



## Appositives and their aftermath: Interference depends on at-issue vs. not-at-issue status



Brian Dillon<sup>a,\*</sup>, Charles Clifton Jr.<sup>b</sup>, Shayne Sloggett<sup>a</sup>, Lyn Frazier<sup>a</sup>

<sup>a</sup> Department of Linguistics, University of Massachusetts, Amherst, MA 01003, USA

<sup>b</sup> Department of Psychology, University of Massachusetts, Amherst, MA 01003, USA

### ARTICLE INFO

#### Article history:

Received 28 June 2016

Revision received 26 April 2017

Available online 22 May 2017

#### Keywords:

Sentence comprehension

Working memory

Appositive relative clauses

Filler-gap processing

At-issueness

### ABSTRACT

Much research has explored the degree to which not-at-issue content is interpreted independently of at-issue content, or the main assertion of a sentence (AnderBois, Brasoveanu, & Henderson, 2011; Harris & Potts, 2009; Potts, 2005; Schlenker, 2010; Tonhauser, 2011; a.o.). Building on this work, psycholinguistic research has explored the hypothesis that not-at-issue content, such as appositive relative clauses, is treated distinctly from at-issue content in online processing (Dillon, Clifton, & Frazier, 2014; Syrett & Koev, 2015). In the present paper, we explore the way in which appositive relative clauses interact with their host sentences in the course of incremental sentence comprehension. In an offline acceptability judgment, we find that appositive relative clauses contribute significantly less processing difficulty when they intervene between a filler and its gap than do superficially similar restrictive relative clauses. Results from two eye-tracking-while-reading studies suggests that recently processed restrictive relative clauses interfere to a greater degree with processes of integrating the filler at its gap site than do appositive relative clauses. Our findings suggest that the degree of interference observed during sentence processing may depend on the discourse status of potentially interfering constituents. We propose that this arises because the syntactic form of not-at-issue content is rendered relatively unavailable once it has been processed.

© 2017 Elsevier Inc. All rights reserved.

### Introduction

The intuition that memory and attentional processes constrain and shape language processing has guided research in psycholinguistics since at least Miller and Chomsky (1963). Interestingly for the psycholinguist, these processes interact with linguistic structure in non-trivial and interesting ways. Very short center-embedded sentences may verge on the uninterpretable (Frazier & Fodor, 1978; Gibson, 1991; Kimball, 1973; Lewis, 1996; Miller & Chomsky, 1963), while certain right-branching or left-branching structures may grow quite large before placing any apparent strain on memory (Frazier & Fodor, 1978; Gibson, 1991; Kimball, 1973; Lewis, 1996; Miller & Chomsky, 1963; Resnik, 1992).

This state of affairs provides an interesting theoretical puzzle. In response, researchers have developed explicit proposals about the processing factors that contribute to sentence complexity (e.g. the Syntactic Prediction Locality Theory; Gibson, 1998 or the Depen-

dency Locality Theory, Gibson, 2000; Warren & Gibson, 2002), as well as the nature of the memory architecture that supports sentence comprehension (Lewis & Vasishth, 2005; McElree, 2006; Van Dyke & Lewis, 2003). A virtue of this body of work is that it has produced a wealth of in-depth research on the fine-grained, incremental processing of syntactic and semantic dependencies, and has yielded valuable insights into the cognitive mechanisms that support sentence comprehension.

In the present work we seek to contribute to this program by investigating the incremental processing of appositive relative clauses in comprehension. Appositive relative clauses, like other parentheticals or supplements, are interesting to consider because in certain respects they are independent of their host clauses, in ways that we make precise below. Building on prior work, we develop several hypotheses for how appositives might interact with their host sentences during incremental sentence comprehension. To test these hypotheses, we present one offline rating study and two eye-tracking-while-reading studies that investigate how not-at-issue appositive relative clauses and at-issue restrictive relative clauses interact with filler-gap processing during reading. Our results suggest that during initial processing, not-at-issue appositives and at-issue relative clauses interact with their host

\* Corresponding author at: Department of Linguistics, N408 Integrative Learning Center, University of Massachusetts, 650 North Pleasant Street, Amherst, MA 01003, USA.

E-mail address: [brian@linguist.umass.edu](mailto:brian@linguist.umass.edu) (B. Dillon).

sentences in a similar fashion. However, once they have been processed, the two types of relative clause diverge in the amount of interference they create for processing syntactic dependencies in their host sentences. The findings we report here suggest that the amount of interference comprehenders experience during syntactic processing may depend in part on the discourse status of possible interfering constituents.

### The at-issue/not-at-issue divide

Dillon, Clifton, and Frazier (2014) posed the question of how the distinction between at-issue and not-at-issue content (Potts, 2005) is reflected in sentence processing. Following Potts' terminology (Potts, 2005, 2015), *at-issue* refers to the main proposition asserted in a given utterance, a notion that dates back to Stalnaker (1978). At-issue content is sometimes understood as an answer to a question under discussion (QUD; see the notion of 'proffered content' in Roberts, 2012; see also Amaral, Roberts, & Smith, 2007; Tonhauser, 2011). At-issue content is contrasted with not-at-issue content. Our concern is with the content conveyed by parentheticals, nominal and clausal appositives, and expressives. Following Potts (2005), we will refer to this class of structures as *not-at-issue* content, and treat them as a class distinct from other non-asserted content such as presuppositions and implicatures (for a recent overview, see Potts, 2015). Examples are given in (1):

- 
1. a. I met John – he's a real jerk, that one – while walking into town. (*parenthetical*).
  - b. I met John, who had just gotten a haircut, while walking into town. (*appositive relative clause*).
  - c. I met John, the new cheesemonger, while walking into town. (*adnominal appositive*).
- 

Potts (2005) hypothesized that the not-at-issue content in these examples is interpreted separately from the at-issue assertion *I met John while walking into town*. On Potts' view, each utterance in (1) has at least two distinct dimensions of meaning, the at-issue and the not-at-issue dimension. This independence explained several key features of the not-at-issue content: that it could be denied independently of the at-issue assertion (Amaral et al., 2007; Potts, 2005; c.f. Syrett & Koev, 2015), that it does not readily interact with semantic operators in the at-issue content (Amaral et al., 2007; Potts, 2005; but cf. Harris & Potts, 2009; Schlenker, 2010), and that it is often interpreted as a comment on the at-issue comment, rather than addressing the QUD or otherwise forming a coherent discourse with the material that surrounds it.

Although there is broad agreement that not-at-issue content is in important ways distinct from its host clause, there remain many unresolved debates about the precise way in not-at-issue and at-issue content are related. Some models hold that not-at-issue content is directly entered into the common ground (AnderBois, Brasoveanu, & Henderson, 2015, 2011; see similar ideas in Jasinskaja, 2016), other treat it as a pragmatic distinction (Harris & Potts, 2009; Potts, 2015), or others still treat it as a purely semantic distinction (Potts, 2005; Schlenker, 2010). More recently, some of the empirical claims made above have come under scrutiny: for example, Syrett and Koev (2015) report important experimental work raising the possibility that not-at-issue content may have a more substantial impact on the perceived truth conditions of the host utterance than is generally thought.

Dillon et al. (2014) asked whether the interpretive independence between not-at-issue material and their host clauses had consequences for incremental sentence comprehension. They asked whether syntactically complex material inside not-at-issue

material (the underlined adnominal appositive in (2b)) contributed as much intuitive complexity to a sentence as did superficially similar material inside at-issue restrictive relative clauses (2a). In examples like (2), Dillon and colleagues manipulated syntactic complexity by the addition of an object relative clause (*Amy visited on Third Avenue*).

- 
2. a. That butcher who was in the busy shop (Amy visited on Third Avenue) bought his meat from local farmers.
  - b. That butcher, the one who was in the busy shop (Amy visited on Third Avenue), bought his meat from local farmers.
- 

Across three acceptability judgment experiments, it was observed that the acceptability penalty associated with increased syntactic complexity was greater for restrictive relative clauses (2a) than for adnominal appositives (2b). This observation held whether the critical structures modified the subject or the object (Experiments 3 and 4), and held true whether the head noun was introduced by the definite determiner (Experiment 4) or a demonstrative (Experiments 1 and 3). It also held true when filler-gap dependencies, rather than object relative clauses, contributed the additional syntactic complexity (Experiment 1). This effect did not seem to reflect raters simply disregarding the content of the appositive structures out of hand: grammatical agreement errors inside the not-at-issue appositive were detected as readily as identical errors in at-issue, restrictive relative clauses (Experiment 2).

Dillon et al. (2014) hypothesized that this behavior was rooted in the fact that the not-at-issue content contributes a 'quasi-independent' speech act from its host clause, and that this quasi-independence has perceptual consequences for online sentence processing (for arguments that appositives and parenthetical asides contribute their own speech act, see Arnold, 2007; Frazier, Dillon, & Clifton, 2015; Syrett & Koev, 2015 dub this property *illo-cutionary independence*). If the appositive content is a quasi-independent speech act, then one might expect the processor to treat the appositive as if it were a partially distinct sentence in the middle of its host sentence. On this view, the processing of the appositive should be independent of its host sentence more or less to the extent that processing one sentence is independent of a distinct sentence in a discourse. Broadly speaking, this view predicts less interference between the at-issue content and the content of the adnominal structures in (2b) than between the at-issue content and the restrictive relative clause in (2a). This is because (2b) effectively breaks down into two sentences with relatively little overlap, while the same is not true of (2a). In other words, in (2a) the additional syntactic complexity complicates a single, integrated representation of the sentence and in (2b) that complexity is distributed across two distinct representations of the sentence, the more prominent of which is a syntactically simple at-issue clause. In this way the at-issue/not-at-issue partition explains why additional complexity inside the adnominal appositive imposes less of a penalty on judgments of sentence complexity than does complexity inside of a restrictive relative clause.

### Distinguishing at-issue/not-at-issue content in processing

The offline judgment data suggest that the syntactic representations of the at-issue and not-at-issue material are to some extent independent of one other. However, these data raise interesting theoretical questions about how this independence arises during the course of incremental sentence processing. We can envision several distinct possibilities. One possibility develops a line of

Download English Version:

<https://daneshyari.com/en/article/5042561>

Download Persian Version:

<https://daneshyari.com/article/5042561>

[Daneshyari.com](https://daneshyari.com)