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The Impact of Spoken French on the Acquisition of Written French in Child L2 Learners

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Abstract

Written French is known as a *deep orthography*, presenting important differences between the spoken and written language systems, especially as far as morphology is concerned. This exploratory study of subject-verb agreement in number illustrates the long and laborious differentiation process of spoken and written French in child learners. The focus of the study is the L2 child, who learns to speak and write in the L2 more or less simultaneously. In a multiple case study, the written production of Swedish child L2 learners of French is compared to that of age-matched L1 children. The results demonstrate that while child L1 writers are strongly biased towards spoken language, the child L2 writers studied here are not yet able to take full advantage of either the spoken or the written language systems when writing in French.

Keywords: L2 acquisition; L2 writing; child learners; French; morphology; subject-verb agreement

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1. Introduction

Many children enter school speaking languages other than the dominant language of the school and the surrounding society. For these children, second language (L2) acquisition has to occur in parallel with their efforts learning to read and write. This can indeed be a challenging task for L2 children. Koda (2005) notes that, in L2 literacy learning, L2 children suffer from a double handicap because “they lack adequate oral language command at the point when second language literacy learning commences, and, unlike adult learners, they have limited prior literacy experience in the first language” (Koda, 2005, p. 321). However, according to Dickinson et al. (1993), the path to literacy for L2 children can also have a lot in common with the path of monolingual (L1) children, including segmentation problems, the discovery of different units of language and increasing demands of metalinguistic awareness (see Koda, 2005).

Preschool children learn to write and spell based on the sounds they hear in the language that they speak. The beginning of the acquisition process of the written language is characterized by a phonetic spelling, which is often referred to as “speech-written-down” (Weissberg, 2006, p.10). While beginner writers depend heavily upon their spoken language skills, developing writers become decreasingly dependent on spoken language and more directly influenced by their experiences with written language (Dickinson et al., 1993). This study illustrates that the differentiation process of the spoken and written language systems is a complex process in French, where the differences between

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the two language systems are very important. Written French is referred to as a *deep orthography*, where the sound-to-letter and letter-to-sound correspondences are far from transparent (Cook & Bassetti, 2005; Coulmas, 2003). According to Fayol and Jaffré (2008), written French is known as one of the most complex alphabetic systems due to its numerous homophones and ‘silent’ letters that lack a phonological counterpart. As will be shown below, these written units often cause problems for children learning to write in French, both as a first and as a second language.

When acquiring written French, a heavy reliance upon the spoken language will lead to difficulties with number agreement, which is in focus in this study. In this area, the correspondence between the spoken and the written languages is often very limited (Fayol, 2003, 2008). This fact is illustrated in (1) and (2) below (Marty, 2001, p. 215). In spoken French, examples (1) and (2) are pronounced identically whereas in written French five morphological markers distinguish the plural in (2) from the singular in (1).

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|-----|-----------------------------------|------------------|-------------------|----------------|-------------------|
| (1) | <i>Leur</i> | <i>nouveau</i> | <i>camarade</i> | <i>russe</i> | <i>chante.</i> |
| | Their-SG | new-SG | friend-SG | Russian-SG | sing-SG |
| | ‘Their new Russian friend sings.’ | | | | |
| (2) | <i>Leur-s</i> | <i>nouveau-x</i> | <i>camarade-s</i> | <i>russe-s</i> | <i>chante-nt.</i> |
| | Their-PL | new-PL | friend-PL | Russian-PL | sing-PL |
| | ‘Their new Russian friends sing.’ | | | | |
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The particular learning situation of the L2 child will be in focus in this small-scale multiple case study, which compares a group of Swedish child L2 writers of French (n=5) to their monolingual peers (n=5). As far as the relation between spoken and written language is concerned, the learning situation of these groups of writers is indeed very different. While the L1 child has a morphosyntactically well developed spoken French on which the written language can be built, the L2 child learns spoken and written French more or less simultaneously and clearly after their L1. As underlined in the next section, the development of written language in monolingual French-speaking children is relatively well known. Research in the area of adult L2 learning of written French has also been published during the last decade (see Ågren, 2008, for a review). However, the understanding of the learning process of written French in child L2 learners is relatively unknown, at least as far as the complicated morphological aspects of this language are concerned. Even though the number of Swedish children attending a French-speaking school in Sweden is limited, a fact that is reflected in the small number of participants in this study, it is likely that the situation in which these children learn spoken and written French is similar to that of many other children learning French through immersion in Europe and in Canada. The aim of the present study is thus to highlight the learning process of L2 children in a morphologically complex language and to discuss different factors that influence this process. The topic of this paper is relevant to language teachers who meet young L2 children in their daily work. Hopefully, it can also serve as a basis for further investigations and discussions among applied linguists on the particular learning situation of L2 children as compared to L1 children and L2 adults.

2. Theoretical background

2.1 Subject-verb agreement in spoken and written French

The subject-verb (SV-) agreement patterns in spoken and written French differ from one another. In spoken French, SV-agreement in number, exemplified by 3rd person singular (3sg) versus 3rd person plural (3pl), can be described as partial and heterogeneous (Barra-Jover, 2009). Since the morpheme –*nt* marking plural in writing is silent in the spoken language, the notion of verbal stem becomes important here. In a corpus of 6390 French verbs, Marty (2001) observes that in no more than 9.6% of these verb types, an audible stem alternation distinguishes 3pl from 3sg. Thus, in a majority of French verbs 3sg is not phonologically different from 3pl. Even though verbs that do mark the singular/plural

distinction phonologically can be seen as exceptions to this rule, it should be mentioned that these verbs are often frequent in the input, including both auxiliary verbs, *être* ‘be’ and *avoir* ‘have’, modal verbs like *pouvoir* ‘can’, *vouloir* ‘want’, *aller* ‘go’, and other frequent lexical verbs (*faire* ‘do’, *prendre* ‘take’, etc.).

In written French, the situation is radically different. Grammatical morphemes appear mainly as suffixes. In this respect written French is more closely related to other Romance languages, like Italian and Spanish, than to spoken French (Barra-Jover, 2009). As far as number is concerned, the addition of the *grapheme* *-nt* to the 3sg form marks the SV-agreement in 3pl in the majority of French verbs. The term *grapheme* will be used in the subsequent sections to refer to the smallest functional units in a writing system, also termed written symbols (Cook & Bassetti, 2005, p. 4; Fayol & Jaffré, 2008, p. 230). As indicated in Table 1, some verbs combine the *grapheme* *-nt* with a stem alternation in the plural. This is the category that constitutes the 9.6 % of French verb types according to Marty (2001). Furthermore, four frequent verbs: *être* ‘be’, *avoir* ‘have’, *aller* ‘go’ and *faire* ‘do’, indicate the difference between singular and plural in 3rd person with suppletive forms. In this study, the notion *suppletive form* will be used to refer to verb forms where the number distinction is expressed by a totally or partially different morpheme, which has no or little connection with the base form, as for example in the verb *être* ‘to be’, *est/sont* ‘is/are’ (Spencer, 1991; see Prévost, 2009 for French).

Table 1. Subject-Verb Agreement Patterns in Spoken and Written French

SPOKEN FRENCH			WRITTEN FRENCH		
Infinitive	3 rd SG	3 rd PL	Infinitive	3 rd SG	3 rd PL
<i>A. No morphological agreement</i>			<i>A. Morphological agreement (-nt)</i>		
/parlɛ/	/ilparl/	/ilparl/	parler	il parle	ils parlent
‘to speak’	‘he speaks’	‘they speak’	‘to speak’	‘he speaks’	‘they speak’
<i>B. Stem alternation</i>			<i>B. Stem alternation + morph agr. (-nt)</i>		
/finiʁ/	/ilfini/	/ilfinis/	finir	il finit	ils finissent
‘to finish’	‘he finishes’	‘they finish’	‘to finish’	‘he finishes’	‘they finish’
/vulwar/	/ilvø/	/ilvœl/	vouloir	il veut	ils veulent
‘to want’	‘he wants’	‘they want’	‘to want’	‘he wants’	‘they want’
/bwar/	/ilbwa/	/ilbwav/	boire	il boit	ils boivent
‘to drink’	‘he drinks’	‘they drink’	‘to drink’	‘he drinks’	‘they drink’
<i>C. Suppletive forms</i>			<i>C. Suppletive forms</i>		
/ɛʁ/	/ilɛ/	/ilsɔ̃/	être	il est	ils sont
‘to be’	‘he is’	‘they are’	‘to be’	‘he is’	‘they are’
/avwar/’t	/ila/	/ilzɔ̃/	avoir	il a	ils ont
‘to have’	‘he has’	‘they have’	‘to have’	‘he has’	‘they have’
/alɛ/	/ilva/	/ilvɔ̃/	aller	il va	ils vont
‘to go’	‘he goes’	‘they go’	‘to go’	‘he goes’	‘they go’
/fɛʁ/	/ilfɛ/	/ilfɔ̃/	faire	il fait	ils font
‘to do’	‘he does’	‘they do’	‘to do’	‘he does’	‘they do’

As illustrated in Table 1, the SV-agreement system in number can be divided into three different agreement patterns. In pattern A, a morphological number agreement in the written language stands in contrast to the absence of audible agreement in the spoken language. In pattern B, a group of verbs agree with a plural subject through an audible stem alternation in the spoken language, an alternation that is combined with the grapheme *-nt* in the written language. Thus, a verb like *vouloir* 'to want' benefits from a double plural agreement in the written language, including both stem alternation and grapheme. Finally, pattern C contains only four frequent verbs agreeing in number with suppletive forms that clearly distinguish the difference between 3sg and 3pl in both oral and written mode. In addition, these suppletive forms differ from other verbs in that they are not decomposable.

Even though the phonological connection is clearly the most important factor when children start to learn an alphabetic system (Nuñez et al., 1997), it is not the only factor that influences the learning process. With increasing age and exposure to written language, children's learning of a written system is also influenced by other factors, such as semantics, syntax, lexicon and frequency of words and graphemes. This has been shown in several studies on the learning of written French, as underlined by Fayol (2008). These studies show that one part of French orthography is linked to grammar and not to phonology. This fact explains why the model of Goldschneider and DeKeyser (2001), presented in the section 2.3 is a suitable framework for this study. This model allows a description of the complex interplay of different linguistic factors intervening in the acquisition of morphological patterns. In addition, Goldschneider and DeKeyser emphasize a crucial factor in L2 acquisition, namely transfer from the L1.

2.2 Previous findings on the acquisition of SV-agreement in written French

The silent morphology of written French must be derived from a grammatical analysis of the context and not from phonological cues, thus asking for great metalinguistic awareness. Jaffré and David (1999) underline the multidimensional difficulty of number agreement in written French, where the writer needs to gain mastery of 1) various silent morphological markers for different word classes, (i.e. the morphological dimension), 2) the relation between different words (i.e. the morphosyntactic dimension), and 3) the complexity of the morphological system in combination with that of the communicative situation (i.e. the cognitive dimension). In this section, previous research findings on written French morphology in child L1 and adult L2 learning will be presented.

2.2.1 L1 learning of SV-agreement in written French

During their schooling, French-speaking children gradually learn to operationalize number agreement in writing. However, they start out with a written language that lacks all sorts of silent number marking on nouns and pronouns as well as agreement between noun-adjective and subject-verb (Totureau, Thevenin & Fayol, 1997). This is just what would be expected from children who base their writing on the spoken language system. Hence, the initial writing strategy has far reaching consequences in a language like French, where the differences between the spoken and the written languages are so important. Very slowly and gradually, French-speaking children learn to differentiate the written language system from the spoken language system (cf. Kroll, 1981). Totureau et al. (1997) found that L1 children in primary school typically have a better comprehension than production of this type of morphology. As far as number is concerned, L1 children express plural marking and agreement in the noun phrase well before number agreement in the verb phrase. Jaffré and Fayol (2008) indicate that the written morphology is vulnerable even at high-school levels. Furthermore, Barra-Jover (2009) observes many omissions in a corpus of written French collected among university students. In addition, anecdotal evidence from French Internet sites and blogs clearly show the difficulty of mastering this written morphology when the need to communicate prevails over formal control of the language.

Largy and Fayol (2001) show that experienced L1 writers of French are sensitive to oral cues in written SV-agreement. As a consequence, they produce the grapheme *-nt* in verbs like *ils finissent*, ‘they finish’, more easily than in verbs like *ils parlent*, ‘they talk’, since the singular-plural alternation is supported by a phonologically salient stem alternation in the former but not in the latter. An impact of the phonological realization of SV-agreement is also found in a comprehension study using Event Related Potentials (ERPs) (Frenck-Mestre, Osterhout, McLaughlin & Foucart, 2008). Frenck-Mestre and colleagues investigated whether L1 speakers and advanced L2 speakers of French (L1 German) benefit from the presence of phonological cues when processing written French. The results show that the phonological status of grammatical morphemes plays an important role in both L1 and L2 processing. Still, the effects of phonological saliency are more robust in L1 speakers than in advanced L2 speakers.

2.2.2 Adult L2 learning of SV-agreement in written French

During the last decade, a number of studies have focused on the L2 acquisition of written French (Granget, 2004, 2005; Gunnarsson, 2006; Ågren, 2008). These studies show that adolescents learning French in a typical L2 classroom in their home country follow a different path towards the French written language system than L1 children. As compared to the child L2 learners studied here, this group of older L2 learners will henceforth be labelled adult L2 learners, referring to the fact that they started their acquisition of French after puberty. Just as expected, these adult writers are less influenced by the spoken language than L1 children. In fact, they show facilitation for the kind of morphology that is only expressed in writing. Yet, this does not necessarily mean that these L2 writers are target-like in their use of written morphology. Many L2 learners overextend the use of regular morphological patterns and produce deviant written forms that are not found in texts written by L1 children. The results reveal that even beginner L2 learners express plural graphemes on nouns and pronouns to a larger extent than beginner L1 writers. In addition, early in the learning process, the grapheme *-nt* appears in L2 texts as a marker of SV-agreement in plural on all sorts of verbs, even those that according to the target language should include stem alternations or suppletive forms (see Table 1 above). Thus, non-target like verb forms that nevertheless agree in number with a plural subject occur in texts written in L2 French by adult learners. Examples (3) and (4), borrowed from Ågren (2008), illustrate that even though they agree in number, these forms do not correspond to the norms of the target language.

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| (3) | <i>Elles *allent à l'Italie dans ses vacances.</i> [correct: <i>elles vont</i>]
She-PL go-PL to the Italy in her holiday
‘They go on holiday to Italy.’ |
| (4) | <i>Deux mois plus retard ils *font le voyage.</i> [correct: <i>ils font</i>]
Two months more late he-PL do-PL the trip
‘Two months later they make the trip.’ |
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These two non-native examples of written SV-agreement in French correspond to typical L2 forms that appear when a learner have had extensive input in written French but lack a solid base of spoken French. In the present study, the above mentioned results will be kept in mind when analysing the texts written in L2 French by child learners that benefit from a learning context with a stronger and more balanced input situation when compared to adult L2 learners.

2.3 Perceptual salience and other factors influencing the acquisition of morphology

According to Goldschneider and DeKeyser (2001), perceptual salience and morphological regularity, already mentioned in section 2.1, are two of the relevant factors influencing the acquisition process of grammatical morphemes in an L2. In a meta-analysis, the authors studied previous research

findings on the acquisition order of six grammatical morphemes in L2 English: progressive *-ing*, third person *-s*, past tense *-ed*, nominal plural *-s*, possessive *'s* and the articles *a/an/the*. In a review of the literature on acquisition orders, Goldschneider and DeKeyser found five important factors that, when taken together, influence the acquisition process in a decisive way. Except the two factors already mentioned, semantic complexity, syntactic category and frequency were included in their explanatory model. The authors found that a combination of these five determinants explains a large proportion of the variance in the acquisition order of the morphemes in question. In addition, they argue that transfer from L1 is a sixth important factor that should be included in an explanatory model of L2 morpheme acquisition, even though they were not able to quantify this factor in their meta-analysis.

In this study, the basic ideas of Goldschneider and DeKeyser will be used in order to shed further light on the characteristics of SV-agreement in written French when this phenomenon is acquired in a Swedish L2 context. In a much simplified way, Table 2 illustrates an adaptation of their model to the phenomena analysed in this study. More precisely, it shows how the three different agreement patterns discussed above (A, B and C in Table 1) score differently according to the idea of multiple determinants. The label (+) in Table 2 stands for a facilitating effect, i.e. a positive impact of a certain linguistic factor, whereas the label (-) indicates a negative influence. The label (+/-) indicates that the impact of a certain factor on the learning process is bi-directional. For example, agreement pattern B includes both an irregular stem alternation and a regular grapheme (*-nt*), which generates the label +/- for the factor morphological regularity (see column 2).

Table 2. *Characteristics of Different SV-Agreement Patterns in Written French*

Agreement pattern	1. Perceptual saliency	2. Morphological regularity	3. Syntactic category	4. Semantic complexity	5. Frequency (token)	6. L1 transfer
Pattern A (<i>-nt</i>)	-	+	-	-	-	-
Pattern B (stem+ <i>-nt</i>)	+	+/-	-	-	+/-	-
Pattern C (suppl.)	+	-	+	-	+	-

(adaptation of the model of Goldschneider & DeKeyser, 2001)

Note: + positive influence on acquisition; - negative influence on acquisition, +/- factor including both negative and positive effects on acquisition.

The first predictor, perceptual salience, indicates how easy or difficult it is to hear or perceive a given morphological structure. Thus, perceptual salience can include characteristics such as amount of phonetic substance, stress level, intonation or other prosodic phenomena. The logic as far as language acquisition is concerned is straightforward: a morpheme that is perceptually salient is easier to acquire than a morpheme that is not. In our analysis, this factor will be considered in a dichotomous way contrasting silent and audible agreement in singular/plural. In this perspective, the silent morphological agreement (pattern A) is expected to be more difficult to learn in writing than an

audible stem alternation (pattern B) or a suppletive form (pattern C), due to its lack of phonological support.

The second predictor, morphological regularity, is explained as the consistency of the relation between morphological form and a particular function. In the case of plural, the grapheme *-nt* can be considered of high regularity, since it is used on all French verbs in 3pl, even in verbs with stem alternation, excluding only the four verbs with suppletive forms that are not decomposable.

As for the third predictor, syntactic category, the authors consider that lexical morphemes are easier to learn than grammatical morphemes and that, in both categories, free morphemes are acquired before bound morphemes (see Goldschneider & DeKeyser, 2001, p. 28 for details). In our analysis, the suppletive forms in pattern C are considered free morphemes, hence easier to learn, than SV-agreement based on the bound grapheme *-nt*.

Concerning the fourth factor, semantic complexity, the three SV-agreement patterns in written French are all similar. Importantly, the singular/plural agreement on the verb, whether it is expressed morphologically or with a suppletive form, is redundant and carries no semantic content that is not already expressed by the subject with which it agrees.

Furthermore, the fifth factor is frequency, meaning the number of times a given morpheme occurs in the input addressed to the learner. This factor is mentioned in almost every discussion of possible determinants in morpheme acquisition. The more frequent a morpheme is, the more easily and quickly it is likely to be produced in the L2. Note that Goldschneider and DeKeyser consider a morpheme's token frequency in a particular corpus (Brown, 1973) and that they do not speak of type frequency (frequency of patterns, as in Bybee, 2008). Ågren (2008) found that in written French, the token frequency of suppletive forms (pattern C) widely exceeds that of other verbs in 3pl. This finding is partly explained by their function as auxiliary and modal verbs. Verbs with a stem alternation in plural often have a higher token frequency than most regular verbs, but they never attain that of suppletive forms.

Finally, when considering the possible influence of transfer from the L1 of the learners, in this case Swedish, it should be noted that written Swedish is known as a more transparent alphabetic system than written French (Jaffré & Fayol, 2008, p. 89). In addition, Swedish is a language without SV-agreement in person and number. Hence, in singular and plural, all persons share the same verb ending in both spoken and written Swedish, as exemplified in the present tense: *jag/du/han/hon/ni/oi/dom spelar*, 'I/you/he/she/we/you/they play'; and in the imperfect: *jag/du/han/hon/ni/oi/dom spelade* 'I/you/he/she/we/you/they played'. Thus, as far as SV-agreement is concerned, it must be concluded that a transfer effect from Swedish L1 to French L2 would be negative. The lack of SV-agreement in person and number in Swedish could indeed delay the acquisition of SV-agreement in L2 French.

All in all, the interpretation of the information in Table 2 must be that the automatising of SV-agreement in written French will take some time for a Swedish L2 learner because several important predictors will have a negative impact on the learning process. The model also predicts that the learning of the different SV-agreement patterns described above will differ. If all predictors were attributed an equal impact, suppletive forms in pattern C (that are perceptually salient, free morphemes with a high token frequency in the input) would be expected to be produced earlier than verbs that agree in plural with a stem alternation (pattern B) and certainly before the silent morphological agreement in pattern A (its only advantage being high regularity).

3. Rationale and research question

The focus of this empirical study is a small group of Swedish L2 children entering a French school at an age of four and a half to six years. These young L2 learners share some characteristics with L1 children. For instance, both groups of children learn to write through French. Furthermore, they spend the entire school day in a French-speaking environment. However, the L2 children have a morphosyntactically developed spoken L1 when starting school in the L2 and, at least initially, they

lack a solid base of spoken French upon which the learning of the written language can be built. In this respect, the L2 children resemble adult L2 learners. As underlined in section 2.2, the development of written language in French L1 children is well-known. However, the understanding of the learning process of written French in child L2 learners is relatively poor and needs to be further investigated. In this exploratory study, the following research question is addressed:

- What similarities and differences in written production can be observed between child L1 and child L2 learners of written French morphology in general, and of written SV-agreement in particular?

Given the results of previous research outlined above, it is predicted that the morphological development of written French will be laborious for both L1 and L2 children. However, L1 children will have an advantage over L2 children in domains where the silent written agreement is supported by oral cues. The problem for the L2 children in this domain is that they do not master the spoken language to the same extent as L1 children. Therefore, a different production pattern is expected in the two groups of children in verbs with an audible number agreement (pattern B and C).

4. Method

This study is part of a research project focusing on the age of onset and development of French in early L2 acquisition. The project has a longitudinal research design and is currently running on its fourth year. Even though the main focus of this project is on spoken language development, a small amount of written data has recently been collected.

4.1 Participants

This multiple case study is based on written data from five child L2 learners of French participating in the above mentioned project. These children are L1 speakers of Swedish who entered the French school between the ages of four and a half to six years. Whereas three of the L2 children started in pre-school, located in the same building as the primary school, between four and five years, two of them started in the first class (CP) at an age of six years². The children spend the entire school day in a French-speaking environment, thus learning French through immersion. They are exposed to oral and written French for at least six hours every day. However, at home, they speak only Swedish.

The texts written by the L2 children are compared to a sample of texts written by five age-matched L1 children who all go to the same French school and to the same classes as the L2 children. The exposure to French at school is thus identical for these children. However, the L1 children have two French-speaking parents and only a very limited knowledge of Swedish. All children studied are developing as expected for their age group and do not have any general reading or writing difficulties. Basic information on the L1 and L2 children is presented in Table 3.

² In the French school system, children start first class at an age of six years. The sequence of classes in primary school is the following: CP *Cours Préparatoire* 'Preparatory class' (6 years); CE1 *Cours Élémentaire 1* 'Elementary class 1' (7 years); CE2 *Cours Élémentaire 2* 'Elementary Class 2' (8 years); CM1, *Cours Moyen 1* 'Intermediate class 1' (9 years); CM2 *Cours Moyen 2* 'Intermediate class 2' (10 years).

Table 3. L1 and L2 Children Participating in the Study

Mode	Child	Class	Age	AOA	Text length
L1	Lucie	CE2	8	Birth	282
L1	Nina	CM1	9	Birth	256
L1	Zoro	CM1	9	Birth	195
L1	Gustave	CM2	10	Birth	469
L1	Molly	CM2	10	Birth	397
L2	Patrick	CE2	8	4,5	281
L2	Viola	CM1	9	6	249
L2	Hannes	CM1	9	6	299
L2	Lena	CM2	10	4,5	215
L2	Nancy	CM2	10	4,5	313

Note: AOA = Age of Onset of Acquisition; Text length = number of words

4.2 Written task

An elicited production task (see Figure 1 below) was used to collect data from the children. The task is a narrative text based on a picture story, based on a sequence of 23 pictures, where the writers' attention is focused on content and transmission of the message rather than on form. The children wrote their texts at school, using paper and pencil, in the presence of their teacher and a member of the research team. The children were instructed to write their stories in as much detail as possible in order to convey it to someone who could not see the pictures.



Figure 1. *The Picture Story: "The party"*

The written task is based on a picture story called *La fête* ('The party'), which was created in a Power Point format and displayed to the children on a computer screen. They performed the task individually. Before they started writing, the children looked through the entire sequence of pictures. Then, during the editing of the text, they could go back and forth in the picture sequence in order to focus on details. This task elicits both singular and plural contexts. Special attention was paid to create contexts for particular verbs so that all agreement patterns (described in Table 1) could be used by the young writers.

4.3 Tested agreement patterns

This study will contrast the production of SV-agreement in 3pl to that in 3sg. Three agreement patterns in number will be considered in written French (see Table 1). Meunier and Marslen-Wilson (2004) underline that the same pattern of decomposability and stem allomorphy can be present in different tenses. Accordingly, the dominating agreement pattern A includes contexts in both the present tense, *il(s) parle(nt)* 'he/they speak(s)', and the imperfect, *il parlait/ ils parlaient*, 'he spoke/they spoke'. This pattern, which is the largest considering the number of different verbs included, counts no audible difference between 3sg and 3pl but is solely based on the addition of a plural grapheme in writing.

Agreement pattern B is characterized by the combination of an audible stem alternation in the plural and the silent grapheme *-nt*. As indicated by Basnight-Brown, Chen, Hua, Kostic and Feldman (2007), the stem alternation can be regular, which means that the same stem alternation occurs in a group of verbs, as for example in *-ir*-verbs like *finir* ‘to finish’, or irregular, which means that the stem alternation varies with the verb and that it is not predictable at a group level. The analysis of pattern B will include verbs in the present tense, *il prend/ils prennent* ‘he takes/they take’, where 3sg contrasts with 3pl in both an audible alternation and the grapheme *-nt*, as described above (Riegel, Pellat & Rioul, 1994, p. 250).

Finally, agreement pattern C only concerns four very frequent verbs (*être* ‘be’, *avoir* ‘have’, *aller* ‘go’ and *faire* ‘do’), where the 3sg-3pl contrast is based on an idiosyncratic alternation of suppletive forms. These forms can be used in the present tense, *il a/ils ont* ‘he has/they have’, or as auxiliary verbs in the present perfect (*passé composé*), *il a fait/ils ont fait* ‘he has done/they have done’.

In the analysis of the written data, all produced verb forms in 3sg and 3pl contexts were analysed and calculated in the different agreement patterns A, B and C. Singular and plural contexts were identified by their nominal subjects and/or subject pronouns. The picture story serves as an important support to the linguistic analysis, since it gives the context (singular or plural) that the writers refer to in their texts. First, every instance of SV-agreement in number (whether correctly or incorrectly produced) of the individual writers was identified and analysed in a quantitative analysis. Second, a qualitative analysis of the writers’ errors was carried out on the total amount of incorrect verb forms in the singular and in the plural.

5. Results

5.1 Subject-verb agreement in 3rd person singular

In the production of SV-agreement in 3sg, L1 and L2 children encounter the well-known problem of homophones in written French. Written verb forms in 3sg can easily be confounded with other verb forms or other words that have the same pronunciation but are spelt differently. In this domain, more similarities than differences are observed between L1 and L2 children, as illustrated in Table 4.

Table 4. Individual Results of Subject-Verb Agreement in 3rd Singular: Raw Score and Percentage Correct Agreement in Patterns A, B and C

Learner	Pattern A		Pattern B		Pattern C		Total	
	<i>Il parle</i>		<i>Il prend</i>		<i>Il est/a</i>			
	Raw score	%	Raw score	%	Raw score	%	Raw score	%
L1 Lucie	5/8	62	6/11	55	1/2	50	12/21	57
L2 Patrick	5/13	42	7/10	73	2/2	100	15/25	60
L1 Nina	8/8	100	7/8	88	7/7	100	22/23	96
L1 Zoro	7/9	78	3/4	75	3/3	100	13/16	87
L2 Viola	9/9	100	7/7	100	3/3	100	19/19	100
L2 Hannes	13/21	62	2/8	25	5/5	100	20/34	59
L1 Molly	8/8	100	10/12	83	5/5	100	23/25	92
L1Gustave	13/13	100	15/17	88	6/6	100	34/36	97
L2 Nancy	6/6	100	11/12	92	5/5	100	22/23	96
L2 Lena	6/6	100	4/4	100	2/2	100	12/12	100

Note: A raw score of 5/8 (L1 Lucie, Pattern A) indicates that out of eight occurrences in this pattern, Lucie produced five correct verb forms, which corresponds to an accuracy rate of 62%.

5.1.1 The L1 children

The youngest L1 child Lucie is struggling with the orthography of the written verb forms in 3sg. Indeed, her writing is characterised by a phonetic spelling of the speech-written-down-type referred to in the literature (Dickinson et al., 1993; Fayol & Jaffré, 2008). Non-target forms appear in all three agreement patterns A, B and C. All in all, Lucie produces target-like singular forms in 57% of obligatory contexts. The incorrect verb forms correspond to homophones to the target forms, as illustrated in (5) below.

-
- (5) L1 Lucie, eight years
- a. *Et après la fête *et terre miner.* [correct: *est*]
And after the party and finished.INF
'And after that the party is finished.'
- b. *Pauline *mais son colier.* [correct: *met*]
Pauline but her necklace
'Pauline puts on her necklace'
-

The problem with homophones is clearly most prominent in the youngest L1 writer. However, if all the misspelt verb forms are read out aloud, it is obvious that they correspond to the forms of 3sg in the spoken language. We can thus conclude that what we observe here is a spelling problem, due to the deep French orthography, rather than an agreement problem. With increasing age and exposure to the written language, as well as an intense teaching of the written language system, the production of SV-agreement in 3sg is getting increasingly target-like. This can be seen in the nine- and ten-year-old L1 writers who all reach close to 90% target-like forms in obligatory contexts. An interesting problem, very typical for the opaque French written system, emerges in Zoro's text, due to his use of the past tenses. In the imperfect, Zoro demonstrates a well-known difficulty in written French, namely the homophonous verb forms ending in /E/ (infinitive (-er), past participle (-é), imperfect (-ait) and 2pl present tense (-ez)). Without going into detail, all erroneous verb forms produced by Zoro in 3sg are examples of these homophone E-forms, as illustrated in (6a) and (6b) below.

-
- (6) L1 Zoro, nine years
- a. *Pauline *prenez son plus beau colier.* [correct: *prenait*]
Pauline take.2PL her most beautiful necklace
'Pauline took her most beautiful necklace.'
- b. *Et Paul *cirer ses chaussures avant la fête.* [correct: *cirait*]
And Paul polish.INF his shoes before the party
'And Paul polished his shoes before the party.'
-

The differentiation of these homophonous verb forms ending in /-E/ is based on fine-grained grammatical notions that are obviously not mastered in primary school and, according to the literature, not even in secondary school (see Chevrot, Brissaud & Lefrançois, 2003, and references cited there).

5.1.2 The L2 children

Turning to the L2 children, the problem with homophones is also present in their texts. In fact, their production of verb forms in 3sg is very similar to that of the L1 children. The youngest L2 writer, Patrick, has great problems in this domain, just like his L1 peer Lucie, as illustrated in (7) below.

-
- (7) L2 Patrick, eight years
- a. *Après la point du bateau *cas le papge.* [correct: *casse*]
After the top of boat break the paper
'After that the top of the boat breaks the gift wrap.'
 - b. *Pauline *me du scotch sur le papge.* [correct: *met*]
Pauline put some tape on the paper
'Pauline puts some tape on the paper.'
 - c. *Pauline lui *apren de danser.* [correct: *apprend*]
Pauline him teach to dance
'Pauline teaches him how to dance.'
-

These examples illustrate that the youngest L2 writer Patrick is struggling with the complex connection between phonology and orthography in French. Again, these forms are examples of spelling error and not agreement errors *per se*. The production of the older L2 writers, in particular Viola, Nancy and Lena, is very correct in all three agreement patterns. If all verb forms are taken together, these writers reach above 90% target-like verb forms in obligatory contexts. Nine-year-old Hannes, however, is less target-like than his L2 peer Viola, mainly due to the fact that he produces verb forms in the past tenses, thus entering the difficult area of homophones ending in /-E/. Just like L1 Zoro, many of the imperfect forms in 3sg are transcribed using the *-er* or the *-é* graphemes of the infinitive and the past participle, as illustrated in (8).

-
- (8) L2 Hannes, nine years
- Paul *frapper sur la porte.* [correct: *frappait*]
Paul knock.INF on the door
'Paul knocked on the door.'
-

In sum, the main difficulty of written SV-agreement in 3sg is the many homophones in this area. However, these problems are more linked to spelling than to agreement and they are present in all children studied, L1 and L2 children alike. It can thus be concluded that the data in this area show more similarities than differences between the L1 and the L2 children of this case study. The complex connection between phonology and orthography in French is a challenge for the youngest writers in particular. With increasing exposure to the written language, including intense teaching of the written language system, the ten-year-old L2 writers studied here achieve the target level in this particular domain.

5.2 Subject-verb agreement in 3rd person plural

Subject-verb agreement in 3pl is less correct than that in 3sg, as shown in Table 5. A greater difference between agreement patterns A, B and C can be observed in 3pl as compared to 3sg. Furthermore, the speech-written-down strategy of the young writers leads to agreement errors in this area. As illustrated in the following sections, a careful analysis of the produced verb forms reveals interesting differences between the written productions of the L1 as compared to the L2 children.

Table 5. Individual Results of Subject-Verb Agreement in 3rd Plural: Raw Score and Percentage Correct Agreement in Patterns A, B and C

Learner	Pattern A		Pattern B		Pattern C		Total	
	<i>Ils parlent</i>		<i>Ils prennent</i>		<i>Ils sont/ont</i>			
	Raw score	%	Raw score	%	Raw score	%	Raw score	%
L1 Lucie	0/4	0	0/7	0	5/5	100	5/16	31
L2 Patrick	0/8	0	0/13	0	0/6	0	0/27	0
L1 Nina	1/5	20	5/6	83	2/2	100	8/13	62
L1 Zoro	1/3	33	8/8	100	3/3	100	12/14	86
L2 Viola	10/15	67	8/14	57	10/11	91	28/40	70
L2 Hannes	4/12	33	0/5	0	13/14	93	17/31	55
L1 Molly	7/10	70	3/4	75	3/3	100	13/17	76
L1 Gustav	0/5	0	5/5	100	2/2	100	7/12	58
L2 Nancy	0/8	0	2/7	29	9/9	100	11/24	46
L2 Lena	1/9	11	3/4	75	3/3	100	7/16	44

5.2.1 The L1 children

Perhaps not surprisingly, the youngest L1 child Lucie has great problems producing the silent plural SV-agreement in verbs from pattern A. In fact, she does not produce a single agreeing verb form in this context. The verb forms produced in 3pl contexts always correspond to the singular form, as exemplified in (9). This problem is found in the data from all L1 children studied. Even at the age of ten years, Gustave overgeneralizes the 3sg form to plural contexts, as exemplified in (10).

-
- (9) L1 Lucie, eight years
*Et après ils *commence à danser.* [correct: *commencent*]
 And after he-PL start-SG to dance
 ‘And after that, they start dancing’
- (10) L1 Gustave, ten years
*Ils *commence à s’entraîner.* [correct: *commencent*]
 He-PL start-SG to practice
 ‘They start to practice.’
-

Despite some individual variation, the overall result indicates that the silent plural agreement in pattern A develops very slowly in written L1 French. Even at ten years, the children studied frequently omit this agreement. This is a confirmation of previous findings (see Fayol, 2003; Fayol & Jaffré, 2008; Totereau et al., 1997). Furthermore, this result underlines that French L1 children rely on oral cues when writing during their first years of schooling and that the grammatical distinctions of written morphology are mastered late.

The reliance on oral cues is supported by the results in pattern B. Instead of overusing the singular form, as in pattern A, the youngest L1 child Lucie is producing non-target like forms where the stem alternation is transcribed but the silent grapheme *-nt* is omitted. In (11) the production of the verbs *dire* ‘to say’ and *mettre* ‘to put’ in plural contexts illustrates this phenomenon.

-
- (11) L1 Lucie, eight years
- a. *ils *dise on y va.* [correct: *disent*]
 he-PL say-PLstem let's go
 'they say let's go.'
- b. *Et Paul et Pauline *maite leure chapeaux.* [correct: *mettent*]
 And Paul and Pauline put-PLstem their hats
 'And Paul and Pauline put on their hats'
-

Among the L1 children, no verb forms lack both plural stem and plural grapheme and the stem is sometimes produced in absence of the grapheme. Verb forms in pattern B agree in plural to a larger extent than verbs in pattern A. This result suggests that the silent morphological agreement (-*nt*) is more often produced if it is supported by an audible plural stem than if it is the only sign of plural agreement, as is particularly clear in Nina, Zoro and Gustave. The audible agreement through stem alternation is well automatized also in the youngest L1writer studied here. However, the morphological agreement of the written language is clearly delayed. The importance of audible cues in written French SV-agreement has also been put forward by Largy and Fayol (2001) for adult French writers.

As far as agreement pattern C is concerned, the L1 children never omit the plural agreement in these verbs. This finding confirms the prediction of the multiple-factor approach (see section 2.2) according to which several grammatical factors, such as high token frequency, free morphological status and clear perceptual saliency, favour an early production of this agreement.

5.2.2 The L2 children

Just like the L1 children, the L2 children fail to produce the silent plural agreement in pattern A. Even the oldest L2 children, Nancy and Lena, very seldom produce this agreement in obligatory contexts. The 3sg form is always replacing the 3pl form, as illustrated in (12).

-
- (12) L2 Nancy, ten years
- Ils *parle et *rigole.* [correct: *parlent et rigolent*]
 He-PL speak-SG and laugh-SG
 'They speak and laugh.'
-

Note that nine-year-old Viola is significantly more correct than the other L2 children in this domain. Her plural agreement in pattern A is 67% correct (10/15) which is similar to the result of Molly (L1), who outperforms the other L1 children in this domain. Some individual variation is thus present in both L1 and L2 data.

As far as pattern B is considered, a clear difference between the two eight-year-old writers Patrick (L2) and Lucie (L1) can be observed. Patrick keeps producing singular forms in plural contexts also in pattern B, thus omitting the double agreement pattern altogether. Example (13) illustrates the difference between Patrick and Lucie in this domain (cf. example 11).

-
- (13) L2 Patrick, eight years
- a. *ils *dit on iva.* [correct: *ils disent*]
 he-PL say-SG let's go
 'they say let's go'
- b. *ils *prend la fisel est le *me autour...* [correct: *prennent et mettent*]
 he-PL take-SG the string is it put-SG around
 'they take the string and put it around...'
-

This double omission pattern is found in all L2 children studied and most frequently in Patrick and Hannes. When looking in more detail at verbs from pattern B, a striking difference in written SV-agreement is observed between L1 and L2 children in the sense that L2 children never produce the plural stem in isolation. The non-target like plural forms found in the L1 children (see example 11) are never found in the L2 texts. The L2 children use the same forms in plural contexts in both patterns A and B, namely the singular form. This result indicates that the stem alternation in pattern B is not mastered by these L2 children and therefore it cannot function as a support for their production of the silent grapheme *-nt*, which seems to be the case in the L1 children.

As far as agreement pattern C is concerned, most L2 children studied produce a correct plural agreement in verbs with suppletive forms. Nine-year-old Viola and Hannes reach more than 90% correct agreement in pattern C and ten-year-old Nancy and Lena reach 100% correct forms in this context, thus attaining the level of the L1 children. Notably, the youngest L2 writer Patrick is responsible for the majority of omissions in pattern C. He does not produce a single agreement in plural, either in pattern C or in patterns A or B, a result that underlines his lower level of written French as compared to the other L2 children. In summary, except for Patrick's data, the L2 children attain a number agreement in pattern C that is similar to that of the L1 children.

5.3 Summary of results

This case study of SV-agreement in number in written French was based on a comparison of texts written by five L2 children, with Swedish as L1, and five of their L1 peers. The results demonstrated both similarities and differences between child L2 writers and age-matched L1 writers during their first years of schooling. The production of SV-agreement in 3sg was a problematic area of homophones for the youngest learners of written French. However, the difficulties observed in this area are best understood as spelling problems and not as agreement problems *per se*. Most verb forms were correctly transcribed in 3sg contexts, at least in the older learners, but it was obvious that the mastery of the many homophones in this area is a complex task for young L1 and L2 writers of French.

In plural contexts, the child L1 and most child L2 writers showed a similarly correct production of suppletive forms (pattern C) and the same tendency to omit written morphological agreement (*-nt*) where this agreement was not audible (pattern A). However, the L2 children differed from L1 children in that they did not master the stem alternations in plural (pattern B). Instead, the L2 children produced singular forms in plural contexts. Thus, the 3sg form was used as a typical 'elsewhere form' in the texts written by L2 children (cf. Prévost, 2009, p. 28). A different result was revealed in the L1 children who produced verb forms agreeing with the stem only. Such forms were never found in the L2 data.

6. Discussion and Conclusion

When learning to write in French, whether L1 or L2, children are confronted with a complicated morphological system that is more or less absent in the spoken language. This phenomenon has been illustrated in this exploratory study of written SV-agreement in Swedish children learning L2 French through immersion. In Sweden, these children are very rare and this is of course a limitation of this study. However, even though the results of this case study must be interpreted with caution, we believe that they are relevant for other learning contexts of L2 French, such as immersion programs that enrol L2 children in primary school. Future studies in this area, based on larger cohorts, will show if the tentative results of this case study hold for other young L2 populations who, just like the Swedish children, approach spoken and written French more or less simultaneously.

The research question addressed in this study concerned possible similarities and differences between child L2 and child L1 production of written SV-agreement in French. The overall results suggest that child L2 writers, just like child L1 writers, are negatively influenced by the inaudible

nature of number agreement in written French. Thus, in the group of young L2 writers, oral language seems to guide the development of the morphological system of the written language, if not as strongly as in the L1 children. In addition, it seems that the child L2 writers in this study are more influenced by the spoken language than the adult L2 writers observed previously (Ågren, 2008). This is not surprising since these L2 children have much more oral input than the adult L2 writers studied in Ågren (2008). However, in opposition to the data of the L1 children, the texts of the L2 children indicate that they have some difficulties with the SV-agreement patterns of the spoken language system, expressed through omissions of audible stem alternations in plural contexts. As a matter of fact, what the L2 children exhibit in writing seems to be confirmed in on-going analyses of their spoken French where the irregular SV-agreement in plural is one of the latest morphosyntactic phenomena to be expressed consistently (Ågren, Granfeldt & Thomas, under revision; see also Prévost, 2009). In this respect, the L2 children are more similar to adult L2 writers than to the L1 children in this study. They produce a large amount of omissions of plural agreement in verbs with stem alternation, where the singular form is overused. However, the non-target like verb forms that agree morphologically, typical for adult L2 writers (see examples 3 and 4 above), are never found in the texts produced by the L2 children. One might hypothesize that child L2 writers generalize the dominating pattern of the spoken language (no audible agreement) to verbs with stem alternation in both speech and writing, while adult L2 writers seem to do the opposite. According to the literature, they overuse the dominating written agreement pattern (the grapheme *-nt*) on all sorts of verbs when they write in French. This result suggests that the greater meta-linguistic awareness of adult L2 writers and the grammar centered teaching to which they are exposed also play important roles in the development of their written French.

The different paths towards the mastery of both written and spoken language skills discussed in this study can be illustrated as in Figure 2. This illustration is an adaptation of Weissberg's model (2006, p. 11), which in turn refers to the ideas of Kroll (1981) on the long and laborious differentiation process of spoken and written language systems. The difficult learning process of SV-agreement in written French observed in this study suggest that the differentiation process in L1 children bends towards the spoken language whereas the same process in adult L2 acquisition leans in the other direction, that of the written language system. As far as the L2 children are concerned, the path towards mastery of the two language systems seems to be an intermediate one, sharing several characteristics with both other groups of writers. Figure 2 can also be considered as an illustration of the 'double handicap' of L2 children in literacy learning emphasized by Koda (2005). First, L2 children lack a solid base of spoken language on which their written language system can be built. Second, unlike adult L2 learners, they have limited prior literacy experience in their first language.

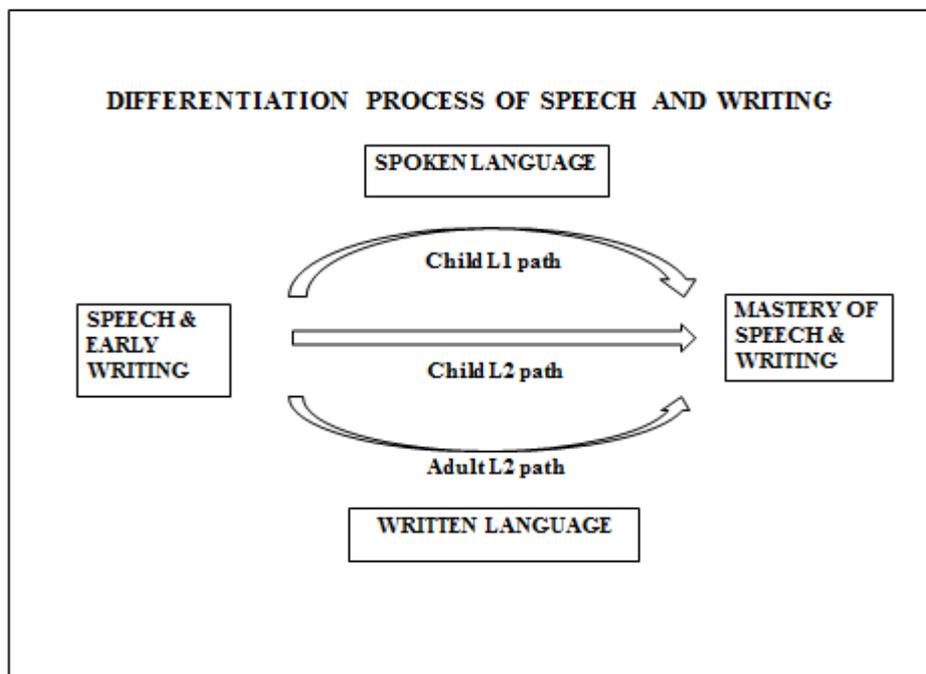


Figure 2. *Differentiation Process of Spoken and Written French: the Path of Child L1, Child L2 and Adult L2 Writers (adaptation of Weissberg, 2006, p.11)*

In the analysis of SV-agreement in written French, the model of Goldschneider and DeKeyser (2001) was adapted in order to illustrate the complicated interplay of different linguistic factors influencing the L2 acquisition of morphology. Even though the model has been used in a very simplified way in this study, it illustrates the idea that no single factor can explain the learning process of morphology. The importance of a multi-factor analysis has been emphasized in previous research on the learning of number agreement in written French (see Fayol, 2003, 2008). The first prediction of the model was that the learning of SV-agreement in number would be slow in written L2 French due to the negative influence of several linguistic predictors in this domain. In general terms, this prediction was confirmed in the empirical study. Most L2 children had considerable difficulty with SV-agreement in the plural. Furthermore, the results show that perceptual saliency is a predictor of importance, especially in L1 children, but also in L2 children. Among the former, the phonological cue of stem alternations seems to remind them to produce the silent grapheme *-nt*. If no audible cue is present in the verb (as in pattern A) the agreement is omitted. The same positive effect of stem alternations on the morphological agreement was not found in child L2 writers who do not master these irregularities of the French language. The low token frequency of many plural verb forms in pattern B may partially explain these problems in the L2 children. However, if the phonological cue of plural agreement is reinforced by a high frequency and a free morphological status, as in suppletive verb forms (pattern C), the child L2 writers produce the number agreement correctly and to the same extent as L1 children. Thus, we believe that the focus on the interplay of different linguistic factors can explain some, even if not all, results in this study.

To conclude, the data from this case study of child L2 writers of French suggest that they take an intermediate position between child L1 writers, on the one hand, and adult L2 writers, on the other hand. The written data from the L1 children studied show that they are still under heavy influence of the spoken language. According to the literature, the opposite is true for the adult L2 learners who are very much influenced by the written language. The child L2 writers in this study, finally, seem not yet able to take advantage of either system. Their written language shares many characteristics with their spoken language. The problem for the L2 child, however, seems to be that what is transferred from

speaking to writing is an incomplete language system as far as the mastery of irregular forms is concerned.

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