

Linguistic register variation and linguistic background modulate the processing of morphosyntactic errors

Linguistic register is defined as a variety of language shaped by different situational settings [1]. The processing of language features related to register variation is crucial for successful communication, thus register knowledge should be considered as part of users' linguistic repertoires. Furthermore, depending on the situational contexts in which bilingual people learn and use their languages [2,3], they may exhibit variation in how they deal with different linguistic registers [4]. Despite its central role in communication, only a few recent studies have focused on the impact of linguistic register on language processing [5,6]. Our work aims to investigate whether register variation affects the ability to detect morphosyntactic errors both independently and jointly from users' linguistic background. Our research questions are the following: (I) Does register modulate the ability to detect morphosyntactic errors? (II) Does register variation play the same role in detecting such errors in monolingual and bilingual populations?

Our sample includes Italian-speaking monolinguals ($n = 27$), Italian/Spanish-speaking bilinguals ($n = 27$), and two groups of Italian bidialectals (i.e., speakers of Italian and an Italian dialect), namely Italian/Pavese-speaking bidialectals ($n = 26$) and Italian/Agrigentino-speaking bidialectals. Participants completed a timed acceptability judgement task involving 120 auditory stimuli presented in standard Italian, split into 40 test items, 60 grammatical fillers, and 20 ungrammatical fillers. The test items consisted of ungrammatical sentences that featured Subject-Verb agreement mismatches, which were divided into 2 conditions: half ($n = 20$) were presented in a low linguistic register (examples 1a and 2a), while the other half ($n = 20$) were presented in a high linguistic register (examples 1b and 2b). Responses were elicited on a 5-point Likert scale (1 = "completely wrong. The sentence sounds bad"; 5 = "completely correct. The sentence sounds good") and RTs were measured.

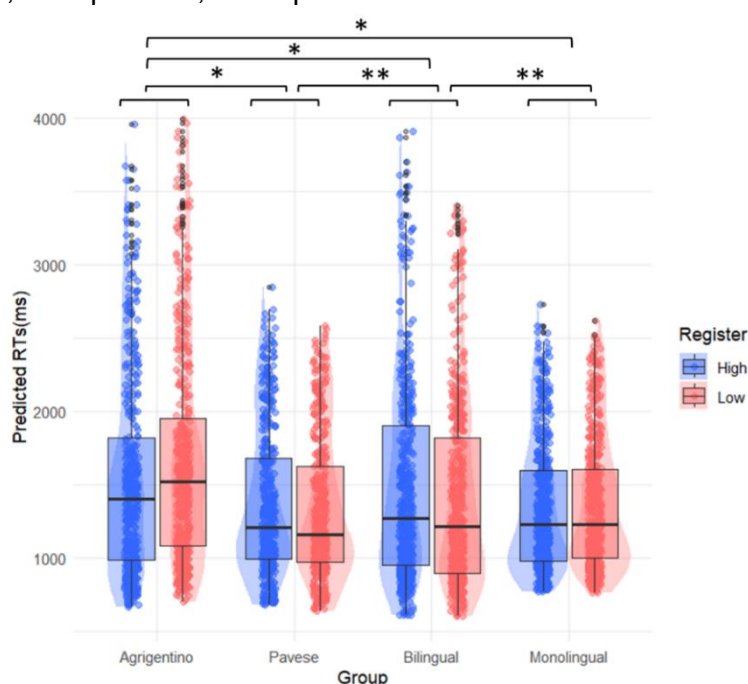
A Generalized Linear Mixed Effect Model reveals a main effect of linguistic register for the whole sample ($t = -2.20$; $p = 0.02$): morphosyntactic errors are better detected when stimuli are presented in low register compared to high register. Furthermore, different processing outcomes in terms of both accuracy and RTs are found across the four language groups. While monolinguals show similar accuracy rates and RTs for low- and high-register sentences, the bilingual and bidialectal groups tend to spot errors in low-register better. In addition, different RT patterns emerge from the bilingual groups. While Italian/Agrigentino-speaking bidialectals are faster in judging high-register stimuli compared to low-register stimuli, Italian/Pavese-speaking bidialectals and Italian/Spanish-speaking bilinguals show faster RTs for low-register stimuli (see Figure 1).

Our findings show that linguistic register plays an important role in the processing of morphosyntactic errors, suggesting that it may separately influence the processing of other linguistic domains such as morphosyntax. Consequently, the theorization of linguistic register could be broadened and could also embrace its cognitive dimension and its impact on language processing [7], besides features related to situational and social aspects of language use. Furthermore, our results reveal that the impact of linguistic register on language processing is also modulated by users' linguistic background and language practices. This suggests that handling different linguistic registers is strongly shaped by factors related to various language practices (i.e., use, switching) and sociolinguistic contexts. These results stress the need to consider the language use conventions of each specific linguistic community when it comes to studying language processing, and more specifically, the processing of linguistic register variation [8].

Examples

(1a) *L'incontro tra gli insegnanti nuovi sono un buco nell'acqua - The meeting.NOUN.SG between the new teachers.NOUN.PL be.3PL a hole in the water - 'The meeting between the new teachers make a hole in the water.' (1b) *L'assemblea tra i docenti nuovi non giungono a nessun accordo - The meeting.NOUN.SG between the new teachers.NOUN.PL not lead.3PL to any deal - 'The meeting between the new teachers do not lead to any deal.' (2a) *La proposta per i progetti futuri non sono farina del suo sacco - The proposal.NOUN.SG for the projects.NOUN.PL upcoming not be.3PL flour of her/his bag - 'The proposal for the new projects are not in her/his wheelhouse.' (2b) *La proposta per i progetti futuri non derivano da una sua idea - The proposal.NOUN.SG for the projects.NOUN.PL upcoming not come.3PL from a her/his idea - 'The proposal for the upcoming projects do not come from an idea of her/his.'

Figure 1. RTs in milliseconds for low- vs. high-register stimuli split per language group. * = $p < .05$, ** = $p < .01$, *** = $p < .001$, **** = $p < .0001$.



References

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