The problem. Object Cleft sentences (OCs) are critical constructions for testing parsing predictions in non-local configurations: according to the type of the intervening subject DP occurring between the focalized DP and the cleft predicate, a widely documented scale of difficulty is described (Warren & Gibson 2005):

(1) It was [D the banker]/[N Dan]/[P you], that [D the lawyer]/[N Pat]/[P we] avoided _i at the party

D-D and N-N matching conditions being the most difficult configurations to be processed (lower accuracy in comprehension questions, longer reading times in self-paced reading experiments at the verb segment), while P-P matching condition is the easiest one. None of the existing theories fully explains the complete scale of phenomena: theories based on the referentiality hierarchy (Ariel 1990, Gibson 1998, Warren & Gibson 2005 a.o.) fail to predict why also N-N matching condition induces a low performance comparable to the D-D matching condition; similarity based accounts (Gordon et al. 2004 a.o.) capture this fact, but fail in distinguishing the differences caused by reversing the order of the DPs in mismatch conditions (e.g. D-P < P-D); featural relativized minimality accounts (e.g. Belletti & Rizzi 2012 a.o.) predict harder time with both D-D and N-N matching conditions, also expecting better performances in the P-intervening conditions (i.e. D-P ≈ N-P ≈ P-P), but fail in predicting any granularity in other conditions (e.g. P-D > D-N).

Goal: testing morphological cues. To disentangle the role of distinct features in this configuration we tested restricted pronouns - rP (hence removing any advantage of the null lexical restriction) in a language (Italian) in which overt agreement on the verb distinguishes among all person and number cases.

(2) SonoIIIp/sieteIIp stati [D gli]/[rP voi] investitori, che [D gli]/[rP avvocati] hannoIIIp/aveteIIp evitato _i …
HaveIIIp/IIp been [D the / rP you investors], that [D the / rP you lawyers] haveIIIp/IIp avoided _i …

Materials and methods. 32 paradigms expressing the four possible conditions presented in (2) have been tested both off-line (acceptability on a 7-points Likert-scale, 77 participants, age range = 20-64; 41 female) and on-line (Eye-movements recorded with an Eyelink® 1000 system, 36 different participants, age range = 19-35; 18 female). Results were analyzed using linear mixed-effects regression models (Baayen, Davidson & Bates, 2008), using lme4 package (version 1.1.18) in R environment (R Core Team, 2018).

Crucial results. Grammaticality judgments (Fig. 1) showed that matching conditions are significantly different (D-D better than rP-rP). D-D is as grammatical as D-rP, while rP-D ranks below them and above rP-rP, which is unquestionably the hardest configuration. Concerning reading times (Fig. 2-3): D-D constitute the processing baseline in all measures; D-rP caused some slow-down, but mainly on DP2 region, where the restricted pro was present, (GD, TT and SP), and at the verb segment only in FF; P-D caused some slow-down, but only on DP1 region (GD, TT and SP); rP-rP is by far the most time consuming condition: with slower reading times across the board, including effects in FF, GD, TT and SP. About factors interaction: the interactions between DP1 and DP2 was found in DP2 region (and not at the verb region) for FF; in DP2 and VERB regions for TT; and in the regressions from VERB (fig. 4).

Discussion. Results are interpreted using a left-right minimalist parsing-friendly model (Chesi 2015) where non-local dependencies are computed and evaluated using a Feature Retrieval and Encoding Cost (FREC) function. As in cue-based memory retrieval (Van Dyke and McElree, 2006) we predict effects both on the verbal region segment (retrieval) confirming the idea that unambiguous cues on the verb (i.e. features overtly realized on verb agreement morphology) facilitate the correct argument assignment (fulfilling a parsing expectation); in case of mismatch, the processing cost was (correctly) predicted to be lower. Unlike 3rd person, 2nd person requires an anchoring to the left peripheral field (where the relevant features of the speech event are encoded, i.e. the “logophoric patient” feature, Sigurdsson 2004). This explain both why rP-rP (2nd person matching condition) pays the highest cost, while D-rP (vs. rP-D) condition is easier to be interpreted (the salience of the 2nd person on the cleft subject triggering verb agreement is rewarded) though it require longer time to encode person feature (longer First Fixation time on the verb segment).
\[ C_{\text{FREC}} = \prod \frac{(1+nF)^m}{(1+dF)} + eF_i \]

**FREC.** Feature Retrieval and Encoding Cost function associated to memory buffer access: \( m \) is the number of items stored, \( nF \) the number of new features to be retrieved from memory, \( dF \) the number of distinct features cued (in this case by the verbal morphology); \( eF_i \) is the encoding cost of new referents.

**Fig 1.** Grammaticality judgments

**Fig 2.** Major reading times measures (FF and TT)

**Fig 3 Regression In and From**

**References**