

Exploring the role of noun type for differential object marking in Levantine Arabic

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Overview Differential Object Marking (DOM) is a widely studied crosslinguistic phenomenon where only certain sets of objects are marked with case (Bossong 1991, Aissen 2003, a.o.) DOM is attested in Levantine Arabic (LA) and the DOM marker is realized as a prepositional dative *la-* “to” (glossed as DOM). In (1), DOM is licit only with definite objects (e.g., Abu-Haidar 1979, Levin 1987, Aoun 1999, Brustad 2000). DOM also has a property of clitic doubling, which will not be examined.

- (1) aḥmad taʕma-ha la-*(I)-bess-e
Ahmad fed-3F.SG.OBJ DOM-the-cat-F.SG
'Ahmad fed the cat.'

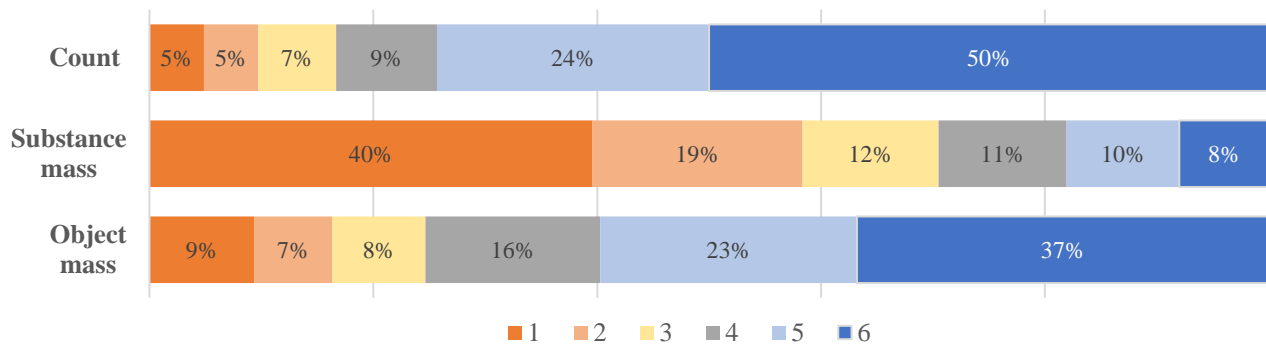
Beyond definiteness, previous theoretical works argue that individuation is the key factor in licensing Arabic DOM (e.g., Brustad 2000, 2008; cf. Khan 1984). Most recently, Zarka (2021) observes that in LA, DOM is licensed with count nouns but not with mass nouns; thus, Zarka argues that countability is the right dimension for characterizing the distribution of nominals with DOM. The current study tests the hypothesis that individuation is a relevant dimension for DOM by using a gradable acceptability task. We use the term *individuation* to refer to a number of distinct entities that the semantics can tell apart (parallel to ‘atomicity’ in e.g., Link 1983, Krifka 1989, Chierchia 1998).

Our findings generally support Zarka (2021), in that speakers are indeed much more likely to provide high acceptability scores for DOM sentences with a count (individuated) noun DP than for DOM sentences with a mass noun. Importantly, our study further refines this generalization by testing an additional class of nouns, namely, so-called “object mass” nouns (*?θaθ* ‘furniture’). Such nouns are syntactically mass, but – unlike typical substance mass nouns – they refer to individuals (cf. Barner & Snedeker 2005). This allows for a direct comparison of substance- and object-mass nouns, which minimally differ with respect to individuation. **Method** The experiment was conducted online via Qualtrics. The verbal stimuli were presented as fully randomized audio files. The manipulated variable includes three types of DPs: count, substance mass, and object mass. An example item from each experimental condition is presented in the table below.

Condition	Example
Count	al-walad rama-ha la-ṭ-ṭab-e The-boy threw-3F.SG.OBJ DOM-the- ball -F.SG 'The boy threw the ball.'
Object mass	nadia našrat-o la-l-ghasil Nadia hung out-3M.SG.OBJ DOM-the- laundry 'Nadia hung out the laundry.'
Substance mass	*aḥmad ghassal-o la-d-dam Ahmad washed-3M.SG.OBJ DOM-the- blood Intended: 'Ahmad washed the blood.'

There were 6 items in each condition. Ten non-DOM sentences were also included as distractors and to counterbalance expected ratings. Adult speakers of LA (n=48) were asked to provide acceptability judgments on a 6-point scale, with only the extreme ends of the scale explicitly labeled (1= *btmḥkaš* ‘cannot be uttered’); 6= *akid btmḥka* ‘can absolutely be uttered’).

Results and analysis As can be seen in the graph below, DOM sentences with count DPs received the highest scores, with 74% 5-6 ratings, and only 10% 1-2 scores. In contrast, acceptability ratings in the substance mass condition were low, with only 18% 5-6 ratings and 59% 1-2 scores. Most interestingly, the data demonstrate that not all mass nouns are created equal. The distribution of judgment for DOM sentences with object-mass DPs (60% 5-6 ratings and only 16% 1-2 ratings) is much more similar to the judgments obtained in the count condition than those in the substance mass condition.



An analysis of the data using Friedman's Chi-Square revealed a main effect of noun type ($p < 2.2e-16$). A Wilcoxon Signed-Rank test confirmed that this effect was due to significantly different distributions in each experimental condition (count vs. substance-mass: $p = 2.366e-09$; substance mass vs. object mass: $p = 1.253e-08$; count vs. object mass: $p = 5.502e-05$).

Discussion The results of our acceptability judgment task provide support for the individuation generalization discussed in the theoretical literature on Arabic DOM (Khan 1984, Brustad 2000, 2008, Zarka 2021). Moreover, these results are in line with Grimm's (2012, 2018) proposal that individuation is more accurately viewed as a scalar phenomenon, rather than a simple binary individuated/non-individuated contrast. The DOM data can be linked to Grimm's individuation scale, wherein count nouns are the most individuated and therefore, they receive the highest acceptability scores in the context of DOM. On the other hand, substance mass nouns are the least individuated which is why they receive the lowest scores in this context. Object mass nouns are lower in their level of individuation than count nouns but far higher than substance mass nouns. As shown in the results, object mass nouns may be differentially marked, but they receive lower acceptability scores than count nouns. Hence, we conclude that a scalar view of individuation is the relevant dimension for licensing DOM in LA. Our data further suggest – contra to Zarka (2021) – that countability may not be a relevant notion for characterizing the distribution of nominals with DOM in LA. This is demonstrated by the results in the object mass condition: while object mass nouns are non-countable, they nevertheless received acceptability scores similar to those obtained in the count condition.

In sum, this study provides novel experimental evidence for the role of noun type in the distribution of DOM in LA. Particularly, it corroborates the theoretical observations that individuation is the primary factor in licensing DOM in LA. Countability, on the other hand, was not found to be relevant. Using a gradable acceptability judgment task, rather than a binary one, further reveals the subtle intricacies of the paradigm, which allows us to better understand the gradient effects of individuation with DOM. **References:** Abu-Haidar, F. (1979). *A Study of the Spoken Arabic of Baskinta* (London: Brill). Aissen, J. (2003). Differential object marking: Iconicity vs. economy. *Natural language & linguistic theory*, 21(3), 435-483. Aoun, J. (1999). Clitic-doubled arguments. In *Beyond principles and parameters* (pp. 13-42). Springer, Dordrecht. Barner, D., & Snedeker, J. (2005). Quantity judgments and individuation: Evidence that mass nouns count. *Cognition*, 97(1), 41-66. Bossong, G. (1991). Differential object marking in Romance and beyond. *New analyses in Romance linguistics*, 143-170. Brustad, K. (2000). *Spoken Arabic*. Georgetown University Press. Brustad, K. (2008). -āt Drink Your Milks! āt as Individuation Marker in Levantine Arabic. In *Classical Arabic Humanities in Their Own Terms* (pp. 1-19). Brill. Chierchia, G. (1998). Plurality of mass nouns and the notion of “semantic parameter”. In *Events and grammar*, pp. 53–103. Springer. Grimm, S. (2012). *Number and Individuation*. (Ph.D. Thesis), Stanford University. Stanford, CA. Grimm, S. (2018). Grammatical number and the scale of individuation. *Language*, 94(3), 527-574. Khan, G. A. (1984). Object markers and agreement pronouns in Semitic languages. *Bulletin of the School of Oriental and African Studies*, 47(3), 468-500. Krifka, M. (1989). Nominal reference, temporal constitution and quantification. In R. Bartsch, J. van Benthem, and P. van Emde Boas (Eds.), *Semantics and contextual expression*, pp. 75–111. Dordrecht: Springer. Levin, A. (1987). The particle la as an object marker in some Arabic dialects of the Galilee. *Zeitschrift für arabische Linguistik*, (17), 31-40. Link, G. (1983). The Logical Analysis of Plurals and Mass Terms: A Lattice-Theoretic Approach. In R. Bäuerle, C. Schwarze, & A. van Stechow (Eds.), *Meaning, Use and Interpretation* (pp. 303–323). Berlin: Mouton de Gruyter. Zarka, A. (2021). Individuation and differential object marking. In *Proceedings of the Canadian Linguistic Association*, June 4-7.