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## **Pronoun processing in gracefully ageing adults and individuals with primary progressive aphasia: a case-control study**

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### ► **To cite this version:**

Seçkin Arslan, Leonie F. Lampe, Bruna Tessaro, Lyndsey Nickels. Pronoun processing in gracefully ageing adults and individuals with primary progressive aphasia: a case-control study. *Science of Aphasia* 2023, Sep 2023, Nice, France. halshs-04355643

**HAL Id: halshs-04355643**

**<https://shs.hal.science/halshs-04355643>**

Submitted on 29 Dec 2023

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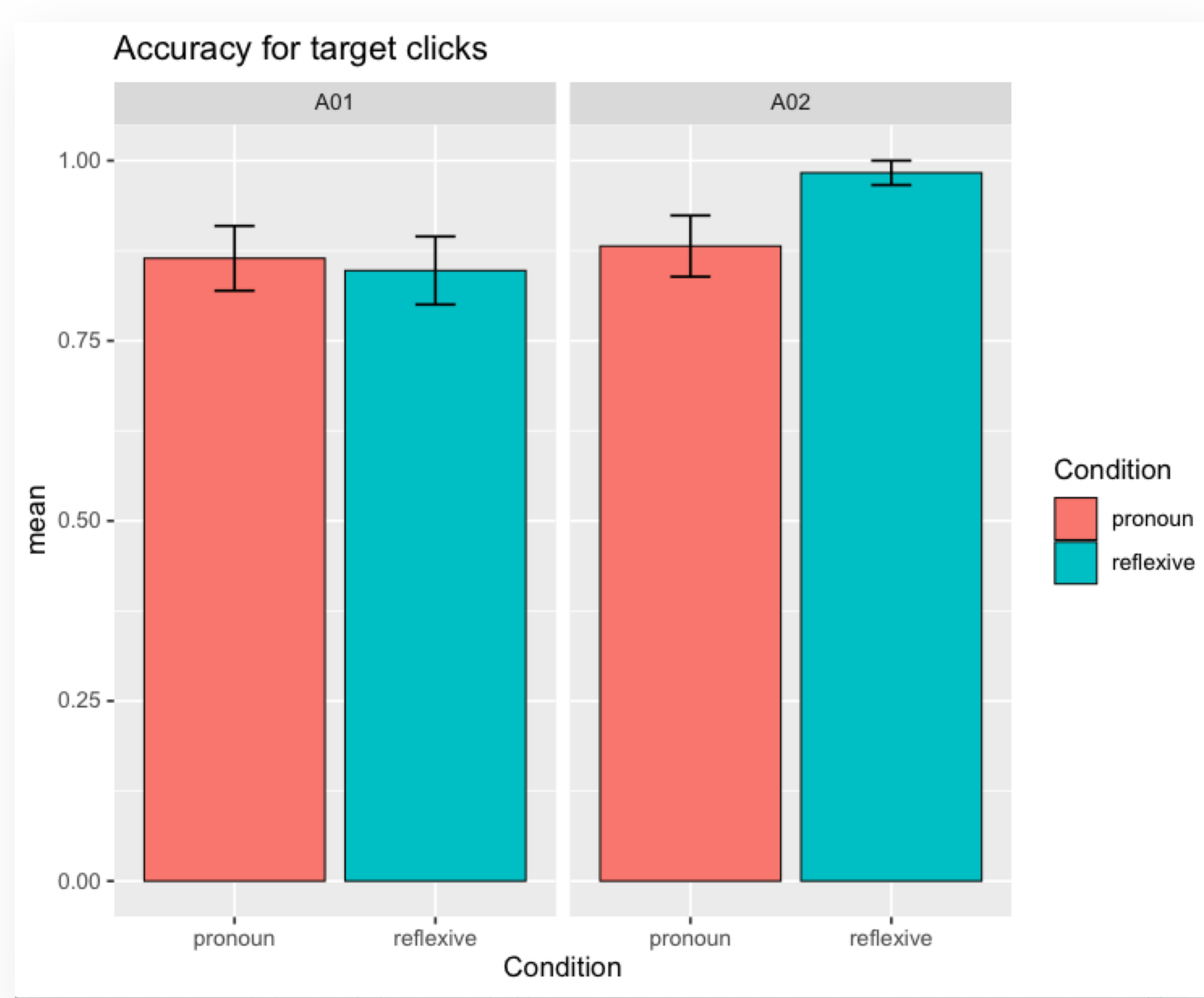
# Pronominal processing is challenged in non-fluent progressive aphasia

*Pronoun processing in gracefully ageing adults and individuals with Primary Progressive Aphasia: A case-control study*

**Background: Primary Progressive Aphasia (PPA) is a neurocognitive disorder caused by cortical atrophy.** Pronouns are often reduced in PPA variants (Henry & Gorno-Tempini, 2010). Particularly, the non-fluent variant presents difficulty interpreting complex sentences (Charles et al., 2014).

**Result 1: A01 performed more poorly on reflexives than older controls. A02 performed within control norms**

**Result 2: Older adults have reduced target looks for pronouns but not reflexives. PPA have rather atypical and reduced fixations overall.**



## Methods

Eye tracking

Comprehension

GORILLA™

**Px** Groups of young and senior unimpaired individuals and two cases with PPA were recruited

|        | N  | Age  | Remarks   |
|--------|----|------|---|
| Young  | 32 | 19   | Performed at ceiling 98% in both pronoun and reflexives |
| Senior | 31 | 68.8 | Performed 97% in pronoun but 99% in reflexives          |
| A1     |    | 84   | Non-fluent PPA  |
| A2     |    | 69   | Logopenic PPA   |

**Task** Eye-movement monitoring and picture selection

The barista untangles *himself/him*



**Conclusions:** PPA individuals can interpret anaphoric elements with relatively unimpaired accuracy, but pronoun processing is poorer in non-fluent PPA consistent with the overall grammatical impairment. We are hoping to improve ways eye-tracking data reliably can be analysed within a case-control design. If you have ideas, say hello to people named below.



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Bruna Tessaro, Lyndsey Nickels  
(& thanks Mar Cordero Rull)

