L1-L2 Differences in the Acquisition of Form-Meaning Pairings: A Comparison of English and German Learners of French

A major difference between first language (L1) acquisition and adult second language (L2) acquisition is that L2 learners come to the learning task already equipped with a fully developed language system. A central question in L2 research necessarily concerns, therefore, how, and to what extent, prior language knowledge impacts on subsequent language learning. A recent focus of research on L1 influence deals with the nature of L1-L2 differences in terms of the connections between meaning and form (Izquierdo & Collins, 2008; Salaberry, 2008; Sugaya & Shirai, 2007). Because languages do not always pair form and meaning consistently, new associations between meaning and form are required when the L1 and the L2 differ in how they express the same meaning. In a German L1-French L2 learning situation, for example, German implicitly conveys aspect (discourse context and lexical content), whilst French explicitly expresses it with inflectional morphology. As a result, the German speaker learning French needs to establish different form-meaning mappings in which aspect is grammaticalized (i.e. mapped to inflectional morphology).

Although the process of form-meaning mapping is claimed to constitute one of the most difficult aspects of L2 grammar learning (Ellis, 2013), some studies claim that learning different form-meaning pairings is ultimately successful (Slabakova & Montrul, 2003), yet others suggest persistent L1 influence at the advanced-stages of learning (Salaberry, 2008). L2 form-meaning mapping arguably depends on precisely how individual L1s and L2s express the same meaning. It is hypothesized to be most difficult when in the L1 a series of different meanings are mapped together to a single form, but then in the L2 these same meanings are isolated and mapped to different forms (Collins, 2004; Izquierdo, 2009). There also appear to be clear effects for differences in the manner of expressing meaning, such as grammatically versus lexically (Roberts & Liszka, 2013). The present study contributes to
this debate, reporting on a crosslinguistic investigation into the L2 acquisition of form-meaning pairings in the domain of aspect. The purpose of the study was to investigate how acquisition is influenced when the L1 and the L2 mark the same meaning differently.

Oral data were collected from 75 English- and German-speaking university learners of French L2 as well as a control group of French native speakers. The results reveal significant differences between English and German speakers for the use of aspect morphology in perfective and habitual contexts. The study’s findings contribute to existing research on the acquisition of aspect, and importantly the nature of L1-L2 differences in L2 development. English-French and German-French language pairings were selected in order to compare the impact of (a) isolating and redistributing different meanings in the L2 and (b) meaning conveyed explicitly versus implicitly (or grammatically vs. lexically). Furthermore, the study’s crosslinguistic design crucially allows for differences and similarities between different L1-L2 pairings to be isolated, a methodological component absent from studies based on learners from a single L1 background. Consequently, different L1-L2 pairings and the potential influence of specific L1-L2 combinations on L2 learning is examined.

In the sections that follow, previous research related to the impact of L1-L2 differences in L2 learning is first discussed, followed by the study’s linguistic background on aspect and the crosslinguistic differences between English, French and German for perfective and habitual viewpoint aspect. The present study's methodology is next presented, followed by the results and conclusions.
Previous research on the SLA of aspect

As review works suggest (Ayoun, 2013; Bardovi-Harlig, 2000; Salaberry, 2008) the SLA of aspect has been intensively investigated for a number of decades now, increasingly drawing on different learner populations, languages and methodologies. It is also clear that by providing a clear set of testable predictions the Aspect Hypothesis (Andersen & Shirai, 1994, 1996) has encouraged such research. This hypothesis draws on theories of lexical aspect (Vendler, 1967) in which verbs/predicates are classified according to their inclusion and/or absence of particular inherent semantic features, such as lexically determined endpoints. For example, he ran a mile is said to be telic because it includes a lexically determined endpoint, but because he ran miles does not it is said to be atelic (see next section for more information). The Aspect Hypothesis (AH) predicts that learners’ early use of aspect morphology is heavily influenced by lexical aspect: perfective morphology (e.g. Passé Composé) is initially used with telic predicates and imperfective morphology (e.g. Imparfait) with atelic predicates. It is claimed that as L2 proficiency increases, learners begin to use aspect morphology irrespective of a predicate’s lexical class (although see Domínguez, Tracy-Ventura, Arche, Mitchell, & Myles, 2013; McManus, 2013). Andersen’s (1984) one-to-one principle has additionally been shown to be insightful in predicting initial form-meaning mappings. It is claimed that learners initially expect one meaning to be expressed by “one clear invariant surface form” and over time initial form-meaning pairings are said to “expand” (Andersen, 1984, p. 79).

Turning to the findings, research in French L2 has been particularly fruitful in describing the acquisition and use of aspect morphology. Ayoun (2013) notes that the majority of French SLA aspect research has investigated the acquisition of aspect contrasts in past time contexts, building on early work conducted in Canada by Harley (1989, 1992) and colleagues (e.g.
Harley & Swain, 1978), who documented that perfective past marking (Passé Composé) emerges earlier than imperfective past marking (Imparfait). A combination of cloze tests and retellings of the silent film *Modern Times* have been frequent in French SLA aspect research, especially amongst studies testing the AH (Bergström, 1995; Labeau, 2005; Salaberry, 1998). In line with the AH, such studies generally show that early use of aspect morphology is influenced by lexical class. For example, Salaberry’s (1998) *Modern Times* results show that 79% of Passé Composé (PC) use is with telic predicates (achievements) and as the Imparfait (IMP) is comparatively later to develop, studies such as Labeau (2005) report infrequent use. She found that when produced the IMP is most frequently used with atelic predicates (statives). In AH-testing studies, analyses focus mainly on the distribution of PC and IMP morphology across different lexical classes. However, as Bardovi-Harlig (2000, p. 201) points out, a shortcoming of the *Modern Times* method is that “certain types of predicates occur more frequently than others”. Therefore, because the different lexical classes are not balanced, it is unclear whether *Modern Times* reflects learners’ actual use of aspect morphology. Although interview data can be in the same way limiting, Howard (2005) and Kihlstedt (1998, 2002) have used them to propose orders of acquisition for the IMP. Howard’s data come from Anglophone university learners (n=18), whereas Kihlstedt’s learners are Swedish speaking (n=4). Following other studies in French L2, both authors propose an initial stage of IMP use with statives. Beyond the initial stage, however, differences emerge for the IMP’s habitual and progressive functions: English speakers are claimed to use the IMP’s progressive function earlier than its habitual function. Howard (2005, p. 191) suggests this is a difference linked to L1 background (English vs. Swedish) because in English progressive meaning is grammaticalized and therefore “progressivity is a notion easier to conceptualize for English-speaking learners than for Swedish-speaking learners”. Izquierdo (2009) draws a similar conclusion for his Spanish speakers’ use of the
IMP. His cloze test data indicate that the French-Spanish form-meaning similarity for expressing progressive and habitual meaning appears to help learners correctly supply the IMP in habitual and progressive contexts. Results from other studies equally suggest that L1-L2 form-meaning similarities can facilitate learning. In Japanese L2, for example, Sugaya and Shirai (2007) collected data on the use of the Japanese imperfective marker –teiru from English- (n=26) and Slavic/Germanic-speaking (n=35) learners of Japanese. Whilst English has an imperfective marker (the L1-L2 similarity), Germanic/Slavic languages do not (the L1-L2 difference). However, whilst the English imperfective marker expresses only progressivity, -teiru additionally expresses resultativity (Shirai & Kurono, 1998). Results from a picture description task showed that English speakers were more accurate with -teiru’s progressive than its resultative meaning, whilst Slavic/Germanic speakers performed similarly with both meanings, indicating clear L1 effects on performance. Leaners appear to have transferred their L1 form-meaning mappings to the L2 resulting in use of –teiru that was similar to the use of L1 aspect morphology. In a similar vein, Izquierdo and Collins’ (2008) comparison of English and Spanish speakers in French L2 also suggests that L1-L2 form-meaning similarities offer a clear advantage. Their results showed that accurate use of the French IMP was facilitated by L1-L2 similarities (see also Izquierdo, 2009). The existence of the same form with the same functions in Spanish resulted in Spanish speakers outperforming English speakers for IMP use despite both L1 groups being matched for proficiency. Retrospective interviews additionally revealed that, in contrast to the English speakers, Spanish speakers more often referred to L1-L2 form-meaning similarities and reportedly used these: “that’s the way we say it in Spanish” (Izquierdo & Collins, 2008, p. 360).

Theorizing L1 influence in the SLA of aspect appears to build on observations that L2 development is initially influenced by the learner’s perception of the L1-L2
similarity/difference (Corder, 1967). One operationalization of perceived L1-L2 similarity/difference is Salaberry’s (1999, 2000, 2002, 2008) Default Past Tense Hypothesis (DPTH). His work is based on L1 English and L2 Spanish and mostly draws on research focusing on the impact of L1-L2 differences. He suggests that English speakers incorrectly assume close correspondences between English and Spanish in how temporal and aspectual information is expressed. As a consequence, learners initially transfer their L1 form-meaning mappings for aspect to the L2. Salaberry considers that the English Simple Past is a past tense marker only (however, for contrasting views, see Bertinetto, 2001; Smith, 1997), therefore English speakers initially assume that the Spanish Preterit is a marker of past tense only:

[…] during the first stages of L2 development, learners will mark tense rather than aspectual distinctions. This is mostly a consequence of the fact that in English the Simple past marks only tense, but not aspect, coupled with the claim that learners are relying on the use of general (non-modular) cognitive processes to learn the L2

(Salaberry, 2008:120)

By transferring L1 form-meaning mappings to the L2, the learner’s use of aspect morphology is predicted to reflect L1 rather than L2 form-meaning mappings. For example, the German learner of French would also be predicted to use aspect morphology to express past tense rather than aspectual information (because in German the past tenses do not convey aspectual information). As suggested by Slabakova and Montrul (2003), the learner appears to create a working hypothesis based on prior language knowledge, which is subsequently revised and tested over the course of L2 development.

The present study directly addresses this issue, examining whether L2 learners are able acquire properties of the L2 that are different from the L1. In the next section, the study’s linguistic background is presented paying particular attention to the aspect-marking differences between the languages under investigation in this study.
**Linguistic background**

*Aspect*

Aspect concerns “the different ways of viewing the internal temporal constituency of a situation” (Comrie, 1976, p. 3). It expresses how an event unfolds in time in terms of its lexical and temporal properties. Two-component theories propose that two separate semantic notions make up aspectual meaning: lexical aspect and grammatical aspect (Bertinetto, 2001; Smith, 1997). Lexical aspect typically deals with Vendler’s classification of verbs/predicates based on their inherent lexical semantics. Four separate classes are proposed based on their inclusion and/or absence of particular inherent semantic features, including telicity. Telicity refers to a lexically determined endpoint inherent to a situation. The lexically determined endpoint of *Jack ran a mile* is ‘a mile’, so after running one mile the lexical endpoint inherent to the situation is reached. Accomplishments and achievements have a lexically determined endpoint (and are therefore telic), whilst states and activities do not (and are atelic). Vendler’s lexical classification system with examples is summarized in Table 1.

[Table 1 here]

In terms of grammatical aspect, Romance languages like French morphologically encode the semantic distinction between perfectivity and imperfectivity. Smith (1997, p.93) proposes that perfectivity differs from imperfectivity in “how much of a situation [it] make[s] visible”. Perfective viewpoint focuses on the initial and end points of a situation presenting an event as complete, as the French PC in (1). Imperfective viewpoint, however, focuses on the internal stages of a situation, excluding its endpoints, as the English Past Progressive in (2). Imperfectivity is often split between habitual and progressive meaning (cf. Comrie, 1976; Smith, 1997). Habitual viewpoint presents “a situation as repeated on different occasions, as
distributed over a period of time” (Tagliamonte & Lawrence, 2000, p. 326), or in which a situation is presented as “a characteristic feature of a whole period”, as the English used to construction in (3) (Comrie, 1976, pp. 27-8). Progressivity, on the other hand, is a situation presented as “in progress” or unfolding, as in (2) (Comrie, 1976, p. 33).

(1) Il a **construit** un château

\[ \text{He has}^{\text{AUX}} \text{ built}^{\text{PP}} \text{ a castle} \]

‘He built a castle’

(2) He **was building** a castle

Il construisait\(^{\text{IMP}}\) un château

(3) He **used to build** a castle

Il construisait\(^{\text{IMP}}\) un château

The sentences in (1) - (3) show that the same situation [he build a castle] can be presented perfectly (1) or imperfectly (2, 3) depending on how particular languages realize the semantic viewpoints as well as the perspective adopted by the speaker to present the event. The realization of the semantic viewpoints also differs crosslinguistically. For example, some languages express aspect explicitly with aspect morphology (e.g. French), other languages draw on implicit means (e.g. German), and languages like Mandarin Chinese combine explicit and implicit means (cf. Comrie, 1976).

*Perfective and habitual aspect in English, French and German*
As noted, the difference between perfectivity and habituality is a semantic viewpoint aspect contrast. Individual languages differ in how they realize this semantic contrast, if at all. English uses a range of forms (analytical and inflectional) to explicitly express perfectivity and habituality:

(4) Jack **played** football – perfective

(5) Jack **played /used to play/would play** football (every Thursday) – habitual

Perfective viewpoint is expressed by the Simple Past, as in (4), but, as (5) additionally shows, the Simple Past can also express habitual viewpoint (Smith, 1997; Tagliamonte & Lawrence, 2000). Habitual viewpoint can be additionally expressed by *used to* and *would* and in some varieties of English the Progressive (e.g. he was always eating porridge).

French, in contrast, uses inflectional morphology to explicitly express the semantic contrast between perfectivity and habituality. The sentences in (6)-(7) show how the meanings of English sentences in (4)-(5) are translated into French:

(6) Jacques **a joué** au foot – perfective

Jacques has**AUX** played**PP** to football

‘Jacques played football’

(7) Jacques **jouait** au foot (chaque jeudi) – habitual

Jacques played**IMP** to football (every Thursday)

‘Jacques used to play football’

In French, the habitual viewpoint is expressed by the IMP, but perfective viewpoint is expressed by the PC, as in (6). It is important to note that the inflectional form in (6) is different to the one in (7). In French, perfectivity and habituality are expressed by different inflectional forms.
Lastly, German implicitly conveys viewpoint aspect, lexically and via the discourse context because, unlike English and French, German past tense forms do not express viewpoint aspect (Comrie, 1976; Duden, 1995; Durrell, 2006). Viewpoint information is instead ‘interpreted’ from situation aspect leading to ‘preferential’ interpretations based on a predicate’s inherent semantics: atelic predicates entail imperfectivity and telic predicates entail perfectivity (Bohnemeyer & Swift, 2004).

Preferential interpretations hold until explicit information cancels them out. For instance, if a telic predicate is combined with a durative adverbial then a perfective interpretation is ruled out (e.g. I went to the supermarket + every day for ten years). The sentences in (8)-(9) show how the meanings of the English sentences in (4)-(5) are translated into German:

(8) Jack spielte Fußball (jeden Donnerstag) – perfective/habitual
   Jack played<sup>PRET</sup> football (every Thursday)
   ‘Jack played/used to play football’

(9) Jack hat Fußball gespielt (jeden Donnerstag) – perfective/habitual
   Jack has<sup>AUX</sup> football played<sup>PP</sup> (every Thursday)
   ‘Jack played/used to play football’

The aspectual meanings of the sentences in (8)-(9) are the same because, by themselves, German past tense forms do not express viewpoint aspect. However, German has been argued to still convey perfective and habitual meaning, but instead drawing on time phrases, adverbials, verb complements (for a thorough discussion, see Cook, 1992). Because the Preterit (8) and the Perfekt (9) can both refer to either perfective or habitual events their use is therefore not guided by aspectual considerations (in contrast to English and French). In general, use of the Preterit and Perfekt in Standard German can be influenced by modality.
(speaking vs. writing) and region. According to Durrell, Kohl & Loftus (2002, p. 102), the Preterit “is used to narrate past actions or events in written German. In spoken German, the [Perfekt] is commonly used in such contexts” (see also Durrell, 2006; Thieroff, 1992). Although modality does not wholly account for tense use and verbs can be used with either tense form, Durrell et al. (2002) note that in speaking the Perfekt is generally preferred over the Preterit in southern Germany (e.g. Baden-Württemberg, Bavaria). Therefore, if these modality tendencies were to apply to any group of German speakers (Preterit in writing and Perfect in speaking), they would most likely be found by those from/living in in the southern regions. In the present study, German speakers were recruited from Baden-Württemberg.

In summary, the English and the French past tenses express viewpoint aspect information (and tense), but the German past tenses (Preterit/Perfekt) only express tense information. German Preterit/Perfekt use is influenced by modality and region. Furthermore, viewpoint aspect is explicitly marked in English and French, but in German it is implicitly conveyed. Importantly, however, despite apparent similarities between English and French, crucial form-meaning differences exist:

(a) In English, habituality and perfectivity can be mapped together to a single form (Simple Past)
(b) In French, habituality and perfectivity are each mapped to different forms (IMP, PC, respectively)
(c) In French, habituality is mapped to one form (IMP), but in English it can be mapped to multiple forms (Simple Past, used to, would)

The form-meaning differences between English and French concern habituality. The differences and similarities between English, French and German are summarized in Table 2.

[Table 2 here]
The present study examines how these crosslinguistic differences for viewpoint aspect influence learnability and acquisition. In the next section, the study's predictions are outlined. These are followed by the details of the empirical study.

**Predictions**

The predictions focus on the distribution of aspect morphology in appropriate perfective and habitual contexts. Due to L1-L2 form-meaning differences for viewpoint aspect, as well as L1-L2 convention of use differences for tense-aspect morphology, it is hypothesized that L1 form-meaning mappings for viewpoint aspect will be transferred (as predicted by the DPTH). Therefore, the distribution of aspect morphology (PC and IMP) is hypothesized to be influenced by (a) L1 form-pairings for viewpoint aspect and (b) L1 conventions for the use of tense-aspect morphology. Furthermore, because of English-French and German-French form-meaning differences, both L1 groups will need to learn target-like and therefore different form-meaning pairings for viewpoint aspect. Each L1 group is subsequently faced with a different learning challenge:

- **English** morphologically distinguishes progressive from non-progressive viewpoint (in contrast to French): perfectivity and habituality are mapped together. In learning target-like viewpoint aspect form-meaning pairings for French, English speakers must isolate perfectivity from habituality and redistribute each viewpoint meaning to different forms: perfectivity to the PC and habituality to the IMP. A straightforward application of the DPTH predicts that English speakers will initially map perfectivity and habituality together.

- **German** does not map viewpoint aspect to tense morphology (in contrast to French). The Preterit (simple form) is used in writing and the Perfekt (composed form auxiliary + past participle) in speaking. In learning target-like viewpoint aspect form-
meaning pairings for French, German speakers must learn that PC and IMP are explicit markers of tense and aspect. Perfectivity must be associated with the PC and habituality with the IMP. A straightforward application of the DPTH predicts that German speakers will not use aspect morphology to distinguish between perfectivity and habituality. It is predicted that discourse conventions will guide learners’ use of aspect morphology: PC for speaking and IMP for writing.

**Method**

*Participants*

The participants were registered on undergraduate degree programmes in French as a foreign language in England (n=38) and Germany (n=37). English speakers were recruited and tested in northern England and German speakers were recruited and tested in southern Germany (Baden-Württemberg). Participants were drawn from intact groups from two different levels of instruction (Year 1 and Year 4). At each level of instruction English and German speakers were matched according to the Common European Framework of Reference for Languages at levels B2 (Year 1) and C2 (Year 4). Learners at each level of instruction declared similar amounts of classroom exposure to French (7.9 years in Year 1 and 11 years in Year 4). Only Year 4 learners had taken part in residence abroad in a French speaking country. No learners had followed content and language integrated learning courses. A group of ten French speakers served as a control group. Additional information about the learners is presented in Table 3.

[Table 3 here]
Instruments and procedure

To group participants, a French c-test was used as an independent proficiency measure (see Appendix 2). The c-test is created from five short texts. Following Daller, van Hout, and Treffers-Daller (2003), learners filled in the second half of every second word. Each text begins and ends with an unaltered sentence. From the second sentence onwards, the second half of each second word is deleted and replaced with a blank space. Proper nouns are left unaltered. The c-test contains 123 blanks to be filled.

The main test instrument was a picture-based oral narrative called les sœurs. This controlled elicitation instrument allowed for a broad sampling of predicates across a range of lexical aspect classes and is a French version of the one created by Domínguez et al. (2013). It was designed to force learners to make perfective and habitual viewpoint aspect contrasts. A series of illustrations were designed with the help of an artist and presented in the story in order to make clear that the picture story contained a perfective part and a habitual part. A total of 25 target predicates selected according to their lexical aspect properties were used to create the picture-based narrative (for the predicates used, see Appendix 1). The story offered several examples of each context. In perfective contexts, the illustrations depicted a summer holiday from 2006, in which the sisters go on an eventful train journey to Barcelona. Pilot testing revealed that the pictures alone were not sufficient for learners to perceive contextual differences (perfective and habitual), so a number of prompts accompanied the pictures to sequence the narrative, such as ensuite, en route pour Barcelone... and et alors, tout à coup, dans le train... (‘then, en route to Barcelona…’ and ‘suddenly, on the train’). In habitual contexts, the pictures showed the girls when they were younger (as school children in 1996) engaging in different activities after and during school. These images had the prompts quand
elle était petite, elle... and pendant la semaine, elle... (‘when she was IMP little, she…’ and ‘during the week, she…’). The prompts as well as the illustrations were used to sequence the story and emphasize the differences between the perfective (the holiday, the train journey) and habitual (childhood stories) contexts. In addition, target verbs were provided (in the infinitive) underneath each picture. Participants were asked to use these verbs while telling the story, but were free to add more information if necessary. Participants were given up to five minutes to look through the story before telling it. Figure 1 is an extract from the picture-based narrative.

[Figure 1 here]

Analyses

All spoken data were digitally recorded for orthographic transcription using CHAT from the CHILDES system (MacWhinney, 2000). Part of Speech tagging of the CHAT transcripts was carried out using the French MOR and POST programs. Data were coded for context (perfective and habitual) and forms produced (e.g. IMP, PC, Présent). The forms used in each context (perfective and habitual) in addition to their appropriateness (in comparison with French NS use) were also analysed. Although percentages are displayed in the results tables, only raw data were used in the statistical tests (ANOVAs and t-tests). Statistical tests of normality of distribution were carried out to test for the presence of outliers and non-normal distribution on all analysed variables (c-test scores, PC and IMP use in perfective and habitual contexts). Shapiro Wilks tests showed normal distribution (p>.05). For this reason, parametric tests (t-tests and ANOVAs) have been conducted throughout.
For the analyses, learners were divided into groups based on L1 background and performance on the c-test. This procedure allowed for L1 effects to be evaluated against differences in L2 proficiency. The same c-test was administered to all participants prior to data collection. Learners scored between 53 and 114 (M= 83.77; SD=22.58). 38 learners scored below the mean (the low group) and 37 above the mean (the high group), with comparable numbers of English and German speakers at each level. A one-way analysis of variance (ANOVA) revealed statistically significant differences between the groups, \( F(4, 76)=239.29, p\leq.001 \). Tukey post hoc comparisons showed that the significant differences were between the low and high groups: English low (M=59.47, SD=6.63) and English high (M=98.47, SD=6.63) performed significantly differently from one another, as did German low (M=63.95, SD=6.16) and German high (M=101.89, SD=6.58). All groups performed significantly differently from the French NS (M=122.67, SD=.52). No significant differences were found between learners of different L1 backgrounds at the same level (e.g. German high and English high).

[Table 4 here]

**Results**

*Perfective contexts*

A total of 2,039 perfective and habitual contexts were identified in the data. Table 5 and Figure 2 summarize the forms produced in perfective contexts by group. Results are presented in percentages with raw counts in parentheses.

The first analysis looked at differences between the groups for the PC in perfective contexts. French NS used the PC most frequently in this context and, in general, the learner groups also
follow this usage pattern. Learner groups additionally use other forms, but no form is as frequent as the PC. For example, there is some use of the Présent and the IMP across the learner groups, with the low group generally using them more frequently than the high group. Use of the IMP in perfective contexts is generally low. To test the performance differences observed in Table 5 a two-way between-groups ANOVA was conducted with the PC in perfective contexts as the dependent variable and L1 background (English, French, German) and proficiency grouping (low, high, control) as independent variables. The interaction between L1 background and proficiency-grouping was significant, $F(1, 80) = 24.218$, $p \leq .001$. There was a statistically significant main effect for L1 background, $F(1, 80) = 7.737$, $p = .007$. Post hoc comparison revealed that all L1 groups (English, German, French) were significantly different from one another ($p \leq .05$). There was also a statistically significant main effect for proficiency-grouping, $F(1, 80) = 27.875$, $p \leq .001$. Post hoc (Tukey) comparisons revealed that all groups (low, high, control) were significantly different from one another ($p \leq .001$). To investigate the interaction further, t-tests were conducted to test (1) differences between learners at the different proficiency-grouping levels and (2) differences between the English and German speakers at each proficiency-grouping level. These tests revealed significant differences for PC use between the English and German speakers in the low group ($t(36) = -7.59$, $p \leq .001$), but not in the high group. The effect size between English and German speakers in the low group was large (Cohen’s $d = -3.67$). Additional t-tests showed significant differences between the different proficiency-grouping levels: the control group and learners in (1) the low group ($t(37) = -21.28$, $p \leq .001$) and (2) the high group ($t(36) = -12.56$, $p \leq .001$).

This analysis revealed performance differences between English and German speakers in the low group for PC in perfective contexts. Compared to German speakers, English speakers in the low group use the PC less frequently and show greater use of the Présent. These usage
patterns result in significant performance differences between the different L1 groups in the low group only.

[Table 5; Figure 2 here]

**Habitual contexts**

**Imparfait**

Table 6 and Figure 3 summarize the forms produced in habitual contexts by group. As in Table 5, the results are presented in percentages with raw counts in parentheses.

This analysis focused on differences between the groups for the IMP in habitual contexts. In contrast to the results in perfective contexts, Figure 3 shows greater variability between the groups, especially between English and German speakers in the low group. French NS, German high, English high and English low all use the IMP most frequently in habitual contexts. German speakers in the low group, however, use the PC most frequently. Therefore, German speakers in the low group differ from all the other groups due to high use of the same form (the PC) in habitual as well as in perfective contexts, indicating that for this group of learners aspect morphology is generally not used to contrast perfective and habitual meaning.

To test the extent of these differences a two-way between-groups ANOVA was conducted with IMP use in habitual contexts as the dependent variable and L1 background and proficiency-grouping as independent variables. The interaction between L1 background and proficiency-grouping was significant, $F(1, 80) = 67.38, p \leq .001$. There was a statistically significant main effect for L1 background $F(1, 80) = 14.56, p \leq .001$. Post hoc comparisons revealed that all L1 groups were significantly different from one another ($p \leq .05$). There was also a statistically significant main effect for proficiency-grouping $F(1, 80) = 54.36, p \leq .001$. Post hoc comparisons revealed that all groups (low, high, control) were significantly different
from one another \( (p \leq .05) \). Furthermore, t-tests revealed significant differences between the control group and learners in (1) the low group \( (t(37) = -23.49, p \leq .001) \) and (2) the high group \( (t(36) = -10.47, p \leq .001) \). Significant differences were also found between English and German speakers in the low group \( (t(36) = 7.02, p \leq .001) \) and the high group \( (t(35) = -3.55, p \leq .001) \). The effect sizes between English and German speakers in both groups were large \( (\text{Cohen's } d = 4.38 \ \text{[low]} \) and \(-1.56 \ \text{[high]}\)).

In sum, an effect for L1 background emerges in habitual contexts because of significant differences between English and German speakers at both proficiency groupings. Note that this result contrasts with PC use in perfective contexts where no significant effect for L1 background was found between English and German speakers in the high group. Therefore, at both proficiency groupings, performance differences emerge, suggesting a clear impact of L1 background on IMP use.

**Passé Composé**

As already noted, the learner data show use of the PC in habitual contexts. PC use in perfective contexts showed some similarities between the learner groups, but its use in habitual contexts appears to clearly divide them. Firstly, it is clear from Figure 3 that the PC in habitual contexts is low amongst high group learners (<11%) but more frequent in the low group (>35%). Secondly, in the low group, there are important differences between English and German speakers: the PC is most frequent amongst German speakers but it is the IMP that is most frequent amongst English speakers. These apparent differences between the groups were tested. A two-way between-groups ANOVA revealed a significant interaction between L1 background and proficiency-grouping, \( F(1, 80) = 29.29, p \leq .001 \). There was a statistically significant main effect for L1 background, \( F(1, 80) = 9.03, p = .004 \). Post hoc
comparisons revealed that all L1 groups (English, German, French) performed significantly differently from one another (p≤.05). There was also a statistically significant main effect for proficiency-grouping, $F(1, 80) = 243.97$, $p≤.001$. Post hoc comparisons revealed significant differences between (a) low and control and (b) low and high (p≤.05), but not between high and control. The t-tests additionally revealed significant differences between English and German speakers in the low group ($t(36) = -6.51$, $p≤.001$), but not in the high group. The effect size between English and German speakers in the low group was large (Cohen’s $d = -4.03$).

This analysis has shown, therefore, that an effect for L1 background emerges from the PC in habitual contexts because of significant differences between the English and German speakers in the low group only, as documented by German speakers’ frequent use of the PC contrasting with English speakers’ use of the IMP. As a result, differences in L1 background only appear to account for performance in the low group.

To summarize this section, the results have shown productive use of the PC and the IMP in perfective and habitual contexts that indicate important differences between (a) English and German speakers and (b) low and high proficiency groupings. In the low group, all the analyses showed significant performance differences between English and German speakers, such as German speakers’ frequent use of the PC in habitual as well as perfective contexts. This result, however, was not replicated in the high proficiency groupings because the only significant difference found at this level was for the IMP in habitual contexts. Therefore, whilst clear and consistent L1 effects are found amongst the low groups for both the PC and the IMP, L1 effects in the high group are much less prominent. Therefore, with observable L1 effects at both proficiency levels, there is clearly a complex interaction between both factors on performance, especially in habitual contexts. The next section presents a discussion of these findings in light of the study’s predictions for L2 development.
Discussion and conclusions

The present study compared oral data from English and German speakers in order to examine how L2 development is influenced when the L1 and the L2 express the same meaning differently. Following the DPTH’s predictions, it was hypothesized that learners would initially transfer their L1 form-meaning mappings for viewpoint aspect to the L2. As a result, performance differences between English and German speakers were expected.

German speakers were predicted not to use PC and IMP aspect morphology to contrast perfective with habitual meaning because in their native language aspect is not grammaticalized. The results support this prediction. For this group of speakers, PC and IMP morphology is generally not used to contrast perfective and habitual meaning, as evidenced by the PC being the most frequent form in both contexts. However, German speakers in the high group do appear to use PC and IMP morphology to express aspectual contrasts. Therefore, these results suggest an initially strong influence of L1 background but one in which L1 effects are mediated by proficiency.

For the English speakers, it was predicted that aspect morphology would be used to express aspectual meaning because viewpoint aspect is grammaticalized in English. Furthermore, perfectivity and habituality were predicted to be mapped together because of how these meanings are mapped in their native language. These predictions would result in use of the same form in perfective as well as habitual contexts. The results do not offer full support for this prediction because English low group learners did not routinely use the same form in
perfective and habitual contexts. Instead, the PC is most produced in perfective contexts (64.3%) and the IMP in habitual contexts (56.6%). It is notable, however, that in the low group English speakers’ use of the target form lacks consistency in both contexts, suggesting fragility in their L2 form-meaning mappings. Turning to the English speakers in the high group, the results show that PC and IMP use becomes more accurate with increases in proficiency, suggesting that increased L2 proficiency facilitates L2 remapping and the use of aspect morphology to express aspectual contrasts.

In terms of L1 effects, therefore, these results suggest an important role for the nature of the L1-L2 difference. Whilst matched for proficiency, English and German speakers in the low group use PC and IMP morphology differently. As already noted, the principal difference between English and German is the how viewpoint aspect is realized: it is grammaticalized in English but not in German. By initially assuming the L2 functions like the L1 (as hypothesized by the DPTH), the English speaker is facilitated by their native language because viewpoint aspect in French is also grammaticalized. The German speaker learning French, however, benefits from no such advantage. Izquierdo and Collins (2008) and Sugaya and Shirai (2007) similarly found an advantage for L1-L2 similarities. L2 processing research equally points to an advantage. Roberts and Liszka (2013) argue that L1-L2 differences concerning the grammaticalization of aspectual distinctions affects L2 development the most. They propose that speakers whose L1 grammaticalizes aspect are claimed to be more sensitive to it than speakers whose L1 does not, subsequently facilitating L2 learning when both languages grammaticalize viewpoint aspect.

The present study’s results additionally indicate that whilst learners’ use of aspect morphology reveals L1 effects, these effects appear to be mediated by proficiency. For example, some performance features in the low group are generally not found in the high
group, such as frequent use of the PC in habitual contexts by German speakers and the Présent in perfective contexts by English speakers. Results from other studies also clearly show that accurate PC and IMP use increases with proficiency/level of instruction (e.g. Howard, 2005; Kihlstedt, 2002; Labeau, 2005). In Ayoun’s (2013, p.127) cloze data, for example, target-like use of aspect morphology becomes more target-like with proficiency, especially for IMP use, where the results show that “the higher the level of proficiency, the greater the performance”. In other words, the most proficient learners’ use of the IMP is the most accurate. In sum, therefore, this study supports the findings from other studies showing that target-like PC and IMP use generally increases with proficiency, with accurate IMP use being a clear indicator of advanced-level proficiency (Ayoun, 2013; Howard, 2005; Labeau, 2005)

On methodological grounds, lastly, it is important to note that the findings reported here are have only been detected by comparing learners from different L1 backgrounds learning the same L2, an important element at times absent from studies investigating L1 influence. In addition, claims of L1 effects are substantiated by incorporating an independent proficiency measure into the study design.

Limitations
It is possible that various methodological choices may have contributed to the results in the present study, including the balance of predicates used in the picture story, prompts and the use of one data collection instrument in this analysis. Firstly, whilst the number of perfective and habitual contexts in the picture narrative task is generally balanced, this is not maintained across the lexical classes (see Appendix 1). For example, although the number of habitual contexts are balanced across telic (n=6) and atelic (n=6) situation types, in perfective contexts there are more atelic (n=9) than telic (n=4). Secondly, the picture-based narrative included
adverb and verbal prompts to sequence the story and to emphasize perfective and habitual contextual differences (e.g. *ensuite* ‘then’, *quand* ‘when’, quand elle était petite… ‘when she was little… ’). It is possible that these prompts may have influenced learners’ use of aspectual forms, as suggested by Izquierdo and Collins (2008), who found that learners’ use of aspectual forms in a cloze test was influenced by the presence of particular adverbs, such as the PC with adverbs referring to specific time periods (e.g. 8am). Furthermore, in line with McDonough and Kim’s (2009) findings for wh-movement, it is possible that the two IMP tokens, which functioned as prompts, subsequently primed learners’ use of the IMP (although see Marsden, Altmann, & St Claire, 2013). Future research using picture-based narratives should investigate how different prompt types (adverb, verbal) and their frequency impact on L2 production. Thirdly, although this paper is part of a larger study on the L2 development of aspect morphology in French L2 (see McManus, 2011, 2013), the present analysis is based on data collected from one instrument.

Pedagogical implications

This study’s findings additionally offer implications for pedagogy and future instructed SLA research. The results indicate that explicit L1-L2 contrasts that focus on the form-meaning differences between languages could be beneficial for learning. Importantly, however, instruction should focus on the *nature* of form-meaning differences, rather than on differences of form only. Some L2 grammars, for example, make form-based comparisons between English and French, such as “English also uses the simple past to express the French imperfect” (L’Huillier 1999, p.119). However, as previously noted, the English Simple Past also expresses perfectivity that is not typically expressed by the IMP. Therefore, whilst such comparisons initially appear valid and simple to understand, they present only a partial picture. Tackling L1-L2 form-meaning mapping differences arguably requires instruction
methods where the primary focus is meaning. To this end, some studies have forced learners to notice L1-L2 differences by making them attend to a form’s meaning in structured input activities, thus making salient a form’s meaning (Laval, 2008; Marsden, 2006), whilst others advocate a concept-based approach whereby learners are first introduced to the conceptual differences between perfectivity and habituality, for example, followed by their realizations in the L1, L2 etc. (Ayoun, 2013; Salaberry, 2008). Ultimately, the present study’s findings support approaches to the learning of aspectual distinctions that primarily focus on meaning and at the same time raise learners’ awareness of L1-L2 differences though explicit information and/or structured input activities.

References


McManus, K. (2011). *The Development of Aspect in a Second Language.* (PhD), Newcastle University, Newcastle, UK.


## Appendix 1: Predicates used in the picture-based narrative

<table>
<thead>
<tr>
<th></th>
<th>Perfective</th>
<th>Imperfective (habitual)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atelic</strong></td>
<td>(avoir) de nouveaux sièges</td>
<td>(écrire) des histoires</td>
</tr>
<tr>
<td></td>
<td>‘get new seats’</td>
<td>‘write stories’</td>
</tr>
<tr>
<td></td>
<td>(boire) du vin</td>
<td>(être) très différentes</td>
</tr>
<tr>
<td></td>
<td>‘drink wine’</td>
<td>‘be different’</td>
</tr>
<tr>
<td></td>
<td>(manger) des tapas</td>
<td>(faire) du vélo</td>
</tr>
<tr>
<td></td>
<td>‘eat tapas’</td>
<td>‘bike ride’</td>
</tr>
<tr>
<td></td>
<td>(manger) des pizzas</td>
<td>(jouer) au foot</td>
</tr>
<tr>
<td></td>
<td>‘eat pizzas’</td>
<td>‘play football’</td>
</tr>
<tr>
<td></td>
<td>(parler) de leur enfance</td>
<td>(lire) des livres</td>
</tr>
<tr>
<td></td>
<td>‘speak about their childhood’</td>
<td>‘read books’</td>
</tr>
<tr>
<td></td>
<td>(réfléchir) à la cause de l’accident</td>
<td>(peindre) des dessins</td>
</tr>
<tr>
<td></td>
<td>‘think about the cause of the accident’</td>
<td>‘paint pictures’</td>
</tr>
<tr>
<td></td>
<td>(rire) des événements du voyage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘laugh about the journey’s events’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(se détendre)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘relax’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(visiter) le centre-ville</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘visit the city centre’</td>
<td></td>
</tr>
<tr>
<td><strong>Telic</strong></td>
<td>(avoir) un accident</td>
<td>(aller) au cinéma</td>
</tr>
<tr>
<td></td>
<td>‘have an accident’</td>
<td>‘go to the cinema’</td>
</tr>
<tr>
<td></td>
<td>(demander) l’aide du contrôleur</td>
<td>(apprendre) ses leçons tard la nuit</td>
</tr>
<tr>
<td></td>
<td>‘ask the conductor for help’</td>
<td>‘do homework late at night’</td>
</tr>
<tr>
<td></td>
<td>(prendre) le train</td>
<td>(arriver) en retard en cours</td>
</tr>
<tr>
<td></td>
<td>‘take the train’</td>
<td>‘arrive late to class’</td>
</tr>
<tr>
<td></td>
<td>(sentir) des gouttes de pluie</td>
<td>(finir) ses devoirs tôt</td>
</tr>
<tr>
<td></td>
<td>‘feel rain drops’</td>
<td>‘finish homework early’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(se coucher) tard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘go to sleep late’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(se lever) tôt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘get up early’</td>
</tr>
</tbody>
</table>
Appendix 2: Extracts from the French c-test

1. Les vaches folles
Selon une récente enquête, 45 % des Français auraient diminué ou cessé de manger de la viande de boeuf depuis le début de la crise de la vache folle. Ils s’_tournent vers les viandes blanches et la nourriture végétale. O__ court son doute de risque en prenant le vol de sa voiture qu’en consommant une entrée. Mais, comme le remarque dernièrement un sociologue, «le Français veut bien mou en conduisant mais pas en mangeant».

2. La grève s’atténue sur le réseau Paris-Nord
Le mouvement de grève lancé hier par les conducteurs et contrôleurs de la SNCF officiant sur les lignes K et H du réseau Paris-Nord devrait s’affaiblir aujourd’hui. Hier mat___, un train sur de___ roulait sur la ligne K, cont___ un train sur tro___ sur l___ ligne H. Les grév___ ont recondu le mouvement au cou___ d’une assemblée générale, bi___ que celui-ci ne semb___ pas avo___ été fort___ suivi. La grève, décidée pour des motifs salariaux et pour des questions de notation, devrait encore s’affaiblir aujourd’hui, selon la SNCF, qui prévoit une reprise normale du trafic sur la portion K.
Tables and figures

**Table 1. Vendler’s classification of predicates/verbs with examples**

<table>
<thead>
<tr>
<th>Atelic</th>
<th>Telic</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Activity</td>
</tr>
<tr>
<td>Be happy</td>
<td>Play football</td>
</tr>
<tr>
<td>Love someone</td>
<td>Read books</td>
</tr>
</tbody>
</table>

**Table 2: Forms that express perfective and habitual aspect in English, French and German**

<table>
<thead>
<tr>
<th>Form</th>
<th>Perfective</th>
<th>Habitual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Past</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Would</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Used to</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td><strong>French</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imparfait</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Passé Composé</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td><strong>German</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preterit</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Perfekt</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Table 3: Additional background information for the learners**

<table>
<thead>
<tr>
<th></th>
<th>English Year 1</th>
<th>German Year 1</th>
<th>English Year 4</th>
<th>German Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>18.3</td>
<td>20.5</td>
<td>20.9</td>
<td>23.5</td>
</tr>
<tr>
<td>Mean classroom exposure to French (years)</td>
<td>7.9</td>
<td>7.9</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Mean time in Francophone country (years)</td>
<td>0.1</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Table 4: Participants

<table>
<thead>
<tr>
<th>Group</th>
<th>English L1</th>
<th>German L1</th>
<th>C-test score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>19</td>
<td>19</td>
<td>53-78</td>
</tr>
<tr>
<td>High</td>
<td>19</td>
<td>18</td>
<td>92-114</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>37</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Aspect morphology in perfective contexts, percentages (raw figures)

<table>
<thead>
<tr>
<th></th>
<th>PC</th>
<th>IMP</th>
<th>PRES</th>
<th>Other</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>English low (n=19)</td>
<td>64.3 (146)</td>
<td>13.2 (30)</td>
<td>20.3 (46)</td>
<td>2.2 (5)</td>
<td>100 (227)</td>
</tr>
<tr>
<td>German low (n=19)</td>
<td>78.2 (184)</td>
<td>9.4 (22)</td>
<td>6.4 (15)</td>
<td>6.0 (14)</td>
<td>100 (235)</td>
</tr>
<tr>
<td>English high (n=19)</td>
<td>85.9 (195)</td>
<td>11.9 (27)</td>
<td>2.2 (5)</td>
<td>0 (0)</td>
<td>100 (227)</td>
</tr>
<tr>
<td>German high (n=18)</td>
<td>80.2 (175)</td>
<td>16.1 (35)</td>
<td>3.2 (7)</td>
<td>0.5 (1)</td>
<td>100 (218)</td>
</tr>
<tr>
<td>Control (n=10)</td>
<td>100 (130)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>100 (130)</td>
</tr>
</tbody>
</table>

Table 6: Aspect morphology in habitual contexts, percentages (raw figures)

<table>
<thead>
<tr>
<th></th>
<th>PC</th>
<th>IMP</th>
<th>PRES</th>
<th>Other</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>English low (n=19)</td>
<td>35.8 (81)</td>
<td>56.6 (128)</td>
<td>5.3 (12)</td>
<td>2.2 (5)</td>
<td>100 (226)</td>
</tr>
<tr>
<td>German low (n=19)</td>
<td>57.1 (128)</td>
<td>35.3 (79)</td>
<td>1.3 (3)</td>
<td>6.3 (14)</td>
<td>100 (224)</td>
</tr>
<tr>
<td>English high (n=19)</td>
<td>11 (24)</td>
<td>86.3 (189)</td>
<td>0.5 (1)</td>
<td>2.3 (5)</td>
<td>100 (219)</td>
</tr>
<tr>
<td>German high (n=18)</td>
<td>4.7 (10)</td>
<td>92 (196)</td>
<td>0 (0)</td>
<td>3.3 (7)</td>
<td>100 (213)</td>
</tr>
<tr>
<td>Control (n=10)</td>
<td>0 (0)</td>
<td>100 (120)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>100 (120)</td>
</tr>
</tbody>
</table>
Figure 1: Extracts from les sœurs

(être) très différentes

(arriver) en retard en cours

Figure 2: Aspect morphology used in perfective contexts (percentages)
This research was supported by grants awarded to the author by the School of Modern Languages at Newcastle University, the Association for French Language Studies, and a British Academy Postdoctoral Fellowship (PF130001). I would like to thank the anonymous CMLR reviewers for their valuable comments as well as Florence Myles, Richard Waltereit, Laura Domínguez and Nicole Tracy-Ventura.

Progressive viewpoint aspect is not investigated in this study and as a consequence the crosslinguistic differences for expressing progressive meaning will not be discussed.

A corpus analysis of habitual forms in a 1.5-million word corpus of spoken British English reveals that the most frequent marker of habitual past is the Simple Past (70%), followed by used to (19%) and would (6%) (Tagliamonte & Lawrence, 2000).

Although the PC can be compatible with adverbs expressing duration (e.g. all night long) the result is not a habitual interpretation, but an iterative one (i.e. the event is interpreted as repeated on an irregular basis and temporally bounded, as opposed to the effect achieved with the IMP: repeated regularly and unbounded). For further discussion, see Comrie, 1976, Gezundhajt, 2000.

To avoid Type I errors, a Bonferroni adjustment was applied to the alpha level, whereby a more stringent alpha level for each comparison is set by dividing the alpha level (.05) by the number of comparisons made (see Pallant, 2013). The alpha level used in the t-tests conducted for post-hoc analyses was .025.