

Evaluative Adjectives: An Adjunct Control Analysis

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1 Introduction

Evaluative adjectives like *stupid*, *smart*, *silly*, and *rude* have been recognized as a coherent syntactic and semantic class for over forty years (Lees 1960, Bolinger 1961, Vendler 1963, 1968, Quirk et al. 1985). The class has gained recent attention, however, from syntacticians looking to extend analyses of argument alignment in the verbal domain to the adjectival domain (Stowell 1991, Bennis 2000, 2004, Landau 2006) and from semanticists examining the interpretation of ‘vague’ predicates (Barker 2002, *inter alia*). The majority of these analyses make a starting assumption that the embedded infinitival in an evaluative control structure like (1) is an optional thematic argument of the adjective.

(1) Hoffman is smart (to cut a deal).

The presence of the infinitival leads to a peculiar ‘relativized’ interpretation of the adjective (Stowell 1991, Barker 2002). Under the relativized interpretation, the sentence *Hoffman is smart to cut a deal* does not entail that Hoffman is smart. Stowell (1991) shows that the infinitival clause in (1) is realized syntactically as an adjunct, not a complement, and suggests that the presence of the infinitival coerces a stage-level (eventive) reading.

In this paper I argue against Stowell’s coercion analysis, showing that evaluative control structures are interpreted as individual-level, not stage-level predicates, and furthermore that evaluative control structures are not eventive. I adopt Stowell’s proposal that the infinitival is an adjunct, and go beyond that analysis in arguing for an AP adjunction site. I distinguish between the AP-adjoined infinitival construction shown in (1) and a VP-adjoined gerund construction. The analysis presented here explains a variety of facts not accounted for by the coercion analysis, including co-occurrence restrictions on internal arguments and other adjuncts.

2 Past Analyses

Barker’s (2002) analysis of evaluative adjectives as vague predicates contrasts evaluative adjectives like *smart* with the ‘normal’ control adjective *eager* and the raising adjective *likely*, neither of which exhibits a relativization effect. Barker’s analysis assumes the infinitival is a complement in each case, but does not hinge on this detail. Rather, the crucial component involves distinguishing among different types of presuppositions and their contributions to context update.

Recent syntactic analyses of evaluative adjectives (Stowell 1991, Bennis 2000, 2004, Landau 2006) have focused on a syntactic alternation between the subject control structure in (1) and an impersonal construction, as shown in (2). (See also Rosenbaum 1967, Wilkinson 1970, 1976.)

(2) It was smart of Hoffman to cut a deal.

Each of the proposals differs in its implementation, but they share in common the following claims: the infinitival clause is a thematic argument of the adjective, the two structures are instances of an alternation in the ordering of adjectival arguments, and the two alternations are derivationally related.

Stowell (1991) attempts to unify the semantic effect of relativization with an argument-structure analysis, and his proposal depends on three claims: that evaluative control predicates are eventive, that the infinitival clause is a thematic argument, and that the infinitival clause, despite its argument status, is realized syntactically as an adjunct. Stowell assumes a process of coercion under which evaluative adjectives, typically interpreted as individual-level (property-denoting) predicates, are coerced into a stage-level (eventive) reading when combined with an infinitival clause. This coercion is argued to result in the observed relativized interpretation.

The claim that evaluative control structures are eventive is based on Stowell's stipulation that the infinitival clause is assigned an Event theta-role, comparable to Kratzer's (1995) event argument. No independent evidence is provided, however, to support the stage-level analysis. The claim is further complicated by the fact that evaluative control structures do not show typical stage-level behaviors. For example, stage-level predicates in general admit both an existential (\exists) and a generic (\forall) reading with bare plurals, while individual-level predicates do not admit an existential reading (Carlson 1977). As shown in examples (3)-(5), the evaluative adjective *smart* shows the individual-level behavior, in contrast with stage-level *eager*.

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|-----|--------------------|--|------------------|
| (3) | $\forall/*\exists$ | American consumers are smart. | individual-level |
| (4) | $\forall/*\exists$ | American consumers are smart to buy foreign goods. | individual-level |
| (5) | \forall/\exists | American consumers are eager to buy foreign goods. | stage-level |

The effect is confirmed using a test from Milsark (1977): the individual-level evaluative predicates do not felicitously combine with an existential *there* subject, in contrast with stage-level *eager*.

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|-----|---|---|------------------|
| (6) | * | There were lawmakers smart. | individual-level |
| (7) | * | There were lawmakers smart to endorse the proposal. | individual-level |
| (8) | | There were lawmakers eager to endorse the proposal. | stage-level |

To account for this failure, Stowell suggests several revisions to an analysis of the stage-level/individual-level distinction as presented in Diesing (1992) and Kratzer (1995). That re-analysis requires a number of additional assumptions not adopted here, however, and in the following section, I argue against Stowell's stage-level analysis.

Stowell's second claim, that the infinitival clause is a thematic argument of the adjective, is necessary to support his first. Stowell argues that when evaluative adjectives select an infinitival argument, they are assigning it an Event theta role, and are therefore behaving as stage-level predicates. This analysis assumes that because the infinitival clause denotes an action, the control predicate itself must be eventive, a position I argue against in the following section. Finally, Stowell claims that despite being a thematic argument of the adjective, the infinitival clause is realized syntactically as an adjunct. This mismatch between semantic and syntactic status is necessary given Stowell's reanalysis of Diesing/Kratzer. The syntactic status of the infinitival as an adjunct, however, is further supported by data from wh-movement patterns and extraction. I adopt Stowell's structural adjunct analysis here, but argue against his claims regarding coercion.

3 Against the Coercion Analysis

In addition to the data regarding existentials shown above, further diagnostics contradict Stowell's claim that evaluative control structures form stage-level predications. For example, stage-level predicates can be distinguished from individual-level predicates based on their ability to combine with both weak and strong subjects (Milsark 1974, 1977). An example of a weak subject is one which includes the phonetically reduced quantifier '*sm*', in contrast with the accented version '*SOME*'.

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|------|------|--|------------------|
| (9) | SOME | /*Sm people are smart. | individual-level |
| (10) | SOME | /*Sm people are smart to request a waiver. | individual-level |
| (11) | SOME | / Sm people are eager to request a waiver. | stage-level |

The individual-level evaluative adjective fails to combine with the weak subject, whether an infinitival is present or not. This contrasts with stage-level *eager* which can combine with both weak and strong subjects.

Another property distinguishing stage-level predicates is their ability to embed felicitously under verbs of direct perception like *see* and *hear*. This is in contrast with individual-level predicates, which instead embed under verbs like *consider* or *find* (Carlson 1977, Barwise 1981, Higginbotham 1983). As seen consistently already, the evaluative adjectives in (12)-(13) show the individual-level behavior, contrasting with stage-level *eager*.

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|--|------------------|
| (12)# We have all seen the senator smart to avoid controversy. | individual-level |
| (13) We all consider the senator smart to avoid controversy. | individual-level |
| (14) We have all seen the senator eager to avoid controversy. | stage-level |
| (15)# We all consider the senator eager to avoid controversy. | stage-level |

As described in Ladusaw (1994), the strong/weak subject effect shown in (9)-(11) is related to the existential quantification effects observed in the preceding section. As such, if one adopts Stowell's revision of the Diesing/Kratzer analyses, these exceptions should be accounted for. Stowell's revision, however, does not explain the examples in (12)-(15). Nor does it explain the following data, which demonstrate that evaluative control structures are not eventive.

Kratzer (1995) suggests a diagnostic for event-hood employing adverbs like *often*. Such adverbs quantify over events, Kratzer claims, and should be felicitous with eventive predicates. By this test, we observe that the evaluative control structure, like other individual-level predicates, denotes a property and not an event. The control adjective *eager*, shown above to be a stage-level predicate, exhibits the eventive behavior and combines felicitously with the adverb.

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|--|----------|
| (16)# Copland was often smart to write about his compositions. | property |
| (17) Copland was often eager to write about his compositions. | event |

Notice that although both structures can be situated in time and space via adverbial modification, as in (18)-(19), this is not a sufficient diagnostic of event-hood: both properties and events can be so situated.

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|---|----------|
| (18) Yesterday at the meeting, John was smart to volunteer. | property |
| (19) Yesterday at the meeting, John was eager to help. | event |

Only events, however, are expected to occupy a spatio-temporal expanse. The contrast is shown in (20)-(21), where the property-denoting evaluative predicate is infelicitous with a modifier suggesting spatio-temporal dimension, in contrast with eventive *eager*.

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|--|----------|
| (20)#All the way from Lubbock to Marfa, John was smart to drive. | property |
| (21) All the way from Lubbock to Marfa, John was eager to drive. | event |

Thus a series of diagnostics for identifying events and for distinguishing stage-level/individual-level predicates argue against the coercion analysis: when combined with an infinitival clause, evaluative adjectives maintain their individual-level interpretation. The finding that evaluative control structures are property-denoting and lack event structure is inconsistent with Stowell's second claim, that the infinitival clause is a thematic argument of the adjective. A review of the nominalization patterns of both eventive and non-eventive adjectival control predicates argues against that claim.

Following Grimshaw (1990), I assume that eventive adjectives, like *unwilling* and *reluctant*, form complex 'process nominals'. These nominals, like their adjectival counterparts, have internal thematic structure and can select a complement, as shown in (22)-(23).

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|---|-----------------|
| (22) the owner's unwillingness to risk injuring the horse | process nominal |
| (23) the researcher's reluctance to waste time studying invisible waves | process nominal |

Evaluative adjectives like *stupid*, and *silly*, however, form simple ‘result nominals’, which are lacking in internal structure and do not admit a complement, as shown in (24)-(25).

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|---|----------------|
| (24) *the owner’s stupidity to risk injuring the horse | result nominal |
| (25) *the researcher’s silliness to waste time studying invisible waves | result nominal |

The intended meaning of the nominalizations in (24)-(25) is clear, but the structures are ill-formed. Rather than combining with an infinitival complement, an evaluative adjective instead forms a nominalization by combining with a PP adjunct which embeds a gerund. Although the majority of informants I consulted find the nominalizations in (24)-(25) marginally acceptable, when asked to reproduce the same utterances, informants consistently produce the gerund constructions in (26)-(27).

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|--|----------------|
| (26) the owner’s stupidity in risking injuring the horse | result nominal |
| (27) the researcher’s silliness in wasting time studying invisible waves | result nominal |

These nominalization data confirm that both the evaluative adjective and its related nominal lack internal argument structure, and we can reject Stowell’s split semantic argument/syntactic adjunct proposal in favor of a straightforward adjunct analysis. Having rejected Stowell’s coercion analysis, I suggest that the relativized interpretation associated with evaluative control structures is better accommodated by a semantic analysis along the lines of Barker (2002).

4 An Adjunct Analysis

In this section I review briefly the syntactic evidence in support of an adjunct analysis before turning to the question of the location of adjunction.¹ Syntactic evidence of adjunction comes from patterns in wh-movement (Stowell 1991). In interrogatives where the degree of the adjective is questioned, the infinitival clause in an evaluative control structure cannot pre-pose, but must remain in situ.

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|---|--|
| (28) How stupid was John ___ to leave town? | |
| (29) *How stupid to leave town was John ___ ? (Stowell 1991, ex. 45-46) | |

In contrast, the clausal complement of *eager* can prepose along with the adjective as a single constituent.

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|--|--|
| (30) How eager was John ___ to leave town? | |
| (31) How eager to leave town was John ___? | |

A similar effect is seen when the question element is extracted out of the infinitival (cf. Stowell ex. 33-34). For example, a manner adverbial can be extracted from either a raising or control complement to yield a grammatical question.

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|---|--------------------|
| (32) How is John likely to respond? favorably | raising complement |
| (33) How is John eager to respond? favorably | control complement |

When the adverbial is extracted from an evaluative control structure, however, the result is degraded, suggesting an adjunct island effect.

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|---|-----------------|
| (34) ?How is John smart to respond? favorably | control adjunct |
|---|-----------------|

These syntactic data, together with the semantic evidence reviewed in the previous section, confirm that evaluative adjectives form adjunct control structures. Stowell’s analysis assumes AP adjunction for the infinitival clause, and I argue in favor of that proposal here. The analysis presented in the following section

¹ Bennis (2000) describes a similar construction in Dutch, and offers evidence that the infinitival in that case must also be an adjunct. Bennis reports in a footnote, however, that the construction is marginal for most speakers.

goes beyond Stowell, however, in contrasting the infinitival control structure examined already with another adjunct control structure.

5 AP and VP Adjunction

The infinitival control construction examined so far can alternate with a gerund construction similar to the one observed in nominalizations. In that construction, a gerund is embedded in a PP modifier. I propose a difference in adjunction site for the two structures, with the infinitival adjoining at AP, and the gerund at VP. The contrast is shown in (35)-(36).

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|------|--|-------------|-------------|
| (35) | The government was [AP smart] [CP to bring the trial to Houston]. | infinitival | AP modifier |
| (36) | The government [VP was smart] [PP in bringing the trial to Houston]. | gerund | VP modifier |

Like the infinitival clause, the gerund modifier is an adjunct, not a complement. Its adjunct status is confirmed by extraction data, as seen in (37)-(39), which show that extraction out of either adjunct is degraded in comparison to extraction out of the complement of *eager*.

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|------|---|-----------------|
| (37) | # Where was the government smart in bringing the trial? | VP adjunct |
| (38) | ? Where was the government smart to bring the trial? | AP adjunct |
| (39) | Where was the government eager to bring the trial? | complement of A |

The gradient quality of the judgment, and the relative acceptability of extraction out of the AP adjunct may follow from the AP adjunct's lower attachment site, though the suggestion is speculative. Below I examine other syntactic and semantic effects distinguishing the two structures.

Evidence that the gerund adjoins at VP comes from parallels with other verbal predicates, as in (40), while evidence for the infinitival's lower AP-level attachment comes from examples like (41)-(42), which demonstrate that the gerund modifier, like other VP modifiers, can prepose to a sentence-initial position. The AP-adjoined infinitival, however, cannot prepose.

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| (40) | The government [VP made a good decision] [PP in bringing the trial to Houston]. |
| (41) | In bringing the trial to Houston, the government was smart. |
| (42) | *To bring the trial to Houston, the government was smart. |

Further evidence of the difference in adjunction site comes from interactions with other forms of AP-level modification, including *enough* constructions and comparatives. The AP-adjoined infinitival clause is incompatible with these other AP-level modifiers, as shown in (43)-(44).²

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|------|---|
| (43) | *The Major was rude enough to offend the hostess to leave during dinner. |
| (44) | *The Major was more rude than the Colonel to leave during dinner. |
| (45) | The Major was rude enough to offend the hostess in leaving during dinner. |
| (46) | The Major was more rude than the Colonel in leaving during dinner. |

The gerund modifier is compatible with both constructions, as shown in (45)-(46), due, I argue, to its higher, VP-level adjunction site.

The gerund and infinitival constructions also show a difference in their compatibility with internal arguments of the adjective. Within the class of evaluative adjectives is a subclass, including *rude*, *nice*, *mean*, and *cruel*, which admits optional internal goal arguments, as in (47).

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|------|--------------------------------|
| (47) | Carol was rude to the hostess. |
|------|--------------------------------|

² Thanks to Chris Barker for drawing my attention to this point.

These goal arguments are compatible with the gerund construction, but not with the infinitival construction, as shown below.

(48) Carol was rude to the hostess in refusing dessert.

(49) *Carol was rude to the hostess to refuse dessert.

This difference is not the result of any phrase-structural constraint blocking the appearance of the goal argument with the infinitival. Rather, the distinction follows from a difference in the interpretation of the adjective and its argument structure within a given semantic frame. As Stowell (1991) points out, the presence of an internal argument is generally consistent with a stage-level, eventive interpretation. The now familiar tests for event-hood confirm in (50)-(51), that the internal argument construction can be eventive. It is not entirely clear that non-eventive readings are excluded, however, given cases where (52) is acceptable.

(50) Carol was often rude to the hostess.

(51) We've all seen Carol rude to the hostess.

(52) ?We all considered Carol rude to the hostess.

The finding that internal arguments are compatible with eventive interpretations is problematic for Stowell, who assumes that the infinitival control structure is also eventive. Stowell must explain the conflict in (49) in other terms, and he does so by proposing a syntactic restriction on head-movement which blocks the illicit structure. As demonstrated above, however, the infinitival control structure is not in fact eventive. As such, failure of an individual-level, non-eventive, predicate to combine with an internal argument comes as no surprise. The incompatibility of the goal argument and the infinitival adjunct follows from a difference in argument structure and semantic interpretation. No additional syntactic mechanisms are required.

6 Implications and Open Issues

The analysis presented here describes a construction where control is projected into an AP adjunct, in contrast with 'normal' complement control structures, like those formed by *eager*. This finding suggests that the variation in adjectival control structures is richer than previously assumed. The analysis might also serve as a template for otherwise puzzling constructions in which it appears that noun phrases and lexicalized PPs select control complements. (See Bolinger 1961 for a discussion of nominals.) In examples like (53)-(54), both the noun phrases *a fool/a jerk* and the lexicalized PPs *out of one's mind/out of line* alternate with the evaluative adjectives *foolish/mean*.

(53) John was foolish/a fool/out of his mind to tell Mary.

(54) John was mean/a jerk/out of line to say anything.

Under a complement control analysis, one might assume that both the nominals and the lexicalized PPs exhibit internal thematic structure. Absent independent evidence for such internal structure, the adjunct control analysis, *prima facie*, offers a more promising solution.

The account presented here may also have a bearing on analyses of the impersonal construction presented in the introduction, which involves pairs like (55)-(56) below.

(55) Hoffman was stupid to trust his friends.

(56) It was stupid of Hoffman to trust his friends.

If it is the case that the infinitival in (55) is an adjunct, and not an argument, this poses a challenge for analyses which describe the alternation as an argument re-ordering phenomenon (Stowell 1991, Bennis 2000, 2004, Landau 2006). Similarly, it seems unlikely, given the present analysis, that the two structures are derivationally related. A full analysis of the alternation, however, remains an issue for further research.

7 Conclusion

Evaluative adjectives like *smart* form a coherent semantic and syntactic class, distinct from ‘normal’ control adjectives like *eager*. Evaluative adjectives are one-place property-denoting predicates, which retain their individual-level reading when combined with an infinitival clause. These facts are incompatible with a coercion analysis (Stowell 1991) intended to explain a semantic relativization effect observed with these predicates. Evaluative adjectives combine with two types of control adjunct, an infinitival adjunct which adjoins at AP, and a gerund adjunct which adjoins at VP. The two types of adjunct show distinct syntactic and semantic behaviors. The analysis presented here provides an account for patterns in nominalization and explains interactions with internal arguments and AP-level modifiers.

8 Acknowledgements

This research was funded in part by NSF grant BCS-0131946 to the University of California, San Diego. Many thanks for helpful discussion go to Chris Barker, Shin Fukuda, Grant Goodall, Peter Jenks, Andrew Kehler, Cynthia Kilpatrick, Nayoung Kwon, Idan Landau, Maria Polinsky, and Hannah Rohde.

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Proceedings of the 25th West Coast Conference on Formal Linguistics

edited by Donald Baumer,
David Montero, and Michael Scanlon

Cascadilla Proceedings Project Somerville, MA 2006

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Kertz, Laura. 2006. Evaluative Adjectives: An Adjunct Control Analysis. In *Proceedings of the 25th West Coast Conference on Formal Linguistics*, ed. Donald Baumer, David Montero, and Michael Scanlon, 229-235. Somerville, MA: Cascadilla Proceedings Project.

or:

Kertz, Laura. 2006. Evaluative Adjectives: An Adjunct Control Analysis. In *Proceedings of the 25th West Coast Conference on Formal Linguistics*, ed. Donald Baumer, David Montero, and Michael Scanlon, 229-235. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #1453.