

Hydras: Split Heads and Light Heads

Kirby Conrod, University of Washington. (they/them)
Brent Woo, University of Washington. (he/him)

kconrod@uw.edu, @kirbyconrod
bwoo@uw.edu, @brentpwoo

> The Puzzle

Certain types of heads can form hydras (contiguous coordinated-headed relative clauses, (1a)) and can be split to form split-antecedent relative clauses (SARCs, (1b)). However, pronominal heads of relative clauses cannot be split, and SARCs can't be subjects of the matrix clause:

- (1) Canonical hydra: contiguous NP, subject or object
 - a. I saw **a man** and **a woman** *who look alike*.
 - b. **A man** and **a woman** *who love each other* can do anything together.
- (2) Canonical SARC: split NP object (*subject)
 - a. Tom met **a man** and Mary met **a woman** *who know each other*.
 - b. ***A man** rode a bike and **a woman** rode a scooter *who love each other*.
- (3) Pronominal: contiguous okay, but not split
 - a. **He** and **she** *who love each other* can do anything together.
 - b. Everyone loves **him** and **her** *who are loyal to each other*.
 - c. ***He** must be brave and **she** must be selfless *who sacrifice everything*.
 - d. *Men love **him** and women love **her** *who are loyal to each other*.

> The Research Question

How can a single analysis of split-antecedent relative clauses capture asymmetries between subjects/objects (2a, 2b), split/adjacent heads (2a, 1a), and nominal/pronominal heads (3b, 3d)?

> Background

Pronominal Relative Clauses are attested and productive:

- (4) He who has great power should use it lightly. (Conrod et al. 2016: 82)
- (5) u can't tease us who weren't there with a new song and not let us hear!!!! (Conrod et al. 2016: 9453)

Previous analyses of split-antecedent hydras:

- **Ellipsis accounts** have been used for RNR, a similar phenomenon. (Ha 2008) Ellipsis cannot account for split antecedents licensing collective predicates like *each other*.
- **Sideward movement** has been proposed, but the constraints on sideward movement with respect to c-command predict against anaphora licensing (Zhang 2007).
- **Multidominance** is a kind of structure where the same material can be merged twice. (Citko 2005, Johnson 2007, McKinney-Bock 2013) We're going with this one.

Not previously addressed:

- **An asymmetry between subjects and objects**
- **Raising structures** and split antecedents
- **Pronominal headed** relative clauses, (Conrod et al. 2016, Conrod 2016) which also can't be split

> Problematic hydras

Pronouns cannot be split heads of RCs.

- (6) a. ***He** is a hero and **she** is a martyr who love each other.
b. *Men respect **him** and women respect **her** who love each other.

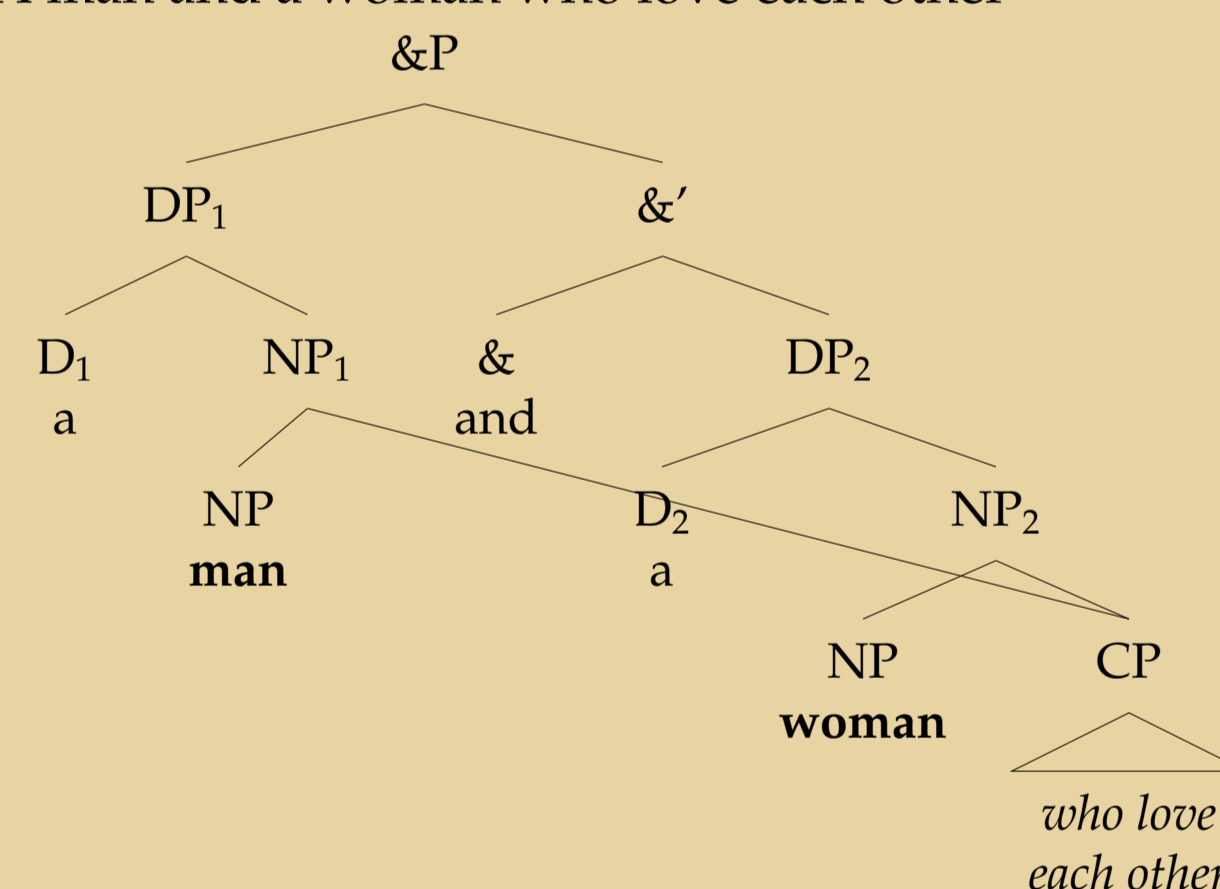
Transitive subjects cannot be split heads of RCs (7a), but unaccusative subjects (7b) and objects (7c) can.

- (7) a. ***A man** rode a bike and **a woman** rode a scooter who love each other. (Gazdar 1981)
b. **A man** came in and **a woman** went out who knew each other very well.
c. John knew **a man** and Mary knew **a woman** who had children together.

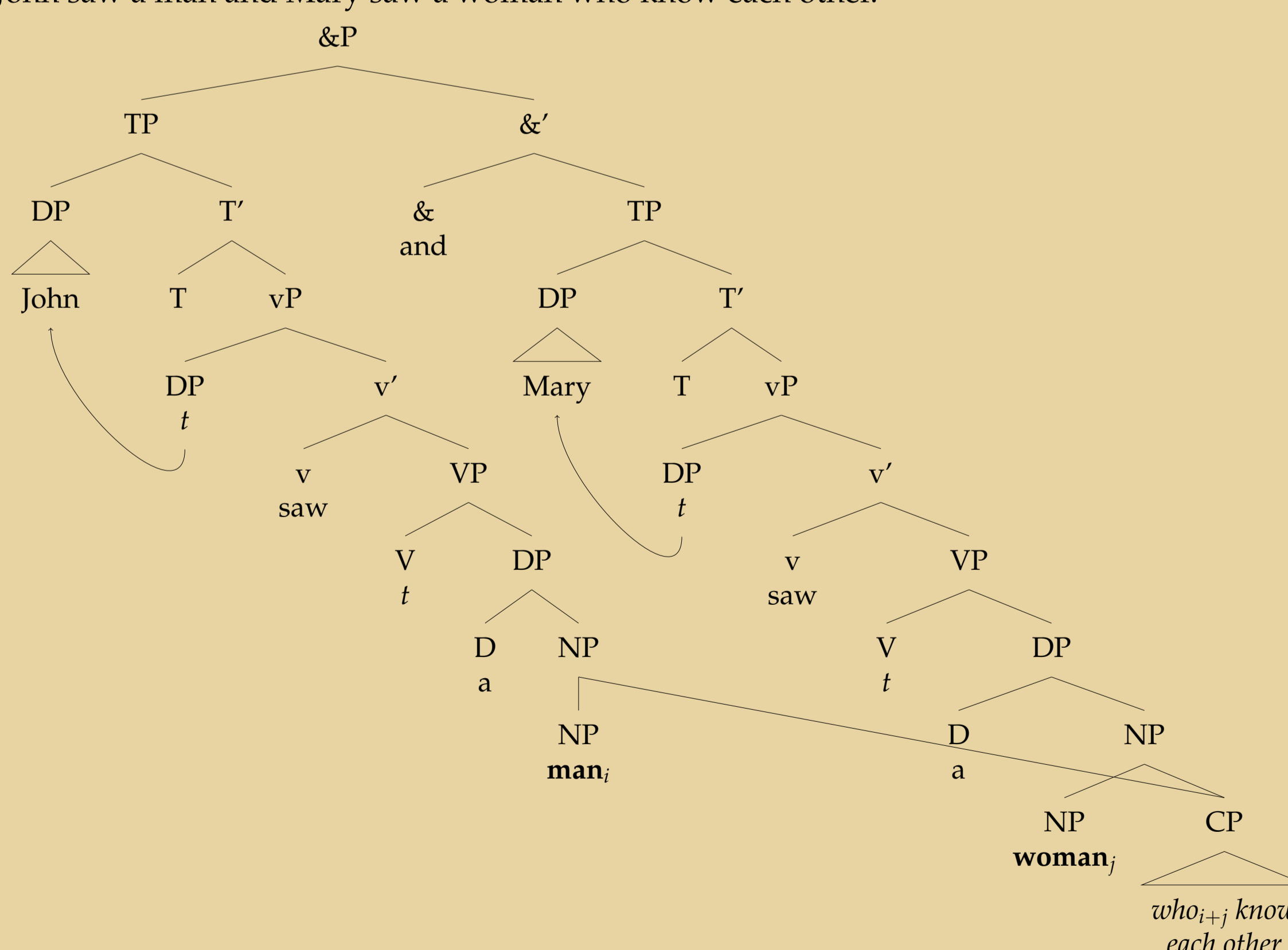
> Proposal

We propose a multidominant analysis of SARCs (McKinney-Bock 2013) using Parallel Merge (Citko 2005).

- (8) **Contiguous heads with multidominance**
A man and a woman who love each other



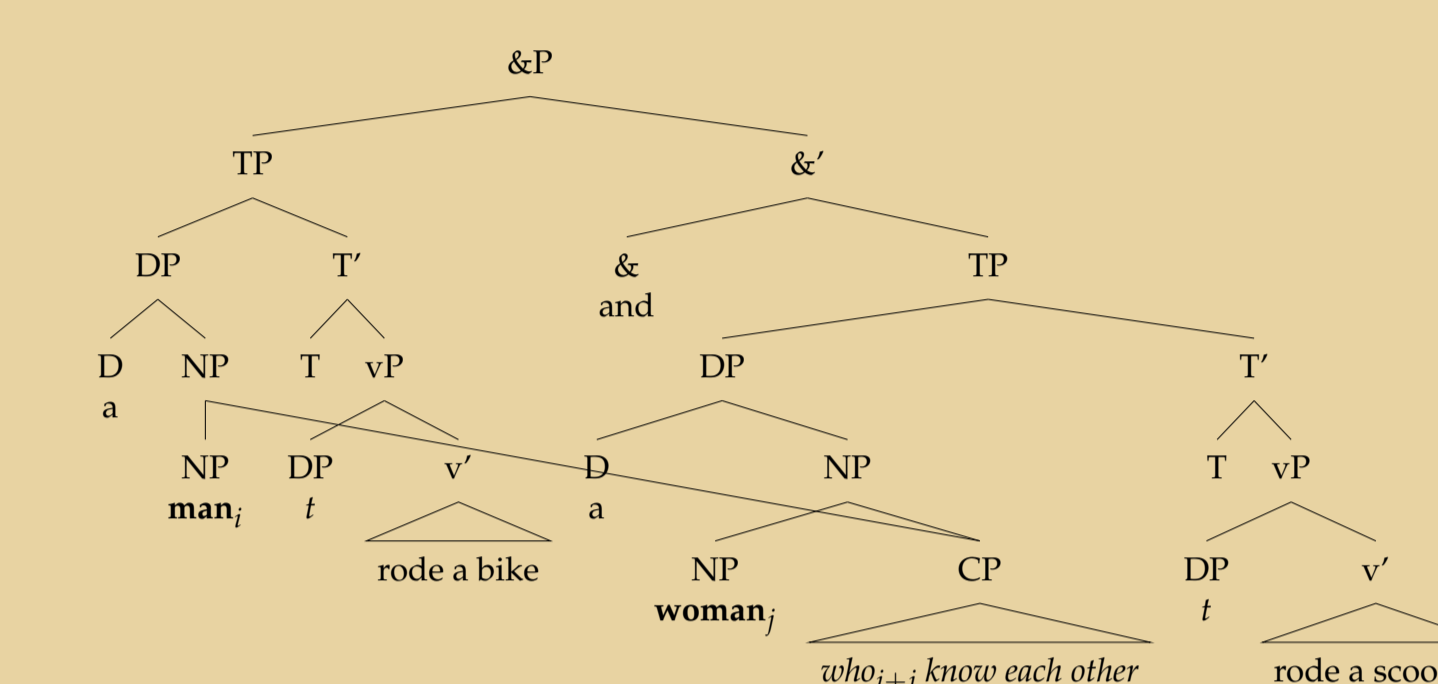
- (9) **Split heads with multidominance**
John saw a man and Mary saw a woman who know each other.



> Accounting for Restrictions

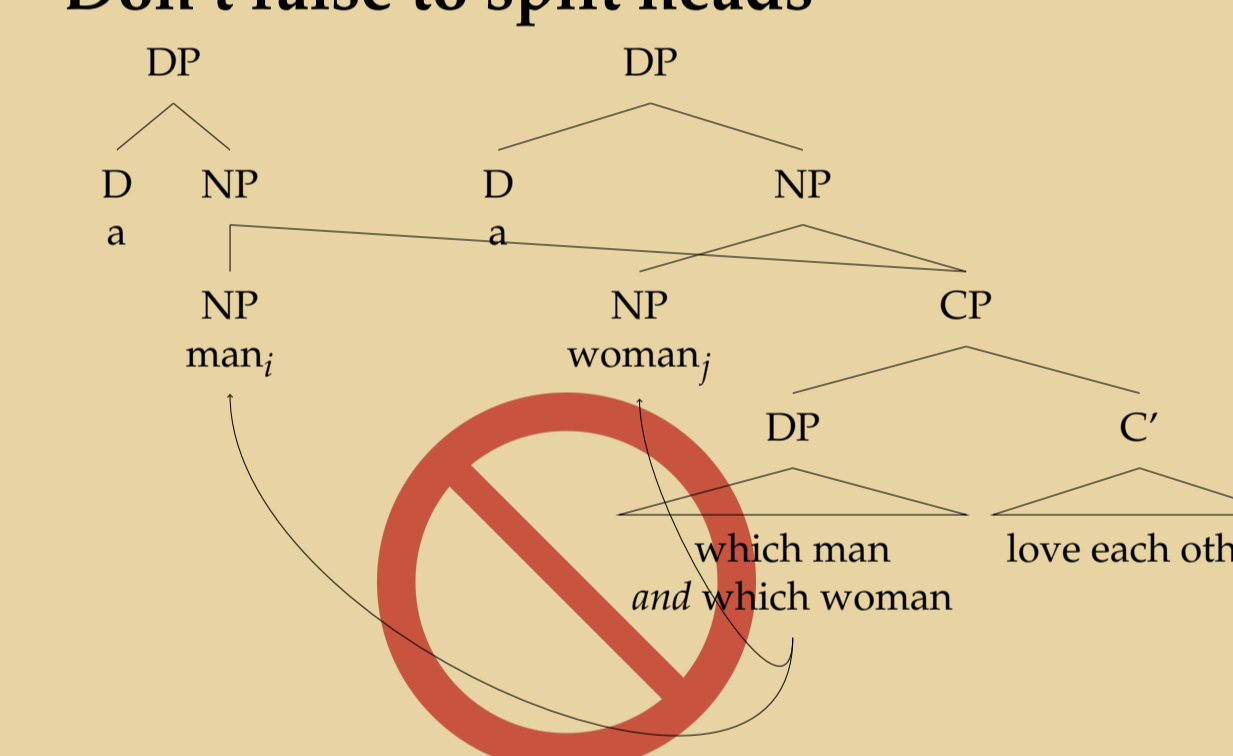
Split subjects are bad because of the Right Edge Restriction. **Right Edge Restriction:** If shared element α surfaces in the final conjunct, gaps corresponding to α must be at the right edge of the non-final conjuncts. (Wilder 1999)

- (10) **Can't be linearized:**



Raising structures are also bad:

- (11) a. *Joan bought **a painting of his_i sister** and Elizabeth commissioned **a portrait of his_i brother** that every boy_i will love.
b. *Joan hated **the beans** and Elizabeth cried about **the milk** that I spilled.
- (12) **Don't raise to split heads**



> Summary

Main Takeaway: multidominance correctly rules in canonical hydras (1), canonical split-antecedent relative clauses (2a), and rules out pronominal-headed SARCs (3c-d).

- **linearization** rules out split subjects
- **raising restriction** rules out PRCs and other raising structures

This analysis provides support for:

- **a restriction on forking movement in multidominant structures (new)**
- matching analysis of SARCs (see diagnostics in Hulsey and Sauerland 2006)
- raising analysis of PRRCs (Conrod et al. 2016, Conrod 2016)
- the linearization algorithm that derives the Right Edge Restriction (Wilder 1999)