vague, we think that future research should further investigate related questions.

7 Limitations, pedagogical implications and concluding remarks

There are several important limitations of the study that need to be considered when interpreting the results. One limitation refers to the recruitment of the L3 learners. To better identify the role the L1 and the L2 play in the acquisition process of the L3, González Alonso et al. (2017: 644) highlight the important role of a mirror-image-design, that is, the L1 and the L2 alternate, while the L3 is held constant. Future studies should therefore include a matched group of L3 learners of Spanish or, if possible, an L1 German and L2 Spanish group in order to empirically prove the claims made regarding the privileged role of L2 English as default transfer source for the aspectual system of the L3. Another possibility to disentangle the possible influence of the L1 would be a detailed analysis of the acquisition of the Spanish compound perfect. The German perfect has mainly lost its [+ present relevance]-reading and it can be considered a past tense marker (at least in spoken German). The English and Spanish compound perfect, in contrast, cannot be used to express perfective past interpretations without present relevance. Paying attention to how the L1 German speakers understand and use the compound perfect in Spanish (more like in German or more like in English) would shed light on whether transfer originates from the L1 or from the L2. If the argumentation presented in the
previous Section holds true (i.e., the L2 aspect system is transferred as a default), this would have important implications for the results of studies that have not sufficiently analysed possible L2 influence (e.g., Diaubalick and Guijarro-Fuentes 2019; McManus 2015). We therefore emphasize that future studies investigating the acquisition of tense-aspect phenomena should carefully look at the previous linguistic knowledge of the participants and should integrate it into their analyses – at least as a control variable.

Another limitation concerns the construction of the tasks. Although the picture stories were provided with prompts that were intended to elicit progressive contexts, the learners did not produce a significant number of progressive constructions. It should therefore be further investigated whether the lack of progressive constructions produced can be attributed to the construction of the production task or whether some kind of compensatory strategy related to, for example, processing constraints took place. Additionally, future studies should look at other semantic notions (e.g., prospective aspect or iterativity) in more detail in order to understand how transfer of complex aspectual concepts works. As Salaberry (2020: 55) proposes, it could be the case that the L1 remains central “for the acquisition of deep conceptual components of language (non-prototypical)”, and that L2 transfer of aspectual notions primarily takes place with prototypical meanings. This interesting question, however, was not addressed in the present study and needs therefore further empirical evidence.

In sum, the present study offers new evidence for transfer in L3 acquisition by examining the transferability of aspectual notions and the influence of analytic L2 and general L3 proficiency. The results demonstrate that AK in L2 English positively influences the acquisition of the Spanish aspect system. This means that German-speaking L3 learners of Spanish can effectively use their L2 knowledge for the acquisition process of the L3. Consequently, Spanish teachers should base their explications on the already existing knowledge of their pupils. Such explicit cross-linguistic explanations include comparisons of the grammatical forms and functions and are supposed to benefit grammar learning in the TL (see e.g., McManus 2019 for positive effects of explicit instruction for L1-L2-form-meaning-pairings) and to raise the learners’ metalinguistic awareness (e.g., Eibensteiner and Müller-Lancé 2020).

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