

Moulton, K. 2009. Clausal Complementation and the Wager-Class. Proceedings of the 38th Annual North East Linguistics Society Vol 2. Schardl, Anisa, Martin Walkow, and Muhammad Abdurrahman, editors. GLSA: Amherst, MA. 165-178.

## Clausal Complementation and the *Wager*-class

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### 1. How do clausal complements complement?

It seems obvious that clausal complements are arguments of the predicates that embed them. So, for instance, attitude verbs (like *believe* and *understand*) syntactically select for clauses and semantically select for the kind of meanings usually associated with clauses, propositions. I will provide support for a different picture for attitude verbs, in which clausal complements, or propositions, are not arguments of embedding predicates, but are rather introduced by meaningful complementizers (Kratzer 2006, Portner 1992). I then argue that different attitude verbs require different kinds of complementizers. My claim is that attitude verbs that describe events (like *think*, *claim*, and *say*), as opposed to attitudes that describe states (such as *believe* and *know*), must embed a clause via a complementizer that provides an accessibility relation relative to the *event* of the embedding predicate. This difference in complementizer choice motivates a different syntax for these two classes of attitude verbs, which is then used to explain a long-standing puzzle in ECM known as the *wager*-class (Postal 1974, 1993, Pesetsky 1992).

### 2. Raising to Object: the *Believe*-class and the *Wager*-class

But there are languages that do not allow R-to-O from infinitives at all, but do appear to allow some of the ‘rescuers’ that the *wager*-class verbs in English do. French (and Italian) has a pattern similar to the English *wager*-class (Kayne (1984), Rizzi (1982), Bošković (1997)). In French, Raising-to-Object from infinitives is not possible (1)a;<sup>1</sup> However, such constructions can be rescued by a subset of the English *wager*-class rescuers, including question and relative operators (b,c) and heavy NP shift (d).

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<sup>1</sup> R-to-O/ECM is allowed in French small clause complements. I will leave small clauses aside for now, since I do not know how they conform to the proposal for attitude ascription adopted in this paper.

- (1) a. \*Je croyais le garçon être arrivé. \*R-to-O  
 I believe the boy (to) have arrived.  
 (Rochette 1988:322(5a))
- b. Qui croyais-tu aimer Anne? Q-operator  
 Who believe you to-love Anne.  
 (Bošković 1997: 129(103a))
- c. Le garçon que je croyais être arrivé. Rel-operator  
 The boy that I believed (to) have arrived.  
 (Rochette 1988: 332(5a))
- d. Pierre croit être doctresses les femmes qu'il a rencontrées HNPS  
 l'année dernière à la Nouvelle Orleans.  
 Pierre believes to be doctors the women he met last year in New Orleans.  
 (Bošković 1997: 133(113))

However, unlike the English *wager*-class, French infinitives under these propositional attitudes do not allow passive raising:<sup>2,3</sup>

- (2) \*Pierre était cru aimer Anne. \*Passive Raising  
 Pierre was believed to love Anne.  
 (Bošković 1997: 130(105))

In this paper, I will concentrate on those *wager*-class rescuers that involve A and A-bar movement (passive raising and Q- and relative-operator movement). (See Moulton 2007 for an account of *wager*-class constructions that incorporates English expletives and HNPS.)

I will defend a traditional account of French infinitival complements, and then extend that picture to English *wager*-class constructions. French 'propositional' infinitives, like those in (1), are often claimed to be CPs (Kayne 1984, Rochette 1988, Bošković 1997).<sup>4</sup> The presence of a CP will prohibit A-movement out of the infinitive, under whatever constraint prohibits A-movement from a CP. I take ECM as an instance of raising-to-object (Postal 1974, Johnson 1991, Runner 1995, Koizumi 1994), and hence a CP will prevent this movement. While deriving such a syntactic constraint isn't straightforward (see Bošković 1997 for one approach), we know that we need such a

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<sup>2</sup> Expletives appear not to be *wager* rescuers in French. Since expletives in French have Case requirements different from English expletives, we expect different conditions on their appearance in infinitives.

<sup>3</sup> Rizzi (1982) reports that passive raising is possible from infinitives as long as the matrix verb is one that can also embed a small clause (and small clause subjects *do* passive raise).

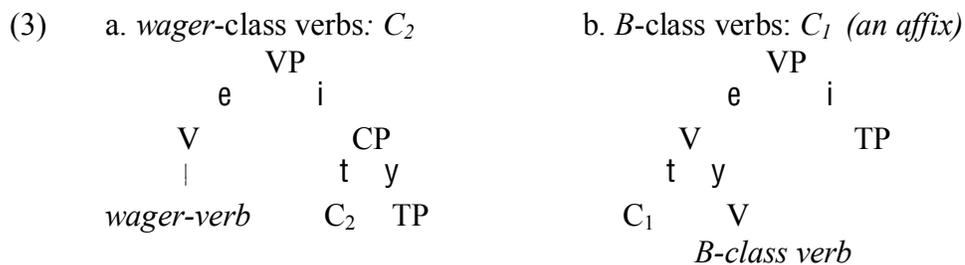
<sup>4</sup> In contrast to English infinitives under *believe* verbs, French allows control, another reason the CP account was adopted in earlier frameworks (see Bošković 1997 for recent arguments). I have not incorporated control into the present account.

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constraint independently. The other consequence of a CP analysis, following an influential proposal by Kayne (1984), is that a CP allows for the kind of *wager*-class rescuers that involve A-bar (question or relative-operator) movement from embedded subject position. Kayne (1984) proposes that elements that undergo A-bar movement can receive case as they pass through the specifier of CP. With such a mechanism A-bar movement of infinitival subjects will be licensed if the complement has a Spec, CP position, correctly deriving the availability of A-bar extraction as a *wager*-class rescuer (English **Error! Reference source not found.c,d,e**) and French (1)b,c,d).

This account, though, appears at first glance not to be suitable for English *wager*-class verbs. For one, English allows passive raising from *wager*-class complements, suggesting that the complement cannot be a CP. The second reason for rejecting this account is that English appears to allow other attitude verbs, those of the *B*-class, to take a non-CP complement. Moreover, as Pesetsky (1992) concludes, the complement type of *B*-class and *wager*-class verbs appears to be the same kind of semantic object.

My claim is that the English *wager*-class complements *are* like French, and my goal is to show that the objections to this account, just outlined, are in fact not problems. With respect to passive raising, I will argue that English passives in **Error! Reference source not found.b** are not verbal passives, and should not be considered part of the *wager*-class paradigm. I will also present evidence that *B*- and *wager*-class verbs select for different kinds of complements, using as motivation some novel evidence from the nature of these verb classes' non-clausal complements. Using a novel semantics for complementizers, I propose that *B*- and *wager*-class verbs require different complementizers to embed propositions. To capture the differences in raising-to-object, I will revive Pesetsky's (1992) complementizer incorporation analysis – recast as a theory about what kinds of complementizers can serve as affixes to verbs: the complementizer that *B*-class verbs embed can affix to the verb but the *wager*-class complementizer cannot. I will provide semantic evidence for why such incorporation is possible for certain complementizers and not others. The basic picture, then, will look like the following: Two different complementizers in English:  $C_2$ , selected by *wager*-class verbs, the other  $C_1$ , compatible with *B*-class verbs, can be an affix.



The result is that since the complementizer that accompanies *B*-class verbs can be an affix, the clausal complement is a TP, which I will assume is transparent to A-movement (and hence allows raising-to-object). This is blocked, however, from *wager*-class complements. In the next section I will motivate these two different complementizers.

### 3. *Wager-class verbs don't select for things with propositional content*

There is a striking difference between *wager-class* and *B-class* verbs when we turn to the kinds of nominal arguments these two classes of verbs take. *B-class* verbs select for nominals, like *rumour*, *story*, or *idea*, that describe things carry propositional content, what I will call 'content nouns':

- (4) a. Pinchwife does not believe the rumor that Horner is impotent because, as he well knows, rumors are unreliable.<sup>5</sup>
- b. To take a simple example, consider the idea that vitamin supplements in pregnancy lead to healthy babies.
- c. David, I don't understand your claim that the argument has nothing to do with probability.
- d. Rita held the belief that Jesus will return again.

*Wager-class* verbs, on the other hand, do not select content nouns (an observation observed, independently of its connection to *wager-class* verbs, by Moltmann 2003).

- (5) a. \*Fred said the rumor that Horner is impotent.
- b. \*We never thought the idea that vitamin supplements in pregnancy lead to healthy babies.
- c. \*I didn't wager the claim that the argument has nothing to do with probability.
- d. \*He alleged the rumour that Homer was happy.
- e. \*Fred claimed the story that Steph was dating Phil.
- f. \*?He yelled his belief that Jesus will return again.

I have compiled a database of roughly 30 *wager-class* verb that reliably pass the syntactic diagnostics for that class, and none of these verbs comfortably take content nouns. (A database can be found at <http://people.umass.edu/keir/DOCverbs.xls>.) The constraint is specific to content nouns. The *wager-class* verbs of speech can take nominals that refer to audible things (6) and many *wager-class* verbs take cognate objects (7):

(6) John said some words/a foul oath/his name

- (7) a. John thought a thought.
- b. He claimed an outrageous claim.
- c. She whispered a nasty whisper.

Moreover, *wager-class* verbs allow a range of DP arguments: *that* and *this*; *wh*-words; and quantifiers like *something* or just *thing*.

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<sup>5</sup> sources (a): "The Country Wife Q & A" <http://www.u.arizona.edu/~atinkham/TCW.html>; (b): "Operational Meaning" <http://deming.eng.clemson.edu/pub/den/files/opermng.txt>; (c): "Evolution Blog" <http://evolutionblog.blogspot.com/feeds/114546640836160477/comments/default>.

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- (8) a. John said/thought/muttered/whispered something.  
b. John said/thought/muttered/whispered that.  
c. What John said/claimed/thought/wagered was that Mary and Donna were dating .

I will assume for now that the expressions in (8) replace clauses, not content nominals (compare to Moltmann 2003). What crucially sets the two classes of verbs apart, though, is the difference in the possibility of a content nominal argument: the *B*-class verbs in (4) select these nouns, while the *wager*-class verbs do not (5). The next task is to investigate the semantics of attitude verbs that *do* take content nouns, because that will allow us to see what the *wager*-class verbs are missing.

### 3.1 Attitude Ascriptions

The standard possible worlds quantification analysis (Hintikka 1962) gives to attitude verbs a lexical meaning that quantifies over worlds. The function, *Dox*, restricts the quantification to the set of worlds compatible with an attitude holder's beliefs (her *doxastic alternatives*).

- (9)  $\llbracket \text{believe}(p)(x)(w) \rrbracket = 1$  iff  
 $\forall w' \in \text{Dox}(x,w): p(w') = 1$

In (9), *believe* selects for propositions. This doesn't allow for the fact that these verbs can also take content nominals as in (4). These are not propositions; they are descriptions of a kind of abstract individual (Chierchia 1984). Following Kratzer (2006), content nominals are predicates of abstract individuals that carry content (variables of such individuals will be subscripted as  $x_c$ ).

- (10)  $\llbracket \text{rumour} \rrbracket = \lambda x_c. \text{rumour}(x_c)$

Content nominals can themselves have clausal complements. Kratzer (2006) proposes that clauses, headed by complementizers such as *that*, introduce quantification over worlds compatible with a content argument (see Stalnaker 1984 on recovering content from individuals). The complementizer selects for a proposition and returns a description of an individual that carries content. The truth of the proposition is evaluated at those worlds compatible with the content argument.

- (11)  $\llbracket \text{that} \rrbracket = \lambda p. \lambda x_c. [\forall w' (\text{compatible}(x_c)(w') \rightarrow p(w'))]$  (Kratzer 2006)

A CP and a content noun NP can then be intersected, as shown below in a NP such as (12)a:

(12) a.  $[\text{NP rumour } [\text{CP that Edna was happy}]]$ .

$\llbracket [\text{CP}] \rrbracket = \lambda x_c. \forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))$

$\llbracket [\text{NP}] \rrbracket = \lambda x_c. [\text{rumour}(x_c) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$

Attitude verbs such as *believe* do not take propositions as their internal arguments, but contentful individuals. *Believe*, then, has the denotation in (13) (the external argument will be added by a separate voice head).

(13)  $\llbracket \text{believe} \rrbracket = \lambda x_c. \lambda e. \lambda w. \text{believe}(x_c)(e)(w)$ <sup>6,7</sup>

When *believe* takes a clausal complement, Kratzer shows that the CP, which as we have seen above is a predicate of contentful individuals, can compose with B-class verbs via the compositional mechanism *Restrict* (Chung and Ladusaw 2004). The CP, as a predicate, restricts the internal argument of *believe*, which then undergoes existential closure. Kratzer's derivation for a clausal complement of *believe* is shown below:

(14) a.  $[\text{VP...believe } [\text{CP that Edna was happy}]]$ .

$\llbracket [\text{CP}] \rrbracket = \lambda x_c. \forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))$

$\llbracket [\text{VP}] \rrbracket = \lambda x_c. \lambda e. \lambda w. [\text{believe}(x_c)(e)(w) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$

$= \exists x_c. \lambda e. \lambda w. [\text{believe}(x_c)(e)(w) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$

Kratzer's strategy for combining clauses with attitude verbs has the advantage of accounting for the non-clausal arguments of B-class verbs. However, this strategy crucially requires that the predicate take a content noun as an internal argument. Given the facts about *wager*-class verbs – which do not take content nominals – we cannot employ the same strategy here.

While *wager*-class verbs do not take content nominals, the verbs themselves describe *events* that have content. The events of *claiming* and *thinking* and *saying* have content, as do states of *belief* and *knowing*. The mental activity of *thinking* is compatible with a set of worlds which constitutes the content of *thoughts* and *claims* (Stalnaker 1984). Not all verbs are associated with propositional content. A verb like *love*, for instance, does not describe a state that has propositional content. Similarly for garden variety eventive verbs that don't describe mental or speech activities. We can design a complementizer, then, much like the one Kratzer proposes for *believe*, that picks out the

<sup>6</sup> Here, I provide predicates with an eventuality and a world argument.

<sup>7</sup> This formula does not capture the belief-ascription: we still need to get a hold of an attitude holder's doxastic alternatives independently of the content noun. It may simply be that B-class verbs have a 'built-in' accessibility relation – which is just the standard account (Hintikka 1962). I leave this to future research, noting that a more thorough understanding of how these verbs select content nouns might help understanding issue surrounding complementizer incorporation which I address in the last section of the paper.

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worlds compatible with the content of an *event*. I will call this the Event-Relative Complementizer, or  $C_2$ . (See Hacquard (2006) for a proposal for making modal bases relative to an event.)

$$(15) \quad \llbracket C_2 \rrbracket = \lambda p. \lambda e. [\forall w' (\text{compatible}(e)(w') \rightarrow p(w'))]$$

*Wager*-class verbs will then be intransitive verbs (the external argument will be introduced separately (Kratzer 1996)):

$$(16) \quad \llbracket \text{think/wager/claim/say} \rrbracket = \lambda e. \lambda w. \text{think}(e)(w)$$

We now have all the pieces we need to compose CPs, headed by Event-Relative Complementizers, with *wager*-class verbs. The composition of the Verb with CP proceeds by intersection of two properties of events.

$$(17) \quad [\text{VP} \dots \text{think} [\text{CP} \text{ that Edna was happy}]]$$

$$\llbracket [\text{CP}] \rrbracket = \lambda e. \forall w' (\text{compatible}(e)(w') \rightarrow \text{happy}(\text{Edna})(w'))$$

$$\llbracket [\text{VP}] \rrbracket = \lambda e. \lambda w. [\text{think}(e)(w) \wedge [\forall w' (\text{compatible}(e)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$$

The VP in (17) is a property of *thinking* events such that, for all worlds compatible with that event, the embedded proposition is true at those worlds.

For both *B*-class or a *wager*-class verbs to take a propositional complement, a complementizer is needed. With the syntactic assumptions outlined at the beginning of this section, this will rule out A-movement but allow the A-bar *wager*-class rescuers. It will also, however, rule out passive raising, as well as raising to object for *B*-class verbs, both contrary to fact. In the next section I will provide an account of raising to object that makes crucial use of the difference between the complementizers in *B*- and *wager*-class construction. Then I will provide arguments that the passive raising cases are not verbal passives, and suggest that they should be given a separate treatment.

### **3.2 B-class verbs: Affixal Complementizers**

In order to allow for ECM/raising-to-object, Pesetsky (1992) proposes that complementizers in English can undergo incorporation (affixation) into the embedding verb. At the time, incorporating a complementizer created, with the help of conditions on government, a transparent complement clause from which A-movement could proceed. Pesetsky, following Stowell (1981), also proposes that null finite complementizers are affixal. Affixal complementizers cannot be extraposed:

- (18) a. Fred didn't believe Mary was a great person.  
b. \*Fred didn't believe at any point Mary was a great person. \**extraposed null C*

A similar pattern holds for R-to-O complements: extraposed R-to-O is not possible (19)b, suggesting that the complementizers that make R-to-O possible are complementizers that must incorporate (or be verbal affixes).

- (19) a. Fred didn't believe Mary to be a great person.  
b. \*Fred didn't believe at any point Mary to be a great person.<sup>8</sup>

On the complementizer incorporation account, extraposed clauses headed by null complementizers are out because the incorporated complementizer will fail to properly bind its trace after the CP undergoes extraposition.<sup>9</sup> Only non-incorporating complementizers, then, will be allowed to head extraposed clauses: they do not involve movement and hence will leave traces that would be ruled out by the proper binding condition. The infinitival complements of *wager*-class verbs are not subject to the same requirements: these infinitives, like control infinitives, can extrapose:

- (20) Which boy did you claim at one time to be the best right-winger.

But (20)b is not a control construction. It is a *wager*-class construction with A-bar movement. The complement is, by hypothesis, a CP. The difference between *wager*-class and R-to-O infinitives is that the complementizer responsible for embedding clauses under *wager*-class verbs is not a complementizer that has to incorporate. The complementizer that allows for R-to-O, on the other hand, must be affixal. It couldn't be any other way: to allow for A-movement, the complement clause must be transparent, a property we have identified with TPs, not CPs. The difference in extraposition supports this view.

I want to defend a version of Pesetsky's complementizer incorporation for *B*-class R-to-O constructions. This version postulates that certain complementizers can be verbal affixes. What's crucial, though, is that only the Content-Noun Complementizer can be a verbal affix, while the Event-Relative Complementizer is not.

If the complementizer affixes to V then the clausal complement can be a TP complement (of type <st>), and as such renders the clause transparent to A-movement. There is a semantics that builds this structure compositionally. If the Content Noun Complementizer composes with the verb, the operation *Restrict* can apply to the individual argument ( $\lambda x_c \dots$ ) shared by *believe* and *C*, before the proposition argument is saturated:

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<sup>8</sup> I assume that (i) is not a case of extraposition, but rather that raising can move the DP past matrix material (see e.g. Runner 1995).

(i) John believed Mary at one point/sincerely to be the best.

<sup>9</sup> Bošković and Lasnik (2003) argue that the complementizer incorporation story (along with the proper binding condition) does not adequately account for null finite complementizers. I will leave these considerations for future study, noting that the complementizer available to *B*-class verbs, that allows for R-to-O, is an affixal complementizer.

- (21)  $[_{VP} [_V C+believe] [_{TP} \text{Edna to be happy}]]$
- $[[ C_1 ]]$                      $= \lambda p. \lambda x_c. [\forall w' (\text{compatible}(x_c)(w') \rightarrow p(w'))]$   
 $[[ \text{believe} ]]$                  $= \lambda x_c. \lambda e. \lambda w. \text{believe}(x_c)(e)(w)$   
 $[[ [_V C+believe] ]]$          $= \lambda p. \lambda x_c. \lambda e. \lambda w. [ \text{believe}(x_c)(e)(w) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow p(w'))]]$   
 $[[ [VP] ]]$                      $= \lambda x_c. \lambda e. \lambda w. [ \text{believe}(x_c)(e)(w) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$   
 $= \exists x_c. \lambda e. \lambda w. [ \text{believe}(x_c)(e)(w) \wedge [\forall w' (\text{compatible}(x_c)(w') \rightarrow \text{happy}(\text{Edna})(w'))]]$

The result is a *C+belive* head that selects for TPs, a category we have assumed to be transparent to A-movement.<sup>10</sup> The hypothesis, then, is that the Content-noun complementizer can be an affix (which can appear with *B*-class verbs), but the Event-relative complementizer cannot (which appears with *wager*-class verbs, and optionally with *B*-class verbs). While this may appear ad-hoc presently, I turn now to some evidence for this distribution from the impossibility of affixal complementizers in nominalizations.

Nominals do not allow ECM (22)a (Kayne 1984). Null complementizers are not allowed in complements of nominals either (22)b (Stowell 1981).

- (22) a. \*John's belief Mary to be a genius.  
 b. \*John's belief Mary was the culprit.

Pesetsky (1992) proposes that the source of these two effects is the same: nouns do not allow null complementizers. Pesetsky proposes that complementizers cannot incorporate to nouns because of a general constraint, following Myers (1984), that rules out further derivation after a zero derivational affix:

- (23) \*  $[_{nominalizer} [ \emptyset_{comp} [ V ] ]]$  (Pesetsky 1992:36)

Assume, then, that nominalization of this sort are always root nominalizations, and a morphological principle rules out (26). But then we are left with the question of why the null complementizer cannot affix *after* nominalization. I propose there is a semantic reason for why this is ruled out. Nominals derived from *B*-class verbs no longer allow for internal arguments (24)a, in contrast to other derived nominals (24)b.<sup>11</sup>

- (24) a. \*John's belief of that story.                    *cf. John believed the story.*  
 b. The Roman's destruction of the city.                *cf. The Romans destroyed the city.*

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<sup>10</sup> Of course, the finite-clause selecting *C* (*that*) can also be null. Conditions on this null-*C* are different than those conditions that involve affixal *C*, since *wager* verbs show that the ability to select a null *that* (*John said he was happy*) does not travel with the ability to be selected by the incorporated complementizer (e.g. ECM).

<sup>11</sup> I owe this observation to a discussion with Kyle Johnson.

Moreover, the nominal itself refers to the things believed:

(25) John's belief was crazy (= *the content of what he believed was crazy*)

This suggests that nominalization in these cases closes off the internal argument to any further composition after nominalization. I take the nominalizer to be an existential quantifier over the *content* argument of *believe*. The denotation of nominal *belief* is below:

(26)  $\llbracket [\text{noun belief}] \rrbracket = \lambda e. \exists x. \text{believe}(x)(e)$

Since the individual/content argument of the predicate *believe* is inaccessible for further composition, the Content-Noun Complementizer cannot be used (recall it *restricted* this argument (see (21)). This means that nominals can never just take a TP (a proposition) since they will never allow the Affixal Complementizer. But, the Event-Relative Complementizer (which doesn't allow R-to-O due to syntactic locality) is fine with nominals (as long as control constrictor is used), since it is not dependent on an internal argument, but rather the eventuality argument (which is available for composition):

(27) a. John's claim to be a doctor.  
b. John's presumption to be the first in line.

The nominalization facts provide evidence that the Event-relative complementizer is not affixal, while the content-noun complementizer can be, and only when it is an affix will a TP complement be available (and hence R-to-O).

#### 4. Passive Raising Constructions aren't Passives

There remains the possibility of passive raising as a *wager*-class rescuer. So far the account prohibits all types of A-movement from *wager*-class complements, since it gives them the same syntax as French. In this section, I want to suggest that the passive raising cases (see **Error! Reference source not found.**b) exhibit curious restriction that do not follow if these are simply verbal passives. To do that I need to show that *wager*-class verbs are eventive.

*Wager*-class verbs are eventive, in contrast to *B*-class verbs which are stative.<sup>12</sup> *Wager*-class verbs are all compatible in progressive aspect, something not available to stative (i.e. *B*-class) attitude verbs:

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<sup>12</sup> Pesetsky (1992) claims that the *wager* paradigm is subject to the following correlation: (Animate) Agentive verbs cannot ECM (Pesetsky 1992:146(560)). Bošković (1997) derives the *wager*-class facts by accounting for this correlation in terms of conditions on Economy in the way accusative case is licensed in the presence of external arguments. Bošković's analysis requires that Agents pass through two theta-marking positions.

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- (28) a. I've been saying/claiming/thinking that for years. *wager verb*  
b. \*He was probably believing that the police wouldn't find him *B-class verb*
- When passivized, we do not expect anything special to happen to *wager-verbs*' lexical aspect. But this is not what we find. In the passive raising construction, *wager-class* verbs behave like statives: they cannot appear in the progressive.
- (29) a. \*The suspect was being thought to be on the run.  
b. The suspect was thought to be on the run.
- (30) a. \*The suspect was being said/claimed/wagered/whispered to be in cahoots with the local police.  
b. The suspect was said/claimed/wagered/whispered to be in cahoots with the local police.

There is no general prohibition against progressives in (eventive) verbal passives, even for those verbs that take clausal complements:

- (31) a. Fred was being accused of being in cahoots with the local police.  
b. It is just now being discovered that red wine isn't that much of a benefit.

Crucially, though, *Q-* and *rel-movement* (those *wager-class* rescuers accounted for by the CP hypothesis) are fine with the progressive, showing that the *wager-class* paradigm does not as a whole require a derived stative:

- (32) The woman we have been claiming/thinking/saying to be responsible is in fact innocent.

I will not provide an analysis of the passive raising cases here. What suffices for now is the fact that these verbs are not verbal passives, and so they could be understood differently. One hypothesis is that they are adjectival passives, or at least derived statives of some sort. Now, passive *wager-class* verbs allow *by-phrases*. Postal (1974) notes, however, that passivized *wager-class* verbs allow *by-phrases* of a limited sort: general 'agents' are possible, but not Agents that would pick out individuated events.

- (33) a. The suspect was thought \*?by the Officer/by many to be in Kansas.  
b. The suspect was said \*?by the police/by many to be in Kansas.

Moreover, the presence of *by-phrases* does not rule out an adjectival-analysis of the raising cases. Many adjectival passives allow *by-phrases*, and they exhibit the same gradience in acceptable *by-phrases* as the passivized *wager-class* verbs in (33). Grimshaw (1990), citing Zubizarreta (1987), discusses how *by-phrases* for adjectival passives tend to be more 'generic':

- (34) a. The island was uninhabited by humans/\*by the woman.  
b. The jacket was untouched by human hands/\*by Bill.  
c. These facts remain unexplained by current theories/\*by your theory.

Whatever the analysis of passive raising is, it should be kept apart from the other *wager*-class rescuers, which do not require such alterations to the aspectual interpretation of these verbs.<sup>13</sup>

## 5. Conclusion

Based on selectional differences between *B*-class and *wager*-class predicates, I have argued for two different kinds of complementizers, which recover propositional content from different types of arguments: the event in the case of *wager*-class verbs, the content-object in the case of *B*-class verbs. This allowed us to state (with some evidence from nominalization and extraposition) that the Content-Noun complementizer was affixal (thus allowing the embedded clause to be a TP, transparent to A-movement), while the Event-Relative Complementizer, which embedded *wager*-class verbs' clausal complements, was not. This in turn allowed us to locate the unavailability of raising-to-object in *wager*-class constructions in the fact that the complement was a CP.

The approach to complementation I have taken has consequences for a more general understanding of the kinds of constraints on predicate meanings and embedding in general. As argued here, attitude verbs do not select for higher types (i.e. propositions). Instead, propositions are factored into the composition indirectly, via complementizers. The idea that there is a general constraint that predicates only select for low types has been explored by Chierchia (1984). This study makes the case that the job of embedding propositions (i.e. selecting for higher types) is done by functional heads like complementizers.

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<sup>13</sup> Why French does not allow passive raising may be related to the fact that epistemic adjectives (like *certain*) are not raising but control in French (the preposition *de* diagnoses this in (i) as well as the fact that only the wide scope reading of the quantifier is available here).

(i) Quelqu'un est sûr/certain de gagner à la loterie.  
Someone is certain/sure to win the lottery.

(Leger 2006, p.c.)

∃ > certain, \*certain > ∃

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