

A variationist approach to NP genitive alternatives in Arabic

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This study aims to investigate the sociolinguistic variation of Noun Phrase (NP) genitive alternatives in Jordanian Arabic (JA) as spoken in Amman. It attempts to examine the role of certain linguistic factors i.e., animacy, definiteness, alienability, complexity, and grammatical function as well as social factors, i.e., age, gender, education, and region which may constrain the choice of using free state nominals (FSN) or construct state nominals (CS) in JA structure. Drawing on Labov's variationist approach (1972), for the current study's objectives, a corpus of spontaneous speech data is created. The corpus includes 32 sociolinguistic interviews of 32 speakers of JA (all reside in Amman). Using GOLDVARB X (Sankoff, Tagliamonte, and Smith, 2005), distributional analysis, multivariate analysis, and cross-tabulation approach are employed to analyze the data. An overall distribution of 1319 tokens indicates that CS is evidently more frequent than FSN in JA. Multivariate analysis is used to ascertain the statistical significance of factor groups. Region and four linguistic factors i.e., alienability, animacy, definiteness, and grammatical function are found to be statistically significant regarding constraining the variant choice. An interpretation of the effect of these factors on the observed linguistic phenomenon is offered.

Keywords: Construct state nominals; free state nominals; Jordanian Arabic; Amman.

1. Introduction

1.1. Language variation

The concept of language variation is vital to the study of sociolinguistics, expressly when the core purpose is to investigate the precise influence of a selected collection of sociolinguistic factors on the selection of a certain phenomenon.¹ It is often seen as a revolution that has changed the way

¹ We are deeply grateful to two anonymous reviewers for their very insightful comments and constructive criticisms; they greatly helped improve this article in all respects.

sociolinguists view language change and the true impact of socio-linguistic factors on language use, a study which is commonly referred to in the literature as *variationist sociolinguistics*. Labov (1972), who is regarded as the founder of the discipline of variationist sociolinguistics, mentions that the core study of this branch of sociolinguistics crystalizes when there are “two or more ways of saying the same thing” (Labov 1972: 271). As a comment to this point, Al-Wer (2009: 1) mentions that “variation is an inherent characteristic of every living human language. This means that in every language there is more than one way of saying the same thing, and no individual speaks in exactly the same manner all the time and in all situations.” Likewise, Wolfram (2006: 333) notes that “if structure is at the heart of language, then variation defines its soul.” By statistically defining linguistic systems, variationists seek to understand how language works in order to contribute to the explanation of the variation and possible paths of language change.

There are differences in grammatical structures, word choice, and pronunciation within one speech community. An example of phonological variation can be observed in Arabic varieties which have multiple possible pronunciations for the word /qaal/ ‘he said,’ namely [qa:l], [ga:l], [ʔa:l], [ka:l], [gɒ:l], and [ʔɒ:l] (Al-Wer 2009). All of these different variants of the word /qaal/ ‘he said’ do not express different propositional meanings; rather they are different with respect to their social meanings (Al-Wer, 2009). Such variation of these different forms of the word /qaal/ ‘he said’ is never random but follow from the effect of certain social (e.g., age, gender, education attainment, regional origin, social class, etc.) and/or linguistic (e.g., animacy, transitivity, polarity, the type of clause, etc.) factors (see also Al-Hloul *et al.* 2023). According to Labov (2001), the first contribution of sociolinguistic research in the second half of the 20th century was to demonstrate that such variation is not chaotic. Rather, it is an underlying aspect of linguistic structure that is indicative of how language is employed to express certain social attributes.

1.2. NP genitive alternatives

A genitive construction or a genitival construction is a type of grammatical construction used to express a relation between two nouns such as possession (e.g., *Mary’s bag*) where the referent of the possessor, in some sense, possesses (owns, has as a part, rules over, is connected with etc.) the referent of the possessed (Peters and Westerståhl 2013). Note here that a genitive construction is broadly a noun whose reference is narrowed down or modified by another noun [N [N]].

In Arabic, a genitive construction is traditionally called *iḍāfah* (literally "attachment") or a construct state nominal as referred to in the current linguistic practice (Altakhaineh 2016). Trask (1993: 149) defines a genitive construction as “a term used in the grammars of certain languages to denote a

construction in which a noun is possessed or modified by another noun or a noun phrase, particularly when an overt marking of the relation occurs on the noun which is possessed or modified.” One of the genitive constructions in Arabic is Construct State (CS) which normally consists of two elements: a head noun (known as *muḍāf* "attached") and a genitive NP complement (known as *muḍāf 'ilayhi* "attached to"). Cross-linguistically, a construct state is a noun inflectional form typically designating what is possessed and accompanied by another noun designating the possessor (Borer 1999). One main characteristic of CSs is that the first element obligatorily lacks a definite article, whereas the second can be definite or indefinite. It is important to mention here that the definiteness of the second element spreads to the first element in CSs, producing a definite construction as a whole (Borer 1999). This discussion is illustrated in example (1) below.² The noun *galam* 'pen' is the head of the construct state (CS) and *l-walad* 'a boy' is a genitive NP complement:

- (1) *galam* *l-walad*³
 pen DEF-boy
 'The boy's pen'

In (1) above, the possessum (*galam* 'a pen') is presented as the entity that belongs to or that is specific to the second noun which is the possessor (*l-walad* 'the boy').

Note here that CSs do not represent a homogenous group in Arabic grammar. For example, the head noun of the CSs may have an agreement (in Number and Gender) with the accompanying NP possessor in JA when the latter is referential (Jarrah *et al.* 2020). This is seen in examples (2-3) below (the examples are taken from Jarrah *et al.* 2020: 2) where the possessed is attached to an inflection that displays the same Person and Number features of the possessor.

- (2) a. *galam* *l-binit*
 pen DEF-girl
 'The girl's pen'

- b. *galam-ha_i* *l-binit_i*
 pen-her DEF-girl
 'The girl's pen'

² All examples in this study are from Jordanian Arabic unless otherwise stated.

³ In this study, the IPA system is used in the transliteration of the examples.

(3) a. *barbiif* *l-kaaz*
 pipe DEF-gas
 ‘Gas pipe’

b. **barbiif-uhi* *l-kaazi*
 pipe-SG.M DEF-gas
 Intended: ‘Gas pipe’

Jarrah *et al.* (2020) argue that there are two types of CSs with respect to ϕ -agreement between the head of the CS and its associate (the possessor). The difference between these two types rests on whether the second member of CS i.e., the NP associate in their terminology is referential or not.

An important point to mention here is that genitive relations between the possessum and the possessor in JA can be expressed through a different construction, known in the related literature as ‘absolute state’ or ‘free state nominals’ (FSN; Altakhaineh 2016). An example of FSNs is mentioned in (4a), whereas (4b) is an example of a CS:

(4) a. *l-galam* *tabaʕ* *l-walad* (FSN)
 DEF-pen of DEF-boy
 ‘The boy’s pen’

b. *galam* *l-walad* (CS)
 pen DEF-boy
 ‘The boy’s pen’

The two constructions exhibit the same word order between the possessor and the possessed. The head noun precedes the genitive phrase, but they differ in terms of the form of their constituents. The genitive phrase in the CS is bare, contrasting with the genitive phrase in the free state which is marked by *tabaʕ* ‘of/for.’ This alternation is also manifested in pronominal genitive constructions (where the possessor appears as a possessive clitic) as shown in (5) below:

(5) a. *l-galam* *tabaʕ-i* (FSN)
 DEF-pen of-my
 ‘My pen’

b. *galam-i* (CS)

pen-my

‘My pen’

There are several differences between the two constructions. One difference pertains to the fact that in an FSN, the possessum can be prefixed with a definite article. On the other hand, the addition of the definite article to the possessum is not permissible in a CS. This is illustrated in the following examples in (6):

(6) a. *l-galam tabaʕ l-walad* (FSN)
 DEF-pen of DEF-boy
 ‘The boy’s pen’

b. *(*l-)galam l-walad* (CS)
 DEF-pen DEF-boy
 ‘The boy’s pen’

Another difference between FSNs and CSs is that in the former, nominal modifiers follow the noun they modify while in a CS, nominal modifiers can only appear after the second noun in the genitive construction (after the possessor). In other words, nominal modifiers in CSs always appear after the possessor, regardless of whether they modify the possessor or the possessum. Examples (7-8) below illustrate this difference.

(7) a. *l-galam tabaʕ l-walad ?itʕ-tʕawi:l* (FSN)
 def-pen of def-boy def-tall
 ‘The tall boy’s pen’

b. *l-galam ?itʕ-tʕawi:l tabaʕ l-walad* (FSN)
 def-pen def-tall of def-boy
 ‘The boy’s long pen’

(8) a. *galam l-walad ?itʕ-tʕawi:l* (CS)
 pen def-boy def-tall
 ‘The tall boy’s pen;’ or: ‘The boy’s tall pen’

b. **galam ?itʕ-tʕawi:l l-walad* (CS)
 pen def-tall def-boy
 intended: ‘The boy’s tall pen’

Sentence (8a) is ambiguous as the two readings are possible. The context of the sentence resolves this ambiguity which can also be done away when the two members of the CS are different in their Φ -features.

This discussion clearly indicates that FSNs and CSs are in fact two different ways to express a similar interpretation, which is according to the variationist approach to syntactic alternations an optimal instance of possible effects of sociolinguistic factors. It is the purpose of the current study to examine the role of certain linguistic i.e., animacy, definiteness, alienability, complexity, and grammatical function and social i.e., age, gender, education, region factors that may constrain the choice of using FSNs or CSs in JA structure.

1.3. The aim and questions of the study

Variation is an inherent characteristic of language; there is more than one way of saying the same thing. However, this variation is found to be a result of the influence of sociolinguistic factors in languages investigated in this regard. Therefore, one main key objective behind variationist research is to figure out the extent to which social and linguistic factors affect the linguistic choice in apparent time. Thus, the current study aims to provide a detailed exploration of the attribution of a group of socio-linguistic factors which are in charge of the alternation of NP genitives in JA. Additionally, the findings of this work are supposed to contribute to the ongoing research on how language change and variation are delimited by a subset of socio-linguistic factors, a matter that is significant in feeding the argument that language change is a result of internal and external factors.

Drawing on the variationist sociolinguistics (Labov 1972) the current study purports to answer the following questions:

1. What is the distribution of NP genitive constructions (CS and FSN) in JA as spoken in Amman?
2. To what extent is the alternation between CS and FSN socially constrained, with reference to age, gender, education, and region?
3. To what extent is the alternation between CS and FSN linguistically constrained, with reference to animacy, definiteness, alienability, complexity, grammatical function?

2. Literature review

2.1. Phonological variation

One of the first variationist studies that examines the Jordanian community is Al-Khatib (1988). His study is carried out in the city of Irbid (Hōrān). He investigates six phonological variables: (q), (dʒ), (d),

(θ), (k) and (a), across five social factors: regional origin, gender, age, education, and style in order to determine whether or not such variation is rule-governed. His study demonstrates that the language spoken by the two rural groups (the Horaniis and the Fellahiin) in Irbid City is highly varied, and that this variation is systematic. He approaches variation in the vernacular from the viewpoint of standardization, by which he means ‘approximation’ to standard Arabic. He adopts the face-to-face interview technique to elicit naturalistic speech. It is based on the speech of 38 informants from two rural groups. The Horaniis are those people who came to the city from the surrounding rural regions during the last five decades, and the Fellahiin are those who arrived from the rural areas of the West Bank after the two Arab-Israel wars in 1948 and 1967. He analyzes his data primarily in terms of groups rather than idiolects. That is to say, the behavior of the group as a whole rather than that of the individual. Individuals are aggregated in groups based on social parameters like education, age, gender, etc. in an attempt to observe the effect of those social factors on the linguistic behaviour of the participants. He finds that the use of most variables is lexically conditioned. Regarding standardization, men standardize more than women, younger speakers more than older speakers, rural speakers (Palestinians, originally) more than local Hōrānis (indigenous Jordanians). He also finds that the social context and the educational level of the speaker are the social factors that most condition and influence the variability concerning most of the phonological variables under examination. Jordanian speakers tend to use more standard features in their speech in formal contexts than in casual contexts. One of the main findings of this study is that the more educated the speakers are, the more they tend to use standard lexical and phonological features. The older non-educated speakers are more faithful to their colloquial variants than the older educated speakers. Al-Khatib observes that this is because Standard Arabic (SA) forms are normally attainable in schools. For him, the Irbid speech community is still undergoing a big deal of linguistic change.

Amman, which is the speech community that the current study investigates, has been the locus of interest to many variationists who seek for variation patterns among its speakers. One study that describes the linguistic and social situation of this speech community is Al-Wer (2007). In her investigation, Al-Wer (2007) explicates how the Ammani dialect undergoes the process of changing from chaos to order. Al-Wer (2007) mainly attempts to examine the formation of the dialect of Amman. Her study is based on an investigation of the outcome of contact between Jordanian and Palestinian dialects. She focuses on the exploration of the sociolinguistic situation, background information about dialect geography, and the population growth through the analysis of the major socio-historical events in Amman city. She assumes that “through dealing with the Amman data, we are not dealing with a continuation of change in a dialect, but with the formation of a dialect from scratch. Amman had no

dialect simply because it did not have a native and stable population” (p. 1). Her data is obtained through sociolinguistic interviews that are an ongoing research, which she calls the Amman project. She states that her sample is too small to permit statistical testing, yet it is systematic and, therefore, her data permits comparisons across the speakers.

She divides the population into three generations since the beginning of centering Amman as the capital of Jordan containing people from different social backgrounds (Jordanian and Palestinian). The first-generation speakers arrived to Amman when it had no natives, they came into contact with speakers of different dialects. Through contact with and exposure to speakers of other dialects, their native dialects underwent rudimentary levelling, as part of a koineisation process. On the other hand, children, identified by Al-Wer as stage II, unlike their parents, are considered as the first native-born generation, not only exposed to the dialects of their parents, but, in their formative years, they were also exposed to a wide range of variations contributing into the variable model. Regarding this particular generation, the data show that this generation preserves some of their parent’s linguistic features yet are affected by the mixture of features from more than one dialect. Al-Wer also states the similarities between second and third generation linguistic features. Unlike stage two which is described by Al-Wer as an unstable and chaotic, stage III marks the beginning of stability of usage and order. In other words, there is an evolution of norms and reduction of the extreme variability of Stage II. Based on her conclusions, Al-Wer refers to the third generation as the Ammani.

Aljabali (2020) is a recent study that aims to investigate the variable realizations of /k/ sound in JA as spoken in Ajloun governorate and the correlation between this variation and some social i.e., age, education, gender, and class and linguistic factors i.e., the place of articulation of the preceding sound, the manner of articulation of the preceding sound, voicing of the preceding sound, the manner of articulation of the following sound and position of k, place of articulation of the following sound, and voicing. The corpus of her study consists of thirty audio-recorded sociolinguistic interviews (Labov, 1984) of speakers of JA who were born and raised in Ajloun. After collecting the data, the researcher extracted all tokens of [k] and [tʃ] where they are variant such as /keef/ "how" which can be pronounced as /keef/ or /tʃeef/ by Ajlouni speakers. Moreover, the researcher excluded all tokens where /k/ is invariant such as /kaan/ "was." In Ajloun, no one pronounces /kaan/ as /tʃaan/, so the researcher excluded such tokens. The total number of eligible tokens was 1027.

The coded data is analyzed using a computer program, namely Goldvarb X to obtain the distribution of the variants and their frequencies. The results show that the distribution of [k] variant is higher than that of [tʃ] variant (72.8% & 27.2%, respectively). Furthermore, the results demonstrate that the social factors (age, education, and class) are statistically significant in conditioning variant

choice while gender is not: young speakers use [k] more than old speakers, highly-educated speakers use [k], followed by the middle-educated and finally by the low-educated, the higher the class is, the higher preference of /k/. In addition, the linguistic factors (the place of articulation of the preceding sound, the manner of articulation of the preceding sound, voicing of the preceding sound, manner of articulation of the following sound and the phonological position of (k)) constrain the variant choice. By contrast, the place of articulation of the following sound, and voicing of the following sound are not statistically significant in affecting the choice of the variant.

2.2. Syntactic variation

Above and beyond phonology, there are relatively few sociolinguistic studies in Jordanian Arabic (Al-Shawashreh 2016 and Hamdieh *et.al.* 2022).

Al-Shawashreh (2016) is distinguished as one of the first variationist studies that tackles syntactic variation in JA. He primarily focuses on investigating whether two syntactic variables, namely word order variability and pro(noun)-drop variability are constrained by an array of sociolinguistic factors. Concerning the first variable, he assumes that his investigation is significant due to two main reasons. Firstly, he observes that previous studies on word order in Arabic primarily draw on decontextualized and intuitive examples (mainly from written Arabic) to present that a particular word order is the basic word order in Arabic varieties, meaning that they do not adopt a systematic community-based approach by quantitatively analyzing spontaneous speech data. Secondly, previous investigations of word order in Arabic show that vernacular Arabic has changed from VSO to SVO, but very few, if any, show empirical demonstrations that this is indeed the case. Hence, due to the lack of diachronic data pertinent to the historical evolution of the spoken dialects of Arabic, and the paucity of synchronic corpus-based studies targeting everyday speech, his study focuses on actual everyday speech in order to offer an accountable analysis of the dominant word order(s) in JA, the social and linguistic factors that constrain word order variant choice, as well as the direction of change (if any) in word order. As for choosing the second variable, he claims that quantitative studies on variable expression of subject pronouns in Arabic are very rare. Henceforth, his investigation provides a chance to compare the variable expression of subject pronouns in Arabic with the well-established research on this issue in other languages.

Labov's variationist approach is adopted by the researcher. He draws on a corpus of JA recorded in the Irbid metropolitan area via conducting sociolinguistic interviews to elicit spontaneous speech data obtained from 30 native speakers. His participants are stratified according to their age, gender, level of education and urban/rural origin. To analyze his data, he employs distributional analysis, multivariate

analysis, and cross-tabulation techniques. He extracts and transcribes eligible instances of target variables in an EXCEL file ready for coding. He uses GOLDVARB X (Sankoff, Tagliamonte & Smith 2005) to analyze the data distributionally and to conduct binominal logistic regression analysis. The results reveal an important evidence-based perspective on the dominance of SV(O) word order and null subject pronouns in JA. As for word-order variation, he finds that age and education are the main social constraints on word order variant choice. Younger educated speakers (particularly those with post-secondary education) favor SV whereas the older speakers disfavor SV. This finding then strengthens the claim that word order in JA is a possible candidate for change in progress. Moving to the effect of education on word order choice in JA, Al-Shawashreh contends that the higher the level of education, the lower the percentage of VS. Uneducated speakers favour VS more than speakers with intermediate education, who in turn favour VS more than highly educated speakers. Moreover, statistical analysis of linguistic factors reveals that transitive verbs with objects and definite subject pronouns are key predictors of SV(O) word-order choice.

On the other hand, concerning pro-drop variation, he finds that only education constraints variant choice in JA. As for linguistic factors, the factor group that makes the strongest contribution to the selection of overt subject pronoun in JA is switch reference. The linguistic constraints that are found to affect variant choice in JA include transitivity, discourse genre, polarity, transitivity, tense, semantic class of verb, switch reference, grammatical person and number of subject and word order in previous clause. The last three factor groups are found to be the key predictors of variable subject expression in these modern varieties of Arabic.

Inspection of the previous related literature shows that research on language variation with reference to Arabic overwhelmingly focuses on phonological variation while less attention has been paid to syntactic variation. This, in fact, makes the present study unique as there is no single study that investigates NP genitive alternatives with respect to whether such alternation is constrained by an array of social and linguistic factors.

2.3. Theoretical framework

The framework which is implemented in the current study to achieve its goals is based on Labov's (1972) variationist approach. Every language, according to Labov (1982), shows variability that is restricted by internal and external constraints. Such variability is nonetheless not random; rather it is rule-governed by an array of social and linguistic factors that constrain the variant choice. Labov (1982) notes that if we endeavor to understand the system as a whole, we should figure out these constraints, i.e., by understanding the relative effects of the linguistic and non-linguistic factors on language

choice. The claim that no speaker's speech in a particular community functions as a complete representation of the speech of the entire community is one of the most essential tenets of the variationist approach. According to Labov (1982: 17), “This heterogeneity is an integral part of the linguistic economy of the community, necessary to satisfy the linguistic demands of every-day life.”

Another important tenet of the variationist approach is the linguistic variable. Labov (1972: 271) defines the linguistic variable as “two or more ways of saying the same thing.” The linguistic variables can be phonological (deals with sounds), morphological (deals with the forms of words), lexical (deals with the choice of words), and syntactic (deals with the structure of the sentence). Linguistic variables in a given speech community, whether morphosyntactic, phonological, lexical, or syntactic, do not vary chaotically, but systematically. Because it is systematic, this behavior can be quantitatively modeled (Tagliamonte 2006).

Drawing on this framework, the effect of social and linguistic factors on the variant choice is modelled through statistical analysis using a quantitative tool, following Tagliamonte (2006). In view of this, the variationist approach is the appropriate tool to quantitatively uncover the constraints and distribution rates of variable patterns or structures. Moreover, since the use of a vernacular is a core element in Labov's approach, the present study is based on everyday community-based speech of native speakers of JA. The significance of adopting this approach to achieve the main goals of the current study lies in the fact that alternative forms of the genitive patterns in JA might on the surface indicate that there is some redundancy in the language. However, this approach makes it clear that such forms are socio-linguistically constrained.

3. Methodology

To investigate variability and change in language, it is important to connect the study with its community in order to examine the effects of social factors on the given speech community (Al-Shawashreh 2016). To this end, the community of Amman, the capital city of the Hashemite Kingdom of Jordan, with 4,302,730 population is the target of the current work to select potential participants.⁴

In 1906, Amman had 5,000 Circassian settlers. By the 1930's, Amman had received 5000 migrants, mainly from the Balga and Hōrānl regions in the north, Kerak and Madaba in the south, Haifa, Jaffa, Nablus, Jerusalem and Hebron in the West, along with a few merchant families from Damascus (Al-Wer 2011). Internal migration from other Jordanian and Palestinian towns and villages increased

⁴ This number is based on the census carried out by the Department of Statistics in Jordan in 2016.

progressively in the subsequent decades, but the most sudden population increases occurred in the aftershock of the wars with Israel in 1948 and 1967. In the early 1950’s, Amman had just over 100,000 people and by the late 1990’s, the population had increased more than fifteen times with an estimation of 1.6 million (Al-Wer 2002). The evolution of Amman has been phenomenal in terms of population, physical size, and regional geopolitical significance. The social variety of Amman provides ideal conditions for researching how language variation and change are socially entrenched. Amman has been an area of interest of many linguists who work within the variationist approaches to language. Among the main reasons for targeting this speech community particularly is the fact that Amman shows a various mixture of dialects, a situation which is significant enough to provide an excellent case for variationists to examine variation patterns among speakers. According to Al-Wer (2002), Amman is a case in point where there is no native dialect to develop from; rather a new dialect is formed in the process of the formation of the community itself.

The current study is based on a corpus collected using a sociolinguistic interview methodology (Labov 1984) to audio-record 32 native speakers of JA living in Amman in 2020. Participants are stratified according to their age (young, old), gender (male, female), education (low, high), and region (East, West). Participants are categorized in two age groups. The younger participants are those aged (18 – 38) years old, whereas the older participants are those aged (40+) years old. As for education attainment, participants who have secondary degrees or no degrees are categorized as low-educated while participants who have university or higher degrees are categorized as highly educated. This classification is illustrated in Table 1. below.

Education	Male		Female		Total
	Young	Old	Young	Old	
High	4	4	4	4	16
Low	4	4	4	4	16
Total	8	8	8	8	32

Table 1. Sampling population according to age, gender and education.

Education	Male				Female				Total
	Young		Old		Young		Old		
	East	West	East	West	East	West	East	West	
High	2	2	1	3	2	2	1	3	16
Low	2	2	1	3	1	3	1	3	16
Total	16				16				32

Table 2. Sampling population according to region (East & West Amman) in light of other factors.

One major obstacle to compile a balanced sampling population concerning the region of the speaker is the access to the participants. Additionally, it was hard for us to secure the optimal number for some categories, such as old women with old education. Furthermore, movement from one location to another was difficult because of the COVID-19 epidemic and social distancing restrictions.

Being members of the Amman speech community made it easier for the researchers to gain access to the targeted participants by capitalizing on the friend-of-a-friend approach (snowball technique) (Milroy and Milroy 1977). Most participants are obtained through relying on personal social networks: family members, relatives, neighbors, and friends. People in public settings (universities, stores, supermarkets, and malls) are also approached in order to recruit additional participants.

In order to address the study's research questions, the data are recorded in the form of a sociolinguistic interview (Labov 1972) of 32 participants lasting in the range of 45-70 minutes to elicit the vernacular speech style, "the most systematic data for linguistic analysis" (Labov 1984: 29). The vernacular is referred to as the speech style which is used unreflectingly when minimum attention is paid to speech (Labov 1972). Sociolinguistic interviews increase the possibility of obtaining spontaneous speech from the participants. "Sociolinguistic corpora are by their nature extremely personal. A sociolinguistic interview is really not an interview at all, but a conversation between two people. Depending on the personality and skill of the interviewer and/or the personality and demeanor of the individual being interviewed, the conversation can be simply casual, riotous, or intensely personal" (Tagliamonte 2012: 115).

Each participant who is willing to participate is recorded using iPhone with IOS14 voice memos app. This app records voice memos using the built-in microphone. Questions on different topics that are thought to get the participant emotionally involved in the interviews are prepared (see Appendix B). This increases the possibility of getting the vernacular speech style. It is commonly recognized in sociolinguistic investigation (e.g., Labov 1972, 1984) that people are more likely to talk more formally

or employ cautious speech style when they are being recorded. This is identified as the observer's paradox (Labov 1972). To ensure the flow of spontaneous speech during the interview and to attenuate the effect of the observer's paradox, a number of conversational modules are carefully designed to seek the vernacular speech style by focusing on personal experiences of the interviewee throughout different stages of their lives (e.g., childhood, schooling, adulthood, traditions, and work). Questions during the interviews are carefully prepared to elicit vivid personal narratives that focus on emotional experiences (e.g., danger of death questions). Interviewees are given more chance to talk during the interview than the interviewer (the researcher herself). Additionally, to further avoid the effect of the observer's paradox, participants are not informed that the present study is linguistic in nature; rather, they are told that the study scrutinizes the community of Amman and how this community is changing. An important point to mention here is that in order to ensure that the participants will produce the target expressions (FSNs and CSs) in their speech during the interview, data elicitation tools are specifically designed to achieve this aim. For example, during the interview, participants are engaged in topics that require the production of genitive constructions. Below are some of these questions:

1. What is your best material possession and why is it important?
2. What do you put in your bag?
3. What is your most prized possession as a child vs. as an adult?

These interviews comprise the raw data for analysis. The interviews begin by asking the participants some general questions such as name, age, work and weather conditions, to break the ice between participants and the interviewer. This offers them the chance to speak more comfortably (Al Shawashreh 2016). After that, participants are asked some questions about past days, dreams, and memories. These are some of the questions that are administered in the interviews:

- Have you ever had a dream that really scared you/came true? What happened?
- What did you like to do when you were a child? Did you have a happy childhood?
- What was your favorite subject in school? Which teacher influenced you the most?

Such questions increase the possibility of getting the participants emotionally involved during the interviews, triggering the use of the vernacular, the desired speech style. Additionally, questions about recent natural phenomena are prepared. For instance, Al Shawashreh (2016) refers to a big snowstorm that hit the north of Jordan in January 2014 (one month before recording the interviews), leaving people without sufficient food, gas and electricity. He assumes that questions about this certain event can generate vivid personal narratives. However, since the current study is conducted at the time of

COVID-19 epidemic, questions about this recent event are carefully prepared. Questions to speakers about this event elicit some vivid personal narratives. Some of these questions are:

- How did you and your family react to the threat of COVID-19?
- What do you think about the Vaccination? Would you take it?
- How can we avoid another virus outbreak?

These interviews constitute the raw data for analysis. Drawing on the framework of variationist sociolinguistics, the targeted variables (FSNs and CSs) are extracted from the data, coded and analyzed.

Determining where the linguistic variable varies is called “circumscribing the variable context” (Poplack and Tagliamonte 1989: 60) or “the envelope of variation” (Milroy and Gordon 2003, p. 180). According to the principle of accountability, it is compulsory to circumscribe the data to only those contexts that are functionally equivalent as well as variable. The chore is to decide, sometimes by a long process of trial and error, which tokens are in and which are out (Tagliamonte 2012). All the required tokens⁵ (1319) are coded into a token file ready for statistical analysis while all the excluded tokens are left out and are not calculated for statistical procedures. The variable context includes any sentence containing CS and FSN variants. All declarative, interrogative, exclamatory, and imperative sentences that include a genitive construction are extracted from the data and coded in terms of social and linguistic factors hypothesized to condition NP genitive alternative choice.

In total, (1319) tokens are taken for statistical analysis. These tokens are coded according to the social and linguistic factors that are postulated to condition variant choice. The process of data extraction and coding is similar to Al-Shawashreh (2016). In that, the audio recordings are not described in their entirety. Instead, eligible occurrences of target variables are extracted from the audio files and transcribed in an EXCEL file ready for coding. The total number of eligible tokens is (1319). The tokens in the EXCEL file are then coded for a number of social and linguistic factors postulated to condition the variant choice. Once coding is completed, the coding string associated with each token is concatenated, taking into consideration the careful verification of the data. Afterwards, coding strings and tokens are imported into a GoldVarb token file, a flat-text file, ready for distributional analysis, multivariate analysis, and cross-tabulation analysis using GOLDVARB X (Sankoff, Tagliamonte and Smith 2005) to analyze the data distributionally and to conduct binominal logistic regression analysis.

⁵ An individual occurrence of a linguistic unit in speech or writing.

To analyze the data, distributional analysis, multivariate analysis, and cross-tabulation techniques are employed using GOLDVARB X (Sankoff, Tagliamonte and Smith 2005). These conventional data analysis tools in variationist sociolinguistics involve many steps. The first step is to determine how often the variants of a variable occur in a given body of data. The second step is to assess the distribution of variants across the full range of factors that are thought to condition them i.e., a comparison of marginal (Rand and Sankoff 1990). A key component of a distributional analysis is to scrutinize the cross-tabulation of factors in order to assess how different factors intersect with one another. According to Labov (2001), it is useful to alternate between cross-tabulations and multivariate analysis whenever we are dealing with social factors. While cross-tabulations display the existence of interaction, multivariate analysis can measure the size of the effect. Poplack and Tagliamonte (2001: 93) point out that variable rule analysis offers three key lines of evidence: “statistical significance of independent variables (at the 0.05 level), magnitude of effect, as determined by the range between the highest and lowest factor weight in a factor group, and hierarchy of constraints, or ordering of factor weights within a factor group.”

4. Results and discussion

4.1. Overall distribution

The frequencies and counts of each variant of the dependent variable in the data alone is known as overall distribution. A total of (1319) tokens are extracted from the interviews. The results in Table 3 show that the distribution of CS is evidently higher than that of the FSN variant (87.9% & 12.1%, respectively).

Variant	Number of occurrences	%
CS	1159	87.9
FSN	160	12.1
TOTAL	1319	100

Table 3. Overall distribution of NP genitive alternatives.

This result is foreseeable on the grounds that CS is a productive process in Arabic (see Borer 1999). CS is used across the board in Arabic grammar to describe all genitive relations while FSNs are restricted to some types of possessive construction (Altakhaineh, 2016).

4.2. Distributional analysis

A distributional analysis, also known as factor-by-factor analysis, is all about exploring how a context (independent factor) constrains the use of the (dependent) variant (Tagliamonte, 2006).

4.2.1 Distributional analysis of social factors

4.2.1.1. Speaker's age

Table 4 below shows that younger and older speakers behave similarly in terms of NP genitive alternatives in JA in terms of overall rates of variant selection. Younger speakers modestly use CS (89.2%) more than older speakers (86.6%). Conversely, older speakers modestly use FSN (13.4%) more than their younger counterparts (10.8%).

Age	CS		FSN		Total	
	N	%	N	%	N	%
Young	563	89.2	68	10.8	631	47.8
Old	596	86.6	92	13.4	688	52.2
Total	1159	87.9	160	12.1	1319	100

Table 4. Distribution of NP genitive alternatives according to the speaker's age.

4.2.1.2. Speaker's gender

As for the effect of gender on NP genitive alternatives, Table 5 shows that females use CS (88.4%) more than males (87.3%) whereas males use FSN to a very low percentage (12.7%) more than females (11.6%).

Speaker's gender	CS		FSN		Total	
	N	%	N	%	N	%
Male	556	87.3	81	12.7	637	48.3
Female	603	88.4	79	11.6	682	51.7
Total	1159	87.9	160	12.1	1319	

Table 5. Distribution of NP genitive alternatives according to the speaker's gender.

4.2.1.3. Speaker’s level of education

The distributional results shown in Table 6 below show that low-educated and highly-educated participants behave similarly in terms of their preference towards the CS variant (88% and 87.7% respectively). This situation is also similar for the FSN variant as the findings demonstrate that (12.3%) of highly educated participants while (12%) of low-educated participants use it. The first possible conclusion that can be deduced from these results is that one’s educational attainment does not determine his/her CS and FSN choice in JA.

Speaker’s education	CS		FSN		Total	
	N	%	N	%	N	%
High	541	87.7	76	12.3	617	46.8
Low	618	88.0	84	12.0	702	53.2
Total	1159	87.9	160	12.1	1319	

Table 6. Distribution of NP genitive alternatives according to the speaker’s level of education.

4.2.1.4. Speaker’s region

Table 7. shows the effect of the participants’ regions on variant choice. Participants from West Amman use FSN (13.8%) more than participants from East Amman (9.2%) while CS is used by participants from East Amman (90.8%) more than participants from West Amman (86.2%).

Speaker’s region	CS		FSN		Total	
	N	%	N	%	N	%
East	435	90.8	44	9.2	479	36.3
West	724	86.2	116	13.8	840	63.7
Total	1159	87.9	160	12.1	1319	

Table 7. Distribution of NP genitive alternatives according to the speaker’s region.

So far, the distributional analysis of the effect of each social factor group is individually assessed. The next step is to assess the effects of each linguistic factor group separately.

4.2.2. Distributional analysis of linguistic factors

Distributional analyses of the targeted linguistic factors i.e., the alienability of the possessum, definiteness of the possessor, the complexity of the possessor, the grammatical function of the genitive construction, and the animacy of the possessor are displayed in this section.

4.2.2.1. Animacy of the possessor

The results in Table 8. indicate that the animacy of the possessor constraints the variant choice in two different directions. CS is used when the possessor is inanimate (95.1%) more than animate possessor (81.3%). The direction reverses in the case of FSN variant. FSN is used by animate possessors (18.7%) more than inanimate possessors (4.9%).

Animacy of the possessor	CS		FSN		Total	
	N	%	N	%	N	%
Animate	560	81.3	129	18.7	689	52.2
Inanimate	599	95.1	31	4.9	630	47.8
Total	1159	87.9	160	12.1	1319	

Table 8. Distribution of NP genitive alternatives according to the animacy of the possessor.

4.2.2.2. Definiteness of the possessor

Table 9. presents the distribution of the variants according to the definiteness of the possessor. The results indicate that CS is slightly more frequent with indefinite possessors (94.8%) than definite possessors (86.3%). Similarly, FSN is modestly more frequent with definite possessors (13.7%) than indefinite possessors (5.2%).

Definiteness of the possessor	CS		FSN		Total	
	N	%	N	%	N	%
Definite	924	86.3	147	13.7	1071	81.2
Indefinite	235	94.8	13	5.2	248	18.8
Total	1159	87.9	160	12.1	1319	

Table 9. Distribution of NP genitive alternatives according to the definiteness of the possessor.

It should be noted here that we placed our focus on the definiteness status of the possessor rather than the possessed. The major reason for this focus is related to the fact that almost all tokens of CS and FSN in our corpus include examples of a definite possessed. Only four tokens of indefinite possessed are found. We refer the reader to Bettega (2019) for more detail about the definiteness status of genitive markers in Arabic.

4.2.2.3. Alienability of the possessum

As far as the effect of alienability of the possessum on CS and FSN variant choice is concerned, the results in table 10 below show that CS is more frequent with inalienable possessums (100%) than alienable possessums (86.3%) whereas FSN is far more frequent with alienable possessums (13.7%) than inalienable possessums (0.0%). The crucial finding here is that whenever the possessum is inalienable, FSN is never used. Concerning the case where the possessum is alienable, CS is used more than FSN variant (86.3% and 13.7% respectively). This finding clearly indicates that CS and FSN can never alternate with inalienable possessums but do alternate with alienable possessums (Eksell-Harning 1980).

Alienability of the possessum	CS		FSN		Total	
	N	%	N	%	N	%
Inalienable	155	100	0	0.0	155	11.8
Alienable	1004	86.3	160	13.7	1164	88.2
Total	1159	87.9	160	12.1	1319	

Table 10. Distribution of NP genitive alternatives according to the alienability of the possessum.

4.2.2.4. Complexity of the possessor

Table 11. below shows the distribution of variants according to the complexity of the possessor (a complex possessor consists of more than one word such as *the car of John's mother* whereas a simple possessor consists of one word such as *the car of John*). The results show that simple possessors (88.4%) modestly occur with CS more than complex possessors (83.1%). Complex possessors, however, occur with FSN (16.9%) more than their simple counterparts to a low percentage (11.6%).

Complexity of the possessor	CS		FSN		Total	
	N	%	N	%	N	%
Complex	103	83.1	21	16.9	124	9.4
Simple	1056	88.4	139	11.6	1195	90.6
Total	1159	87.9	160	12.1	1319	

Table 11. Distribution of NP genitive alternatives according to the complexity of the possessor.

4.2.2.5. The grammatical function of the genitive construction

The distribution of variants according to the grammatical function of the genitive construction (e.g., subject, direct object, object of preposition) in Table 12 shows that CS is most frequent firstly with subjects (93.8%), then with objects of preposition (89.1%), lastly with direct objects (78.8%). As for FSN, it is most frequent firstly with direct objects (21.2%), then with objects of preposition (10.9%), lastly with subjects (6.2%).

It is worth mentioning that (714) tokens did not occur within a particular context as they appeared in the interviews as fragments, so it is difficult to assign grammatical functions for those tokens. They are assigned no grammatical function (rather, they are labeled as “otherwise”) and are not compared with the other grammatical functions i.e., the object of preposition, direct object, subject.

Grammatical function	CS		FSN		Total	
	N	%	N	%	N	%
Otherwise	639	89.5	75	10.5	714	54.1
Object of preposition	228	89.1	28	10.9	256	19.4
Direct object	186	78.8	50	21.2	236	17.9
Subject	106	93.8	7	6.2	113	8.6
Total	1159	87.9	160	12.1	1319	

Table 12. Distribution of NP genitive alternatives according to the grammatical function of the genitive construction.

So far, the distributional analysis of the effect of each social and linguistic factor group has been assessed separately. In the next section, we will present the multivariate analysis of these factors when they are run all at once.

4.3. Multivariate analysis

Multivariate analysis allows us to comprehend the statistical significance of factor groups when all factor groups are run together simultaneously (in the same run). This specific feature distinguishes multivariate analysis from distributional analysis (when factors are run distinctly). Likewise, multivariate analysis provides the analyst with three lines of evidence: (1) statistical significance, i.e., which factors are statistically significant at the $p = 0.05$ level and which are not, (2) effect magnitude (the strength of factors), i.e., which factor group is most significant (the largest range) or least (the smallest range), and (3) constraint hierarchy or direction of effects, i.e., what is the order (from more to less) of factors within a linguistic feature (Poplack and Tagliamonte 2001: 94). This evidence permits comparisons between analyses, contexts, and groups, depending on how the data is apportioned.

Corrected mean	0.909		
Log likelihood	435.937		
Significance	0.009		
Total number	1159/1319		
Animacy of the possessor	Factor weight	%	N
Inanimate	.68	95	599/630
Animate	.33	81	560/689

Range	35		
Grammatical Function			
Subject	.68	93	106/113
Otherwise	.53	89	639/714
Object of preposition	.49	89	228/256
Direct object	.35	78	186/236
Range	33		
Definiteness of the possessor			
Indefinite	.71	94	235/248
Definite	.45	86	924/1071
Range	26		
Region			
East	[.58]	90	435/479
West	[.46]	86	724/840
Range	12		
Complexity of the possessor			
Simple	[.51]	88	1056/1195
Complex	[.40]	83	103/124
Range	11		
Age			
Young	[.53]	89	563/631
Old	[.47]	86	596/688
Range	6		
Gender			
Female	[.51]	88	603/682
Male	[.49]	87	556/637
Range	2		
Education			
Low	[.50]	88	618/702
High	[.50]	87	541/617
Range	0		

Table 13. Variable rule analysis of the contribution of social and linguistic factors.

The results of the multivariate analysis of the social and linguistic factors to the probability that CS variant will be selected show that CS and FSN variant choice in JA is sensitive to one social factor i.e., region while age, gender, and education are found to be statistically non-significant. Furthermore, CS and FSN variant choice in JA is sensitive to a number of linguistic factors i.e., the animacy of the possessor, the definiteness of the possessor, the grammatical functions that are shown to be statistically significant in their contribution to the probability of selecting CS variant in JA whereas complexity of the possessor is reported to be statistically insignificant.

The numerical figures in Table 13. can be elucidated as follows. Factor weights above 0.50 denote that a factor group has a favoring effect on variant selection while those below 0.50 indicate that a factor group has a disfavoring effect.

The findings demonstrate that, based on the magnitude of effect, which is defined by the range value, the animacy of the possessor is the highest factor group that conditions variant choice (35) followed by the grammatical function (34), the definiteness of the possessor (27), and region (12). According to the constraint hierarchy within each factor group, the results implicate that inanimate possessors use CS while animate possessors disfavor it. Moreover, CS is used by subjects but preferred by objects of preposition and direct objects. In addition, indefinite possessors use CS while definite possessors prefer it. Lastly, participants from East Amman use CS while participants from West Amman prefer it.

It is worth mentioning that although alienability of the possessum plays an undeniable role in conditioning variant choice, it was difficult to have a multivariate analysis of this linguistic factor due to the knockouts that resulted in the process of running the data. A knock-out simply means that there is a 0 per cent value or a 100 per cent value in one of the cells in your analysis. You cannot run a variable rule analysis when either of these cases exist because it means that the data, so configured, is not variable. In most cases, knockouts can be handled by removing them or re-coding them in a sound linguistically justified way (Tagliamonte 2006: 152).

4.4. Discussion

4.4.1. Discussion of social factors

Inspection of all distributional analyses, cross-tabulations and multivariate analysis of social factors leads us to the crucial conclusion that only region is reported to slightly constraint CS and FSN variants while this alternation is not socially constrained with respect to participants' age, gender, and education.

As the multivariate analysis shows, based on the magnitude of effect, exemplified by the range value, region is the lowest significant factor group that constraints variant choice (12). Based on the constraint of hierarchy, participants from East Amman favour CS while participants from West Amman disfavor it. One way to interpret this variant selection is attributable to the assumption that West Amman is a wealthy area and people who come from it are normally considered as first class; thus they have a unique use of language unlike people from East Amman who do not share the same social status of those in West Amman. As is mentioned earlier, Amman is divided into prosperous, newly developed West Amman, and East Amman where you can find working class neighborhoods and more traditional Jordanian culture. Broadly speaking, West Amman is more liberal and accustomed to expats and other visitors, meanwhile East Amman is more traditional and less frequently exposed to foreigners.

Al-Wer (2007) refers to West Amman as the part of the city whose dialect is undergoing change in process. One possible difference between the more traditional East Amman and West Amman is in the socialisation pattern of the youth. In East Amman, one may observe that the youngsters spend considerably more time with their own families, and extended families often live in the same neighborhoods. On the other hand, in West Amman, the youngsters form intimate peer group relations, and spend most of their leisure time away from their homes and families. In addition, the leisure facilities in West Amman are much more widely available for the youth to spend most of their free time together. In other terms, the familial networks in East Amman are closer, and, therefore, linguistic innovations (divergence from the traditional dialects) would not be expected to permeate such tightly-knit social networks easily (cf. Milroy 1980).

Drawing on the previous discussion, we can suggest that people from West Amman are more innovative and hence they can adopt what we may assume to be an innovative form, the genitive marker *tabaʕ*, quicker than their East counterparts who are in turn more conservative.

4.4.2. Discussion of linguistic factors

As we have shown above, the complexity of the possessor is found to be insignificant for conditioning variant choice while the remaining four linguistic factors i.e., the alienability of the possessum, the definiteness of the possessor, the animacy of the possessor, the grammatical function are found to be statistically significant. This finding goes in line with numerous variationist studies that conclude that an array of linguistic factors does constraint variant choice (Abd-El-Jawad 1981, Al-Khatib 1988, Al-Wer 1991, El-Salman 2003, Al-Shawashreh 2016).

Embarking upon alienability of the possessum, the important notice that can be observed when analyzing the data is that CS and FSN can never alternate with inalienable possessums but do alternate

in alienable possessums. FSN is never used by inalienable possessums. This finding goes in line with Eksell-Harning (1980) that also concludes that inalienable possession was the preserve of CS only. Correspondingly, this finding is in agreement with Soltan (2007) that considers Egyptian Arabic (EA). Soltan (2007) manifests that while the two strategies are interchangeable with regard to alienable possession, only the CS can be used for inalienable possession (e.g., body parts and family members).

Inalienable possession involves two entities with an inseparable semantic relationship. Conversely, in alienable possession, the possessor and the possessum carry a separable semantic relationship. For instance, *Jane's mother* elucidates an inalienable construction because the relationship between Jane and her mother is inherent. On the other hand, *Jane's bag* represents an alienable structure, for Jane and the bag have an extrinsic relationship (Gebregziabher 2012: 161). With inalienable possession, the two entities have a permanent association in which the possessed has little control over their possessor (Chappell and McGregor 2011). For example, body parts (under normal circumstances) do not change and cannot be removed from their possessor. Alienable possession, on the contrary, has a less semantic association between the two entities in that most objects may or may not be possessed. Alienable possession is used generally for tangible items that one might cease to own at some point (such as my money), but inalienable possession generally denotes a perpetual relationship that cannot be readily severed (such as 'my mother or my arm;' Lichtenberk *et al.* 2011).

To clarify this finding, consider a typical alienability contrast in an adpossessive (adnominal possessive) construction, from the West Papuan language Abun (Berry and Berry 1999: 77–82):

- (11) a. *ji bi nggwe*
I of garden
'My garden' (alienable possession)
- b. *ji syim*
I arm
'My arm' (inalienable possession)

We see that in this language, an adpossessive construction with an alienable noun i.e., *nggwe* 'garden' requires a possessive (genitive) postposition, while a construction with an inalienable noun (*syim* 'arm') expresses possession by mere juxtaposition. This pattern is common across languages (Stolz *et al.* 2008).

According to Haiman's (1985) explanation in terms of iconic motivation, the mere juxtaposition construction chosen for inalienable possession shows little linguistic distance between the possessor and its possessum, and this iconically reflects the greater conceptual closeness between the possessor and its possessum (supposedly arms are not conceived of independently of their owners). By contrast,

the overt genitive marker *bi* ‘of’ between the possessor and the possessum in the alienable ‘my garden’ displays greater linguistic distance, and this reflects the greater conceptual distance between ‘garden’ and ‘I.’

Semantically speaking, since inalienable possession involves two entities with an inseparable semantic relationship and greater conceptual closeness between the possessor and its possessum implies little “linguistic distance,” the insertion of the possessive marker *tabaʕ* ‘of/for’ is not permissible. Inalienable expressions are defective nominals, meaning that they should be local to other nominals that specify them. Accordingly, the insertion of the possessive marker *tabaʕ* ‘of/for’ breaks down this adjacency.

Animacy is the strongest factor group that constraints variant choice (35). This finding contributes to the relevant literature concerning the alternation in English between the s-genitive and the of-genitive. A plethora of research on English language shows that animacy is widely considered an important factor in predicting which genitive will be chosen. The choice between the two genitives is not random but is determined by a number of factors, of which animacy has been shown to be one of the strongest (e.g., Rosenbach, 2002, and references cited therein). According to Rosenbach (2008), while animate possessors have a strong preference for occurring in the s-genitive (John’s wife > the wife of John), inanimate possessors tend to occur preferably with the of-genitive (the roof of the house > the house’s roof). That is, animate possessors are preferably realized pre-nominally, i.e., first, in English genitive constructions.

Another study that proves the significance of this linguistic factor is Alexiadou (2005). Alexiadou perceives that animate/human possessors and possessors that can be considered +topical tend to appear in the ‘s genitive while inanimate and -topical possessors appear in the of-genitive.

- (12) a. The color of the chair
b. ?? The chair’s color

Rosenbach (2008) attempts to elucidate this linguistic preference. She detects that animacy correlates considerably with other factors, in particular with topicality (or referentiality/definiteness) and syntactic weight. Animates, especially humans, are more likely to be a discourse topic and are therefore also more likely to be definite. Likewise animates are statistically more likely to be short than inanimates (see Wedgwood, 1995). Accordingly, in languages such as English where animate, topical/definite, as well as short elements show a strong preference for being placed early in linear order, it is difficult to keep the firstness effect of animacy apart from the firstness effect of topicality/definiteness and weight. That is, in examples such as *John’s book* it is difficult to disentangle

whether the s-genitive is strongly preferred because the possessor is (a) human, (b) high in topicality/referentiality, and/or (c) very short. Given these correlations, it has been claimed that animacy is epiphenomenal to other factors.

Arabic, unlike English, has the same word order for the two constructions: the head noun precedes the genitive phrase. This being the case, we cannot rely on the order effect in our interpretation. According to the constraint of hierarchy, inanimate possessors favor CS while animate possessors disfavor it. We can rely on a semantic point of view by assuming that the relationship between animate possessors and their possessums imply true possession. (e.g., *galam l-walad* ‘the boy’s pen’) the pen is the true possession of the boy. While animate referents are simply nouns, inanimate referents are specified as inherently unable to possess a perspective on the truth of a proposition (Barker 2010). An animate object has the ability to decide which things to own and which things not to own. On the contrary, with inanimate possessors, this is seemingly not the case. An inanimate object such as a chair or a window cannot own anything (e.g., *ridʒl l-kursi* ‘the leg of the chair’). Semantically speaking, the chair cannot own its leg, rather, the carpenter who made the chair composed its parts all together in which the leg is one of these parts that make up the chair. The possessor and its possessum are thus not semantically in a true possessive relationship, rather it is a relation of a unit to a group (or a group to its units). *tabaʕ* ‘of/for’ is a true possessive marker which indicates true possessive relation. It denotes the existence of a quality or characteristic pertaining to a person or thing meaning ‘belonging to,’ ‘pertaining to,’ or ‘characteristic of a person’ (Albayati, 2015).

Grammatical function is the second highest factor group that conditions variant choice (33). According to constraint hierarchy, CS is favored by subjects but disfavored by objects of preposition and direct objects. When we use FSN with subjects, we make the subject more complex as we have to insert the possessive marker *tabaʕ* ‘of/for.’ Subjects cross-linguistically tend to be simple. Evidence from this come from “heavy NP shift.” Heavy-NP shift is the tendency for speakers to place long or “heavy” noun phrase direct objects at the end of a sentence rather than in the canonical post-verbal position (Stallings *et al.* 1998). This is shown in the following examples:

- (13) a. I gave the book that I bought last week to Mary.
b. I gave to Mary the book that I bought last week.

Likewise, linguists have observed other factors that correlate with speakers’ choice of possessive alternative such as *The principle of end-weight* (Behaghel 1909). For instance, Jespersen (1921) noted that the prenominal Saxon genitive was dis-preferred in cases with very heavy possessors (Hinrichs and Szmrecsanyi 2007 for corpus-based evidence).

This finding also goes in line with Al-Shawashreh (2016), who finds light subjects (74.5%) favour SV more than heavy subjects (68%) whereas heavy subjects favour VS (32%) more than their light counterparts (25.5%). Al-Shawashreh (2016) explained his results in light of the end weight principle (Holes, 1995). When the subject is light, the verb is usually heavier (and more informationally salient) and hence its gravitation to the end of the clause.

Based on the magnitude of effect, represented by the range value, the results show that the definiteness of the possessor (26) is the penultimate factor group that conditions variant choice. Definiteness, as a linguistic factor, is reported in previous variationist studies to affect variability in a range of languages (see Al-Shawashreh 2016 for an overview). Owens, et al. (2009) find that proper nouns and definite nouns are reported to favour SVO in Gulf Arabic while indefinite nouns favour VSO. Al-Shawashreh (2016) reports that definiteness of subject is the second strongest effects on variant choice. According to the constraint hierarchy within each factor group, the results show that indefinite possessors favour CS while definite possessors disfavor it. We ascribe this to the assumption that definiteness is normally affiliated with uniqueness and familiarity (Saeed 1997). For instance, indefinite objects do not denote a unique and familiar referent. In *'galam walad'* we do not refer to a particular boy that is familiar for both the listener and the speaker. The indefinite possessor *'walad'* indicates the absence of a uniquely identifiable boy. However, this result should be taken with care as definiteness has a special relation with CS structures (in that only certain combination of definite/indefinite nouns are technically allowed). Therefore, definiteness should be treated as a special factor and investigated according to the specific role it has in Arabic. For example, structures such as “a pen of a boy” are much less frequent in language use than structures as “the pen of the boy.”

Semantically speaking, an indefinite possessor has a generic interpretation which denotes that it is less likely to possess. A definite possessor, on the contrary, is unique and familiar; therefore, it is more likely to possess. This being the case, *tabaʿ* ‘of/for,’ which is a true possessive marker, tends to occur with definite entities.

5. Conclusion and recommendations

This study has primarily aimed at examining sociolinguistic variation of NP genitive alternatives in JA. An accountable analysis of CS and FSN variation in a corpus of JA has revealed that CS is evidently more frequent than FSN in JA. Multivariate analysis of social factors has demonstrated that region is statistically significant in constraining variant choice while age, gender, and education are found to be non-statistically significant. Likewise, variant choice has been found to be linguistically constrained by a number of linguistic factors, namely alienability of the possessum, animacy of the possessor,

grammatical function, and definiteness of the possessor. On the other hand, complexity of the possessor is not statistically significant in affecting the choice of variant.

Depending on the findings of this study, a number of recommendations can be surmised for further future research:

1. This study is limited to Amman in scope. Therefore, the results cannot be overgeneralized to other regions in Jordan. So, it is recommended to conduct more studies on CS and FSN variation in other regions in Jordan like Jerash, Ajloun, Irbid, and Ma'an. Doing so would be very helpful in providing comparative sociolinguistic analyses of this variation in JA as well as other Arabic varieties.
2. It is worth conducting studies that track the evolution of NP genitive alternatives in JA and other vernacular varieties of Arabic such as Syrian, Iraqi, Yemeni, Sudanese, Libyan, Moroccan, and Algerian.
3. It is recommended to conduct more studies on CS and FSN variation according to other different social factors such as class and other linguistic factors such as clause type (matrix vs. embedded).

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