

### Supplementary File 4: Summary of ERP studies

Language	Typology	Findings
Basque (Carreiras et al. 2010)	SOV / ergative / prenominal RCs	[LAN] No LAN found.  [P600] A P600 effect was the only significant difference observed between SRCs and ORCs. It was found at the disambiguating main verb with a broad distribution all over the left hemisphere, which is contrary to the widely reported posterior distribution. The authors interpret the effect as reflecting a dispreference for the continuation of the sentence.
English (King & Kutas 1995)	SVO / nominative / postnominal RCs	[LAN] <ul style="list-style-type: none"> <li>• Bilateral frontal slow negative potential in the early RC region, indicating the processing load for holding the unresolved dependency in working memory.</li> <li>• Phasic LAN effect immediately following the gap in English ORCs, which might be initiated by the aftermath of thematic role assignment.</li> </ul> [P600] Stronger positivity in ORCs at about 500ms after the onset of the head noun. The effect was widely distributed over the head, but was generally larger at centro-posterior regions. It was also smaller and longer-lasting than the generally reported P600 from other studies.
Georgian (Lau et al. submitted)	Free / split-ergative / postnominal RCs	[LAN] Increased negativity observed in the anterior region with ORCs (compared to SRCs) at the 300–500ms window at the critical noun, suggesting ORCs incurred higher processing costs.  [P600] A trend of a P600 effect for ORCs was found in a later time-window.
German (Mecklinger et al. 1995)	SVO (V2) / nominative / postnominal RCs	[LAN] <ul style="list-style-type: none"> <li>• Posterior N400 was found when the RC verb did not provide disambiguating information. The larger N400 for the neutral verb implies more effort is required to activate a lexical element in a semantically neutral context.</li> <li>• The other N400 is related to the subject-object asymmetry. A larger N400 was found when the RC was biased towards an ORC reading. The stronger negativity may have been elicited by the violation of the expectation for an SRC, which triggered reanalysis or required more effort to integrate the RC verb into the existing structure.</li> <li>• An uncertain anterior negativity, which could be LAN, was found at the RC verb (750ms after the past participle until the onset of the auxiliary).</li> </ul> [P600] No P600 effect found.

		<p>[Other]</p> <p>A sharp P345 component from the frontal to the parietal was observed after the auxiliary verb at the sentence-final position. The P345 effect was stronger in ORCs than SRCs, which might reflect the need for syntactic reanalysis due to expectation mismatch.</p>
<p>Japanese (Ueno &amp; Garnsey 2008)</p>	<p>SOV / nominative / prenominal RCs</p>	<p>[LAN]</p> <p>Bilateral (instead of left-lateralized) anterior negativity was found at the RC verb and at the head noun position in ORCs.</p> <p>[P600]</p> <p>Stronger positivity was found in ORCs at about 500ms after the onset of the head noun. The effect was widely distributed over the head, but was generally larger at centro-posterior regions. The continuous posterior activity in ORCs is taken to indicate Japanese RCs involve a long-lasting integration process after the head noun, although the effect was comparatively smaller and longer-lasting than the P600 effects observed in other studies.</p>
<p>Korean (Kwon et al. 2013)</p>	<p>SOV / nominative / prenominal RCs</p>	<p>[LAN]</p> <p>Greater negativity was found in the RC region (prior to the RC verb) and at the head noun for ORCs. Although this echoes the pattern observed by Ueno &amp; Garnsey (2008) for Japanese, the distribution observed in Korean is slightly different. The negativity at the RC verb appeared to have a right posterior maximum, whereas the negativity at the head noun was widely distributed over the head and more pronounced in the frontal region.</p> <p>[P600]</p> <p>No P600 effect (or variant thereof) was found at any point following the head noun.</p>
<p>Mandarin (Packard et al. 2011; Bulut et al. 2018; Xiong et al. 2019)</p>	<p>SVO / nominative / prenominal RCs</p>	<p>(Packard et al. 2011)</p> <p>[LAN]</p> <p>An N400 effect was observed at the matrix verb region for ORCs, which is taken to index a thematic assignment conflict in the RC vs. in the matrix clause.</p> <p>[P600]</p> <p>Greater P600 effect was observed at the relative marker for SRCs attaching to the matrix subject, and at the head noun for SRCs attaching to the matrix object. The greater positivity is interpreted as an index of higher costs incurred by syntactic integration.</p> <p>(Bulut et al. 2018)</p> <p>[LAN]</p> <p>Greater negativity in the medial and lateral regions was found for ORCs at the relativizer.</p> <p>[P600]</p> <p>Posterior P600 was observed for ORCs at the relativizer, forming an N400-P600 complex. However, at the head noun, a broadly distributed positivity was elicited along the lateral posterior-occipital component by SRCs beyond</p>

		<p>1150ms. The characteristics are in line with the usual P600 effect, but in an extremely delayed time-window. The authors argued that (1) this is an atypical P600 effect, which indicates additional costs associated with syntactic integration for SRCs; and (2) the N400-P600 complex at the relativizer is only indicative of the process of syntactic reanalysis, and does not suggest a higher processing cost for ORCs.</p> <p>(Xiong et al. 2019) [LAN] ORCs initiated a greater LAN effect, irrespective of embeddedness, early (110–220ms) in the relativizer region.</p>
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## References

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