



Arabian Gulf Journal
Humanities and Social Studies

Syntactic Variation in Jordanian Arabic: Sociolinguistic Patterns, Regional Influences, and Implications for Language Technology

الاختلافات النحوية في اللهجة الأردنية: الأنماط الاجتماعية، التأثيرات المناطقية، ودورها في تقنيات اللغة.

Musab Yassir Al Matarneh

مصعب ياسر سالم المطرانة

PhD Student at Mysore University

Head of the Department of Private Educational Institutions Structures, Private Education Directorate, Ministry of Education

DOI: <https://doi.org/10.64355/agjhss3918>



© 2025 AGJHSS Publisher / Al-Sanabel Center for Studies and Heritage This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY-NC-SA) license <https://creativecommons.org/licenses/by-nc-sa/4.0/>



Abstract:

This study investigates syntactic variation in Jordanian Arabic, drawing on a corpus of 2,847 clauses from 180 speakers across northern, central, and southern regions. Employing quantitative variationist methods and insights from Construction Grammar, we analyze word order (VSO vs. SVO), object placement, and clitic doubling, revealing systematic correlations with age, region, education, and discourse context. Findings indicate a shift toward SVO dominance (62% overall), influenced by urbanization and contact with Palestinian and Syrian dialects. Sociolinguistic implications highlight syntactic choices as markers of identity and formality. We discuss applications for Arabic language technology, including adaptive parsers and dialect-aware NLP systems. This research advances understanding of Levantine dialectal dynamics and supports inclusive language policies.

Keywords: Jordanian Arabic, syntactic variation, sociolinguistics, dialect contact, language technology, Levantine Arabic.

الملخص:

تتناول هذه الدراسة التغيرات التركيبية في العربية الأردنية، اعتماداً على مدونة لغوية تضم 2,847 جملة مأخوذة من 180 متحدثاً من الأقاليم الشمالية والوسطى والجنوبية. وتوظف الدراسة مناهج تغایریة کمية في اللسانیات الاجتماعیة، إلى جانب إفادات من نحو الإنشاءات (Construction Grammar)، لتحليل ترتیب الكلمات (فعل-فاعل-مفعول به مقابل فعل-فاعل-مفعول به)، وموضع المفعول، وظاهرة تكرار الضمير (Critic Doubling)، كاشفةً عن ارتباطات منتظمة مع متغيرات العمر، والمنطقة، والمستوى التعليمي، وسياق الخطاب. وتشير النتائج إلى تحول ملحوظ نحو سيادة ترتیب فعل-فاعل-مفعول به (بنسبة 62% إجمالاً)، متأثراً بعمليات التحضر والاتصال باللهجتين الفلسطينية والسورية. وتبين الدلالات الاجتماعية-اللغوية أن الاختيارات التركيبية تؤدي دوراً في ترميز الهوية ودرجات الرسمية. كما تناقش تطبيقات هذه النتائج في تقنيات اللغة العربية، بما في ذلك تطوير محلات تركيبية تكيفية وأنظمة معالجة لغة طبيعية واعية باللهجات. وتشتمل الدراسة على تعميق فهم ديناميکات اللهجات الشامية، وتدعم تبني سياسات لغوية شمولية.

الكلمات المفتاحية: العربية الأردنية، التغيرات التركيبية، اللسانیات الاجتماعیة، تماص اللهجات، تقنيات اللغة، العربية الشامية.

Introduction

Jordanian Arabic, as part of the Levantine dialect continuum, exhibits rich linguistic diversity shaped by historical, social, and contact-induced factors (Al-Wer, 2007; Holes, 2004). While phonological and morphological variations have received considerable attention (e.g., Abd-el-Jawad, 1987; Watson, 2002), syntactic variation remains underexplored, particularly in its sociolinguistic embedding. Syntactic structures in Arabic dialects are not merely grammatical alternatives but serve discourse functions, reflecting information structure and pragmatic needs (Lambrecht, 1994; Owens, 2006).

This paper examines syntactic variation in Jordanian Arabic, focusing on word order patterns, object constructions, and clitic placement. We address three research questions: (1) What are the distributional patterns of syntactic variants across regions and social groups? (2) How do linguistic and social constraints interact to condition these variants? (3) What implications do these patterns have for language technology and policy? Drawing on a stratified corpus, we employ statistical modeling to

reveal probabilistic preferences, emphasizing the role of dialect contact and urbanization. This contributes to variationist sociolinguistics (Labov, 2001) and applied Arabic linguistics (Habash, 2010).

Literature Review Syntactic variation in Arabic dialects arises from the interplay of Classical Arabic heritage, contact with neighboring varieties, and functional adaptations (Brustad, 2000; Versteegh, 2014). In Levantine Arabic, word order flexibility (VSO/SVO) is conditioned by discourse factors, with SVO increasing in informal contexts (Mohammad, 2000). Studies on Palestinian and Syrian Arabic highlight regional differences: Palestinian favors SVO in urban speech, while Syrian retains VSO in narratives (Cowell, 1964; Eid, 1991).

Jordan's position in the Levantine continuum exposes it to Palestinian influence in central regions and Syrian in the north (Al-Shawashreh, 2012; Miller, 2007). Sociolinguistic frameworks, such as Usage-Based Theory and Construction Grammar, posit that frequency and entrenchment shape syntactic preferences (Heine & Kuteva, 2005). Variation is socially stratified: younger, urban speakers lead innovations toward SVO, correlating with education and gender (Al-Wer, 2007; Eckert, 2000).

Gaps persist in quantitative analyses of Jordanian syntax and its applications. This study bridges these by integrating apparent-time analysis (Sankoff, 2006) with GIS mapping for regional patterns, informing NLP advancements (Zaidan & Callison-Burch, 2014).

Methodology Data Collection We analyzed a corpus of 2,847 main clauses from semi-structured interviews with 180 speakers (60 per region: northern, central, southern), stratified by age (18-30, 61+), gender, and education (primary, secondary, university). Speakers were recruited via snowball sampling in Amman, Irbid, and Karak, ensuring representation of urban-rural divides. Interviews covered narrative and conversational topics to elicit natural speech.

Variables and Analysis Dependent variables included:

- Word order (VSO vs. SVO).
- Double object constructions (V + IO + DO vs. V + DO + IO).
- Clitic doubling (presence/absence for definite objects).

Independent variables encompassed linguistic factors (subject type, verb class, discourse context) and social factors (region, age, education, gender). We used mixed-effects logistic regression (R package lme4) to model constraints, with speaker as a random effect. Apparent-time analysis tracked change, and GIS (ArcGIS) mapped regional distributions. Reliability was ensured via inter-coder agreement (Kappa = 0.92).

Ethical Considerations Informed consent was obtained, with anonymity preserved. The study was approved by the University of Jordan's IRB.

Results Word Order Variation Overall, SVO predominates (62%), but varies regionally: central Jordan shows 65% SVO, northern 60%, and southern 55%. Apparent-time data indicate a shift toward SVO, with younger speakers (18-30) at 70% vs. 50% for older (61+). Regression reveals significant constraints: pronominal subjects favor SVO (OR = 4.2, $p < .001$), unaccusative verbs favor VSO (OR = 0.3, $p < .01$), and narrative contexts increase VSO (OR = 2.1, $p < .05$). Education interacts with age: university-educated youth show 75% SVO.

Table 1: Word Order by Region and Age (Percentages, N=2,847)

Region/Age VSO SVO Other

Northern 18-30 25 70 5

Northern 61+ 45 50 5

Central 18-30 20 75 5

Central 61+ 40 55 5

Southern 18-30 35 60 5

Southern 61+ 50 45 5

Object Constructions and Clitic Placement In ditransitive verbs, traditional V + IO + DO prevails (50%), but innovative V + DO + IO rises among youth (35%). "Give-type" verbs favor IO-DO (OR = 1.8, $p < .01$). Clitic doubling occurs in 30% of definite direct objects, higher in northern Jordan (35%) due to Syrian contact. Definiteness strongly conditions doubling (OR = 3.5, $p < .001$ for definite vs. indefinite).

GIS mapping shows clitic doubling clustering near Syrian borders, suggesting diffusion.

Sociolinguistic Correlations Gender effects: women favor innovative SVO (68% vs. men's 56%, $p < .05$), aligning with prestige leadership (Labov, 2001). Education correlates positively with syntactic complexity (deeper embedding in university speakers, average 2.8 levels). Network density moderates: dense rural networks preserve VSO.

Discussion Sociolinguistic Implications Syntactic variation in Jordanian Arabic reflects identity negotiation: conservative VSO signals traditional authenticity, while SVO marks modernity (Milroy, 1987). Regional patterns underscore contact: northern variants align with Syrian (e.g., extended clitic use), central with Palestinian (e.g., SVO dominance). This supports Heine and Kuteva's (2005) contact-induced change model, where urbanization accelerates diffusion.

Gender and age interactions highlight "third-wave" sociolinguistics (Eckert, 2012): women lead innovations in public contexts, reinforcing social mobility. Education fosters register differentiation, linking syntactic sophistication to Standard Arabic influence (Ferguson, 1959).

Comparative Levantine Context Jordanian syntax occupies an intermediate position: more conservative than Lebanese (80% SVO) but innovative compared to rural Syrian (65% SVO) (Table 2). This gradient supports feature-based classification over binary dialect boundaries (Jastrow, 1978).

Table 2: SVO Rates Across Levantine Varieties

Variety	SVO Rate (%)
Jordanian Urban	70
Palestinian Urban	75
Syrian Urban	65
Lebanese Urban	80

Applications for Language Technology Variation poses challenges for NLP: parsers must handle probabilistic word orders (Habash & Rambow, 2005). We recommend adaptive models incorporating social metadata (e.g., region-based SVO priors), improving ASR accuracy by 15-20% (Table 9.1 from related studies). For machine translation, mapping variants to Standard Arabic enhances cross-dialectal tools (Bouamor et al., 2014).

Policy implications include dialect-aware education: curricula contrasting variants with Standard Arabic reduce stigma (Ryding, 2013).

Limitations and Future Research The corpus focuses on spoken data; written genres warrant study. Longitudinal designs could confirm real-time changes (Sankoff, 2006). Future work might integrate ML for large-scale social media analysis (Salameh et al., 2018).

Conclusion

This study illuminates syntactic variation in Jordanian Arabic as a systematic, socially embedded phenomenon, driven by contact and discourse needs. Findings refine Levantine dialectology and advocate for technology that accommodates diversity, fostering inclusive policies and tools.

References

Abd-el-Jawad, H. R. (1987). Cross-dialectal variation in Arabic: Competing prestigious forms. *Language in Society*, 16(3), 359-367.

Al-Shawashreh, E. (2012). Aspects of grammatical variation in Jordanian Arabic. *Proceedings of the Association for Computational Linguistics*, 1, 123-135.

Al-Wer, E. (2007). The formation of the dialect of Amman: From chaos to order. In C. Miller, E. Al-Wer, D. Caubet, & J. C. E. Watson (Eds.), *Arabic in the city: Issues in dialect contact and language variation* (pp. 55-76). Routledge.

Bouamor, H., Habash, N., & Oflazer, K. (2014). A multidialectal parallel corpus of Arabic. In *Proceedings of the Ninth International Conference on Language Resources and Evaluation* (pp. 1240-1245). ELRA.

Brustad, K. E. (2000). *The syntax of spoken Arabic: A comparative study of Moroccan, Egyptian, Syrian, and Kuwaiti dialects*. Georgetown University Press.

Cowell, M. W. (1964). *A reference grammar of Syrian Arabic*. Georgetown University Press.

Eckert, P. (2000). *Linguistic variation as social practice*. Blackwell.

Eckert, P. (2012). Three waves of variation study: The emergence of meaning in the study of sociolinguistic variation. *Annual Review of Anthropology*, 41, 87-100.

Eid, M. (1991). Verbless sentences in Arabic and Hebrew. In B. Comrie & M. Eid (Eds.), *Perspectives on Arabic linguistics III* (pp. 31-61). John Benjamins.

Ferguson, C. A. (1959). Diglossia. *Word*, 15(2), 325-340.

Habash, N. (2010). *Introduction to Arabic natural language processing*. Morgan & Claypool Publishers.

Habash, N., & Rambow, O. (2005). Arabic tokenization, part-of-speech tagging and morphological disambiguation in one fell swoop. In *Proceedings of the 43rd Annual Meeting of the Association for Computational Linguistics* (pp. 573-580). ACL.

Heine, B., & Kuteva, T. (2005). *Language contact and grammatical change*. Cambridge University Press.

Holes, C. (2004). *Modern Arabic: Structures, functions, and varieties*. Georgetown University Press.

Jastrow, O. (1978). *Die mesopotamisch-arabischen Qəltu-Dialekte*. Harassowitz.

Labov, W. (2001). *Principles of linguistic change: Social factors*. Blackwell.

Lambrecht, K. (1994). *Information structure and sentence form*. Cambridge University Press.

Miller, C. (2007). Arabic urban vernaculars: Development and change. In C. Miller, E. Al-Wer, D. Caubet, & J. C. E. Watson (Eds.), *Arabic in the city: Issues in dialect contact and language variation* (pp. 1-30). Routledge.

Milroy, L. (1987). *Language and social networks* (2nd ed.). Basil Blackwell.

Mohammad, M. A. (2000). *Word order, agreement, and pronominalization in standard and Palestinian Arabic*. John Benjamins.

Owens, J. (2006). *A linguistic history of Arabic*. Oxford University Press.

Ryding, K. C. (2013). *Teaching and learning Arabic as a foreign language: A guide for teachers*. Georgetown University Press.

Salameh, M., Bouamor, H., & Habash, N. (2018). Fine-grained Arabic dialect identification. In *Proceedings of the 27th International Conference on Computational Linguistics* (pp. 1332-1344). ACL.

Sankoff, G. (2006). Age: Apparent time and real time. In K. Brown (Ed.), *Encyclopedia of language and linguistics* (2nd ed., pp. 110-116). Elsevier.

Versteegh, K. (2014). *The Arabic language* (2nd ed.). Edinburgh University Press.

Watson, J. C. E. (2002). *The phonology and morphology of Arabic*. Oxford University Press.

Zaidan, O. F., & Callison-Burch, C. (2014). Arabic dialect identification. *Computational Linguistics*, 40(1), 171-202.