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L2 French Learners' Processing of Object Clitics: Data from the Classroom

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The purpose of this study was to assess whether the well-documented paucity of object clitics in L2 French production reflects difficulties learners have comprehending these forms in classroom input. To this end, an aural French-English translation task was used to determine the extent to which university-level L2 learners of French (N=152) were able to process and encode the meaning of the object clitics *me, te, la, l', les, lui, leur, y* and *en*. An analysis of the translations revealed variation in performance across clitic types (19-75% accuracy) and as a function of learners' proficiency level and educational background. There was a positive relationship between L2 proficiency and clitic processing. Post-French immersion learners were better able to process and encode clitics than their post-core French peers. As a group, the learners were only 54% accurate, with their mistranslations of object clitics indicating incomplete use of gender, number, animacy and case markings to link these forms to their co-referents. An under-reliance on animacy and agreement cues by these L2 learners suggests the need for explicit instruction on the importance of syntactic and discourse-pragmatic information in clitic comprehension.

INTRODUCTION

Researchers studying the acquisition of French agree that mastering the pronominal system for productive purposes is a difficult task for learners in a variety of acquisitional contexts (e.g., Paradis & Prévost, 2004). For instructed second language (L2) learners of French, in particular, object clitics represent a major challenge (e.g., Erlam, 2003; Harley, 1986; Naiman, 1974). Pre-verbally placed object clitics are particularly problematic grammatical elements whose usage learners fail to master despite their ubiquity in both oral and written language and the frequent recycling of these forms in the instructional sequence. In fact, L2 research indicates diminished rates of accuracy in object clitic use in the spoken and written production of instructed learners (Grüter, 2005; Harley, 1986; Kenemer, 1982; White, 1996). Not surprisingly, research on the acquisition of object clitics by learners of French to date has relied almost exclusively on production measures to assess grammatical competence. This focus reflects R. Ellis' (2001) lament that grammar tends to be tested using oral production measures despite the fact that there is no theoretical reason why this should be the case. Although research on the comprehension of object clitics by L2 French learners is virtually nonexistent, it has the potential to increase our understanding of what makes the French pronominal system so difficult to learn and use. Could there, for example, be a link between the comprehension and production of object clitics? Or, in other words, if learners are not producing object clitics (or only do so minimally), could it be because they are unable to syntactically parse and represent these forms in comprehension? The notion I am advancing here is that what cannot be parsed may very well remain incomprehensible and unavailable for use in production. Grüter's (2005) finding that individual learners

have either acquired or not acquired clitics for both comprehension and productive purposes indicates that this is an avenue that merits further exploration.

As will be seen later in my discussion of Chaudron's (1985) continuum, there are many ways to tap into the comprehension of grammatical forms. For this reason, my research programme on the comprehension of object clitics employs a variety of tasks (a dictogloss, a translation task and a listening cloze), all of which differ as a function of the amount of processing and encoding they require on the part of the learner. In the current article, I discuss the use of a translation task to determine the degree to which English-speaking learners of French are able to process animate, inanimate, direct and indirect object clitics, and the potential impact of learner-related factors (e.g., proficiency level and educational background) on the aural comprehension of these forms. As VanPatten (2004) states, processing involves the formation of (partial or complete) form-meaning connections during on-line listening comprehension. Aural translation, as employed here, is a pedagogical task in which learners translate a series of contextualized sentences from the L2 (aural) into their L1 (graphic encoding). Traditionally, researchers have not used translation tasks as measures of listening comprehension, although such tasks have been shown to have a high level of validity on both theoretical and practical grounds (Buck, 1992; Scott et al., 1996). In this study, a translation task, which carries high demands both in terms of processing and encoding, served as an exploratory tool to provide insight into learners' comprehension of object clitics.

SYSTEMS OF PRONOMINALIZATION IN ENGLISH AND FRENCH

Each French pronoun has two corresponding forms: a strong one and a weak one, as can be seen in Table 1.

Person	Clitic – direct object (+animate)	Clitic – indirect object (+animate)	Clitic – other (-animate)	Strong pronouns (+animate)	Strong pronouns – other (-animate)
Singular					
I	<i>me</i>	<i>me</i>		<i>moi</i>	
II	<i>te</i>	<i>te</i>		<i>toi</i>	
III	<i>le/ la</i>	<i>lui</i>	<i>y, en</i>	<i>lui/ elle</i>	<i>à ça/ là, de ça</i>
Plural					
I	<i>nous</i>	<i>nous</i>		<i>nous</i>	
II	<i>vous</i>	<i>vous</i>		<i>vous</i>	
III	<i>les</i>	<i>leur</i>		<i>eux/ elles</i>	

Table 1: Object clitics and strong object pronouns in French.

In addition to the animate forms in the first, fourth and fifth columns of this table, there are also inanimate forms including indirect *y/à ça* “of/about it”; locative *y/là* “there” and the genitive *en/de ça* “of/about it.” Strong pronouns occur postverbally,

typically occupying the same slots as full determiner phrases, as in *Je vais là* “I go there” (Kayne, 1975). Clitic pronouns, on the other hand, are verbal affixes, as in *J’y vais* “I go there.” They are bound forms that are unable to stand apart from their verbal host. French object clitics can neither be separated from their verbal host, nor can they be modified, conjoined or stressed. They are, however, subject to liaison or elision and compete with their stressed counterparts, i.e., strong object pronouns (Kayne, 1975, pp. 66-83). In the context of the current study, and in keeping with Kayne (1975), I have adopted a movement analysis of clitics. Table 1 shows that (accusative and dative) case is only marked on object clitics, not on their strong counterparts. Moreover, there are several ambiguous forms that show morphological syncretism, meaning that a single form carries out a number of linguistic functions (e.g., *me*, *te*, *nous*, *vous* and *elle[s]*). *Elle(s)* functions as both a subject clitic and as a strong pronoun, while *me* and *te* are both direct and indirect object clitics. *Nous* and *vous* function as subject, direct and indirect object clitics, as well as strong pronouns. This morphological syncretism of various object clitic forms could potentially pose problems in the context of the current study given DeKeyser’s 2005 work showing that reduced opacity increases the difficulty of L2 grammar learning. In distinct contrast to these pronominal forms, forms with a strong opacity index are not homophonous with other grammatical morphemes and have a high level of form-meaning correlation, facilitating the detection of their meaning by L2 learners (see DeKeyser, 2005; Goldschneider & DeKeyser, 2005 for detailed discussion on the reduced opacity of English “-s” as the third person singular verb marker, plural noun marker and genitive noun marker).

In the primary, weak pronominal system in French, direct and indirect object clitics are morphemes that bind to a verbal host. In contrast, the strong direct and indirect object pronouns in English ((to) me, (to) you, (to) him/her, (to) it, (to) us, (to) them) appear in postverbal position, as do their lexical counterparts. (The postverbal positioning of indirect pronouns and indirect lexical items is illustrated in the following sentences: *Je lui parle* “I talk to him” or *Je parle à Charlie* “I talk to Charlie.”) While the canonical word order in French is subject-verb-object (SVO), object clitics are placed preverbally (clV) in both affirmative statements (*Je les vois* “I see them”) and in negative imperatives (*Ne me le donne pas!* “Do not give it to me!”) This secondary system of pronouns in French (*pronoms toniques/disjoints*), commonly referred to as “strong” or “stressed” pronouns (*moi*, *toi*, *lui/elle*, *nous*, *vous*, *eux*), behaves like lexical noun phrases (NPs). Strong or stressed pronouns may be used as objects of prepositions, in coordinated structures, in dislocated/doubled structures, and in isolation. For these reasons, the strong pronouns in French distribute similarly to English object pronouns, occurring in post-posed position. This contrasts with the pre-posed clitic system in standard French.

THE ACQUISITION OF CLITICS IN FRENCH

Researchers have studied how learners from different acquisitional backgrounds work towards mastery of the complementary strong and weak pronoun systems in French, namely first language (L1) learners, L2 learners, bilingual L1 learners and specifically-language impaired (SLI) learners (for an in-depth review, see Wust, 2006). Both anecdotal and empirical research indicate common difficulties faced by all learners. What is particularly striking about the data is the similarity between, for example, how

monolingual three-year olds and instructed adult L2 learners acquire the French pronominal system. In regard to all learner types, the following generalizations about the acquisition of French clitics can be made:

- Object clitics are late acquired, possibly as a function of the complexity of their syntactic calculation (Hamann, Rizzi & Frauenfelder, 1996; Granfeldt & Schlyter, 2004);
- In the early stages of acquisition, subject clitics tend to be overgeneralized to object clitic contexts (e.g., Jakubowicz, 1991; Naiman, 1974; Selinker, Swain & Dumas, 1975);
- Errors occur with respect to the person, number, and gender of object clitics (e.g., Jakubowicz, 1991)
- Direct object clitics are produced more frequently (or better comprehended) than indirect object clitics (e.g., Jakubowicz, Nash, Rigaut & Gérard, 1998; Naiman, 1974);
- Errors occur with respect to verb argument structure and the productive use of double object clitic constructions is problematic (e.g., Connors, Nuckle & Greene, 1981; Kenemer, 1982);
- Learners also produce non-targetlike forms such as null pronouns, strong pronouns/*ça* and lexical objects in pronominalization contexts (e.g., Chillier et al., 2001; Paradis, 2004; Schlyter, 1997).

While these research findings apply to all types of French learners, it is essential to underscore the fact that the presence of developmental factors and the length of time that they affect learner production differ greatly according to the specific context of acquisition. For example, L2 learners may never master object clitics for productive purposes (Harley, 1986), whereas monolingual, normally developing L1 learners regularly produce syntactically correct object clitics beginning at age four (Chillier et al., 2001).

While L2 learners differ from their L1 counterparts in the frequency with which they produce non-targetlike forms in object pronominalization contexts and the length of time required for productive mastery of the clitic system, they are also the only population that struggles with word order. Monolingual and bilingual child learners rarely make object placement errors both in ScV and SVO word orders (Chillier et al., 2001; Jakubowicz, Nash, Rigaut & Gérard, 1998; Jakubowicz & Rigaut, 2000). This contrasts with L2 learners for whom ScV word order is particularly difficult. In fact, L2 learners with a variety of L1s have been documented as passing through a phase of non-targetlike, post-posed object clitic usage (Granfeldt & Schlyter, 2004; Schlyter, 1997; Towell & Hawkins, 1994). For these learners, it is clear that the clitic system is learned over an extended period of time.

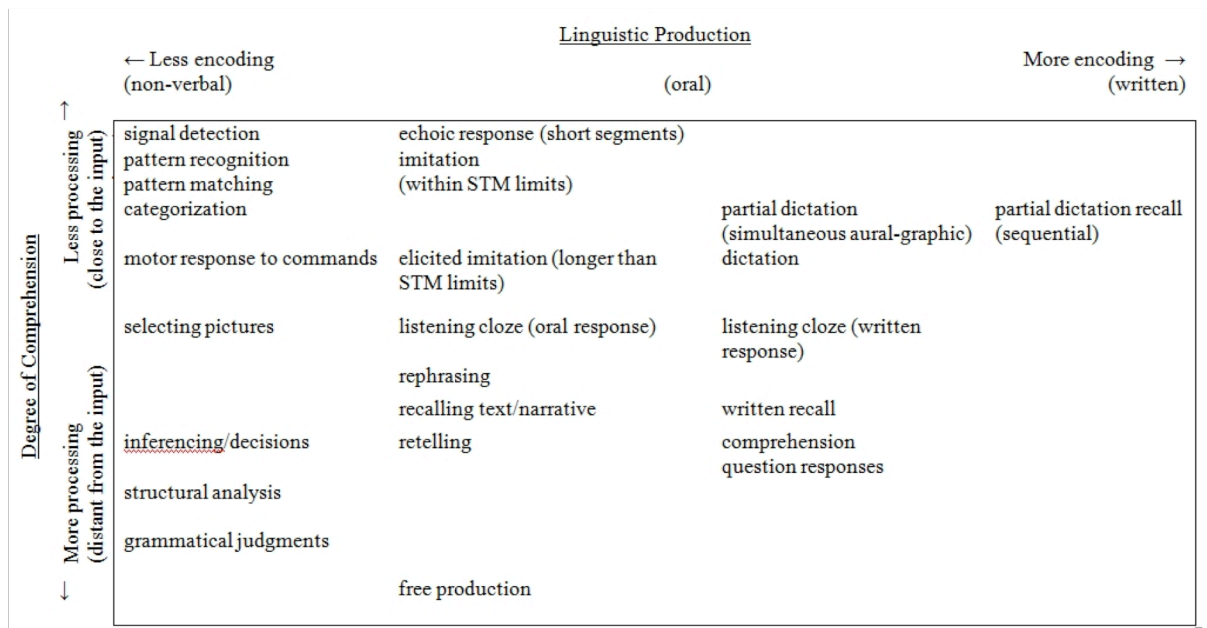
MEASURING L2 LEARNERS' PROCESSING OF GRAMMAR USING AURAL TEXTS

Chaudron (1985) presents and categorizes instruments suitable for measuring aural input processing capacity and intake by L2 learners. Intake constitutes a complex phenomenon comprised of several stages on a continuum of preliminary to final intake: (1) the initial stages of perception of input, (2) the subsequent stages of recoding and encoding of the

semantic (communicated) information into long-term memory, and (3) the series of stages by which learners fully integrate and incorporate the linguistic information in input into their developing grammars (Chaudron, 1985, p. 2).

The translation task employed in the current study aims to capture the first two stages on Chaudron's continuum: "listening for comprehension" as opposed to "listening for acquisition," which would include all three stages.

For Chaudron (1985), L2 learners' perception and processing of input is influenced by the individual measure or testing procedure employed, which presumably "...allow[s] different intervening factors to affect learners' perception or processing" (p. 9). To this end, a variety of tasks that can be used to determine learners' responses to aural input are presented. As illustrated by Figure 1, these tasks differ along two dimensions of response measures: "(1) the amount of encoding or recoding of the input into other forms, whether motor behavior or language, and (2) the degree of comprehension required—that is the level of grammatical abstraction from the input that is expected from the learner" (Chaudron, 1985, p. 9).



From "Intake: On models and methods for discovering learners' processing of input," by C. Chaudron, 1985, Studies in Second Language Acquisition, 7, p. 9. Copyright 2008 by the Cambridge University Press. Reprinted with permission.

Progression along both of these dimensions has implications in terms of the allotted time and the number of stages of intake processing through which the learner must pass. As time allotted for the task increases, so does the possibility for the learner to draw upon higher-level knowledge that is less automatized, clearly allowing him/her to surpass the preliminary intake stage.

As mentioned above, Chaudron (1985) classifies specific comprehension tasks that researchers have typically used with L2 learners on the basis of the amount of encoding and the amount of processing required. As part of my extensive study of the aural

comprehension of object clitics by adult L2 learners of French, I had the same group of learners complete three different tasks that can be contextualized within Chaudron's continuum: a dictation-style task commonly referred to as a dictogloss, a listening cloze and an aural translation. Here is an illustration of the range of tasks used to measure aural comprehension. Selecting pictures, for example, requires less coding and less processing, while making grammatical judgments required less encoding and more processing. On the other end of the spectrum, dictation requires more encoding, but less processing, while highly demanding tasks such as a listening cloze (written response) require more encoding and more processing. Following Chaudron, I estimate that an aural translation from the L2 with graphic encoding in English, like the one in the current study, represents a demanding task that requires high levels of processing and encoding. In this type of translation task, learners hear the sentence (linguistic input), access meanings (orthographic/phonological, lexical/semantic, syntactic/propositional), reformulate the input and produce a translated version of the sentence. In an online translation, it has been estimated that 80% of an individual's effort is dedicated to listening to what is being said in the source language and 20% is dedicated to reproducing it in the target language (Bajo et al., 2001). The French-English translation used in the current study requires the listener to encode meaning graphically, thus allowing me to make inferences about the processing of the target object clitic forms. It is precisely because of the graphic encoding, however, that this task by its very nature conflates comprehension and production.

CLITIC ACQUISITION BY INSTRUCTED L2 FRENCH LEARNERS

While there is an abundance of research on the comprehension and production of object clitics by monolingual and bilingual child learners (see Wust, 2006 for a synopsis of this research), to the best of my knowledge only three studies have directly tested the aural comprehension of object clitics by instructed L2 learners of French. These studies focus on either direct and/or indirect object clitics. Using a clitic comprehension task, Naiman (1974) studied grade one and two French immersion students, who were more successful at identifying direct and indirect lexical complements (e.g., *Chaque jour, dans la cour de l'école, les gros garçons frappent les filles* "Each day in the school yard, the fat boys hit the girls") than their clitic counterparts (e.g. *Chaque jour, dans la cour de l'école, les gros garçons les frappent* "Each day in the school yard, the fat boys hit them"). Naiman's research laid the groundwork for the current study by providing an early indication of an increased processing load for object clitics in L2 French.

More recently, Erlam (2003) carried out a study involving the aural comprehension of third-person direct object clitics *le*, *la* and *les* by high school-level L2 learners of French. Results from a sentence picture-matching task revealed that these learners experienced difficulty understanding clitic forms, both prior to and subsequent to a pedagogical intervention that consisted of either production-oriented or comprehension-oriented practice. The students' pre-treatment scores on the comprehension measure ranged from 18.9-22.0%, and their post-test scores ranged from 19.5-34.0%. Both the experimental groups outperformed the controls on the comprehension measure, with the control group regressing on both post-tests. Erlam (2003) asserts that the gains made by the two experimental groups demonstrate the effectiveness of form-focused instruction in teaching direct object pronouns. It could be argued, however, that the low

accuracy scores on the comprehension tests indicated that these students lacked receptive control of the targeted direct object clitic forms. From an aural processing standpoint, however, the pre-test results in Erlam's (2003) study are important because they underscore the extent to which L2 learners may be able to correctly guess the nature of an object clitic from the context in which it is used (even prior to inductive or deductive instruction on these forms). It certainly seems possible that on the pre-test measures, the learners in the Erlam (2003) study relied on lexical semantics or event probabilities rather than syntactic cues to determine the meaning of the object clitics *le*, *la* and *les* (See VanPatten 1996 and 2004 for a more elaborate discussion of the role of lexical semantics and event probabilities in processing principles).

In a third study, Grüter (2005) employed a sentence picture-matching task to test six six-year old French immersion students' sensitivity to the presence or absence of object clitics in orally-delivered target sentences that completed twenty-four different stories. In each story, both transitive and intransitive interpretations were equally plausible. In the testing phase, the researcher said the culminating sentence of a two- or three-panel mini-story and the student identified the corresponding picture. The following examples from Grüter (p. 376) illustrate utterances from the transitive, intransitive and clitic conditions:

(1) a. *Luc plonge le camion dans l'eau.*

"Luc is plunging *the truck* into the water" (lexical condition)

b. *Luc le plonge dans l'eau.*

"Luc is plunging *it* into the water" (clitic condition)

c. *Luc plonge dans l'eau.*

"Luc is diving into the water" (intransitive condition)

As a group, the L2 learners achieved 75% accuracy in the intransitive condition (as in 1c.) and 64% accuracy in the clitic condition (as in 1b.). Despite moderate levels of accuracy as a group, an examination of the individual data resulted in a statistical correlation between these learners' performance on the comprehension and (elicited imitation) production tasks. Data analysis of individual students revealed that half of the learners were able to produce and comprehend clitics, while the other half were not. Based on the non-aggregated data, Grüter suggests that the acquisition of object clitics is very much a developmental issue, with some learners being in a stage where the representation of clitics is not (yet) acquired and others being in a subsequent stage where the representation of clitics is acquired (p. 384). Grüter's finding of non-acquired vs. acquired clitics among child L2 learners of French speaks to the very question that prompted me to carry out the current study: Could the diminished rates of accuracy in object clitic use in the spoken and written production of instructed L2 learners of French be indicative of difficulty comprehending these forms?

L2 learners' aural comprehension of object pronouns has also been investigated more indirectly through two additional elicited imitation studies that tap into both comprehension and production. Grade one and two immersion students in Naiman's

study (1974: 34) were better at repeating direct object lexical complements (e.g., *Elle a mis une pomme verte dans son sac ce matin pour Marie* “She put a green apple in her bag this morning for Marie”) than indirect object lexical complements (e.g., *Dans la classe mon frère a montré le ballon bleu aux enfants* “In the class my brother showed the blue ball to the children”). The same was true for direct object (e.g., *Mon frère les a vus sur la table brune après le déjeuner* “My brother saw them on the brown table after lunch”) and indirect object clitic forms (e.g., *Après le repas ma sœur lui a lancé une petite pomme* “After lunch my sister threw him/her a small apple”). Even when these students correctly imitated direct object clitics, they almost categorically placed them in non-targetlike, post-verbal position (e.g., **Ma sœur place les sur la chaise brune de la maman de Jean-Paul* “My sister places them on Jean-Paul’s mother’s brown chair”). Naiman’s (1974) results seem to support the notion that not all object clitic forms are created equal from a processing perspective, as indirect object pronouns appear to carry a higher load than their direct counterparts, although he did not make explicit statements to this effect. This finding influenced the primary research question in the current study, which asks the extent to which the grammatical function of object clitics impacts upon their processability.

On additional elicited imitation measures, adult L2 learners of French did not use lexical NPs in the place of object clitic forms. They did, however, frequently delete object clitics in their repetitions of stimulus sentences (Gundel, Stenson & Tarone, 1984). Thus I would suggest that the learners were not showing object clitic avoidance (e.g., registering the meaning of the object clitic, but choosing to represent its meaning with a lexical NP). It seems more likely that learners were experiencing a perception/parsing issue, or perhaps even cognitive overload. In this particular study, learners with study-abroad experience showed the highest rates of targetlike object clitic usage and the lowest deletion rates (29%), compared to a 45% deletion rate for those who had never lived in a French-speaking country. Gundel et al.’s (1984) research not only indicates that instructed L2 learners of French may have difficulty comprehending clitic forms in oral input, but also points to proficiency and type of input (e.g., classroom-based vs. contextualized use within the target-language culture) as potential intervening factors.

To briefly summarize, there is a paucity of research on the comprehension of object clitics by both child and adults learners of L2 French. The studies to date, while limited in scope, suggest that many instructed L2 learners of French are not particularly successful at comprehending and reproducing the meaning of object clitics. Grüter’s (2005) findings show a positive relationship between object clitic comprehension and production. The results in Erlam (2003) could indicate that some learners rely on lexical semantics or event probabilities rather than syntactic cues in interpreting the meaning of the object clitics. Naiman’s (1974) findings demonstrate that the processability of object clitics may be impacted by their specific grammatical function (direct, indirect). Gundel et al.’s (1984) research points to perception/parsing issues as potential explanations for why L2 learners of French delete object clitics during elicited imitation tasks, and it shows increased clitic comprehension among study abroad learners.

FACTORS INFLUENCING THE PROCESSING OF INDIVIDUAL FRENCH OBJECT CLITIC FORMS

In the context of the current study, French object clitics are analyzed in terms of their overall processability as a function of their level of meaningfulness (VanPatten, 1996) and their placement in sentences (VanPatten, 2004). For VanPatten (1996), the value attributed to any given form (more, less or nonmeaningful) varies according to how much it contributes to the overall meaning of a sentence as a function of its inherent semantic value and redundancy within the utterance. The degree of meaningfulness constitutes what VanPatten (1996) refers to as the communicative value of a given form. Using VanPatten's "meaningfulness" criteria/communicative value construct, I classify *le, te, la, l', les, lui, leur, y* and *en* as having a semantic value (+S) in that they provide cues to animacy and/or argument structure by their very nature.¹ These characteristics facilitate co-referencing with their antecedents which occurs on an intra- or inter-sentential level, making these object clitics redundant in the context of this task (+R). Take as an example the first item from the translation task used in the current study: *Nathalie adore Paris. Elle y est allée pour sa lune de miel.* "Nathalie loves Paris. She went there for her honeymoon." The listener infers co-reference between the lexical object "Paris" in the first sentence and the locative clitic "y" in the second sentence, resulting in a +R assignment.² It is precisely because of the +S, +R classification discussed above that the object clitics in the current study have an intermediate-level communicative value. As a function of VanPatten's (2004) Sentence Location Principle, however, the sentence-medial placement of these particular object clitics should detract from their processability, as items in sentence-initial and sentence-final positions are considered to be most salient. Under such conditions, the semantic weight and redundancy of clitics appear somewhat to counteract each other; however, the lack of acoustic saliency and the medial position of these forms should not particularly facilitate their perception, noticing, and subsequent processing by L2 learners.³

I argue on the basis of previous research that not all object clitics are created equal. This classification of the features of the individual clitic forms under study follows from DeKeyser (2005), for whom three factors contribute to the grammatical difficulty of a given linguistic form: complexity of form, complexity of meaning, and complexity of the form-meaning relationship (p. 3).

According to DeKeyser (2005), irrespective of an actual grammatical form, the problem of meaning in and of itself "can constitute a source of difficulty, because of novelty, abstractness, or a combination of both" (p. 5). As a class, French object clitics should be difficult for Anglophone students based on their novelty factor. The students' L1 does not have a comparable pronominalization system (i.e., it lacks preverbal object pronouns and has less morphological syncretism among nominative, accusative and dative pronouns) nor does it distinguish grammatical gender.⁴

With respect to the problem of form, grammatical difficulty primarily pertains to complexity. For DeKeyser (2005), "assuming the learner knows exactly the meanings that need to be expressed, difficulty of form could be described as the number of choices involved in picking all the right morphemes and allomorphs to express these meanings and putting them in the right place" (pp. 5-6). Not all object clitics are equal in terms of syntactic complexity, both from a comprehension and production standpoint. Direct object (accusative) clitics do not require argument selection whereas indirect

object (dative) clitics necessitate a choice between competing arguments (typically *à* or *de*), as illustrated in (2) and (3):

(2) *Il passe la voir.*

“He goes to see *her*.”

(3) *Il lui parle.*

“He talks *to him/to her*.”

In Example (2) there is a direct argument construction, *voir quelqu'un* “to see someone,” whereas in Example (3) there is an additional step that involves an apparent choice between competing arguments: *parler à quelqu'un* “to talk to someone” or *parler de quelqu'un* “to talk about someone.”

The object clitics in this study also differ as a function of complexity due to animacy traits. While indirect, locative and partitive clitic forms provide cues to their animacy by their very nature (e.g., *lui* and *leur* = +animate, or *y* and *en* = -animate), direct object clitic forms can be either +animate or -animate as a function of the antecedent with which they are co-referenced, as in the following example:

(4) *Elle le voit.*

The third person direct object clitic in the preceding example could either be translated as “She sees *it*” or “She sees *him*” depending on the animacy of the masculine antecedent, adding an additional step to the syntactic computation.

As DeKeyser (2005) points out, this problem of difficult grammatical forms for L2 acquisition involves an ongoing debate as to “whether continuing failure to supply these morphemes is truly a problem of competence or one of “mere performance”” (p. 6). He makes specific reference to intermediate-level L2 learners (with English as their L1) who do not naturally use morphology when processing sentences for meaning (for a detailed discussion, see VanPatten, 2004). These learners benefit from processing instruction that draws their attention to morphological cues to sentence meaning in morphology-rich languages like Spanish and French.

A final factor that contributes to the difficulty of mastering a grammatical form, and one that affects French object clitics in particular, is that of form-meaning mapping. As has been shown, French object clitics are problematic for both form- and meaning-related reasons. Their inherent difficulty is further compounded in that the link between form and meaning is not always transparent, for reasons of redundancy (i.e., whether or not the meaning of the form is expressed by one or more additional elements in nearby discourse) and opacity (i.e., the degree to which a morpheme has multiple allomorphs and is homophonous with other morphemes). As I illustrated in the discussion of object clitics in light of VanPatten’s (1996) “meaningfulness” criteria/communicative value construct, object clitics are redundant in that their meaning is expressed by another element on either an intra- or inter-sentential level, which may lead learners to gloss over clitics while processing sentences. French object clitics can also be problematic in that there is often a low form-meaning correlation precisely because they are homophonous

with other grammatical morphemes, most often clitics carrying out other functions in discourse or even strong, post-posed pronouns. For example, in (5) *lui* refers to the son (masculine singular), acting as an indirect object clitic and strong pronoun, but is also used as a weak pronoun in reference to the daughter (feminine singular):

(5) *Julien est un fils à maman. Sa sœur Julie est moins aimée. Sa mère ne lui téléphone qu'une fois par semaine. Sa mère ne pense à elle que rarement. Quant à son fils, sa mère lui téléphone cinq fois par jour. Elle pense à lui constamment.*⁷

“Julien is a mama’s boy. His sister Julie is less loved. Her mother only telephones *her* once a week. Her mother only rarely thinks *about her*. As for her son, his mother telephones *him* five times per day. She thinks *about him* constantly.”

In cases of low form-meaning correlation, frequency ultimately plays a primordial role in their acquisition. N. Ellis (2002) argues that for clear form-meaning mappings, minimal exposure may suffice for acquisition, while for non-transparent mappings, acquisition may never occur, particularly in the case of adult learners.⁵

In summary, from previous empirical research, it has been concluded that both L1 and L2 child learners know the syntax and distribution of French object clitics from the time they begin to use them productively. This contrasts starkly with adult L2 learners who use a number of types of non-targetlike forms, including strong and null pronouns in pronominalization contexts.

While there has been ample research conducted on the production and comprehension of object clitics by child learners, adult L2 learners have been studied to a much lesser extent. One area that has been particularly underrepresented in the research is that of the aural comprehension of clitics. The current study proposes to fill this gap, while at the same time responding to R. Ellis’ (2001) complaint that grammatical knowledge tends to be tested by using oral production measures. This study entails a quantitative examination of how university-level learners of French successfully process and encode the meaning of a variety of object clitic forms, as a response to the following research questions:

1. Does a learner’s ability to process and encode the clitics contained in an aural text vary depending on the grammatical function or animacy of the clitics?
2. Does a learner’s ability to process and encode the clitics contained in an aural text vary depending on the learner’s L2 proficiency level (low vs. intermediate vs. high)?
3. Does a learner’s ability to process and encode the clitics contained in an aural text vary depending on the learner’s total amount of exposure to French (French immersion vs. core French)?

METHOD

Participants

The 152 participants in this study came from nine classes selected from an original pool of 11 classes of a first-year French course (for intermediate-level learners) at the University of Alberta in Canada. In total, 53 post-immersion and 99 post-core French students, who had received the equivalent of between three and 13 years of French instruction in school, were recruited for participation in the study. While core French students had studied French as a subject during their K-12 schooling, French immersion students were taught content area courses such as social studies and math in the target language. The nine participating classes were comprised of three low-, three intermediate-, and three advanced-level sections, for a total of 44 low-, 51 intermediate- and 57 advanced-level students.⁶ It is important to note that both post-French immersion and post-core French students could be found in all three levels, with the former students having completed either early-, middle- or late- immersion programs.

The participants primarily came from monolingual Anglophone backgrounds (78.9%).⁷ The sample was composed of more females than males (76.3% and 23.7% respectively). The participants ranged in age from 18-45 years, although more than 90% of the participants fell into the 18-24 year-old category. The majority of the student sample never used or rarely used spoken French media outside of the classroom. The 36.9% of students who reported having stayed with a Francophone family or French-speaking friends and the 13.1% who reported having lived with a host family indicated, for the most part, making frequent use of French in their interactions. Finally, 51.3% of students acknowledged that they were trying to improve their French outside of the classroom, primarily through oral interactions with friends and family members, as well as customers or colleagues at their place of employment.

Materials

In the current study, the students were given fifteen minutes to translate from French into English contextualized sentences, containing a total of 15 object clitics (see Appendix).⁸ During the administration of the task, I read each group of sentences aloud three times to the individual classes. I presented the sentences at a normal rate of speech and instructed the students not to dwell on any vocabulary items they did not know, but rather to keep the original French word in the translated sentence if necessary.

I carefully selected the research setting, stimuli and task for reasons of ecological validity. While the operationalization of this term has been the subject of debate because of its very nature as an “umbrella” construct (see Scheidt, 1981), it is often used to refer to the “relation between real-world phenomena and the investigation of these phenomena in experimental contexts” (Schmuckler, 2001, p. 420). While experimental, laboratory-based research makes an important contribution to our understanding of second language acquisition (SLA), as Eckerth (2009) points out “it is generally acknowledged in SLA research that studies implemented under controlled conditions lack the ecological validity that research during actual class time can offer (DeKeyser, 2003; Doughty, 2003)” (p. 123). From a psychological perspective, it could be further argued that these types of studies lack both in “representativeness” and “naturalness” of

the stimuli and responses that are characteristic of real-world situations (see Schmuckler, 2001). Design features of the current study are, therefore, framed in this tri-dimensional view of ecological validity.

In designing this study, a primary concern was the choice of environmental setting for data collection. In an attempt to conserve the primary environment in which the students made use of their L2, I administered the task inside their classrooms, during regularly scheduled class time. This is a striking contrast to psycholinguistic research on clitics in L2 French, which has taken place in laboratory settings (Bruhn-Garavito & Montrul, 1996; Duffield, Prévost & White, 1997).

A secondary concern was the sentences to be translated from French into English by the students. The previously mentioned psycholinguistic research on clitics has used researcher-generated stimuli that cannot be assumed to reflect meaningful sentences taken from the classroom discourse where the instructed learners, who served as participants, were exposed to and used their L2 on a regular basis. In the current study, the target sentences mirrored the demands of the language to which the students were regularly exposed in their classes. The content of all of the sentences was based on storylines and characters from the students' textbook, and many of the sentences were taken verbatim from course materials. These sentences had been previously used as part of a pilot study, at which time I statistically determined the effectiveness of individual items, calculating their item facility and item discrimination. In keeping with Brown and Hudson (2002), items with an item facility value of between 0.40 and 0.70 and a fairly high positive discrimination index (0.40 and above) were retained for the current study. In an effort to reflect typical classroom input, individual sentences varied in terms of the number of object clitics they contained and their length. Object clitics were presented in natural phonological contexts (e.g., elided before a vowel or intact before a consonant) and in co-reference with both +animate and -animate antecedents. For these reason, the study also met the criteria for verisimilitude, whereby the cognitive demands in the testing situation are similar to the cognitive demands in the students' natural learning environment (Franzen & Wilhelm, 1996).

A final concern was the choice of an ecologically valid task that would lend itself to an examination of the processing and encoding of object clitics by the students. I have discussed the benefits of using a French-English translation task, a pedagogical activity with which the participants were familiar, in an earlier section entitled "Measuring L2 learners' processing of grammar using aural texts".

Procedures and scoring

Testing took approximately 50 minutes to complete. After signing a consent form and completing a background questionnaire, the participants in each class received an activity packet containing the necessary materials for three tasks: a translation, a dictogloss and a written cloze. Participants were instructed that once they had completed a given task, including the translation, they were not permitted to return to it at any time.

As I was only interested in the translation of verbs and object clitics, not of lexical items in general, the overall accuracy of the student translations was not taken into consideration. Rather, the score assigned to the written translation of each of the targeted object clitics from the stimulus sentences was dichotomous: 0 = incorrect and 1

= correct. One point was allotted for each object clitic that was correctly translated into English (either in the form of a pronoun or a NP), resulting in a maximum score of 15 points on the task. Cases where the English translation included an error in co-reference, such as “asking them if they like *her*” instead of “asking them if they like *it*” in Item 3, were scored as incorrect.

RESULTS

The L2-L1 translation task

There was great variation in the accuracy rates for learner processing and encoding of *me*, *te*, *la*, *l'*, *les*, *lui*, *leur*, *y* and *en* on the translation task: 19% on indirect *en* (Item 11), 36.2% on *la* (Item 3), 41.4% on indirect *y* (Item 8), 43.4% on *leur* (Item 4), 44.1% on *l'* (Item 7), 50.7% on direct *me* (Item 13), 54.6% on *lui* (Item 2), 55.9% on locative *y* (Item 1), 61.8% on *la* (Item 5), 61.8% on *leur* (Item 10), 66.4% on locative *y* (Item 12), 67.1% on indirect *te* (Item 15), 69.7% on *les* (Item 9), 71.7% on partitive *en* (Item 6) and 75% on direct *l'* (Item 14), as is shown in the “% Correct” column in Table 2. In response to the first research question, learners were more accurate in their processing and encoding of direct object clitics than indirect ones (58% vs. 52%), of masculine direct objects than feminine ones (70% vs. 53%), and of animate objects than inanimate ones (56% vs. 51%). Locative *y* was more accurately processed and encoded than indirect *y* (61% vs. 41%), as was partitive *en* (71.7%) compared to indirect *en* (19.1%).

Overall, the findings suggest that the listening task was challenging for the students who only translated the target clitic forms with 54% accuracy ($M = 8.20$, $SD = 4.56$). A more global examination of the students' data shows that some of them were struggling to grasp meaning, as can be seen in Table 2, which includes the percentage of stimulus sentences that students did not attempt to translate (% No attempt in column 3): from 0.7% on indirect *en* (Item 11) to 32.3% on locative *y* (Item 12), with an overall average of 17.9%. While students translated over 80% of the target sentences, the English forms they used did not replicate the meaning of the object clitics they had heard in 12% of the sentences (“% Wrong referent” in column 4). The rate of pronouns referring to other antecedents in the discourse varied from 0% on locative *y* (Item 1) and direct *m'* (Item 13) to 55.6% on *lui* (Item 2).

Clitic (Item #)	Grammatical function	% No attempt (N)	% Wrong referent (N)	% Correct (N)
<i>en</i> (#11)	indirect	0.7% (1)	17.8% (27)	19.1% (29)
<i>la</i> (#3)	direct	28.3% (43)	6.6% (10)	36.2% (55)
<i>y</i> (#8)	indirect	5.3% (8)	34.4% (52)	41.4% (63)
<i>leur</i> (#4)	indirect	20.4% (31)	28.3% (43)	43.4% (67)
<i>l'</i> (#7)	direct	11.2% (17)	25.6% (39)	44.1% (68)
<i>m'</i> (#13)	direct	25.7% (39)	0% (0)	50.7% (77)
<i>lui</i> (#2)	indirect	4.6% (7)	55.6% (49)	54.6% (83)
<i>y</i> (#1)	locative	19.7% (30)	0% (0)	55.9% (85)
<i>leur</i> (#10)	indirect	33.6% (51)	2.7% (4)	61.8% (94)
<i>la</i> (#5)	direct	18.4% (28)	10.0% (15)	61.8% (94)
<i>y</i> (#12)	locative	32.3% (49)	1.3% (2)	66.4% (101)
<i>te</i> (#15)	indirect	19.7% (30)	6% (9)	67.1% (102)
<i>les</i> (#9)	direct	23.7% (36)	1.3% (2)	69.7% (106)
<i>en...une</i> (#6)	quantified direct object (partitive)	16.4% (25)	3.3% (5)	71.7% (109)
<i>t'</i> (#14)	direct	9.2% (14)	10.5% (16)	75.0% (114)
TOTAL (N)		409	273	

Table 2: Form usage in translated clitic contexts.

The effect of grammatical function and animacy

Learner performance on the aural L2-L1 translation measure varied significantly according to the grammatical function and animacy of individual clitic forms. A paired samples *t*-test revealed that the difference in means was significant in both instances. The meaning of direct objects was better processed and encoded than that of indirect objects

($t = 4.657, p < 0.001$), as was the meaning of animate objects as opposed to their inanimate counterparts ($t = 2.908, p = 0.02$).

The impact of proficiency level

The second research question addressed the difference in learner performance depending on L2 proficiency level, as measured at the beginning of the academic year on a placement test. Object clitic processing capacity would be expected to increase as a function of language proficiency. The students in low-proficiency sections received an average score of 34% ($M = 5.16, SD = 4.03$) on their translations, compared to their peers in intermediate- and advanced-level sections who scored an average of 54% ($M = 8.08, SD = 4.40$) and 71% ($M = 10.65, SD = 3.59$) respectively. A one-way ANOVA confirmed that all three groups differed significantly in their clitic processing and encoding, $F(2, 149) = 23.378, p < 0.001$. Post-hoc Tukey's HSD tests revealed that the low-proficiency group was significantly different from both the intermediate and advanced groups ($p > 0.05$), and that the intermediate group differed significantly from the advanced group ($p > 0.05$). The significant difference in means as a function of proficiency level complements the findings from Grüter's (2005) study in which the comprehension of clitics by child L2 learners was shown to follow a developmental trajectory.

The impact of exposure

The third research question posited a difference in learner performance depending on the type of educational background (French immersion vs. core French). Due to their great disparity in classroom-based instructional hours at the K-12 level, post-French immersion students (~3500-7000 hours) were expected to perform significantly better than their post-core French counterparts (~1000 hours) on the translation task. The post-immersion students greatly outperformed their post-core French counterparts, with the groups scoring 75% ($M = 11.30, SD = 3.07$) and 43% ($M = 6.54, SD = 4.36$) respectively. A one-way ANOVA revealed a significant difference in the means of the students who had studied in immersion or core programs prior to arriving at the University of Alberta, in favor of the post-immersion students ($F = 49.980, p < 0.001$).

DISCUSSION

In the current study, a listening translation task permitted an investigation of the degree to which university learners of French were able to process clitic forms and translate them into English. I decided to examine comprehension, rather than production, because this modality has been underrepresented in previous research. In addition, I have advanced the notion that deficiencies in clitic comprehension could potentially help to explain the documented low usage rates of these forms in L2 learner production. A quantitative analysis of the data supported the three hypotheses that both language-internal factors (e.g., grammatical function, animacy) and learner factors (e.g., proficiency level, educational background) play a role in how well object clitics were processed and encoded.

Language-internal factors

It is interesting to examine the non-responses and incorrect responses presented in Table 2 in further detail, as they shed light upon potential sources of difficulties encountered by L2 learners in processing and encoding French object clitics in aural input. In the 17.9% of cases of “non-response,” elements of the sentences may not have been a) perceived and parsed, b) retained due to cognitive overload, or c) accessible to the students for graphic representation. It is impossible to make a definitive conclusion here as to where the breakdown occurred, as the translation task by its very nature conflates comprehension and production as the students must listen to the sentences, access meaning and reformulate the input into English. Instances where students provided incorrect translations of object clitics, however, could be indicative of difficulty processing these forms due to incomplete knowledge of the French pronominal system, particularly as pertains to the gender, number and case specifications of individual clitic forms. An examination of incorrect translations of +animate object clitic forms provides support for such an interpretation. As an illustrative example, *en leur demandant* “asking them” in Item 4 was incorrectly translated as “her,” “him,” “she,” and “they.” In items with inanimate object clitic forms, incorrect translations also exemplify errors in case specifications. For example, *Ils y pensent tous les jours* “They think about it/of it every day” (Item 8) was translated by erroneous inanimate forms such as “there,” “of that place,” “that,” “this,” and “it.” As was the case with Item 8, inanimate object clitics in the current task were often translated by forms referring to a near, plausible animate antecedent in the current or previous sentence. As an illustrative example, *y penser* in Item 8 was incorrectly translated as animate forms such as “about her,” “of each other,” “of her,” and “of you.” This use of animate object clitics to refer to inanimate forms is particularly striking as the learners in the current study exhibited a similar tendency on a dictogloss task (see Wust, 2009) that I administered on the same day. In Wust (2009) I suggest that the learners do not use appropriate sentence-processing cues, such as animacy and agreement, to derive meaning from syntax. Rather, they use an object clitic that refers to one of the two dominant +animate characters from the target text.

In the current study, the resolution of object clitics in an orally delivered translation task was clearly difficult, possibly because of their functional features (e.g., gender, number, case, animacy). Student mistranslations of the target sentences potentially point to another language-internal problem related to French object clitics: the low form-meaning correlation in cases where they are homophonous with other grammatical morphemes. As an example, *lui* can function as an a) object clitic, b) tonic pronoun or c) reflexive. These forms are translated into English as a) “him” or “her,” b) “him” and c) “himself” or “herself”. Students’ mistranslations of the feminine *lui parler* “to talk to her” (Item 2) in the data may very well indicate that the ambiguity of this form in standard French negatively impacts upon adult L2 learners’ understanding of its meaning in a sentence. In fact, *lui* in Item 2 is frequently translated by masculine forms or other forms on which gender is not marked: “to them” (1.3%), “to him/her” (2.6%) and “to him” (28.3%). Correct translation of *lui* as “to her” increased as a function of the students’ proficiency level, with the low-, intermediate- and advanced-level sections averaging 44%, 55% and 65% respectively on this item. In addition, low- and advanced-proficiency learners differed significantly on their accurate interpretation of feminine *lui* ($p < .05$).

Those learners who interpreted *lui* as masculine may have been influenced by *lui* in its non-clitic uses, as illustrated in Examples (5) to (8):

(5) *Lui, il me tape sur les nerfs.*

“He, he gets on my nerves.”

(6) *Tu ne parles pas à moi, tu parles à lui.*

“You are not talking to me, you are talking to him.”

(7) *Elle, elle me tape sur les nerfs.*

“She, she gets on my nerves.”

(8) *Tu ne parles pas à moi, tu parles à elle.*

“You are not talking to me, you are talking to her.”

Further data supporting confusion over *lui* comes from the four learners in the current study who actually translated feminine *lui* as “to him/her,” showing that they clearly recognized the ambiguity of the form-meaning mapping of *lui* in its object clitic function. These results closely parallel those found in Weissenborn, Kail and Friederici (1990) where monolingual four year-olds consistently interpreted the indirect clitic *lui* as masculine, but five and six year-old learners were increasingly able to distinguish between masculine and feminine realizations of this clitic on a sentence/picture matching task. Both the current findings and those from the monolingual child literature point to the developmental nature of object clitic comprehension in French.

The role of learner factors

In addition to language-internal factors, learner factors such as proficiency and previous exposure also play a role in how well object clitics are processed during listening comprehension. Among the present sample of university students enrolled in an intermediate-level French course, there is a positive relationship between L2 proficiency and the ability to process clitic forms contained in aural input: the higher the proficiency level of the student in French, the greater the capacity for aurally processing object clitics. This finding aligns very well with information processing models in SLA (McLaughlin, 1987; Skehan, 1998; Robinson, 2001). It is clear that learners are not able to attend to all of the information in the input. Attention is directed towards certain parts, while other parts are only attended to peripherally. According to various information-processing models, more proficient learners would be using automatic processing (because they have more information chunks available to them), which would free up additional attentional resources that could be directed towards individual forms—in this case object clitics. Conversely, less proficient learners would be using controlled information processing (due to a lesser availability of prefabricated chunks) which would

necessitate a large amount of attention and tax the learners' short-term memory, leaving little capacity for focus on individual forms.

Previous exposure to French through immersion experiences in K-12 schooling among these university students results in an increased capacity for processing the meaning of the object clitics in the experimental task. Numerous studies have indicated that French immersion students' global comprehension skills are comparable to those of same-age NS peers and that they exceed those of same-age peers enrolled in core French programs (Genesee, 1987; Lapkin & Swain, 1984; Pawley, 1985). The current results support the notion of superior processing and written encoding of aural discourse by graduates of immersion programs, perhaps due to better overall comprehension which further facilitates the use of the functional features of object clitics in determining their appropriate referents. That is to say, the post-immersion students may benefit from the complementary use of top-down and bottom-up processing.¹⁰ Additional support for this particular interpretation of my data comes from Genesee's (1978) analysis of a series of empirical studies in which French immersion students performed particularly well on language tasks that were characterized by redundancy, which enable the students to compensate for gaps in their knowledge or understanding of specific linguistic rules.

LIMITATIONS

Although the number of tokens of each targeted clitic form is small, the sentences to be translated reflected the content and linguistic features of the classrooms in which the research took place, contributing to the ecological validity of the study. It is important to acknowledge, however, that the pronominal representations in learners' interlanguage are explained using written data obtained via an aural reception measure requiring learners to encode meaning graphically in order to demonstrate their understanding. Thus, translation ability was a potential confounding variable as the listeners needed to reformulate the sentences from French into English. In these cases, as a reviewer pointed out, "missing" pronouns in student translations could be due to a lack of comprehension, or potentially an artifact of the process of translating into English. Given that the student translations were provided in written form, it would be advantageous in future studies to also have access to verbal data from a subset of participants as they completed the task. This data, which would allow for a better understanding of their real-time processing of the target forms, could be obtained by having the participants narrate their thought process aloud, "think aloud" style (Camps, 2003). In keeping with Ehrlich and Remond's (1997) research on monolingual French children's processing of anaphoric devices in written texts, it would also be beneficial to probe the thought processes of participants, pointing out the representations of the object clitics from the target sentences and asking them to identify the pronoun's referent in their translations as a means of confirming whether they actually recognized the correct antecedent and were able to make connections at the discourse level. This would allow for less speculative assertions as to whether mistranslations were indicative of processing problems, encoding problems, or both.

CONCLUSION, DIRECTIONS FOR FUTURE RESEARCH AND PEDAGOGICAL IMPLICATIONS

From monolingual and bilingual child acquisition research, it can be concluded that although the French pronominal system poses acquisitional difficulties in the early stages of language development, these forms are mastered relatively quickly (Jakubowicz, 1991; Belletti & Hamann, 2004). In contrast, L2 learners may never gain productive mastery over object clitic forms (Harley, 1986; Kenemer, 1982). And in the current study, intermediate-level adult learners of French, with three to 13 years of L2 instruction, still demonstrate difficulties in accurately processing and encoding the meaning of object clitics, particularly the inanimates *y* and *en* as well as those clitics with multiple form-meaning mappings, such as *la* and *lui*. An analysis of learner-related factors revealed that higher proficiency learners outperform their lower proficiency classmates, suggesting that object clitic comprehension in French is developmentally constrained (see also Grüter, 2005 for a similar finding regarding child L2 learners). Based on years of working with classroom learners, it is my belief that object clitic instruction does not necessarily impact upon the overall difficulty of learning these forms (for reasons presented in the section on English and French pronoun systems), nor does it necessarily alter the acquisition order. But there is certainly the possibility that the acquisition process could be enhanced by developmentally appropriate instruction that draws learners' attention to these acoustically non-salient forms of a decreased communicative value. English-speaking learners of French may very well be listening for object clitics in all the wrong places (i.e., postverbally) or not even listening for object clitics at all, unless their teachers specifically ask them to do so.

As much as learner-related factors constrained participants' ability to translate French object clitics into English in the current study, language-internal factors were also at work. Most notably, the students experienced problems processing and encoding gender, number and case markings as well as the +/- human distinctions apparent in object clitics forms. Students also struggled with the low form-meaning mapping correlations for certain clitics, such as *lui*, due to their homophony with other grammatical morphemes. The question of whether or not intermediate-level learners' of French ability to process and encode object clitics would benefit from explicit instruction on the animacy distinction in prescriptive French and the multiple linguistic functions carried out by certain object clitic forms constitutes an avenue for further research. Future research might also look at whether instruction that consists of explicit focus on the acoustic form and placement of object clitics would lead to improved auditory detection and discrimination, as my personal experiences using this technique in the classroom would suggest. It would also be interesting to know whether this type of auditory morpho-phonological training would be beneficial to L2 learners in other modalities, most particularly reading comprehension, given the common characteristics of reading and listening (Vandergrift, 2006).

What then are the pedagogical implications if adult learners of L2 French are listening for object clitics in all the wrong places and failing to make important form-meaning connections? To my mind, the answer lies in a research-informed pedagogy. Based on my extensive reading of the literature on the acquisition of L2 pronominalization and my experience teaching L2 learners of French in North America, from elementary school through to the post-secondary level, I believe that in the case of

beginning-level learners, the primary goal of object clitic instruction should be the development of oral comprehension of these forms using pedagogically-derived tasks. To this end, early instruction should ideally focus on awareness rather than performance, which requires a deviation from the prototypical textbook sequence: presentation of the clitic paradigm, followed by opportunities for mechanical, meaningful and communicative practice activities. Following an inductive presentation of object pronouns (see Wust, 2010 for a detailed presentation of the procedure), I use a series of activities that sensitize students to the phonological forms of object clitics and train them to listen for these forms pre-verbally. An enjoyable starter activity is object pronoun bingo. Students are given a bingo card that includes the pronouns *me, te, le, la, nous, vous* and *les*. (If a three-by-three grid format is used, two pronouns will need to be repeated.) The instructor reads a series of sentences containing the target forms. The students cross off each individual object pronoun as it is heard, assigning the pronoun a number (1-9). Play continues until students have completed their card. The game is then debriefed in a teacher-fronted setting. In an alternative auditory discrimination game that provides the instructor with immediate feedback on student comprehension, each student is given a set of seven object pronoun cards. The instructor reads a series of sentences (e.g. *Je le vois* "I see it"), and the students hold up card containing the pronoun they heard.

Once my students can successfully listen for detection, I introduce listening comprehension activities that require them to make form-meaning connections. A very simple activity I use, similar to one in the introductory French textbook *A vous!* (Anover & Antes, 2008, p. 355), requires students to listen to a series of sentences containing direct object pronouns and to check off the appropriate noun to which the pronoun refers:

Instructor reads: Je la regarde souvent.

Student written response: ___ les chiens la télévision

In other effective comprehension-based activities, inspired by VanPatten's concept of Processing Instruction, students are presented with a series of simple, orally delivered sentences and asked to choose which of a set of paired pictures best conveys the meaning. For example, students hear the sentence *Elle la prend* "She takes it-feminine singular" and see Picture A of a girl picking up an apple (feminine singular) from a table and Picture B of a girl picking up a sandwich from a table (masculine singular). Students identify their selection for each set of paired images by holding up an A or B card.

Comprehension-based activities can also be personalized. For example, students are shown a picture of a personally meaningful item and check off the written sentences that apply to it. For example, I show adolescent and adult learners a picture of a cell phone (*mon portable*) and the following sentences: ___ *Je l'adore.* ___ *Je le déteste.* ___ *Je l'utilise tous les jours.* ___ *Je l'apporte en classe.* ___ *Je le recharge souvent.* ___ *Je ne l'oublie jamais dans ma chambre.* ___ *Je l'utilise pour envoyer des SMS à mes amis.* ("I love it. I hate it. I use it every day. I bring it to class. I charge it often. I never forget it in my bedroom. I use it to send text messages to my friends.") Note that students are not actually required to produce direct object pronouns at any point in time, but rather to show comprehension of their meaning. The instructor gives feedback on student responses and provides explanations or clarifications as needed. This is an important opportunity to draw attention to the

functional features (gender, number) that allow third-person direct object pronouns to be distinguished from one another.

The aforementioned tasks help to sensitize students to the phonological forms of object pronouns. In addition, students should also be trained to listen for object pronouns pre-verbally to facilitate auditory detection (i.e., to make sure that students are listening for object pronouns before verbs and not after them). One strategy that works well with beginners is marking Xs to denote points in sentences where there is typically intervening material in French (i.e., object pronouns, negation etc.). Begin with a simple subject-verb sentence, such as *Je vois* "I see." From there, Xs are marked before the verb (*Je X vois*) and examples of object pronouns like *Je le vois* "I see it" are modeled. Do the same for composed tenses where the X precedes the auxiliary verb (*J' X ai vu*), which subsequently results in *Je l'ai vu* "I saw it." This technique serves to make students more aware of the placement of specific linguistic forms in sentences and prepares the way for production tasks at more advanced levels.

It is important to highlight that these listening for detection and listening for comprehension activities are all very simple (i.e., they require a minimal response from the student, such as an X, check mark or graphic encoding of the object clitic) so that the majority of their processing capacity can be dedicated to listening.

Knowing how to use and to interpret object clitics is an integral part of communicative interactions in French, both inside the classroom and in the real world. Results from the current study reveal that learners who do not use morpho-syntactic information such as gender, number, animacy and case to resolve object clitics in discourse are playing a psycholinguistic guessing game when it comes to understanding what they hear. And when these same learners overuse strong forms, null pronouns and lexical NPs rather than weak clitics to recreate a written version of an aural dictogloss text, they produce language that is markedly nonstandard (Wust, 2009). The findings of these two studies make an important contribution to our understanding of how object clitics in classroom materials are processed by instructed L2 learners of French by showing that not all forms are necessarily of equal difficulty; factors such as grammatical function and animacy also play an important role. There is still, however, a need to complement these classroom-based findings on object clitic processing and encoding by students in their primary language use context with more controlled laboratory experiments to better understand the nature of the learner-related and language-internal factors at play.

NOTES

1. While for the purposes of this study object clitics are classified as having semantic value, the semantic value is reduced when compared to the NPs to which they refer. That is to say that while *me, te, la, l', les, lui, leur, y* and *en* provide cues to structure by their very nature (+ direct or +indirect), one still needs to look to their verbal host to determine animacy (+human or -human) and, for certain forms, their function: direct or indirect *me*, direct or indirect *te*, locative *y* or indirect *y*, and partitive *en* or indirect *en*.

2. As a reviewer points out, object clitics are often classified as being non-redundant (i.e., carrying more semantic weight) in contextualized discourse because they point back anaphorically to their referents. This co-reference is considered to be their semantic weight. The assertion advanced in this paper (i.e., that object clitics are redundant) is based on an extensive body of research generated by VanPatten and his collaborators. This research shows that redundant forms contribute little or no meaning for Anglophone

learners of Romance languages who tend to bypass these forms in listening comprehension activities (see VanPatten, 2004).

3. The learners in the current study completed two additional listening comprehension tasks (an aural cloze and a dictogloss task) on the same day as the translation task. A reviewer pointed out that the learners should potentially be able to supply the correct object pronouns on an aural comprehension task by inferring their meaning through context, as appeared to be the case on the pre-test in Erlam (2003). Based on cloze and dictogloss data from these same learners, I would argue the contrary. It appears that the potential for inferred meaning from context was compromised by an under-reliance on important supplementary cues such as clitic case inflection, verb agreement and noun animacy, resulting in low accuracy rates on meaning replication (see Wust, 2006, 2009).

4. A reviewer suggested that given the context sensitive nature of the object clitics in the study, a discourse-based model could also be used to frame a study of the comprehension of French object clitics by instructed L2 learners. This would certainly be viable as it would allow for a more extensive examination of anaphors characteristics such as type, syntactic function and distance in relation to antecedents (see Ehrlich & Remond (1997) for an anaphoric processing study in written texts with monolingual, child learners of French). The current study uses VanPatten's input processing model to examine the comprehension of object clitics precisely because this model reflects syntactic processing principles that are commonly employed by Anglophone learners of Romance languages.

5. In his discussion of N. Ellis' work on how frequency factors into the acquisition of form-meaning mappings by L2 learners, DeKeyser (2005) underlines the importance of interaction with aptitude and instruction.

6. Given the heterogeneous nature of the student population at the University of Alberta, participants took a pen-and-paper placement test on the first day of class that targeted agreements, indicative mood (past, present and future tenses), subjunctive mood, personal pronouns, strong pronouns, relative pronouns, possessive pronouns, and if-clause constructions. Students also generated complete and meaningful sentences from sentence builder items and responded to an essay prompt in French that elicited both past-tense indicative forms, as well as present and past conditional forms.

7. The linguistic background of the participants was determined as a function of the language(s) spoken in the home (and not as a function of their parents' L1s).

8. The translation task was administered during the seventh month of an eight-month long, six-credit language course for intermediate-level learners.

9. It is important to note that in the instructions for the translation task participants were asked to give a written translation of the sentences in English. They were purposely not specifically asked to translate the object pronouns due to the potential for increased use of explicit knowledge, which could impact on performance by directing learner attention toward the target feature (Doughty, 2003; Truscott, 2004).

10. A reviewer suggested that poverty of context (e.g., one sentence before the operative sentence) might be a factor in the lack of comprehension of object clitics that are, by their very nature, extremely context sensitive. To this end, immersion learners would fare better than traditional classroom learners in the acquisition of object clitics because they have a larger context in which to comprehend those forms. While I certainly agree that object clitics are context sensitive, a "clitic context" by definition is one in which "the referent is indefinite, it is the topic of the discussion, and it is contained in the immediately preceding discourse" (Pirvulescu, 2006, p. 227). Same-age controls (native speakers of French with English as their L2) who performed this translation task were able to understand the meaning of the anaphoric object clitics and translate them into English.

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APPENDIX: THE TRANSLATION TASK

You will hear the researcher read aloud a series of French sentences that deal with some of Bruno and Marianne's friends and what is going on in their lives. Please provide a written English translation of these sentences below. If you are unsure of how to translate a vocabulary item, keep the original French word in the translated sentence.

1. Nathalie adore Paris. Elle *y* (1) est allée pour sa lune de miel.
2. Pierre et sa mère sont très proches. Il *lui* (2) parle au téléphone tous les jours et passe *la* (3) voir pendant le week-end.
3. Océane montre sa bague de fiançailles à toutes ses amies en *leur* (4) demandant si elles *la* (5) trouvent bien et si elles aimeraient *en* (6) avoir une aussi.
4. Jean a eu une aventure avec son amie Anne-Sophie. Quand il *l'* (7) a vue pour la deuxième fois, il était gêné.
5. Paul et Dominique sortent ensemble depuis un an et prévoient une vie en commun. Ils *y* (8) pensent tous les jours.
6. Pour la fête de la Saint-Valentin, les amis de Bruno et Marianne offrent les fleurs à leurs bien-aimées. Elles *les* (9) remercient en *leur* (10) faisant un baiser.
7. L'amitié joue un très grand rôle dans la vie des amis de Bruno et Marianne. Ils *en* (11) parlent souvent.
8. Puisque son petit-ami habite en Belgique, Magali *y* (12) va chaque été.
9. « Est-ce que tu *m'* (13) aimes toujours », demande Josette à Philippe. Il répond: « Bien sûr que je *t'* (14) aime. C'est la raison pour laquelle je *te* (15) fais de jolis cadeaux. »

REFERENCES

- Anover, V., & Antes, T. (2008). *A vous! The global French experience. Instructor's annotated edition*. New York: Houghton Mifflin Company.
- Bajo, T., Padilla, P., Munoz, R., Padilla, F., Gómez, C., Puerta, C., Gonzalvo, P. & Macizo., P. (2001). Comprehension and memory processes in translation and interpreting. *Quaderns, Revista de traducció*, 6, 27-31.
- Belletti, A., & Hamann, C. (2004). On the L2/bilingual acquisition of two young children with different source languages. In P. Prévost & J. Paradis (Eds.), *The acquisition of French in different contexts: Focus on functional categories* (pp. 147-174). Amsterdam: John Benjamins Publishing.

- Buck, G. (1992). Translation as a language testing procedure: Does it work? *Language Testing*, 9, 123-148.
- Brown, J., & Hudson, T. (2002). *Criterion-referenced language testing*. Cambridge: Cambridge University Press.
- Bruhn-Garavito, J., & Montrul, S. (1996). Verb movement and clitic placement in French and Spanish as a second language. In E. Hughes, M. Hughes, & A. Greenhill (Eds.), *Proceedings of the 20th Annual Boston University Conference on Language Development* (pp. 123-134). Sommerville, MA: Cascadilla Press.
- Camps, J. (2003). Concurrent and retrospective verbal reports as tools to better understand the role of attention in second language tasks. *International Journal of Applied Linguistics*, 13, 201-221.
- Chaudron, C. (1985). Intake: On models and methods for discovering learners' processing of input. *Studies in Second Language Acquisition*, 7, 1-14.
- Chillier, L., Arabatzi, M., Baranzini, L., Cronel-Ohayon, S., Deonna, S., Dubé, S., Franck, J., Frauenfelder, U., Hamann, C., Rizzi, L., Starke, M., & Zesiger, P. (2001). The acquisition of French pronouns in normal children and in children with specific language impairment. In *Proceedings of Early Lexicon Acquisition* [CD-ROM], Lyon, France.
- Connors, K., Nuckle, L., & Greene, W. (1981). The acquisition of pronoun complement structures in French and English. In J.E. Copeland, & P.W. Davis (Eds.), *The Seventh LACUS Forum* (pp. 475-485). Columbia, SC: Hornbeam Press.
- DeKeyser, R. (2003). Implicit and explicit learning. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 313-348). Oxford: Blackwell.
- DeKeyser, R. (2005). What makes learning second-language grammar difficult? A review of the issues. *Language Learning*, 55, 1-25.
- Doughty, C. (2003). Instructed SLA: Conditions, compensation and enhancement. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 256-310). Oxford: Blackwell.
- Duffield, N., Prévost, P., & White, L. (1997). A psycholinguistic investigation of clitic placement in second language acquisition. In E. Hughes, M. Hughes, & A. Greenhill (Eds.), *Proceedings of the 21st Annual Boston University Conference on Language Development* (pp. 148-159). Sommerville, MA: Cascadilla Press.
- Eckerth, J. (2009). Negotiated interaction in the L2 classroom. *Language Teaching*, 42(1), 109-130.
- Ehrlich, M.F., & Remond, M. (1997). Skilled and less skilled comprehenders: French children's processing of anaphoric devices in written texts. *British Journal of Developmental Psychology*, 15, 291-309.
- Ellis, N. (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24, 143-188.
- Ellis, R. (2001). Some thoughts on testing grammar: An SLA perspective. In C. Elder, A. Brown, N. Iwashita, E. Grove, K. Hill, T. Lumley, T. McNamara, & K. O'Laughlin (Eds.), *Experimenting with uncertainty: Essays in honour of Alan Davies* (pp. 251-263). Cambridge, England: Cambridge University Press.
- Erlam, R. (2003). Evaluating the relative effectiveness of structured-input and output-based instruction in foreign language learning. *Studies in Second Language Acquisition*, 25, 559-582.

- Franzen, M.D., & Wilhelm, K.L. (1996). Conceptual foundations of ecological validity of neuropsychology. In R.J. Sbordone & C.J. Long (Eds.), *Ecological validity of neuropsychological testing* (pp. 91-112). Delray Beach, Fla: GR Press/St. Lucie Press.
- Genesee, F. (1978). A longitudinal evaluation of an early immersion school program. *Canadian Journal of Education*, 3, 31-50.
- Genesee, F. (1987). *Learning through two languages: Studies of immersion and Bilingual education*. Cambridge, MA: Newbury House.
- Goldschneider, J., & DeKeyser, R. (2005). Explaining the 'natural order of L2 morpheme acquisition' in English: A meta-analysis of multiple determinants. *Language Learning*, 55(1), 27-77.
- Granfeldt, J., & Schlyter, S. (2004). Cliticisation in the acquisition of French as L1 and L2. In J. Paradis and P. Prévost (Eds.), *The acquisition of French across learner contexts: Focus on functional categories* (pp. 333-370). Amsterdam: John Benjamins Publishing.
- Grüter, T. (2005). Comprehension and production of French object clitics by child second language learners and children with specific language impairment. *Applied Psycholinguistics*, 26(3), 363-391.
- Gundel, J., Stenson, N., & Tarone, E. (1984). Acquiring pronouns in a second language. *Studies in Second Language Acquisition*, 6, 215-225.
- Hamann, C., Rizzi, L., & Frauenfelder, U. (1996). On the acquisition of subject and object clitics in French. In H. Clahsen (Ed.), *Generative perspectives on language acquisition: Empirical findings, theoretical considerations, and cross-linguistic comparisons* (pp. 309-334). Philadelphia: John Benjamins Publishing.
- Harley, B. (1986). *Age in second language acquisition*. Clevedon, England: Multilingual Matters.
- Jakubowicz, C. (1991). L'acquisition des anaphores et des pronoms lexicaux en français. In J. Guéron & J.-Y. Pollock (Eds.), *Grammaire générative et syntaxe comparé* (pp. 229-253). Paris: Éditions du Centre National de la Recherche Scientifique.
- Jakubowicz, C., Nash, L., Rigaut, C., & Gérard, C.-L. (1998). Determiners and clitic pronouns in French-speaking children with SLI. *Language Acquisition*, 7, 113-160.
- Jakubowicz, C., & Rigaut, C. (2000). L'acquisition des clitiques nominatifs et des clitiques objets en français. *Canadian Journal of Linguistics*, 45, 119-157.
- Kayne, R. (1975). *French syntax: The transformational cycle*. Cambridge, MA: MIT Press.
- Kenemer, V. (1982). *Le français populaire and French as a second language: A comparative study of language simplification*. Québec: CIRB.
- Lapkin, S., Swain, M. (1984). *Final report on the evaluation of French immersion programs at Grades 2, 6 and 9 in New Brunswick*. Toronto, Canada: Modern Language Centre, OISE.
- McLaughlin, B. (1987). *Theories of second language learning*. London: Edward Arnold.
- Naiman, N. (1974). The use of elicited imitation in second language acquisition research. *Working Papers in Bilingualism*, 2, 1-37.

- Paradis, J. (2004). The relevance of specific language impairment in understanding the role of transfer in second language acquisition. *Applied Psycholinguistics*, 24, 67-82.
- Paradis, J., & Prévost, P. (2004). *The acquisition of French across learner contexts: Focus on functional categories*. Amsterdam: John Benjamins Publishing.
- Pawley, C. (1985). How bilingual are French immersion students? *Canadian Modern Language Review*, 41, 865-876.
- Pirvulescu, M. (2006). Theoretical implication of object clitic omission in early French: Spontaneous vs. elicited production. *Catalan Journal of Linguistics*, 5, 221-236.
- Robinson, P. (2001). Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 287-318). Cambridge, England: Cambridge University Press.
- Scheidt, R.J. (1981). Ecologically-valid inquiry: Fait accompli? *Human Development*, 24, 225-228.
- Schlyter, S. (1997). Formes verbales et pronoms objets chez les apprenants adultes de français en milieu naturel. In C. Martinot (Ed.), *Actes du colloque international sur l'acquisition de la syntaxe en langue maternelle et en langue étrangère* (pp. 273-293). Paris: Les Belles Lettres.
- Schmuckler, M. (2001). What is ecological validity? A dimensional analysis. *Infancy*, 2(4), 419-436.
- Scott, M.L., Standsfield, C.W., & Kenyon, D. (1996). Examining validity in a performance test: The listening summary translation exam (LSTE) – Spanish version. *Language Testing*, 13, 83-109.
- Selinker, L., Swain, M., and Dumas, G. (1975). The interlanguage hypothesis extended to children. *Language Learning*, 25, 139-152.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford, England: Oxford University Press.
- Towell, R., & Hawkins, R. (1994). *Approaches to second language acquisition*. Clevedon, England: Multilingual Matters.
- Truscott, J. (1998). Noticing in second language acquisition: A critical review. *Second Language Research*, 14, 103-135.
- Vandergrift, L. (2006). Second language listening: Listening ability or language proficiency? *Modern Language Journal*, 90, 6-18.
- VanPatten, B. (1996). *Input processing and grammar instruction: Theory and research*. Norwood, N.J.: Ablex.
- VanPatten, B. (2004). Input processing in SLA. In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 5-32). Mahwah, NJ: Lawrence Erlbaum Associates.
- Weissenborn, J., Kail, M., & Friederici, A. (1990). Language-particular or language-independent factors in acquisition? Children's comprehension of object pronouns in Dutch, French and German. *First Language*, 10(29), 141-165.
- White, L. (1996). Clitics in L2 French. In H. Clahsen (Ed.), *Generative perspectives on language acquisition: Empirical findings, theoretical considerations, and cross-linguistic comparisons* (pp. 335-368). Philadelphia, PA: John Benjamins Publishing.

- Wust, V. (2006). *The oral comprehension of clitics by L2 learners of French*. Unpublished doctoral dissertation, University of Alberta, Edmonton.
- Wust, V. (2009). A la recherche des clitics perdus: The dictogloss as a measure of the comprehension of *y* and *en* by L2 learners of French. *Canadian Modern Language Review*, 65, 471-499.
- Wust, V. (2010). *Pronominalization in French: Bridging the gap between research and practice*. Manuscript submitted for publication.