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The Emergence of Agreement in Arabic as an L2: A Feature-Based Approach

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Abstract—**This study presents cross-sectional data on phrasal and inter-phrasal agreement in second language (L2) learners of Arabic. Fifteen learners at different proficiency levels participated. The study examined the order of emergence of phrasal agreement (represented by noun-adjective agreement) and inter-phrasal agreement (represented by subject-verb agreement). It also looked into whether complex form-function relations delayed the emergence of plural masculine and feminine forms compared to other forms with one-to-one form-function relations. The results showed that phrasal agreement emerged far ahead of inter-phrasal agreement, and complexity in form-function relation led to a delay in the emergence of the plural masculine and feminine forms in phrasal agreement. When learners could not supply target language forms of adjectives and verbs, the default form was employed.**

Index Terms—**acquisition, agreement, Arabic, emergence, processability theory**

I. Introduction

Research on language acquisition has made great strides in answering questions about the process of acquiring a language, e.g., mental representation of the acquired language and its development. Processability theory (PT) has gained typological plausibility in this field for successfully predicting and explaining interlanguage development (Bettoni & Di Biase, 2015; Pienemann, 1998, 2005; Pienemann & Kessler, 2011). For instance, researchers have used PT as a theoretical framework for the acquisition of syntax and morphology in Modern Standard Arabic (MSA) as a foreign or second language (L2) (e.g., Alhawary, 1999; Al-Shatter, 2011; Alsubhi, 2021; Mansouri, 2005; Oulhaj, 2015). Due to its complexity, agreement morphology in MSA offers a fertile testing ground for Pienemann's (1998) initial proposal, as MSA has different types of agreement that mirror PT's proposed hierarchy of L2 morphology development. It also has agreement morphemes that exhibit form-function complexities.

The present study sought to extend the scope of investigated morphological structures in MSA as an L2 using PT. More specifically, the goal was to uncover the order of emergence between different types of agreement, namely agreement within phrases (noun-adjective) and agreement across phrases (subject-verb). It also explored whether form-function complexities caused any delay in the emergence of certain agreement structures subsumed under phrasal agreement.

II. Literature Review

A. Theoretical Framework

PT is based on certain common psycholinguistic constraints, such as access speed to processing components and working memory (Eguchi & Sugiura, 2015). Therefore, it claims that language learners must follow a universal developmental trajectory. It views language acquisition as a result of a gradual development of a set of computational routines or procedural skills that make up the language processor. This view of the language processor is strongly influenced by the language generation model of Levelt (1989). Viewing the internal structure of the language processor as a set of computational routines coupled with the typological plausibility of the grammar model it assumes, namely lexical functional grammar (Bresnan, 2001), allows for universal claims about L2 syntax and morphology development.

Lexical functional grammar assumes three parallel grammar components: argument structure, functional structure, and constituent structure marking (Di Biase et al., 2015; Pienemann, 1998, 2005; Pienemann & Kessler, 2011). Different mappings between the three levels of grammar dictate syntax, while feature unification between and across phrases dictates morphology. The main claim of PT is that leaners start from scratch and gradually develop their ability to diverge from canonical word order and to unify features within and across phrases. Since this study focused on agreement morphology in MSA, syntax is not discussed.

For morphological development, PT assumes an incremental activation of five processing procedures with no possibility of skipping the five associated stages of development shown in Table 1 (Pienemann, 2005, p. 13). It argues that learners start by building the lexicon, referred to as the lemma access stage, characterized by formulaic language and memorized chunks. Then, at the category procedure stage, the category of lexical items (noun, verb, adjective) is realized as well as lexical morphemes. Thus far, the target-like forms that emerge are those that do not require any information exchange.

At the next level, a phrasal procedure is activated. Structures that require phrasal information exchange emerge at this stage (e.g., phrasal agreement). This is followed by the S-procedure stage, in which information exchange across phrases is active, and structures that require feature unification across phrases emerge (e.g., subject-verb agreement). The final stage is the S'-processing procedure stage, as shown in Table 1, in which structures that require feature unification across sentences emerge. PT argues that the emergence of target language morphological structures in the interlanguage is contingent upon the development of their respective processing procedure with no possibility of first language (L1) transfer.

TABLE 1
HIERARCHY OF PROCESSING PROCEDURES

	t_1	t_2	t_3	t_4	t_5
S'-procedure (EmbeddedS)	–	–	–	–	+
S-procedure	–	simplified	simplified	inter-phrasal information exchange	inter-phrasal information exchange
Phrasal procedure (head)	–	–	phrasal information exchange	phrasal information exchange	phrasal information exchange
category procedure (lex. categ.)	–	lexical morphemes	lexical morphemes	lexical morphemes	lexical morphemes
word/lemma	+	+	+	+	+

A substantial body of research has investigated the emergence of various morphological structures across typologically different languages through the lens of PT, such as English (Dyson, 2009; Eguchi & Sugiura, 2015), Spanish (Bonilla, 2015), Italian (Di Biase & Kawaguchi, 2002), Norwegian (Håkansson & Arntzen, 2021), Arabic as a foreign language (Alhawari, 1999; Mansouri, 2005), Arabic as an L2 (Alsubhi, 2021), Serbian (Di Biase et al., 2015), and Hindi (Baten & Verbeke, 2015). This robust area of research has largely demonstrated the accuracy of L2 developmental routes that are hypothesized based on the processing procedures of PT, except Alhawari (1999), which found counter evidence to PT from Arabic.

This cross-sectional study investigated the development of phrasal and inter-phrasal agreement morphology in Arabic as an L2 to test the proposed hierarchy in Table 1 and answer the following research questions:

1) Do agreement structures that involve phrasal feature unification emerge before agreement structures that involve inter-phrasal feature unification?
2) Do agreement structures that have complex form-function morphemes emerge after agreement structures that have one-to-one form-function morphemes?
3) What do learners produce when they fail to supply the target language agreement markers?

B. Target Structures

This section provides a detailed morphological analysis of the structures targeted in this study to show the type of feature unification or grammatical information exchange required in their production. This analysis could help explain the rationale behind the placement of each target structure in the proposed hierarchy described later. The focus here is on two representative agreement structures from MSA that theoretically require either phrasal (Stage 3) or inter-phrasal (Stage 4) feature unification in their production: noun-adjective and subject-verb agreement.

Arabic has an inflectional morphology with morphemes denoting more than one function. Within PT, this poses a serious question of what is optimal for testing. Therefore, multiple structures with different form-function mapping were carefully selected to have representative structures that could address the research questions of this study.

C. Noun-Phrase Agreement

Within this type of structure, the selection was confined to noun-adjective constructions. In Arabic, attributive adjectives follow the noun they modify and show full agreement with it in number, gender, case, and definiteness. Within this type of agreement, the focus was limited to number (singular and plural) and gender (masculine and feminine). Dual number was excluded due to its rarity in the input, while case was not part of this study as it tends to be dropped by L2 learners of Arabic as well as native speakers with no effects on grammaticality. Examples 1 and 2 showcase a singular head noun modified by adjectives showing full concord.

1. a. tˤalib muhaðab
   student.M.Sg polite.M.Sg

"polite male student"

b. ʔa-tˤalib ʔal-muhaðab
Def-student.M.Sg Def-polite.M.Sg
"the polite male student"

2. a. tˤalib-ah muhaðab-ah
student.Sg-F polite.Sg-F
"polite female student"

b. ʔa-tˤalib-ah ʔal-muhaðab-ah
Def-student.Sg-F Def-polite.Sg-F
"the polite female student"

On the other hand, Examples 3 and 4 show a plural head noun modified by adjectives showing full concord.

3. a. tˤulab muhaðab-un
student.M.Pl polite.M.Pl
"polite male students"

b. ʔa-tˤulab ʔal-muhaðab-un
Def-student.M.Pl Def-polite.M.Pl
"the polite male students"

4. a. tˤalib-at muhaðab-at
student-Pl.F polite-Pl.F
"polite female students"

b. ʔa-tˤalib-at ʔal-muhaðab-at
Def-student-Pl.F Def-polite-Pl.F
"the polite female students"

The lemma form of an adjective is unmarked for number, gender, definiteness, and case features. Once it modifies a head noun, these unspecified features get marked to show identical features of the head noun (Mansouri, 2005). In the production of the structures above, features must be unified between a head noun and the adjective modifying it. Figures 1 and 2 outline the lexical entries and constituent structure for Example 3b.

ʔa-tˤulab	N,	PRED =	"ʔa-tˤulab"
		NUM =	Pl
		GEN =	M
		DEF =	+
ʔal-muhaðab-un	A,	PRED =	"ʔal-muhaðab-un"
		NUM =	Pl
		GEN =	M
		DEF =	+

Figure 1. Simplified Lexical Entries of Noun Phrase in Example 3b

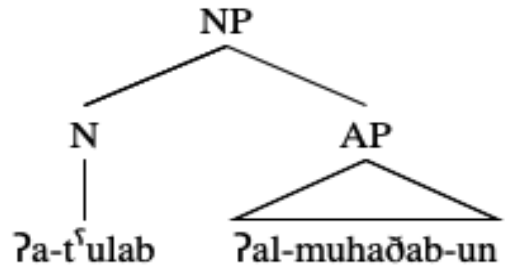

Figure 2. Simplified Constituent Structure for Example 3b

This process of unifying features between elements within a constituent, in this case a noun phrase, is dependent on the availability of phrasal feature unification, which is hypothesized to occur at Stage 3 of the processability hierarchy outlined in Table 1, where the phrasal processing procedure is attained.

D. Subject-Phrase Agreement

Subject-verb agreement can be full or partial in Arabic, depending on word order. However, researchers disagree over what the unmarked word order is, with some assuming SVO (Awwad, 1973; Mohammad, 1990) and others assuming

VSO (Aoun et al., 2010; Bakir, 1980; Soltan, 2007). For this study, I took SVO to be the default because verbs in this order show full agreement with the subject, the area to be investigated.

Verbs in SVO sentences must agree with their subject in gender, number, and person, as in Example 5, while in VSO, only gender agreement is manifested, as in Example 6.

5. a. ʔa-tˤulab-u ja-ktubuna
   Def-student.Pl-Nom 3P.M-write.Pl
   "the students are writing"
   b. ʔa-tˤalib-u ja-ktubu al-waʒib-a
   Def-student.Sg-Nom 3P.M-read.Sg Def-homework.M-Acc
   "the student is writing the homework"
   c. ʔa-tˤalib-at-u ta-ktubu al-waʒib-a
   Def-student.Sg-F-Nom 3P.F-read.Sg Def-homework.M-Acc
   "the female student is writing the homework"
   d. tˤalib-at-un ta-ktubu al-waʒib-a
   student.Sg-Fem-Nom 3P.F-read.Sg Def-homework.M-Acc
   "a female student is writing the homework"
6. a. ja-ktubu atˤ-tˤulab-u al-waʒib-a
   3P.M-read Def-student.M.Pl-Nom Def-homework.M-Acc
   "the students are writing the homework"
   b. ta-ktubu atˤ-tˤalib-at-u al-waʒib-a
   3P.F-read Def-student.Pl-F-Nom Def-homework.M-Acc
   "the students are writing the homework"

As shown in these examples, the verb acquires person, number, and gender features according to the subject. For such structures to be produced, information exchange must occur across phrases. For the purpose of this study, the focus was limited to agreement in SVO order. To allow for comparisons across structures, the discussion was limited to number and gender agreement. Agreement of this type requires Stage 4 (inter-phrasal) processing procedures. Figures 3 and 4 outline the lexical entries and constituent structure for Example 5a.

ʔa-tˤulab-u	N,	PRED	=	"ʔa-tˤulab-u"
		NUM	=	Pl
		GEN	=	M
ja-ktubuna		PRED	=	"ja-ktubuna"
		TENSE	=	Present
		SUBJ PERSON	=	3P
		SUBJ NUM	=	Pl
		SUBJ GEN	=	M

Figure 3. Simplified Lexical Entries for the Sentence in Example 5a

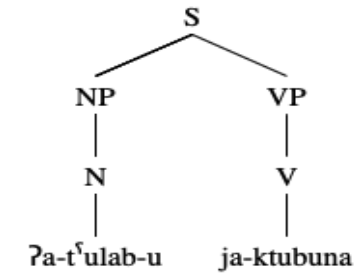

Figure 4. Simplified Constituent Structure for the Sentence in Example 5a

The discussion of these target structures shows that noun-adjective agreement requires feature unification within the noun phrase, while subject-verb agreement requires feature unification across phrases, namely the noun phrase and verb phrase. Within PT terms, the former requires Stage 3 processing procedures while the latter requires Stage 4 processing procedures. Thus, phrasal agreement, in this case noun-adjective agreement, is expected to emerge in learners' interlanguage before inter-phrasal agreement, in this case subject-verb agreement. Example 7 and its constituent structure in Figure 5 show the structural difference in these two types of agreement.

7. a. ʔa-tˤalib-u ʔa-nnaʒib-u ja-rsum
   Def-student.Sg-Nom Def-smart.Sg.M-Nom 3P.M-draw.Sg
   "the smart student is drawing"

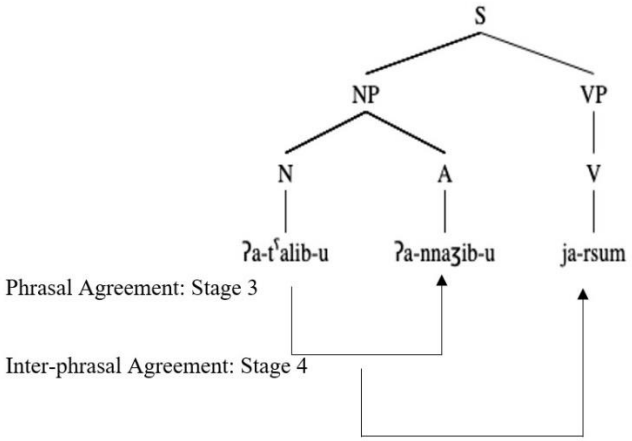

Figure 5. Phrasal vs Inter-Phrasal Agreement

PT claims that the level of information exchange required to produce a certain structure is what dictates its emergence order in the interlanguage of learners (Di Biase et al., 2015; Pienemann, 1998, 2005; Pienemann & Kessler, 2011). This straightforward claim can be tested by selecting "optimal structures," those structures that do not include additional complexities. Additional complexity refers to the additional tasks a learner has to do to produce the structure in question.

This idea was first discussed in Mansouri and Håkansson (2007) and sparked a new area of research within PT that is known as intra-stages. Once a tested structure has a complex form-function relation, it is argued to emerge later than those that have a more straightforward or one-to-one form-function relation, even though in principle they involve an identical level of processing procedures and level of feature unification (Pienemann, 1998). Examples 8 and 9 show two structures that involve phrasal feature unification, with Example 8 showcasing a one-to-one form-function relation in the realization of gender and number morphemes on the modifying adjectives and Example 9 showcasing a more complex form-function relation.

8. a. ʔa-tˤalib ʔa-ðaki
   Def-student.M.Sg Def-smart.M.Sg
   "the smart student"
   b. ʔa-tˤalib-ah ʔa-ðaki-ah
   Def-student.Sg-F Def-smart.Sg-F
   "the smart student"
   c. ʔa-tˤulab ʔal-ʔaðkiaʔ
   Def-student.M.Pl Def-smart.M.Pl
   "the smart students"
   d. ʔa-tˤalib-aːt ʔa-ðaki-aːt
   Def-student-F.Pl Def-smart-F.Pl
   "the smart students"
9. a. ʔa-tˤulab ʔal-muhaðab-un
   Def-student.M.Pl Def-polite-M.Pl.Nom
   "the polite students"
   b. ʔa-tˤulab ʔal-muhaðab-in
   Def-student.M.Pl Def-polite-M.Pl.Gen/Acc
   "the polite students"

Such facts must be considered when testing PT claims. This does not mean the structures with complex form-function relations are not useful in testing but rather cannot be used to falsify the claims of PT. In this study, they were included to assess their time of emergence relative to the optimal structure of the stage that involves identical feature unification. Table 2 shows the full paradigm of the structures targeted in this study, the level of feature unification involved in their production, and the respective level of processing procedures where such structures are claimed to be processable.

TABLE 2
HYPOTHESIZED DEVELOPMENT OF THE TARGET STRUCTURES

Processing Procedure	Feature Unification	Target L2 Structure		Form-Function
Inter-Phrasal	Across Phrases	$NP\text{-}VP_{Type1P}$	Number Gender	One to one
		$NP\text{-}VP_{Type1S}$	Number Gender	
Phrasal	Within Phrases	$N\text{-}Adj_{Type2P}$	Gender Number	One to many
		$N\text{-}Adj_{Type1S}$	Gender Number	One to one

Type 1 and Type 2 in Table 2 refer to the distinction made in this study between the optimal structure (Type 1) and the more complex structure (Type 2) that theoretically involve identical processing procedures. The definitions of each type are provided in Table 3.

TABLE 3
DEFINITIONS OF STRUCTURE TYPES

Structure Type	Meaning
$NP\text{-}VP_{Type1P}$	Inter-phrasal agreement when the subject is a plural masculine or feminine noun.
$NP\text{-}VP_{Type1S}$	Inter-phrasal agreement when the subject is a singular masculine or feminine noun.
$N\text{-}Adj_{Type2P}$	Phrasal agreement when the head noun is a plural masculine or feminine noun.
$N\text{-}Adj_{Type1S}$	Phrasal agreement when the head noun is a singular masculine or feminine noun.

III. METHODOLOGY

For the purposes of this cross-sectional study, a picture description task was developed to collect data from learners of MSA as an L2 with varied L1 backgrounds.

A. Participants

Participants consisted of 15 students enrolled in the TASOL Institute at the Islamic University of Medina (see Table 4). Their 18-month program teaches MSA to students who plan to study for a degree at the university.

TABLE 4
PARTICIPANT INFORMATION

Participant	Age	L1
PA	24	Soninke
PB	28	Swahili
PC	27	Swahili
PD	24	French
PE	25	French
PF	22	Bishtu
PG	27	Hausa
PH	23	Swahili
PI	23	Daza
PJ	22	Swahili
PK	22	Thai
PL	22	Bambara
PM	26	Portuguese
PN	23	English
PO	27	Yoruba

B. Data Collection

PT prefers spontaneous speech data (Pienemann & Lenzing, 2015). However, it might be impossible to create obligatory contexts for every target structure without developing tasks that can be manipulated to create contexts where said structure becomes obligatory. Therefore, this study used a picture description task to elicit data related to the target structures. This and other tasks, such as the elicited imitation task, have proven useful in PT before (Baten, 2019; Baten & Cornillie, 2019). A total of 80 pictures containing the target subject were shown to participants. The target subject was varied to test learners' ability to produce target language agreement with each type of noun phrase in Table 2.

A recruitment email was sent to the head of the TASOL Institute to forward to potential students in Levels 2, 3, and 4 of the program. It included the researcher's contact information and the objective and tasks of the study. Once a potential participant showed interest, the researcher sent another email with a link to an online questionnaire to make sure they met the inclusion criteria and a table with time slots to arrange an appointment. A reminder email was sent to participants 24 hours before their appointment. The meeting was held in the researcher's office at Taibah University. Once a participant arrived, they were given details about what was expected from them and asked to sign a consent form.

Data collection started with the picture description task and took around 30 minutes for each participant. The pictures were divided into two groups of 40 each. The first targeted phrasal agreement while the second targeted inter-phrasal agreement. In the first group, two people or things differing in age, appearance, or facial expression were shown to participants with one of them holding a thing in their hand. The researcher then asked questions such as "Who is holding the X?" For the second group of pictures, each picture depicted an action. The number of the subject was varied to cover all types of noun phrases targeted in the study. Each picture had the intended subject written on it. The researcher then asked questions such as "What are they doing?" Participants were all instructed to produce full sentences. All response were recorded using an external microphone, and each participant had one file containing their responses for later analysis. The researcher then transcribed all responses using the IPA and categorized the transcriptions based on the type of structure they contained.

C. Data Analysis

Since this study sought to test the claims of PT, it had to use that model's criteria when judging whether a dataset supported those claims. As established in the literature, PT looks at the first systematic and productive application of a rule to conclude whether a structure has emerged and is part of the learner's interlanguage (Pienemann, 1998). The terms systematic and productive have various interpretations in the literature, ranging from one application (Glahn et al., 2001; Hammarberg, 1996) to three (Artoni, 2012; Zhang, 2005) or four (Pienemann, 1998). For this study, it was set at four instances of rule application. Variability in lexical items was controlled for, as the pictures presented different subjects performing different actions.

IV. Results

Table 5 presents the participants' responses qualitatively and shows a scalability value of 0.93. A plus sign means the participant produced the structure at least four times in different contexts, a minus sign indicates the structure did not emerge in the interlanguage of participants even though prompts were used to elicit it, and a shaded minus sign indicates a violation of the implicational hierarchy. A continuous line separates structures involving different processing procedures belonging to different stages. A thicker continuous line indicates the highest structure produced by each participant. A dotted line indicates the highest structure produced by a participant within a stage, indicating an intra-stage.

Table 5
Production of Phrasal and Inter-Phrasal Agreement

Participant	Phrasal Agreement (Noun-Adjective)				Inter-Phrasal Agreement (Subject-Verb)			
	One to one		Complex		One to one			
	SG M	SG F	PL M	PL F	SG M	SG F	PL M	PL F
PA	+	+	-	-	-	-	-	-
PB	+	+	+	+	-	-	-	-
PC	+	+	+	+	-	-	-	-
PD	+	+	+	+	-	-	-	-
PE	+	+	+	-	+	-	+	-
PF	+	+	+	-	+	-	+	-
PG	+	-	+	-	+	+	+	-
PH	+	+	+	-	+	+	+	+
PI	+	+	+	+	+	-	+	+
PJ	+	-	+	+	+	+	+	+
PK	+	+	+	+	+	+	+	+
PL	+	+	+	+	+	+	+	+
PM	+	+	+	+	+	+	+	+
PN	+	+	+	+	+	+	+	+
PO	+	+	+	+	+	+	+	+

With regard to phrasal agreement, all participants were able to produce at least one type of noun-adjective agreement. When agreement was phrasal but surfaced in morphemes with complex form-function relations (e.g., masculine and feminine plural), its emergence was delayed, as with Participant PA. Some failed to produce agreement when the head noun was singular or plural feminine, as represented by PE, PF, PG, PH, and PJ, even though they showed evidence of producing structures belonging to the same stage as well as structures belonging to higher stages.

With regard to inter-phrasal agreement, a subset of participants failed to produce any type of subject-verb agreement as seen with PA, PB, PC, and PD. Some showed evidence of subject-verb agreement but consistently failed to produce it when the subject was singular or plural feminine, as in the data for PE and PF. While PG failed to produce this agreement when the subject was plural feminine, PI only failed to produce it when the subject was singular feminine.

Table 6 shows alternative interlanguage patterns when learners could not produce the target structures. The numbers represent instances produced by all participants. The singular masculine form of adjectives and verbs was clearly oversupplied in almost all contexts. The plural masculine form of adjectives and verbs was almost exclusively oversupplied in plural feminine contexts. There were other less-attested patterns of use in non-obligatory contexts (i.e., three instances of a singular feminine adjective in plural masculine contexts and four in plural feminine contexts as well as three instances of a plural feminine adjective or verb in singular feminine contexts and one in a plural masculine context).

Table 6
Appearance in Non-Obligatory Contexts

Non-Obligatory Context	Noun-Adjective Agreement				Subject-Verb Agreement			
	One to one		Complex		One to one			
	SG M	SG F	PL M	PL F	SG M	SG F	PL M	PL F
SG-M Morpheme		36	19	11		44	10	10
PL-M Morpheme				26	1			26
SG-F Morpheme			3	4				1
PL-F Morpheme		2				1	2	

V. Discussion

In answer to the first research question, all participants who produced subject-verb agreement were able to produce at least one type of noun-adjective agreement but not vice versa. Emergence of agreement structures in learner interlanguage followed the order expected in PT. This was in line with previous research on Arabic as an L2 (e.g., Mansouri, 2005; Oulhaj, 2015) but contradicted Alhawari (1999), which examined the same structures but excluded plural in phrasal and inter-phrasal agreement and found that several learners had productive use of subject-verb agreement even though they did not show evidence of noun-adjective agreement.

Regarding the second research question, all participants who produced phrasal agreement with complex form-function morphemes (plural masculine and feminine) were able to produce phrasal agreement with one-to-one form-function morphemes (singular masculine and feminine) but not vice versa. One participant, PA, could not produce agreement with complex form-function morphemes but could with one-to-one form-function relations. Mansouri (2005) found similar results, which led to the idea of intra-stages in Mansouri and Håkansson (2007). Such data support the claim that one-to-one form-function mapping always produces an optimal structure when testing staged development. Complex form-function mapping causes extra processing loads, which may lead to late emergence and thus cannot be taken as evidence against staged development. However, it can be taken as evidence for intra-stages within a stage. Similar to Mansouri and Håkansson (2007), the present study suggested that this was the case with phrasal agreement in Arabic as an L2.

With regard to the third research question, a closer look at Table 6 shows a non-target language pattern in which the singular masculine form is supplied in other contexts. This has been interpreted as a base form problem (Glahn et al., 2001) given that the singular masculine is the base form in Arabic (Aoun et al., 2010; Fehri, 2012; Ryding, 2005). This overgeneralizing of the default form has been found to be prevalent in case marking development as well when the nominative form is generalized at the initial stage (Alsubhi, 2021; Artoni et al., 2013; Artoni & Magnani, 2015; Baten, 2011, 2013; Baten & Verbeke, 2015). Another non-target language pattern that appeared for some learners was contrasting the singular and plural masculine. The former was used in both masculine and feminine singular contexts while the latter was used in both masculine and feminine plural contexts. Both patterns were found in Håkansson and Arntzen (2021).

VI. Conclusion

This study examined the emergence of phrasal and inter-phrasal agreement in Arabic as an L2. In learners' interlanguage, phrasal (noun-adjective) agreement emerged before inter-phrasal (subject-verb) agreement. In addition, complex form-function relations caused proceeding loads, delaying emergence of noun-adjective agreement when the head noun was plural masculine or plural feminine. When learners could not produce target-language forms, they usually opted for one of two strategies: supplying the default form in all contexts or contrasting the singular masculine for all singular contexts with plural masculine for all plural contexts. Future research could identify whether this is the way learners figure out the full paradigm.

References

[1] Al Shatter, G. (2011). Processability approach to Arabic L2 teaching and syllabus design. *Australian Review of Applied Linguistics*, *34*(2), 127–147.

[2] Alhawary, M. T. (1999). *Testing processability and effectiveness of computer-assisted language instruction: A longitudinal study of Arabic as a second / foreign language* (Publication No. 9961619) [Doctoral dissertation]. ProQuest Dissertations Publishing.

[3] Alsubhi, A. (2021). *The development of case morphology and sentential word order in Arabic as a second language: A processability perspective* (Publication No. 92731) [Doctoral dissertation, The University of Wisconsin-Milwaukee]. Retrieved February 22, 2025, from http://digital.library.wisc.edu/1793/92731

[4] Aoun, J., Benmamoun, E., & Choueiri, L. (2010). *The syntax of Arabic syntax*. Cambridge University Press.

[5] Artoni, D. (2012). *The acquisition of case morphology in Russian as a second language* (Publication No. 918386) [Doctoral dissertation, Verona University]. Retrieved February 10, 2024, from https://iris.univr.it/bitstream/11562/918386/1/Artoni%20PhD%20Thesis.pdf

[6] Artoni, D., & Magnani, M. (2015). Acquiring case marking in Russian as a second language: An exploratory study on subject and object. In C. Bettoni & B. Di Biase (Eds.), *Grammatical development in second languages: Exploring the boundaries of processability theory* (pp. 177–193). The European Second Language Association.

[7] Artoni, D., Magnani, M., Butt, M., & Holloway King, T. (2013). LFG contributions in second language acquisition research: The development of case in Russian L2. In M. Butt & T. Holloway King (Eds.), *Proceedings of the LFG13 Conference* (pp. 69–89). CSLI Publications.

[8] Awwad, M. A. (1973). *Relativization and related matters in classical modern standard and Palestinian colloquial Arabic* [Unpublished doctoral dissertation]. Brown University, Providence, Rhode Island.

[9] Bakir, M. J. (1980). *Aspects of clause structure in Arabic: A study in word order variation in literary Arabic* [Doctoral dissertation]. Indiana University, Bloomington, Indiana.

[10] Baten, K. (2011). Processability theory and German case acquisition. *Language Learning*, *61*(2), 455–505.

[11] Baten, K. (2013). *The acquisition of the German case system by foreign language learners*. John Benjamins.

[12] Baten, K. (2019). Teaching the German case system: A comparison of two approaches to the study of learner readiness. In A. Lenzing (Ed.), *Widening contexts for processability theory: Theories and issues* (pp. 301–326). John Benjamins.

[13] Baten, K., & Cornillie, F. (2019). Elicited imitation as a window into developmental stages. *Journal of the European Second Language Association*, *3*(1), 23–34.
[14] Baten, K., & Verbeke, S. (2015). The acquisition of the ergative case in Hindi as a foreign language. In K. Baten, A. Buyl, K. Lochtman, & M. van Herreweghe (Eds.), *Theoretical and methodological developments in processability theory* (pp. 71–104). John Benjamins.
[15] Bettoni, C., & Di Biase, B. (Eds.). (2015). *Grammatical development in second languages: Exploring the boundaries of processability theory*. European Second Language Association.
[16] Bonilla, C. L. (2015). From number agreement to the subjunctive: Evidence for processability theory in L2 Spanish. *Second Language Research*, *31*(1), 53–74.
[17] Bresnan, J. (2001). *Lexical functional syntax*. Blackwell.
[18] Di Biase, B., & Kawaguchi, S. (2002). Exploring the typological plausibility of processability theory: Language development in Italian second language and Japanese second language. *Second Language Research*, *18*(3), 274–302.
[19] Di Biase, B., Bettoni, C., & Medojević, L. (2015). The development of case: A study of Serbian in contact with Australian English. In C. Bettoni & B. Di Biase (Eds.), *Grammatical development in second languages: Exploring the boundaries of processability theory* (pp. 195–212). The European Second Language Association.
[20] Dyson, B. (2009). Processability theory and the role of morphology in English as a second language development: A longitudinal study. *Second Language Research*, *25*(3), 355–376.
[21] Eguchi, A., & Sugiura, M. (2015). Applicability of processability theory to Japanese adolescent EFL learners: A case study of early L2 syntactic and morphological development. *System*, *52*, 115–126.
[22] Fehri, A. F. (2012). *Key features and parameters in Arabic grammar*. John Benjamins.
[23] Glahn, E., Håkansson, G., Hammarberg, B., Holmen, A., Hvenekilde, A., & Lund, K. (2001). Processability in Scandinavian second language acquisition. *Studies in Second Language Acquisition*, *23*(3), 389–416.
[24] Håkansson, G., & Arntzen, R. (2021). Developmental stages challenging cross-linguistic transfer: L2 acquisition of Norwegian adjectival agreement in attributive and predicative contexts. *Journal of the European Second Language Association*, *5*(1), 54–69. https://doi.org/10.22599/jesla.68
[25] Hammarberg, B. (1996). Examining the processability hierarchy: The case of adjective agreement in L2 Swedish. In E. Kellerman, B. Weltens, & T. Bongaerts (Eds.), *Eurosla 6: A selection of papers* (Vol. 55, Issue 2, pp. 75–88). Amsterdam: Ane ´la.
[26] Levelt, W. J. (1989). *Speaking: From intention to articulation*. MIT Press.
[27] Mansouri, F. (2005). Agreement morphology in Arabic as a second language. In M. Pienemann (Ed.), *Cross-linguistic aspects of processability theory* (pp. 117–253). John Benjamins.
[28] Mansouri, F., & Håkansson, G. (2007). Conceptualising intra-stage sequencing in the learner language. In F. Mansouri (Ed.), *Second language acquisition research: Theory-construction and testing* (pp. 119–145). Cambridge Scholars Press.
[29] Mohammad, M. (1990). The problem of subject-verb agreement in Arabic: Towards a solution. In M. Eid (Ed.), *Perspectives on Arabic linguistics I: Papers from the First Annual Symposium on Arabic Linguistics* (pp. 95–126). John Benjamins.
[30] Oulhaj, A. (2015). *The developmental stages of the acquisition of Arabic by adult English-speaking learners: Processability theory and the formulaic language* (Publication No. 11263) [Doctoral dissertation]. University of Wisconsin-Milwaukee. Retrieved January 5, 2025, from https://minds.wisconsin.edu/bitstream/handle/1793/90863/Oulhaj_uwm_0263D_11263.pdf
[31] Pienemann, M. (1998). *Language processing and second language development: Processability theory*. John Benjamins.
[32] Pienemann, M. (2005). *Cross-linguistic aspects of processability theory*. John Benjamins.
[33] Pienemann, M., & Kessler, J. U. (Eds.). (2011). *Studying processability theory: An introductory textbook*. John Benjamins.
[34] Pienemann, M., & Lenzing, A. (2015). Processability theory. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 159–179). Routledge.
[35] Ryding, K. C. (2005). *A reference grammar of Modern Standard Arabic*. Cambridge University Press.
[36] Soltan, U. (2007). *On formal feature licensing in minimalism: Aspects of Standard Arabic morphosyntax* (Publication No. 3297243) [Doctoral dissertation, University of Maryland]. Retrieved March 17, 2025, from http://hdl.handle.net/1903/7581
[37] Zhang, Y. (2005). Processing and formal instruction in the L2 acquisition of five Chinese grammatical morphemes. In M. Pienemann (Ed.), *Cross-linguistic aspects of processability theory* (pp. 155–178). John Benjamins.

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