7 Conclusions

This study is among the first experimental investigations into the use of the innovative suffix *-ə* to designate individuals of unknown, unspecified, or nonbinary gender in Italian (cf. Abbondanza et al. 2025; also see Comandini 2021 and Thornton 2022 for corpus-based research). While countless strategies have been put forward to pursue a gender-fair language, this study focuses on the most widely discussed one, that is, *-ə*, which unlike others (e.g., -*, -@), benefits from a predetermined correspondence to a sound, however unfamiliar to most speakers of Italian. Despite intense debate over its potential, little experimental evidence exists to support any particular stance. This study addresses that gap by examining how the suffix *-ə* is interpreted when referring to a single referent or a plurality.

Three main research questions guided the investigation. The first addressed meaning: does the suffix *-ə* manage to immediately refer to an individual who does not identify with the binary distinction of gender (i.e., specific/exclusive meaning)? Does it activate a reference with a nonbinary group (i.e., specific/exclusive meaning) or a mixed-gender group (i.e., generic/inclusive meaning)? The second explored processing costs: does *-ə* require longer response times

DOI 10.30687/979-12-5742-035-2/007

than traditional gendered suffixes, suggesting cognitive effort? The third questioned the so-called generic masculine: does it actually function inclusively, or is it predominantly interpreted as referring exclusively to male individuals? Here too, the specific *vs* generic meaning distinction is central.

To address the first research question – establishing the meaning of the suffix *-ə* – accuracy was measured through two different analyses. The results were then supplemented by examining the internal distribution of gender selections in the nonbinary condition, based on image choices, to determine which gender interpretation was most prevalent. To ensure the reliability of the visual stimuli, a norming survey (the *Femininity-Masculinity Image Evaluation Survey*) was conducted prior to the experiment, confirming that the selected images were consistently identified as female, male, or nonbinary. Following the procedure established by Bradley and colleagues (2019), a separate sample of participants was recruited to rate a total of 24 stock photos, originally tested on an American sample by Bradley's research team. Using an independent 10-point scale, participants assigned each depicted individual a perceived level of femininity-masculinity. The ratings from the Italian sample closely matched those collected by Bradley and colleagues (2019); as such, no cultural differences emerged between the two groups, and participants showed no uncertainty in recognizing and correctly classifying the photos labeled as nonbinary. These findings confirmed that the nonbinary images were not perceived as problematic – at least in the context of the survey. As previously noted, this is further reinforced by their presentation mode in the SPMT: they were never shown in isolation, but always in direct contrast with both male and female referents. To address any potential confounding effects posed by the presence of images, a follow-up experiment (i.e., the TCET) was designed without visual stimuli, allowing us to focus exclusively on the linguistic input.

In the SPMT, both analyses revealed significantly lower accuracy in the nonbinary singular condition, indicating that participants struggled more to match nonbinary descriptions with the corresponding images than they did with masculine or feminine ones. We thus detected a significant difference in response accuracy that depended on the grammatical gender of the item.

In the plural condition, nonbinary forms were frequently interpreted as referring to mixed-gender (male and female) groups, as indicated by the drop in accuracy in the second analysis, as a result of leaving out both FFM and MMF groups. This suggests an interpretation of the suffix *-ə* as signaling inclusiveness within the binary spectrum, even in the absence of explicit nonbinary referents. Nonetheless, the majority of participants still selected the exclusively nonbinary group (NBNBNB), indicating a clear preference for the

specific meaning over the generic one. This outcome appears to challenge the transitional trend identified by Thornton (2022, cf. Section 2.2.2), which consists of a shift from specific to generic use of the suffix *-ə*. While our data highlight the coexistence of the two readings, they ultimately show that the specific, identity-based interpretation remains strongly anchored in participants' responses.

In examining the nonbinary singular condition, the SPMT results showed that the specific interpretation of the suffix *-ə* was still far from being fully established. A higher percentage of participants matched the description of a nonbinary candidate with a female referent rather than correctly identifying a nonbinary one. This led us to two conclusions: first, in the singular, the suffix *-ə* does not yet reliably prompt a specific nonbinary reading, as it tends to activate a female interpretation instead. Second, in the plural, the same suffix successfully triggered an immediate association with a nonbinary-only group (specific meaning) and, to a lesser extent, a mixed-gender group (generic meaning). However, the follow-up study (TCET) paints a more optimistic picture when it comes to the use of the neomorpheme for the singular: in the absence of visual stimuli, overall accuracy improved, particularly in the nonbinary singular condition. This suggests that under different experimental conditions, where linguistic cues are processed without visual interference, even the singular use of the suffix *-ə* may prove sufficiently effective. However, this improvement cannot be solely attributed to the removal of images. It is likely that some part of the progress reflects the growing public awareness and attention to the use of the suffix *-ə*, developed during the eighteen months between the main data collection and the follow-up, as also confirmed by the responses collected via the SILUI. In other words, the observed improvement may result from both cognitive factors related to reduced visual interference and heightened familiarity with inclusive linguistic forms. Furthermore, the revised experimental design itself may have contributed: by presenting participants with immediately interpretable labels, the task facilitated a more consistent categorization, reducing oscillations and allowing for more precise matching. Together, these findings indicate that the suffix *-ə* is gaining interpretive traction.

In sum, while the concern regarding image interpretation is valid and noted, we contend that the experimental design of the main study – especially the validation of stimuli across two independent samples and the use of contrastive image sets – substantially reduces the likelihood that participants' choices were based solely on misclassification or visual bias. The persistent interpretive difficulty observed in both visual and non-visual conditions supports the conclusion that the challenge lies primarily in unfamiliarity with the nonbinary morpheme itself.

In tackling the second research question, i.e., the processing costs of the suffix *-ə*, *Analysis 3* showed that the nonbinary singular condition had the slowest mean response time, while the plural condition recorded the fastest. This suggests that processing *-ə* for a single referent is indeed more demanding, as reflected in significantly slower response times compared to traditional suffixes. However, the quick responses in the plural condition, where participants predominantly matched the description with a nonbinary-only group, indicate no added cognitive load in that context. We propose that participants experienced hesitation when assigning a singular identity to *-ə*, but felt more confident and flexible when interpreting it as referring to a group. This may be due to the fact that a plurality by its very nature admits of multiple possibilities, hence indirectly instilling much more confidence in the participants. Another reason could be that diverse strategies were implemented when dealing with singular and plural *-ə*, which were also computed differently as mirrored in response times.

To address the third research question, i.e., the possible male-specific bias of the masculine form, we analyzed the gender distribution within the masculine condition. The results showed a clear preference for male-only group images, confirming that the masculine plural form is consistently interpreted specifically as referring only to men. Thus, the ambiguity between specific and generic meaning is resolved in favor of the specific, supporting the presence of a male bias. This evidence strengthens the argument against using the unmarked masculine as a truly generic form, since it naturally evokes male referents. Proof of the existing semantic ambiguity also comes from response times, as the masculine plural condition recorded exceptionally slow mean response time, compared to its singular counterpart. Regardless of the final decision that most often fell on an exclusively male representation, the doubt as to which group should be selected must have aroused, as time attests. It is no coincidence that the same trend is observed for the neutral condition, which presents the slowest mean response time for the plural, and the second-slowest for the singular. What we are observing here is that in the absence of any gender cue, the process of referent selection becomes even more time-consuming, as the range of choices is broader. Particularly interesting is the landing point: when no gender information can be retrieved, participants tend to resort to the male interpretation, also known as the default value. This finding is rather significant considering that one of the suggested strategies against the generic masculine is precisely the use of neutral forms, which however turned out to be assigned a male referent, a result consistent with previous literature (see Ducoli, Giusti, Lebani 2024). Although participants were explicitly instructed to match the description with the picture of the referent, hence ascribing a gender to the described

candidate, there are reasons to believe that there is no such thing as a neutral condition.

The questionnaires are a valuable supplementary tool in that they force participants to express their own judgments on inclusive language as well as their engagement with the activity of reading. Through the SILUI we accessed (i) participants' view on the sexist use of language, (ii) their ability to recognize instances of such use and (iii) their openness to inclusive language. What emerged is that our SPMT-sample of participants, as young as it is (age range 18-30 years), has a positive attitude toward inclusive language and is prepared to put it into practice. This pattern is also evident in the follow-up TCET sample. In drawing upon previous research (Visser, Krosnick 1998; Eaton et al. 2009), we believe that age is a predictor of attitudes towards innovative uses and their implementation, as the young population is more prone to challenge traditional roles and embrace change, compared to the older population.

The responses obtained from the *Questionnaire on Reading Preferences and Habits* allowed us to profile our sample of participants in terms of the level of exposure to the phenomenon under investigation. Crucially, the suffix *-ə* was identified as the most popular strategy in pursuing a gender-fair language. The last two questions offered a glimpse into how the suffix *-ə* is perceived and experienced by the participants. When urged to read aloud a sentence containing the suffix *-ə* in an attempt to assess the difficulty in producing the corresponding sound and accessing its meaning, most participants did not define it as an obstacle to reading; they found it easy to interpret, yet quite difficult to pronounce. In order to explore the actual feasibility of the suffix *-ə* in spoken language, an expansion of the reading aloud section is required, possibly accompanied by the simulation of a dialogue that makes use of such strategy. Since the suffix *-ə* is used most frequently in the written form, including items that involve writing would provide a more comprehensive assessment of participants' abilities.

In line with our broader investigation, the correlation analysis between reading frequency and response times provides additional support for the role of reading experience in shaping processing efficiency. Although the observed effect was modest, participants who reported reading more books per year demonstrated slightly faster response times. This suggests that regular reading, particularly in digital formats, may enhance the ability to process linguistic input more swiftly. These findings underscore the relevance of individual reading habits in experimental tasks involving novel or morphologically complex forms, and further highlight how reading experience can subtly influence language processing outcomes.

In summary, based on the SPMT data, the plural suffix *-ə* appears to have a better chance of being widely adopted, as participants

performed better with it compared to the singular suffix *-ə*. However, data from the TCET hint at a possible convergence toward the accuracy levels observed in the other experimental conditions, leaving open the prospect of a broader use of this suffix. Furthermore, having established that the masculine form is inherently male-dominant and cannot be unbiased, the substitution with neutral forms still poses problems. These neutral forms tend to direct participants' interpretations toward a male representation, likely because, in the absence of explicit gender cues, the default assumption is male, which then materializes in the selection of a male image. This is also confirmed by the TCET, which shows a clear preference for the label *male* when presented with a stimulus unmarked for gender. It seems thus that to be on the safe side, it is better to use the generic feminine (cf. Pires 2020) or the option consisting of both masculine and feminine nouns ('splitting/doubling', cf. De Cesare 2022a), which, however, still excludes any explicit reference to identities situated outside the gender binarism.

Finally, we should point out that some aspects of our experimental design can be further improved, such as randomizing the order in which the images are presented, especially in the task testing the plural counting 18 images per screen, so as to control for the potential effect exerted by the order of presentation on participants' selection procedure. The spatial arrangement of the elements within an item should also be modified to avoid overwhelming participants with too many visuals and text at once. In fact, the initial decision to merge all information and instructions onto a single screen was dictated solely by the platform's limitations related to response time recording (i.e., *Gorilla*). This issue was addressed in the experimental design of the follow-up study, which led to the elimination of the images not only to circumvent issues of visualization and representation of gender identities, but also to ensure a more balanced spatial distribution of the elements on each screen. However, this modification made it impossible to take response times into account, as they referred exclusively to the evaluation stage, while the reading of the prompts was in fact excluded. An additional key to understanding the persistent association between the nonbinary condition and the female gender – although somewhat reduced in the TCET – may lie, among the many reasons already posited, in the fact that participants unfamiliar with the suffix *-ə* might have misread it as a typo for *-e*, given the visual similarity between the two characters. This confusion points to a potential limitation of the adopted written medium, as opposed to an oral one, which would in contrast present different challenges related to the perception and realization of the sound – an issue we leave open for future research.