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Subject-verb agreement marking by Ghanaian learners of French

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Abstract: In learning French as a foreign language, mastery of agreement marking is indicative of learner progression. In this article, I focus on how subject-verb agreement markers are acquired by Ghanaian learners of French. Based on written data collected from examination scripts, I attempt to present a coherent explanation for the trends noted. The results show that allomorphy that characterises the verb stem influences the production of agreement markers. While verbs with a single stem are strongly associated with first person singular marking, verbs without an identifiable stem are more strongly associated with third person singular marking. Interpreting this within the item-learning/rule-learning dichotomy, it is argued that both strategies are simultaneously deployed. Consequently, it is suggested that the dichotomy between rule-based versus item-based learning can be impacted by the modality of language.

Introduction

A common distinction is often made between lexical categories and functional categories (Carlson 1983). It is understood that while forms of the lexical class are contentive, forms of the functional class are non-contentive. Also, while the lexical class is open (new forms can be added through derivation), the functional class is closed. Functional forms can be independent words, or inflectional affixes (Rizzi and Cinque 2016). Therefore, the form *will*, and the form *-ed* on the verb *cook*, in the English language construction in example (1), can both be termed functional forms.

(1) It will be cooked.

Agreement markers are part of the functional class. Their occurrence in grammar is generally considered as guided by cognitive principles (see, for instance, Nichols 1986, for a headedness account). In studies on language learning, it is understood that agreement marking is critical to learners' progression (Klein and Perdue 1992). I use the term 'language learning' to refer to any form of language 'acquisition' after L1 (second language acquisition, third language acquisition, etc.). Their mastery can, however, take time (Prévost 2009). In their highly influential paper, Bartning and Schlyter (2004) propose that the acquisition of agreement markers (as well as other inflectional forms) follows a predictable trajectory: shorter forms tend to occur in learner productions earlier than more elaborate forms. Thus, in learning French for instance, a form such as *prend* 'take:PRS.3SG' is likely to occur in learners' production before the form *prendra* 'take:FUT.3SG'. Also, singular marking (*mange* 'eat:PRS.1SG') is likely to occur before plural marking (*mangeons* 'eat:PRS.1PL'), third person marking (*parlera* 'speak:FUT.3.SG') is likely to occur before first person marking (*parlerai* 'speak:FUT.1.SG') and first person marking is likely to occur before second person marking (*parleras* 'speak:FUT.2.SG').

Basing her work on Bartning and Schlyter's (2004) observations, Michot (2014) suggests that learning these markers can also be influenced by verb types. Based on oral data obtained from Belgian L2 learners of French, she suggests that learners inflect highly irregular verb forms for agreement markers before verb forms that manifest some regularity. Couching her ideas within the word/rule theory of Pinker (1998), she suggests that results can be explained by the fact that learners first item-learn, before pattern-learning. The main aim of this article is to verify these claims in written data. Consequently, two main research questions guide the discussions:

a. How sensitive is subject-verb agreement marking to verb type, even in written data?
b. To what extent can it be held that item-learning occurs before pattern-learning, even in written data?

The irregular verbs of French nevertheless manifest certain patterns. Thus, while regular verbs (group 1 verbs) have one pattern, irregular verbs (group 2 and 3 verbs), as compared to regular verbs, form a cline from verbs with less complicated (more regular) patterns to verbs without any identifiable pattern (less regular). Given that the paradigm of regular verbs of French have very few phonetic oppositions (Rowlett 2007) – the opposition is reduced to a three-way opposition in spoken French as opposed to the six-way opposition that can be noted for written French – Michot (2014) does not make any predictions on their acquisition. As written data allows for predictions concerning all types of verbs, the following hypotheses can be put forward:

I. Even in written data such as the productions analysed in this study, subject-verb agreement marking is sensitive to verb typology;
II. Item-learning and pattern-learning strategies are deployed simultaneously, and the 'regularity' of rules has an influence on pattern productivity.

I structure the article in the following order: I first specify the nature of person and number marking on the French verb. I continue to provide details of Michot's (2014) observations. I then follow this with a presentation of the methodology adopted in data collection and analysis. I describe the data, and continue to discuss pertinent aspects of the data, before drawing the conclusions to the study.

Agreement markers on the French verb

Finite verb forms in French are taken from inflectional paradigms that express notions such as tense, aspect and mood. Examples (2–4) demonstrate how different forms of *manger* 'to eat', *chanter* 'to sing' and *partir* 'to go/leave' signal these oppositions.

	Present tense			Past tense		
(2)	*Je*	*mange*	versus	*J'*	*ai*	*mangé*
	PRO.1SG	eat:PRS:1SG		PRO.1SG	have:PRS:1SG	eat.PP
	'I eat/I am eating.'			'I ate/I have eaten.'		

	Perfective aspect				Imperfective aspect	
(3)	*Il*	*a*	*chanté*	vs	*Il*	*chantait*
	PRO.3SG	have:PRS:3SG	sing.PP		PRO.3SG	sing.IMP.3SG
	'He sang.'				'He was singing.'	

	Subjunctive mood				
(4)	*Il*	*faut*	*que*	*nous*	*partions*
	PRO.3SG	must:PRS:3SG	REL	PRO.1PL	go:SUBJ:PRS:1PL
	'We must leave.'				

	Indicative mood	
	Nous	*partons*
	PRO.1PL	go:IND:PRS:1PL
	'We are leaving.'	

The verb in French can also show agreement with the grammatical subject or object. In example (5), the verb ***être*** 'to be' inflects to signal agreement for person and number with the pronominal that occurs in subject position. Object agreement, on the other hand, is typically triggered when the object of the verb occurs before the main verb. Illustrative of these are the forms of *être* 'to be' and *manger* 'to eat' in the following examples.

(5) *Ils* *sont* *là* versus *Nous* *sommes* *là*
PRO.3SG be:PRS:3SG there PRO.1PL be:PRS:1PL there
'They are there.' 'We are there.'

(6) *Il* *a* *mangé* *la* *banane*
PRO.3SG have:PRS:3SG eat.PP DEF.SG.F banana
'He ate the banana.'
Il *l'* *a* *mangée*
PRO.3SG PRO.3SG.OBJ have:PRS:3SG eat.PP-AGR
'He ate it.'

Some of the markers that signal these agreements can, however, not be realised phonetically. For instance, in the present indicative, the first, second and third person singular and the third person plural have the same phonetic realisation, although the written forms are different (*danse* [dãs], *danses* [dãs], *danse* [dãs], *dansent* [dãs]). In other words, in French, some of the forms that occur in written language are not pronounced when speaking, and subject-verb agreement markers are typically of such nature. Nevertheless, following Morin (1987) and Blanche-Benveniste (2002), I consider that the allomorphic variation that characterises the French verb can be accounted for in terms of phonetic variations. In other words, the various accounts of the paradigmatic variation that characterises the forms of the French verb, which are largely based on phonetic properties, are assumed to be applicable to both spoken and written forms of the French verb. Thus, Pouradier's (1997) classification, which Michot (2014) adopts, are maintained in this study. See below for details of this categorisation.

Agreement markers in French as a foreign language

In learning French as a foreign language, learners' mastery of agreement markers can signal progression to a higher level (Klein and Perdue 1992). From different theoretical perspectives, various studies have sought to account for learner productions of agreement markers, including Bartning (1997), Housen et al. (2006), Sergeeva and Chevrot (2008), Ågren (2014) and others. For those studies that seek to account for the productions from a functional point of view, one model stands out, i.e. the elaborateness hypothesis (Bartning and Schlyter 2004).

The elaborateness hypothesis, which is established on a usage-based understanding of language, and which is also based on empirical data obtained from longitudinal studies, proposes that shorter forms tend to occur in learner productions earlier than more elaborate forms (Bartning and Schlyter 2004). Thus, a form such as *prend* 'take:PRS.3SG' is likely to occur in a learner's production before the form *prendra* 'take:FUT.3SG'. Therefore, the null morpheme that signals third person singular in the present tense occurs before the *-ra* which encodes third person singular in the simple future tense. For the markers under investigation in this article, the prediction then is that singular marking (*mange* 'eat:PRS.1SG') is likely to occur before plural marking (*mangeons* 'eat:PRS.1PL') and third person marking (*parlera* 'speak:FUT.3.SG') is likely to occur before first person marking (*parlerai* 'speak:FUT.1.SG'). First person marking, on the other hand, is likely to occur before second person marking (*parleras* 'speak:FUT.2.SG'). In summary, the predicted trajectory of the occurrence of number marking can be stated as: singular marking > plural marking; and the envisioned trajectory of person marking can be noted as: third person marking > first person marking > second person marking.

However, Bybee (1991), working within a similar framework, notes that in terms of person marking, the positions of first person and third person can switch as learners can construe first person marking, instead of third person marking, as the unmarked. Therefore, according to the elaborateness hypothesis, it can be expected that first person marking and third person marking interchange positions.

Basing her arguments on Bartning and Schlyter's (2004) proposal, Michot (2014) suggests that the nature of a verb's stem can also influence the production of agreement markings. Michot's work is mainly based on a classification of French verbs proposed by Pouradier (1997; as cited in Michot

2014). Pouradier (1997) classifies French verbs based on two main criteria: the number of stems on which are constructed the different forms of the verb's paradigm, and the number of vowels that participate in the allomorphy that is responsible for the variation of the different forms in the verb's paradigm. For instance, while verbs ending in *-er* in the infinitive have one stem on which the construction of other members of the paradigm can be argued to be based on, many of the verbs that end in *-ir* can have more than one stem. The first parts of the phonetic transcriptions of the verbs in the following examples illustrate this.

(7) *Je* *danse [dãs]* versus *Nous* *dansons [dãsɔ̃]*
PRO.1SG dance.1SG PRO.1PL dance.1PL
'I dance/I am dancing.' 'We dance/we are dancing.'

(8) *Je* *dors [dɔʁ]* versus *Nous* *dormons [dɔʁmɔ̃]*
PRO.1SG sleep.1SG PRO.1PL sleep.1PL
'I sleep/I am sleeping.' 'We sleep/we are sleeping.'

Verbs such as *danser* 'to dance', a one-stem verb (Group 1), are distinguished from verbs with multiple stems. In the category of multi-stem verbs, verbs such as *dormir* 'to sleep' (Group 2) are also distinguished from verbs for which stem allomorphy includes a vowel change (Group 3). This latter group is also distinguished from verbs for which no stem can be isolated (Group 4). The inflectional paradigms of *devoir* 'must' and *être* 'to be' illustrate the distinction between Group 3 and 4 verbs.

(9) *Je* *dois [dwa]* *partir* versus *Nous* *devons [devɔ̃]* *partir*
PRO.1SG must.1SG leave PRO.1PL must.1PL leave
'I must leave.' 'We must leave.'

(10) *Je* *suis[sɥi]* *ici* versus *Nous* *sommes [sɔm]* *ici*
PRO.1SG be.1SG here PRO.1PL be.1PL here
'I am here.' 'We are here.'

Michot's work is based on oral data obtained from Belgian learners of French with Dutch as L1. It sought to understand the relationship between the allomorphy that characterises the stems of French verbs, and the productions of third person agreement markers. Thus, the study was restricted to the acquisition of third person plural agreement markers on group 2, 3 and 4 verbs. Results show that indeed stem allomorphy influences the acquisition of subject-verb agreement markers. The influence, however, varies according to the level of proficiency. Learners with lower proficiency produce agreement markers on group 4 verbs more than on any other group of verbs. Although group 4 verbs still constitute the majority of verbs on which agreement markers are produced by the highest proficiency group, productions by learners at this level are characterised by many more group 3 and group 2 verbs. Michot then interprets this as proof of item-learning on the part of the lower proficiency group, as opposed to pattern-learning, exemplified by the higher proficiency group – Group 4 verbs instantiate no identifiable pattern, while group 3 and 2 verbs instantiate identifiable patterns. This article interrogates Michot's observations in written data.

Methodology

Data for this study come from 15 examination scripts of first-year university learners of French at a Ghanaian university (drawn from five hundred scripts). Prior to enrolling on the French programme, the learners had at least 432 hours of exposure to French at secondary school level. Their level could thus be described as post-basic (Klein and Perdue 1992), or compared to the level that Michot (2014) refers to as NN3 group, i.e. a level that hovers around A2 and B1 levels of the Common European Framework of Reference for languages. The essays they produced were responses to two questions: Question 1 asked learners to give a description of their fictive location, while Question 2

demanded learners indicate their housing preferences in a message addressed to a housing agent. Specifically, the questions were:

I. *Vous êtes au Canada. Écrivez une carte postale à un ami. Parlez du temps qu'il fait là-bas* [You are in Canada. Write a postal card to your friend. Tell him/her how the weather is like over there].
II. *Vous cherchez une maison ou un appartement à louer. Envoyez un message à un agent immobilier et indiquez le type de maison ou appartement, le quartier où vous préférez habiter, le nombre de chambres, le salon, la cuisine, le balcon, le jardin, la piscine*… [You are looking for a place to rent. Send a message to a housing agent, indicating your preference in terms of the type of house, the neighbourhood, number of rooms, living room, kitchen, balcony, garden, swimming pool…].

The essays were written under end-of-semester examination conditions. The data can thus be qualified as spontaneous and naturally produced. Scripts were selected based on three sampling criteria: marks obtained, number of words produced and relevance of content. The total marks obtained by the scripts selected were between 50% and 80%. 50% represents the lowest score obtained by a valid text. 80% was chosen as the upper limit because the most advanced learners, most of whom were francophones or had lived in francophone countries prior to enrolling in the university, obtained not less than 80%. Also, all scripts selected had at least 80 words, and the content related to the questions asked. Thus, the scripts chosen can be described as scripts of typical Ghanaian first-year university learners of French, i.e. a post-basic learner of the language. It is worth noting that all learners are multilingual, speaking at least one indigenous Ghanaian language and English.

The verbs produced were extracted and annotated in Excel. Every verbal inflection had cells dedicated to noting number and person values. For each verbal inflection, produced values and their targeted forms were annotated. This had the advantage of enabling an efficient extraction of both frequency and error trends. The verbs were also classified into the four groups proposed by Pouradier (1997; as cited in Michot 2014), to allow for a straightforward interrogation. All results presented are therefore based on empirical data and exemplar constructions are illustrative of general trends.

Michot's data is multi-stratal, spanning different proficiency groups. Interrogating her observations in spontaneous 'unistratal' data presupposes that the frequency of inflected verb forms is critical. Thus, following Bybee (2008), I consider that Michot's observations are compatible with a frequency-based model of interpreting learner productions. Blanche-Benveniste (2002) discusses the relationship between stem-allomorphy and frequency, while Givón (1995) analyses the connections between elaborateness of linguistic item and frequency. Consequently, for learners at a post-basic level such as those under investigation in this article, it is expected that forms that are predicted to occur earlier will occur more frequently in their spontaneous productions, and forms that are predicted to occur later will occur less frequently in their spontaneous productions. This presupposes that in terms of errors, frequent forms are likely to occur in contexts where infrequent forms are expected. Therefore, Group 4 verbs – forms that are expected to be frequent, for instance – will occur in lieu of other verbs and other number and person markers respectively. Consequently, more errors are likely to be counted for frequent forms as opposed to infrequent forms.

The number of tokens considered for general usage, however, differs from that which is considered erroneous usage. This is because while certain values produced by the learners diverge from the targeted forms, it is difficult to determine the exact value of the produced form. This dissymmetry concerns two forms and the values concerned are all person related. The difficulty is determining whether the production by the student is to be coded as first person singular, or third person singular. For instance, the noun phrase in the subject position in the example below shows that the learner targets second person singular inflection. However, the form that is produced can be annotated as either of first person singular or third person singular marking.

(11)	**tu*	*passe*	*tes*	*prochaine*	*vacances*	*ici*
	PRO.2SG	Spend:PRS.1/3SG	POSS.2PL	next	Vacation.PL	here
	'You will spend your next vacations here.'					

Thus, while they can be counted for error usage without any difficulty, it is difficult to group the produced inflection in terms of general usage. For practical reasons, the methodological decision was made to not count these forms both for error usage and for general usage.

Also, learners produce many forms in the infinitive. About 99 infinitive forms of verbs of all classes were produced. Given that the focus is on agreement markers on the verb, and that infinitive forms do not typically signal agreement with a grammatical subject, the methodological decision was made not to count these forms. Nevertheless, where learners, as illustrated in example (12), produce agreement markers on the verb when the target is an infinitive form, these are considered errors. These forms are nevertheless not considered in calculating adequacy scores.

(12)	**aidez*	*moi*	*cherche*	*une*	*maison*	*confortable*
	help:IMP.2PL	PRO.1SG	Look.for:1/3SG	ART.IND.F.SG	house	comfortable
	Target					
	aidez	*moi*	*à chercher*	*une*	*maison*	*confortable*
	help:IMP.2PL	PRO.1SG	to look.for:1/3SG	ART.IND.F.SG	house	confortable
	'Help me find a comfortable house.'					

Finally, there are forms such as *bouillard* in example (13) which are not considered. The idea is that these forms do not have identifiable correspondent forms in the target language. For instance, neither of the forms **bouillarder/bouillardir/bouillardre* are verbs in French.

(13)	**La*	*neige*	*bouillard*	*chaque*	*jour*
	DEF.F.SG	snow	V	every	day
	'Snow falls every day.'				

Results

The total number of verbs considered are 569 forms. 492 of these, representing 86%, inflect correctly for number and person, while the remaining 77, representing fourteen 14%, are erroneous. The errors that are noted, are of different types. The first type involves forms that inflect wrongly for both number and person. Example (14) illustrates this.

(14)	**Le*	*quartier*	*n'*	*devrion*	*pas*	*bruyant*
	DEF.M.SG	neighbourhood	NEG	must:PRS:COND.1PL	NEG	noisy

Many errors concern forms in which one value is correctly inflected, while the other is erroneous. As demonstrated in the following examples, while in (15) number marking is correct and person marking wrong, the reverse occurs in (16): number marking is erroneous and person marking is correct.

(15)	**Je*	*veut*	*la*	*maison*
	PRO.1SG	want:PRS.3SG	DEF.F.SG	house
	Target			
	Je	*veux*	*la*	*maison*
	PRO.1SG	want:PRS.1SG	DEF.F.SG	house
	'I want the house.'			

(16) **Les* *chambres* *doit* *blanc*
DEF.M.PL room-PL must:PRS.3SG white
Target
Les chambres doivent être blanches
DEF.M.PL room-PL must:PRS.3PL be white.F-PL
'The rooms must be white.'

Despite these errors, it can be argued that number and person marking is part of learners' interlanguage. This observation finds support in the percentage of correct usage, i.e. 86%. To consider a category acquired, various barometers have been adopted. While Vainikka and Young-Scholten (1994), for instance, based their discussions on 60% of correct usage, Brown (1973) on the other hand, considered 90% correct usage. With an 86% correct usage, it can be contended that the learners under investigation have person and number marking as part of their interlanguage. The 14% of errors cannot, however, be ignored, for errors, as compared to correct usages, offer practical understanding of the status of functional categories (Grondin and White 1996). Consequently, for each value of number or person marking, I attempt to identify correct usage percentiles as well as error percentiles. Figure 1 shows the percentage of occurrence of the different agreement markers in the data under examination. The percentiles follow, to a large extent**,** Bartning and Schlyter's (2004) predictions: less weighty forms occur before weightier forms. 269 verbs, representing 47%, are inflected for the first person, 50 verbs, representing 9%, are inflected for the second person and 248 verbs,representing 44%, are inflected for the third person. Concerning number marking, 500 verbs, representing 88%, are inflected for the singular, while 69 verbs, representing 12%, are inflected for the plural form. Thus, for person marking, first person markers are the most frequent, followed by third person markers and then second person markers. For number marking, singular markers are more frequent than plural markers.

These trends, it can be argued, set the tone for an interrogation of Michot's (2014) observation. In the next sub-sections, I interrogate how the verb types influence the production of subject-verb agreement markers on the verbs.

Evaluating stem allomorphy effect in person and number marking

Before interrogating the data for stem-allomorphy effects, I restate the predictions of the stem-allomorphy hypothesis: the higher the stem allomorphy, the higher the usage; the lower the stem allomorphy, the lower the usage. Thus, the expected trajectory is Group 4 verbs > Group 3 verbs > Group 2 verbs. No prediction is made for Group 1 verbs. However, if the expected trajectory is noted in terms of item/rule-learning, where Group 4 verbs (token-based forms) are item-learned, while the other verb types (pattern-based forms) are rule-learned, then it can be argued that Group 1 verbs which are pattern-based will be expected to be the last group of verbs on which agreement markers will be produced.

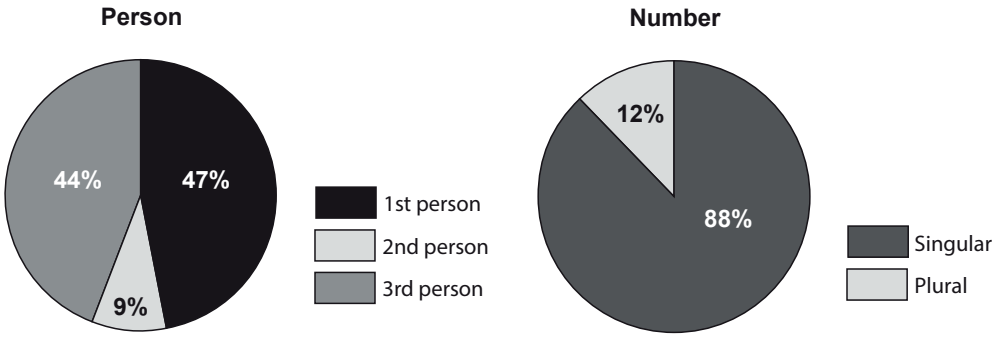

Figure 1: General usage trend in terms of elaborateness

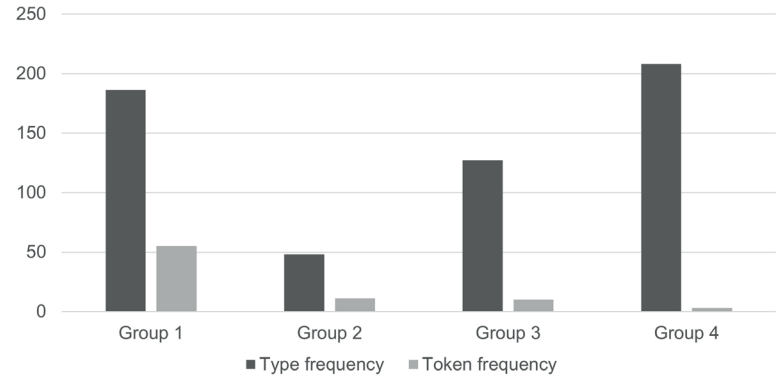

Figure 2: General usage trend with respect to stem-allomorpy

In the data under investigation, learners produced 186 group 1 verbs, 48 group 2 verbs, 127 group 3 verbs and 208 group 4 verbs. Figure 2 illustrates the frequency of each verb type in the data.

The verb-type frequency varies from token frequency. 55 different group 1 verbs are produced by the learners, 11 different group 2 verbs are produced, 10 different group 3 verbs are produced and three different group 4 verbs are produced. Table 1 presents a list of the most common verbs produced for each of the groups.

Thus, while group 4 verbs are the most frequent on type-count, group 1 verbs are the most frequent on token-count. The type-frequency correlates to two important variables: frequency of inflectional markers and error ratio.

In the data, type-frequency correlates with inflectional marking on the verb. In other words, given that they occur much more frequently than other verb types, group 4 verbs receive more agreement marking as compared to other groups of verbs. However, more important is the fact that different inflectional values distribute differently according to different verb types.

The first observation that can be made is that plural marking does not demonstrate any systematicity. Singular marking, on the other hand, presents us with intriguing patterns. Indeed, different verb groups tend to favour certain agreement markers. As can be observed from the percentages in Table 2, Group 1 verbs favour first person singular marking over third person singular and second person singular. Group 2 verbs also favour first person singular marking (in lower proportions as compared to group 1 verbs) over third person singular marking (in higher proportions than in group 1 verbs). Group 3 verbs, on the other hand, favour third person singular marking (in higher proportions than in group 1 and in group 2 verbs) over first person singular marking (in about the same proportion as in group 2 verbs, but lower than the proportions noted for group 1 verbs) and second person marking. Group 4 verbs favour third person singular marking (in higher proportions

Table 1: List of the most common verbs produced for each verb type

Group 1	Group 2	Group 3	Group 4
adorer ‘adore’, *aider* ‘help’, *aimer* ‘love’, *appeler* ‘call’, *arriver* ‘arrive’, *brosser* ‘brush’, *changer* ‘change’, *chercher* ‘look for’, *commencer* ‘start’, *communiquer* ‘communicate’, *composer* ‘compose’, *detester* ‘hate’, *deviner* ‘guess’, etc.	*dire* ‘say’, *attendre* ‘wait’, *connaître* ‘know’, *décrire* ‘describe’, *écrire* ‘write’, *lire* ‘read’, *partir* ‘go/leave’, *peindre* ‘paint’, *pleuvoir* ‘rain’, *prendre* ‘take’, *répondre* ‘respond’.	*asseoir* ‘sit’, boire ‘drink’, *comprendre* ‘understand’, *devoir* ‘must’, *faire* ‘do/make’, *falloir* ‘need to’, *pouvoir* ‘can’, *prendre* ‘take’, *savoir* ‘know’, *venir* ‘come’	*aller* ‘go’, *être* ‘be’, *avoir* ‘have’

Table 2: Within-category occurrence of agreement markers on groups of verbs

	Group 1		Group 2		Group 3		Group 4	
	n	%	*n*	%	*n*	%	*n*	%
1SG	121	65%	19	40%	52	41%	50	24%
2SG	14	8%	7	15%	1	1%	11	5%
3SG	28	15%	17	35%	61	48%	119	57%
1PL	5	3%	1	2%	12	9%	8	4%
2PL	5	3%	4	8%	1	1%	7	3%
3PL	13	7%	0		0		13	6%

Table 3: Cross-category occurrence of agreement markers on groups of verbs

	1SG		2SG		3SG		1PL		2PL		3PL	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Group 1	121	50%	14	42%	28	12%	5	19%	5	29%	13	50%
Group 2	19	8%	7	21%	17	8%	1	4%	4	24%	0	
Group 3	52	21%	1	3%	61	27%	12	46%	1	6%	0	
Group 4	50	21%	11	33%	119	53%	8	31%	7	41%	13	50%

than for group 3, 2 and 1 verbs) over first person singular marking (in lower proportions than in group 3, 2 and 1 verbs) and second person singular.

The picture is clearer when a cross-category view of the data is presented. Such a view, illustrated in Table 3, presents how the different groups of verbs distribute according to different agreement markers.

50% of all first person singular inflection occurs on group 1 verbs, followed by 21% on both group 3 and group 4 verbs. Concerning second person singular marking, again group 1 verbs constitute the most frequently marked verbs (42%). Nevertheless, the percentage is lower than for first person singular marking. Group 4 verbs are once more the second most-inflected group of verbs for the second person singular (33%). Nevertheless, this percentage is higher than that of first person marking. This is followed by group 2 and then group 3 verbs. For third person singular marking, group 4 verbs are the highest inflected forms (53%), followed by group 3 verbs (27%), group 1 verbs (12%) and finally group 2 verbs (8%).

Verb-type frequency also correlates largely to adequacy of inflectional forms. For adequacy scores, I consider productions that target a finite form. As such, of the 77 errors, only 63 are considered, as the remainder target infinitive forms of the verb. Example (17) illustrates one of the 114 erroneous forms not considered in the calculation of adequacy ratios.

(17) **J'espère* *viendrai* *les* *prochaines* *vacances*
PRO.1SG-hope come-FUT-1SG ART.PL next.PL holiday
Target
J'espère *venir* *pendant* *les* *prochaines* *vacances*
PRO.1SG-hope come.INF during ART.PL next.PL holiday
'I hope to come during the next holidays.'

Table 4 presents the details of the adequacy between agreement markers produced by the learners and the targets. Group 1 verbs have 12 erroneous inflections, group 2 verbs have 3 erroneous inflections, group 3 verbs have 38 erroneous inflections and group 4 verbs have 10 erroneous inflections.

Consequently, the ratio of verb-type frequency to the rate at which errors occur in agreement marking on group 1 verbs is 0.064. For group 2 verbs, the ratio is 0.083, for group 3 verbs, the ratio is 0.30 and for group 4 verbs, the ratio is 0.048. Apart from group 2 and group 3 verbs that interchange positions, the frequency of a verb-type corresponds to a lower ratio: group 4 verbs are the most frequent, but they have the lowest ratio. This is followed by group 1, then group 2 and group 3.

Table 4: Errors in the production of subject-verb agreement markers

		GROUP 1	GROUP 2	GROUP 3	GROUP 4
1SG	2SG	2			
	3SG	1	1	22	
	1PL	1			
2SG	1SG	1			
	3SG	1	1	1	1
	1PL	1			
	2pl				1
3SG	1SG			13	
	2SG	1	1		1
	3PL	1			3
1PL	1SG	1			
2PL	1PL	1			1
3PL	1PL			1	
	3SG	1	1	1	3
Total		12	4	38	10

Discussion

The data presented here shows some patterns. First, to the extent that more frequent verb-types show fewer errors, it can be argued that this is proof that the learners master the more frequent forms as opposed to the less frequent ones. In that regard, it can be considered that agreement marking on group 4 verbs is mastered the most. This is followed by group 1 verbs, and then group 2/3 verbs. The question then arises as to the implications of this observation for the item-learning/pattern-learning hypothesis that Michot (2014) talks about.

Michot's data (oral) shows that learners master agreement marking on group 4 verbs before group 3 and 2 verbs. In other words, the more a verb stem is characterised by variation, the higher the probability that agreement marking on this verb will be mastered. She takes this as proof of the fact that learners engage in item-learning before pattern-learning. The results from the data under consideration (written data) also show that agreement marking is mastered most with the verb group with stems that are characterised by the highest form of variation (group 4). This can be taken as proof of the fact that even in written expression learners rote learn (item-learning). Nevertheless, the second most frequent verb-types are group 1 verbs, and they have the second highest adequacy ratio, with group 2/3 verb-types being the third and fourth in terms of frequency and adequacy ratios. It seems then that, while on the one hand learners engage in item-learning, they also simultaneously engage in pattern-learning.

It is interesting to note that, compared to group 4 verbs, group 2 and group 3 verbs instantiate some form of schemata in terms of their stem allomorphies. While the stems of group 2 verbs vary, this does not involve vowel variation. Group 3 verbs, on the other hand, show vowel variation. Thus, while group 1 verbs have a regular pattern, group 2 verbs have a pattern characterised by consonant variation, while group 3 verbs have a pattern characterised by both consonant and vowel variation. It seems that the more regular the pattern, the higher the mastery of agreement marking on the verb. The idea I am trying to put across then is that in subject-verb marking, it seems that, in written expression, item-learning co-occurs with pattern-learning. While item-learning is manifest with only group 4 verbs, pattern-learning is influenced by morphological regularity, such that the more regular the constructional schema, the higher the mastery of agreement markers.

A second factor that is noted from the data is that which I refer to as the *markedness effect* (where markedness is interpreted à la Greenberg 2005). The markedness effect concerns how plurality and person agreement marking distribute on the different verb types. First, singular marking, as opposed

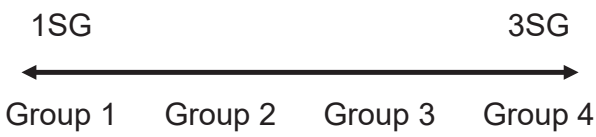

Figure 3: Influence of verb types on person marking

to plural marking, seems to be a marked strategy, thus confirming the observations made by Bybee (1991). Indeed, only 78 verbs are marked for plurality, representing about 14%. Interestingly, as illustrated in Figure 3, the few plural markings that occur follow the same trend as noted above: 36 plural markings, representing 44%, occur on group 4 verbs; 27 plural markings, representing 33%, occur on group 1 verbs; 14 plural markings, representing 17%, occur on group 3 verbs; and only 5 plural markings, representing 6% occur on group 2 verbs. Thus, as illustrated in Figure 3, even the few plural markings that occur confirm the observation that group 4 and group 1 verbs represent the most mastered forms, while group 2 and 3 verbs occupy median positions.

Person marking also varies depending on verb-type. This is most evident within the singular domain – plurality is a marked strategy. A critical observation of the data in the cross-category results show that while first person marking is most frequent with group 1, third person marking is most frequent with group 4 verbs. Group 3 and group 2 verbs occupy median positions. Thus, with first person marking constituting one end of an extreme, and third person marking constituting the other, a cline can be noted.

This observation is critical on two scores: First, it confirms Michot's (2014) observation that third person marking first occurs with group 4 verbs, before occurring on any other verb-type. It can be said then that, in both oral and written data, learners first mark third person agreement on group 4 verbs, and that learning this takes the form of item-learning. Secondly, this observation can be taken as indicative of the fact that the simultaneous pattern-learning that accompanies item-learning in written expression occurs with first person marking before any other person marking strategy. What is fascinating is the complementarity of the distribution: forms that are item-learned are first strongly associated with third person singular marking, while forms that are pattern-learned are first strongly associated with first person singular marking.

To summarise, it seems then that even though in speech, learners initially make use of rote-memorised verb forms and do not seem to apply conjugation rules, they can apply rules more easily in written output. Applying rules does not, however, mean that rote-memorised verb forms are discarded; instead, both rote-memorised and rule-learnt forms are deployed simultaneously. Despite being deployed simultaneously, each first favours particular agreement markers: rote-memorised verb forms are first associated with third person singular marking, while rule-learnt forms are first associated with first person singular marking. This suggests that the dichotomy between rule-based versus item-based learning can be impacted by the modality of language (spoken versus written).

Conclusion

This article has sought to account for subject-verb agreement markers produced by learners of French in Ghana. It has been observed that the learners are at post-basic level and that subject-verb agreement marking is part of their interlanguage. However, it has been observed that agreement marking is influenced by verb-type, i.e. the regularity of the pattern that characterises verb stem allomorphy.

First, it was noted that learners produce many more verbs that do not have an identifiable stem as compared to verbs with one stem and verbs with multiple stems. Then it was shown that verb-types seem to favour certain agreement markers: verbs without an identifiable stem favour third person singular marking, while verbs with only one stem favour first person singular marking. Verbs with multiple stems, on the other hand, occupy a median position. Thus, the morphological regularity and irregularity of verbs seem to correlate to different agreement marking strategies.

Interpreting this within the framework of the item-learning/rule-learning dichotomy, it was observed that, compared to oral production where rule-learning dominates at the initial stages of French foreign language learning, both strategies are deployed in the data under discussion. While item-learning seems straightforward, as it concerns only group 4 verbs, rule-learning correlates strongly with morphological regularity. Thus, the more regular the rule, the more frequently it is used, and the more strongly it is associated with first person singular marking. This suggests then that the relationship between verb-type and agreement marking can be influenced by the modality of language.

Abbreviations

1	First person
2	Second person
3	Third person
AGR	Agreement marker
COND	Conditional tense
DEF	Definite article
F	Feminine
FUT	Future tense
IMP	Imperfect tense
IND	Indicative mode
M	Masculine
NEG	Negation marker
OBJ	Object
PL	Plural
PP	Past participle
PRO	Pronoun
PRS	Present tense
REL	Relativiser
V	No-target verbal
SG	Singular
SUBJ	Subjunctive mood

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