Hydras: Split Heads and Light Heads

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> 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
- **Pronominally headed** relative clauses, (Conrod et al. 2016, Conrod 2016) which also can't be split

> Problematic hydras

Pronouns cannot be split heads of RCs.

- 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.

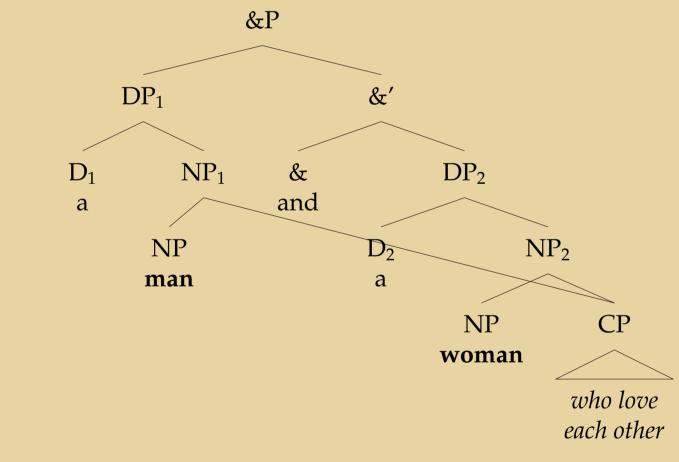
Transitive subjects cannot be split heads of RCs (7a), but unaccusative subjects (7b) and objects (7c) can.

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

> Proposal

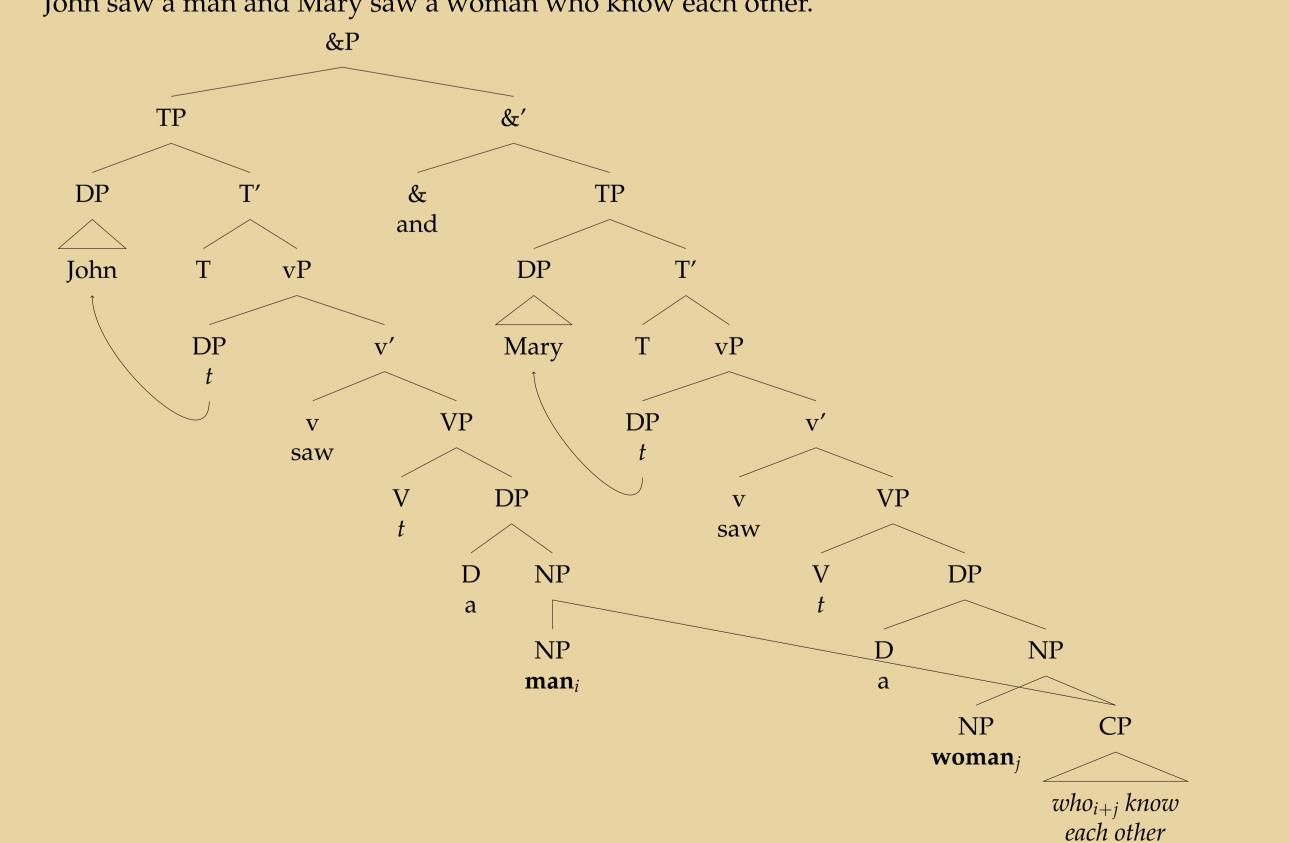
We propose a multidominant analysis of SARCs (McKinney-Bock 2013) using Parallel Merge (Citko 2005).

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



(9) Split heads with multidominance

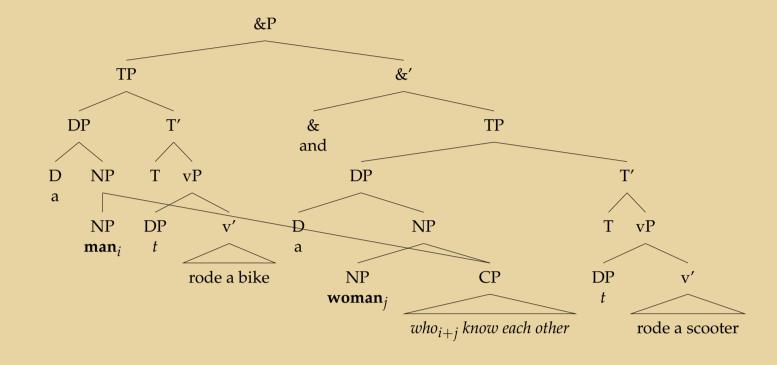
John saw a man and Mary saw a woman who know each other.



> 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)

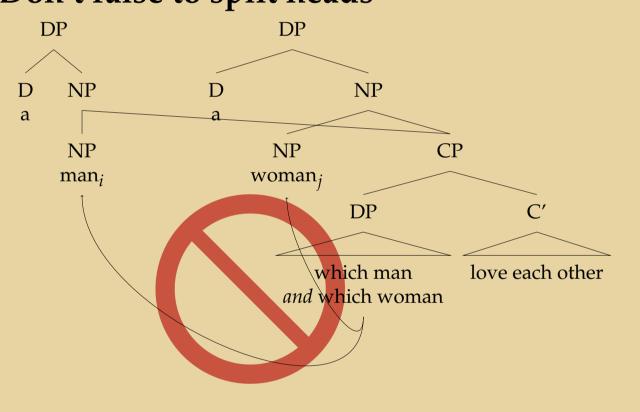
(10) Can't be linearized:



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 pronominally-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)

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