

# Infinitives are Tenseless

Susi Wurmbrand\*

## 1 Introduction

This paper argues against the presence of infinitival tense. Infinitives are traditionally viewed as ‘tenseless’ clauses. A common view since Stowell (1982), however, holds that there are two types of infinitival complements—tensed and tenseless infinitives—and that the presence vs. absence of infinitival tense correlates with different syntactic structures or properties (see e.g., Pesetsky 1992, Pesetsky and Torrego 2004, Bošković 1996, 1997, Martin 1996, 2001, Landau 2000, Wurmbrand 2001). While there is some disagreement about the exact classification of tensed vs. tenseless infinitives (see the Table below), future irrealis infinitives such as *Leo decided to go to the party tomorrow* are uniformly considered to be ‘tensed’ infinitives. This paper will thus concentrate on future irrealis infinitives and the conclusion will be that even these types of infinitives lack semantic tense.<sup>1</sup>

	Null Case	Pesetsky (& Torrego)	Landau/Wurmbrand
Future irrealis	[+tense]	[+tense]	[+tense]
Implicatives	[+tense]	[-tense]	[-tense]
<i>try</i>	[+tense]	[+tense]	[-tense]
Factives	[+tense]	[-tense]	[+tense]
Propositional	[-tense]	[-tense]	[+tense]

## 2 Future ‘Tense’

To determine the tense properties of future infinitives, I will first summarize a standard view on (finite) future statements. Following Abusch (1985) and many others, future is not a simple tense but composed of two parts: a true

---

\*This paper originated in a seminar taught with Yael Sharvit. For discussion of the material presented here, I am grateful to Jonathan Bobaljik, David Pesetsky, Paul Portner, Yael Sharvit, as well as the audiences at the workshop *New Horizons in the Grammar of Raising and Control* (LSA Summer Institute 2005), Georgetown University, the *Jersey Syntax Circle* in Princeton, PLC 30, and WCCFL 25.

<sup>1</sup>This seems to be the common (often implicit) assumption in many semantic works on infinitives (see for instance see Ogihara 1996, Abusch 1997, Enç 2004). The purpose of this paper is to provide further evidence for lack of tense in infinitives and against certain alternative accounts involving infinitival tense.

tense part, namely present tense (henceforth PRES), plus the abstract modal *woll* which contributes a modal force yielding posteriority (see e.g., Thomason 1970, Condoravdi 2001, Copley 2002, Kaufmann 2005 for definitions of *woll*). Morphologically, PRES + *woll* is then spelled out as *will*. The composite structure of the future element *will* is motivated by the following properties which I'll summarize in turn: i) the *indexical* or *absolute* nature of the future and ii) certain *sequence of tense* (SOT) effects.

As is well-known, English PRES is indexical/absolute in that it must be evaluated with respect to the utterance time (Enç 1987, Abusch 1988 *et seq.*, Ogihara 1996, Schlenker 1999). This is illustrated by the so-called *double access* reading in (1)a. Somewhat simplified, in English present-under-past contexts, the embedded time (the time of the pregnancy in (1)a) must contain both the matrix time (the finding out time in (1)a) and the utterance time. An interpretation where the time of pregnancy overlaps the finding out time but does not reach up to the utterance time is impossible (this reading is possible, however, in languages where PRES is defined as a *relative* tense). Importantly for the purpose of this paper, future contexts show the same absolute nature. Examples such as (1)b only allow an interpretation where the embedded time is after the utterance time. An interpretation where the time of pregnancy is after the finding out time but before the utterance time is not available. The absolute nature of sentences involving *will* follows straightforwardly if it is assumed that *will* decomposes (syntactically/semantically) into two parts, a future modal and an indexical/absolute PRES tense.

- |  |          |
|--|----------|
| (1) a. Leo found out that Mary is pregnant.  | absolute |
| b. Leo found out that Mary will be pregnant. | absolute |

The second argument for the PRES component of *will* comes from the phenomenon of SOT (see Dowty 1982, Abusch 1988 *et seq.*, Ogihara 1996 and many others). SOT refers to contexts in which a morphologically realized tense is semantically vacuous. For instance in (2)a, the embedded clause can receive a “non-past” interpretation—i.e., an interpretation where the pregnancy time is not in the past with respect to the finding out time but rather overlaps it. I will follow a deletion approach to SOT such as the one proposed in Ogihara (1996). According to this view, a tense may delete at LF if it is in the scope of another tense with the same value (e.g., the embedded PAST in (2)b which is in the scope of another PAST). Semantically, the deleted tense variable then gets bound by a  $\lambda$ -operator (cf. (2)c). Following Heim (1994), the bound tense variable is then interpreted as a relative ‘now’, which yields the desired simultaneous (i.e., non-past) interpretation in (2) (i.e., the pregnancy time will be a ‘now’ relative to Leo’s finding out time).

- (2) a. Leo found out that Mary was pregnant  
 b. [*Leo* PAST *find out* [ *that Mary* ~~PAST~~ *be pregnant* ]]  
 c. [*Leo* PAST *find out*  $\lambda 0$  [ *Mary* 0-*be pregnant* ]]

Returning to future statements, it has been observed that future contexts trigger SOT for embedded PRES. This is illustrated in (3)a which allows two temporal interpretations: the time of walking could either overlap the utterance time or just the time of seeing. The former interpretation arises if *is walking* is interpreted as PRES (cf. (3)b). The latter interpretation, on the other hand, shows that the embedded tense is not interpreted as PRES but rather as a zero tense (a ‘now’ relative to the time of John’s seeing). Assuming that future consists of PRES plus *woll*, it follows without further assumptions that (3) is a SOT context—i.e., a context which allows deletion of the embedded PRES tense since it is in the scope of another PRES tense.

- (3) a. John will see the unicorn that is walking. [Ogihara 1996:82]  
 b. PRES *woll see* [<sub>NP</sub> PRES *walk* ]  
 c. PRES *woll see* [<sub>NP</sub> ~~PRES~~ *walk* ]

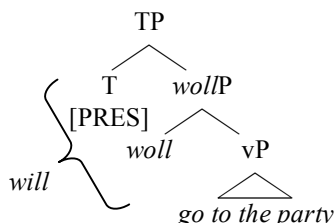
### 3 Infinitival Future $\neq$ Finite Future

As we will see in this and the next section, future infinitives differ crucially from finite future statements. The first difference is illustrated by the minimal pairs in (4) and (5): while finite future is absolute (i.e., the time of the embedded event must be after the utterance time), infinitival future is *relative*—i.e., the embedded event can occur before the utterance time, as long as it is after the time of the matrix event. Note that this property holds in both control (cf. (4)) and ECM infinitives (cf. (5)).

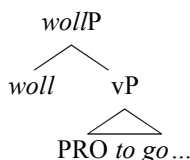
- (4) a. Leo decided a week ago that he will go to the party (\*yesterday).  
 b. Leo decided a week ago to go to the party yesterday.  
 (5) a. According to a report I read last week, it was expected that the bridge will collapse (\*yesterday).  
 b. According to a report I read last week, the bridge was expected to collapse yesterday.

I would like to suggest that the difference between finite and non-finite future arises due to the presence (finite) vs. absence (non-finite) of tense. PRES tense in (6)a guarantees that finite future is absolute, whereas the lack of tense in (6)b has the effect that non-finite future is relative.

## (6) a. Finite future



## b. Non-finite future



There are two alternatives to the view that infinitives are tenseless. First, one could suggest that future infinitives do involve PRES tense, however, that infinitival PRES is defined differently than finite PRES (i.e., infinitival PRES is *relative* such as, for instance, PRES in Japanese or Hebrew). Second, one could assume that infinitival future does not correspond to *will* but rather to *would* (Martin 1996, 2001). As shown in (7), in contrast to *will*, *would* is relative in English since it does not require the future event to be after the utterance time. The common explanation for this fact is that *would* is composed of PAST plus *woll*, and that PAST is relative in English (see Abusch 1988). In the next section, I will provide evidence against both the presence of PRES<sub>REL</sub> and the presence of a silent *would* in infinitives.

(7) a. Kim decided a week ago that she would go to the party  
yesterday.

b. According to a report I read last week, it was expected that the  
bridge would collapse yesterday.

## 4 Sequence of Tense in Infinitives

The arguments against the alternatives presented above come from SOT in infinitives. Let us look in more detail at the conditions under which SOT may apply. Following Ogihara (1996), I assume the SOT rule in (8). The important part of the SOT rule is the locality condition: essentially, SOT can only apply if there is no tense between the trigger and the target of deletion.

(8) *The SOT rule*

[Ogihara 1996:134]

If a tense feature B is the local tense feature of a tense feature A at LF, and A and B are occurrences of the same feature (i.e., either [+past] or [+pres]), A and the tense associated with A (if any) are optionally deleted. N.B.: (i) The tense features include [+past] and [+pres] and nothing else. (ii) A tense feature A is “in the scope” of a

tense feature B iff B is associated with a common noun and asymmetrically c-commands A, or B is associated with a tense or a perfect and asymmetrically commands A. (iii) A tense feature B is the local tense feature of a tense feature A iff A is “in the scope” of B and there is no tense feature C “in the scope” of B such that A is “in the scope” of C.

This locality effect is illustrated in (9) (see Ogihara 1996:93 for a different example; to facilitate parsing of these examples I underline the verbal elements). Examples such as (9)a do not allow a non-past reading of the most deeply embedded clause. More specifically, (9)a cannot have the interpretation: *John promised me to say to his mother tomorrow: “We are (now) having our last meal together.”* Thus, SOT cannot apply in (9)a. This follows from the SOT rule. As shown in (9)b, the lowest PAST is not immediately under the highest PAST; the PRES tense of *will* intervenes between the two PASTs, and therefore SOT is blocked.

- (9) a. John promised me yesterday that he will tell his mother tomorrow that they were having their last meal together (when...).
- b. [ PAST *promise* [ PRES *woll tell* [ PAST *meal*

#### 4.1 Against a Relative PRES in Infinitives

Turning to infinitives, we find a crucial difference. The example in (10)a (which differs from (9)a only in that the middle clause is non-finite) allows a simultaneous non-past interpretation (see also Ogihara 1996, Abusch 1997, Enç 2004 for other examples to the same effect). The interpretation of (10)a can be: *John promised me to say to his mother tomorrow: “We are (now) having our last meal together.”* The assumption that infinitives are tenseless (cf. (10)b) correctly predicts this interpretation: Since there is no tense intervening between the triggering PAST and the target PAST, the latter can delete. The resulting interpretation then is an interpretation where the time of the meal is a ‘now’ relative to John’s telling. If, on the other hand, infinitives were to involve a relative PRES (cf. (10)c), the wrong prediction would be made: PRES<sub>REL</sub> should block SOT, in exactly the same way in which PRES blocks SOT in (9), which is not the case.

- (10) a. John promised me yesterday to tell his mother tomorrow that they were having their last meal together.
- b. [ PAST *promise* [Infinitive  $\emptyset$  *woll tell* [ ~~PAST~~ *meal*
- c. [ PAST *promise* [Infinitive PRES<sub>REL</sub> *woll tell* [ PAST *meal*

The difference in interpretation in the minimal pair in (9) and (10) hence provides evidence against the presence of any type of PRES tense in infinitives.<sup>2</sup>

## 4.2 Against a Silent *would* in Infinitives

Let us now turn to the behavior of *would*. As noted by Abusch (1988) among others, *would* triggers SOT for embedded PAST. This is illustrated in (11) which can have the interpretation: *John promised me to say to his mother tomorrow: "We are (now) having our last meal together."* Since the lowest PAST is in the scope of another PAST (the PAST of *would*), SOT is correctly predicted to be possible (see (11)). The resulting interpretation is then one where the time of the meal is a 'now' relative to the time of John's telling (exactly as in (10)).

- (11) a. John promised me yesterday that he would tell his mother tomorrow that they were having their last meal together.  
 b. [ PAST *promise* [ PAST *woll* tell [ ~~PAST~~ *meal*

The situation is, however, more complex in cases involving embedded temporal *would* such as (11). The paraphrase given above for (11) shows that the PAST of *would* is also deleted (i.e., the telling time has to be after the promising time). This is, in fact, a general property of temporal *would* (however, it is not true for conditional *would* or *would* used in 'story telling' contexts such as ... *and then he would drink a whole bottle of milk*). The examples in (12) further illustrate this. Consider first PAST under PAST sentences such as (12)a. As pointed out above, these contexts are ambiguous between a true PAST interpretation (i.e., a non-SOT interpretation where the pregnancy time is before the finding out time) and a simultaneous non-PAST interpretation (i.e., a SOT interpretation where the pregnancy time overlaps the finding out time. Examples such as (12)b, on the other hand, which involve *would* under PAST, only have the non-PAST (SOT) interpretation in (12)c—i.e., an interpretation where the pregnancy time is after (due to *woll*) the relative 'now' which corresponds to the finding out time. The sentence cannot refer to a situation where the pregnancy is after some time in the PAST of the finding out time but still before the finding out time (a scenario which should

---

<sup>2</sup>One could, of course, define SOT such that PRES<sub>REL</sub> is somehow exempt from the SOT rule. However, this seems to then just restate the fact that infinitival tense is invisible (i.e., missing) in all contexts where we would expect a tense to show certain effects (i.e., PRES<sub>REL</sub> would be a vacuous element, a kind of diacritic, the presence of which could neither be confirmed nor disconfirmed).

be possible if the structure in (12)d were an option). Thus, in order to correctly derive the meaning of (12)b, PAST must be obligatorily deleted.

- (12) a. John found out that Mary was pregnant. SOT/no SOT  
 b. John found out that Mary would be pregnant. SOT/\*no SOT  
 c. [<sub>Matrix</sub> PAST *find out* [<sub>CP</sub> ~~PAST~~ *woll pregnant* SOT  
 d.\*[<sub>Matrix</sub> PAST *find out* [<sub>CP</sub> PAST *woll pregnant* \*no SOT

I will thus assume that SOT is obligatory in contexts involving temporal (i.e., non-conditional, non-story telling) *would*. This assumption is further motivated by examples such as (13) in which temporal *would* is embedded under a non-PAST matrix tense. Crucially, examples of this sort are ungrammatical (it is again important to point out that this only holds for temporal *would*; the sentence is fully grammatical if *would* is conditional). The ungrammaticality of (13) follows from the assumption that *would* requires obligatory SOT. If SOT does not apply, this special requirement of *would* would not be met. However, since (13) is not a SOT environment (PAST is under PRES in (13)b and not under PAST as required by the SOT rule), deletion is not allowed. Thus, there is no way to satisfy both the special requirement of *would* and the SOT rule.

- (13) a.\*John will promise me tonight that he would tell his mother tomorrow that... [OK if conditional]  
 b.\*[<sub>Matrix</sub> PRES *woll promise* [<sub>Infinitive</sub> PAST/~~PAST~~ *woll tell*...

Although an explanation of this special *would* property is still outstanding, it seems that for the purpose of this paper it is sufficient to simply state it as an assumption. Let us now finally return to infinitives. The example in (13) should be contrasted with the example in (14)a. Note first that the only difference between (13) and (14)a is the finiteness of the middle clause. Crucially, (14)a is fully grammatical. This fact clearly shows that it cannot be assumed that infinitives involve a silent *would*. If this was the case, it would not be clear why (14)a is grammatical in contrast to (13). Moreover, the interpretation of (14)a indicates once more that there is no tense in these infinitives. Examples such as (14)a cannot receive the interpretation: *John will promise me tonight to say to his mother tomorrow: "We are (now) having our last meal together."* Under the assumption that infinitives lack tense, (14)a, which is schematized in (14)b, does not constitute a SOT context. Since embedded PAST is not in the scope of another PAST, SOT is correctly predicted to be blocked, and hence, (14)a/b will only receive a true PAST interpretation. If, on the other hand, infinitives were to involve a silent

would—i.e., a PAST as in (14)c (and if one could somehow get around the special *would* requirement problem), it seems that the prediction would be that SOT should be possible since the deepest embedded PAST would be in the scope of another PAST. However, this is not correct.

- (14) a. John will promise me tonight to tell his mother tomorrow that they were having their last meal together (when...).
- b. [ PRES    *woll*    *promise* [ Ø        *woll*    *tell*    [ PAST    *meal*
- c. [ PRES    *woll*    *promise* [PAST    *woll*    *tell*    [ ~~PAST~~    *meal*

To conclude, the interpretation of the temporal properties of infinitives strongly points towards the conclusion that infinitives lack tense. Tenseless structures correctly predict that infinitival ‘tense’ is non-deictic/relative and that infinitives do not participate in the computation of SOT.

## 5 The Syntax of Tenseless Infinitives

In this section, I will discuss some aspects of the syntax of infinitives and provide one further piece of evidence for the lack of a tense domain in (certain) infinitives.<sup>3</sup> The argument will come from the distribution of eventive predicates, which have previously been argued to provide evidence *in favor of* infinitival tense (see Pesetsky 1992, Bošković 1996, 1997, Martin 1996, 2001). I will show, however, that the arguments presented in the literature are not conclusive, and that on further inspection, the distribution of eventive predicates, in fact, provides evidence against infinitival tense.

As shown in (15), eventive predicates (roughly, non-stative, individual level predicates) are possible in future infinitives such as (15)a but not in simultaneous infinitives such as (15)b. (15)b can only receive a generic/habitual interpretation; to express an eventive interpretation, the infinitive has to be in the progressive form in English (15)c). Following Enç (1991), Pesetsky (1992), Bošković (1996, 1997), and Martin (1996, 2001) assume that eventive predicates contain an event variable which must be bound by a modal or temporal operator other than PRES. The conclusion reached in these works is then that the difference between (15)a and (15)b is a difference in tense: (15)a involves tense whereas (15)b lacks tense.<sup>4</sup>

<sup>3</sup>For reasons of space, I cannot present the full picture here. The reader is referred to Wurmbrand (2006) for a more elaborate discussion of the syntax of infinitives.

<sup>4</sup>The authors mentioned in the text also conclude that all control infinitives are tensed (and hence allow eventive predicates) and all ECM/raising infinitives are



- (15) a. Leo decided to sing in the shower right then.  
 b. Lina believes Leo to sing in the shower (\*right now).  
 c. Lina believes Leo to be singing in the shower right now.

Looking more closely at what licenses eventive predicates, however, casts some doubt on the conclusion that tense must be present whenever eventive predicates are licensed. While it is true that eventive predicates are licensed in PAST and future but not in PRES contexts in English (see (16)), this does not entail that it is tense that binds the event variable in (15)a and (16)c. Assuming that *will* is composed of PRES + *woll* and that, for whatever reason, PRES cannot bind the event variable (cf. (16)a), the natural conclusion is that it is *woll* that is responsible for the licensing of eventive predicates in future contexts (see also Pesetsky 1992 for a similar but different implementation).

- |   |         |
|---|---------|
| (16) a. Leo sings in the shower (*right now). | PRES: * |
| b. Leo sang in the shower right then.         | PAST: ✓ |
| c. Leo will sing in the shower right then.    | FUT: ✓  |

This conclusion, however, means that there is no evidence for tense in future infinitives. All we can conclude is that future infinitives involve *woll*, which is what I suggest (cf. (17)).<sup>5</sup> Note that the distinction between tense and *woll* is not just a notational difference. As we have seen in the previous sections, the important point is that finite future and infinitival future are different in that the latter lacks a crucial part of the future interpretation, namely the tense part.

- (17) *Leo decided* [woll;<sub>i</sub> [<sub>e<sub>i</sub></sub> *to sing in the shower*]<sub>eventive</sub>]

The assumption that future infinitives involve *woll* provides a straightforward account for the possibility of eventive predicates. What about simul-

---

tenseless (and hence prohibit eventive predicates). However, this is empirically incorrect: both types of constructions allow eventive predicates (see the ECM example in i.; evidence for the claim that i. is an ECM construction is presented in Wurmbrand 2005), and both types of constructions prohibit eventive predicates in certain contexts (see the control example in ii.).

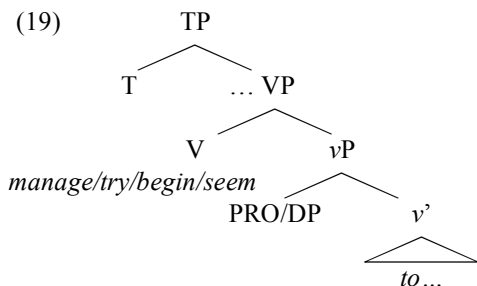
- i. The printer is expected to work again tomorrow.
- ii. Leo claims to play the Marseillaise (\*right now).

<sup>5</sup>An interesting question is whether *woll* is represented syntactically or whether it is simply built into the meaning of the selecting predicate (see for instance Katz 2001, 2004). In Wurmbrand (2006), I provide some initial arguments for the syntactic presence of *woll*.

taneous infinitives? Although certain simultaneous infinitives (e.g., (15)b and the control example in ii. in fn. 4) indeed prohibit eventive predicates, which is correctly predicted if these infinitives lack both tense and *woll*, this is not always the case. Eventive predicates are perfectly fine in infinitives combining with implicative predicates such as *manage* in (18)a, aspectual predicates such as *begin* (whether control [(18)b] or raising [(18)c]), and verbs like *try* ((18)d). Note that all examples in (18) are incompatible with a future interpretation, and hence cannot be assumed to involve *woll*.

- (18) a. Leo managed to sing in the shower (\*tomorrow).  
 b. Leo began to sing in the shower (\*tomorrow).  
 c. The tower began to fall over (\*tomorrow).  
 d. Leo tried to sing in the shower (\*tomorrow).

Does this mean then that these infinitives involve tense? My answer will again be negative. An important generalization about the class of predicates in (18) is that these are the typical predicates triggering *restructuring* or *clause union* in numerous languages (see for instance Rizzi 1978). One account of restructuring (see Wurmbrand 2001 and references therein), is that the transparency effect found in these types of infinitives results from a truncated structure—i.e., *restructuring infinitives lack, to different degrees, clausal functional projections*. I propose to extend this view to the simultaneous infinitives in (18). In particular, I suggest that there is a 1:1 syntax-semantics mapping in that the lack of tense (as argued in the previous sections) corresponds to the lack of a TP in these infinitives (and, of course, the lack of a future orientation corresponds to the lack of a *woll*P). Hence, these infinitives lack the functional domain above the *vP* (see (19)).



Under a structure such as (19), there is only one tense domain which is ‘shared’ by both the matrix and the embedded predicates. I argue that this has (at least) two welcome results. First, as there is no temporal operator in

the infinitive, it follows that the infinitive receives a simultaneous interpretation. Second, we now have an account of the possibility of eventive predicates in (18): The event variable of an embedded eventive predicate can be bound by the matrix tense. This makes the following prediction: If the *matrix* predicate does not involve an eventive licenser, *embedded* eventive predicates should not be licensed. Surprisingly, this is true as shown in (20) (see Martin 2001).

- (20) a. *Leo seems to sing in the shower (\*right now).*  
       cf. *Leo seems to be singing in the shower right now.*  
       b. *Leo seemed to sing in the shower (right then).*

As shown in (20)a, eventive predicates are impossible in a *seem* context when the matrix tense is PRES. If, on the other hand, the matrix tense is PAST, an embedded eventive predicate is licensed. This sensitivity of embedded eventive predicates to the type of matrix tense would be quite surprising under an account where the infinitive involves tense: depending on what type of tense that would be, it would either be predicted that both cases in (20) should be grammatical, or both cases should be ungrammatical. The tense restructuring account proposed here, on the other hand, correctly predicts this distribution. Note that the difference between (20)a and (20)b also shows that it is unlikely that eventive predicates are licensed by the matrix predicates (i.e., by the semantics of *try*, *manage*, or *seem*) directly or that there is a selectional restriction for stative complements under *seem*. If one were to assume such accounts, it seems that the tense dependency in (20) would again be unexpected. Lastly, I would like to mention that the structure in (19) provides a straightforward account for a well-known syntactic puzzle concerning raising infinitives. As shown in (21), in *there* contexts the associate of *there* cannot occur in what is typically assumed to be the embedded Spec,TP. Many ways have been suggested how this fact can be explained (see for instance Bošković 2002 who argues that there is no EPP and hence no motivation for movement to this position). The structure in (19) allows us to view this problem from a different angle: Since there is no TP in (21), the question of why there is no movement of *a unicorn* simply does not arise.

- (21) a. *There seems to be a unicorn in the garden.*  
       b. *\*There seems a unicorn to be in the garden.*

## 6 Conclusion and Outlook

In this paper, I have argued that infinitives lack tense, both in syntax and in

semantics. Assuming this is correct, it is necessary to consider the syntactic properties which have previously been accounted for by reference to infinitival tense/T. Although I cannot provide detailed accounts of these properties here I would like to offer some comments on two ‘tense’ properties.

First, proponents of the *Null Case* approach have suggested that the control vs. ECM/raising distinction correlates with the presence vs. absence of tense. However, as pointed out in fn. 4, tense (however defined) does not distinguish between control and ECM/raising (see also Baltin and Barrett 2002, Hornstein 2003, Wurmbrand 2005). The distribution of the temporal orientation and eventive predicates is summarized in the table below. As the reader can verify, tense cannot be used to delineate the classes of control vs. ECM. At this point, it seems that in order to be faithful to the empirical situation, we must return to the traditional view, according to which control vs. ECM is encoded as a lexical/selectional property of the matrix predicates.

<i>believe</i> (propositional)	ECM	simultaneous	*eventive
<i>claim</i> (propositional)	control		
<i>expect</i> (irrealis)	ECM	future	✓eventive
<i>decide</i> (irrealis)	control		
<i>try</i> (irrealis)	control	simultaneous	✓: matrix PAST
<i>manage</i> (implicative)			*: matrix PRES
<i>begin</i> (aspectual)			
<i>seem</i> (propositional)	raising	simultaneous	✓: matrix PAST
<i>begin</i> (aspectual)			*: matrix PRES

The second syntactic property I would like to mention here as a property that has been attributed to (infinitival) tense is Case. As has been shown convincingly in Sigurðsson (1991), infinitival PRO subjects receive the same type of Case an overt NP would receive in a corresponding finite context. Assuming that Case (in particular nominative) requires the presence of T, these facts provide evidence for the presence of a syntactic TP in infinitives (which, given the discussion in this paper, would need to be semantically vacuous). However, the view that nominative Case requires the presence of a TP has also been challenged, most elaborately in Marantz (1991). Following Marantz’ idea that case is not a structural relation but rather determined post-syntactically by various morphological realization rules, McFadden (2004) proposes an account of case in infinitives which does not require a structural relation with T. If this approach is correct, case does not pose a problem for the view presented here, and the assumption that infinitives lack tense/TP can be maintained, hence allowing a transparent syntax-semantics mapping.

As for other properties (e.g., restructuring vs. no restructuring, the dif-

ference between exhaustive and partial control [Landau 2000]; certain differences between realis and irrealis infinitives [Pesetsky 1992, Pesetsky and Torrego 2004]) the idea would be that these phenomena are indeed, as these authors suggest, related to different structures of the constructions under consideration. The differences, however, are not encoded as  $[\pm\text{tense}]$ . Rather, the features involved are  $[\pm\text{woll}]$  or the presence or absence of irrealis aspect (recall that although this paper claims that infinitives lack tense, this does not mean that all infinitives have the same structure—as pointed out above, some infinitives project *woll* while others don't). Although some initial thoughts along these lines are provided in Wurmbrand (2006), detailed proposals still have to await further research.

## References

- Abusch, Dorit. 1985. On verbs and time, Ph.D. Dissertation, UMass, Amherst.
- Abusch, Dorit. 1988. Sequence of tense, intensionality, and scope. In *Proceedings of WCCFL 7*, 1-14. Stanford, Calif: CSLI Publications.
- Abusch, Dorit. 1997. Sequence of tense and temporal *de re*. *Linguistics and Philosophy* 20:1-50.
- Baltin, Mark and Leslie Barrett. 2002. The Null Content of Null Case. Ms., NYU.
- Bošković, Željko. 1996. Selection and the categorial status of Infinitival Complements. *Natural Language and Linguistic Theory* 14:269-304.
- Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, Mass: MIT Press.
- Bošković, Željko. 2002. A-Movement and the EPP. *Syntax* 5.3:167-218.
- Condoravdi, Cleo. 2001. Temporal interpretation of modals: Modals for the present and for the past. In *Stanford Papers on Semantics*, ed. D. Beaver, S. Kaufmann, B. Clark, and L. Casillas. Stanford, Calif, CSLI Publications.
- Copley, Bridget. 2002. The semantics of the future, Ph.D. Dissertation, MIT, Cambridge, Mass.
- Dowty, David. 1982. Tenses, time adverbs, and compositional semantic theory. *Linguistics and Philosophy* 9:405-426.
- Enç, Mürvet. 1987. Anchoring Conditions for Tense. *Linguistic Inquiry* 18:633-657.
- Enç, Mürvet. 1991. On the absence of the present tense morpheme in English. Ms., University of Wisconsin, Madison, Wisconsin.
- Enç, Mürvet. 2004. Rethinking Past tense. In *The syntax of time*, ed. J. Guéron and J. Lecarme, 203-215. Cambridge, Mass: MIT Press.
- Heim, Irene. 1994. Comments on Abusch's theory of tense. In *Ellipsis, tense and questions*, ed. H. Kamp, 143-170. University of Amsterdam.
- Hornstein, Norbert. 2003. On control. In *Minimalist syntax*, ed. R. Hendrick, 6-81. Oxford: Blackwell Publishers.
- Katz, Graham. 2001. (A)temporal complements. In *Audiator Vox Sapientiae*, ed. C. Féry and W. Sternefeld, 240-258. Berlin: Akademie Verlag.

- Katz, Graham. 2004. The temporal interpretation of finite and non-finite complement clauses of attitude verbs. Ms., University of Osnabrück.
- Kaufmann, Stefan. 2005. Conditional truth and future reference. *Journal of Semantics* 22.3:231-280.
- Landau, Idan. 2000. *Elements of control: Structure and meaning in infinitival constructions*. Dordrecht: Kluwer Academic Publishers.
- Marantz, Alec. 1991. Case and licensing. In *Proceedings of ESCOL '91*, 234-253. Ithaca, N.Y.: Cornell University, CLC Publications.
- Martin, Roger. 1996. A minimalist theory of PRO and control, Ph.D. Dissertation, University of Connecticut, Storrs.
- Martin, Roger. 2001. Null case and the distribution of PRO. *Linguistic Inquiry* 32.1:141-166.
- McFadden, Thomas. 2004. The position of morphological case in the derivation: A study on the syntax-morphology interface, Ph.D. Dissertation, University of Pennsylvania, Philadelphia.
- Ogihara, Toshiyuki. 1996. *Tense, attitude, and scope*. Dordrecht: Kluwer Academic Publishers.
- Pesetsky, David. 1992. Zero syntax II: An essay on infinitives. Ms., MIT, Cambridge, Mass.
- Pesetsky, David and Esther Torrego. 2004. Tense, case, and the nature of syntactic categories. In *The syntax of time*, ed. J. Guéron and J. Lecarme, 495-537. Cambridge, Mass: MIT Press.
- Rizzi, Luigi. 1978. A restructuring rule in Italian syntax. In *Recent transformational studies in European languages*, ed. S. Keyser, 113-158. Cambridge, Mass: MIT Press.
- Schlenker, Philippe. 1999. Propositional attitudes and indexicality: A cross-categorical approach, Ph.D. Dissertation, MIT, Cambridge, Mass.
- Sigurðsson, Halldór Ármann. 1991. Icelandic case-marked PRO and the licensing of lexical arguments. *Natural Language and Linguistic Theory* 9:327-364.
- Stowell, Tim. 1982. The tense of infinitives. *Linguistic Inquiry* 13:561-570.
- Thomason, Richard. 1970. Indeterminist time and truth-value gaps. *Theoria* 36:264-281.
- Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure*. Berlin/New York: Mouton de Gruyter.
- Wurmbrand, Susi. 2005. Tense in infinitives. Plenary speaker at the workshop on *New Horizons in the Grammar of Raising and Control*, LSA Summer Institute, Cambridge, Mass. [Handout: <http://wurmbrand.uconn.edu>]
- Wurmbrand, Susi. 2006. Infinitives: A future without tense. Talk given at the Jersey Syntax Circle. Princeton. [Handout: <http://wurmbrand.uconn.edu>]