What makes the imperative clause type autonomous? A comparative study in a modular perspective[1]

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Abstract. This paper is a *case study* of the *imperative* clause type and its relation to other clause types in Swedish and German in a *modular* framework. We will argue that there are three independent clause types, the *finite,* the *imperative* and the *infinitive clause* type*,* the differences between them derived from a morphologically founded distinction between three verbal paradigms, the *finite*, the *imperative* and the *infinitive* one.

We will further show how the three basic clause types are built up by three autonomous and interdependent modular systems, the *morpho-syntactic*, the *semantic* and the *speech act* system. Whereas the morpho-syntactic system operates with valued and unvalued features of various kinds, like [finite] and [φ], the semantic system supplies modal operators, that will provide the clause type with a clause type meaning. The speech act system will turn the clause type with its clause type meaning into a speech act, being the *act the speaker performs,* when uttering a clause. Not until the clause is accepted as a proper *speech act* at the speech act interface, will it become speech.

Like in Platzack & Rosengren (1998), we also once more claim, that the imperative clause type lacks TP, which in turn prevents it from getting a subject and embed.

Because of its *non-finite*, i.e. *imperative* head, the imperative clause will be a clause type in the system of clause types right from the morphological beginning. It differs substantially in its syntactic structure from the finite clause as well as from the infinitive clause, being a clause type with a head with only a 2nd person inflection. This difference results in a slim structure, univocal meaning and a restricted area of application, the speaker uttering it in order to make or allow the addressee to act according to a norm. It can hence only be used to talk TO the addressee, not ABOUT him.

1   Introduction

We easily recognize an imperative clause:

(1)   a. Spring fortare!   Swedish
          Run faster!
       b. Lauf schneller!   German
          Run faster!

At first glance, the imperative clause seems to be structurally simple. In many languages it is marked by a specific verbal form, which normally only appears in 2nd person. We argued in Platzack & Rosengren (1998) that the imperative verb is morphologically meagre. We claimed that the imperative clause lacks TP (or rather FinP, as we assume a split CP in line with Rizzi, 1997). Since TP (FinP) is the bearer of finiteness, the presence of which is a

prerequisite for a subject and for proper embedding, an imperative clause lacking TP (FinP) cannot have a subject and cannot properly embed.

In this paper we will once more repeat this claim. We will further argue that the imperative clause type, because of its specific, quite different, clause type structure, which in turn is the result of its head being 2nd person, sing./plur., also differs semantically and illocutionarily from the finite clause. When uttering a finite clause, the speaker talks ABOUT an event in the actual world, when uttering an imperative clause, he talks directly TO the addressee in order to make or allow him to act according to a norm.

1.1   Aim

We believe that we have arrived at a point where only a detailed *case* study with a thorough empirical foundation, on the basis of a consistent linguistic theory, will answer the question of what kind of clause type the imperative clause is and how it relates to other clause types.This paper is a *case study* of three independent basic clauses types, the *finite*, the *imperative* and the *infinitive* clause type in two related Germanic languages, Swedish and German, the focus being on the imperative clause. The differences between the three clause types will be derived from a morphologically founded distinction between three verbal paradigms, the *finite*, the *imperative* and the *infinitive* one.

We further show how the three basic clause types are built up by three autonomous and interdependent modular systems, a *morpho-syntactic*, a *semantic* and a *speech act* system. Whereas the morpho-syntactic system operates with valued and unvalued features of various kinds, like [finite] and [φ], the semantic system supplies modal operators, that will provide the clause type with a clause type meaning. The speech act system will turn the clause with its clause type meaning into a speech act, being the *act the speaker performs,* when uttering the clause. Not until the clause is accepted as a proper *speech act* at the speech act interface, will it become speech.

The paper is divided in three general parts, where the morpho-syntactic structure of the clauses is described in sections 2-4, the semantic mapping of the clause types onto a proper modal operator in section 5, and the mapping of the clause with its clause type meaning onto a proper speech act type in section 6. Section 7 contains a summary and a conclusion.

1.2   Theses

Thesis 1. We will argue that there are three autonomous and interdependent modules in what we call the linguistic system, the morpho-syntactic, the semantic and the illocutionary module. They are autonomous because they are characterized by their own specific system of principles, units and rules, and they are interdependent because they are dependent of one another for their realization, ending up in utterances produced and understood by speaker and addressee. From this follows that neither module shares any principles, units or rules with the other modules, but there exist mapping rules between them, which determine the mapping of each clause type. At the semantic interface the clause will map onto a modal operator, that

lends it a clause type meaning, and at the illocutionary interface the clause with its clause meaning will map onto a proper speech act type. (See e.g. the discussion of grammatical features in Pesetsky & Torrego, 2001: 364, and BRRZ, 1992).

Thesis 2. We will argue that *morphology* is the module where words are created by merging roots with e.g. inflection morphemes. Morphology differs from syntax in being concatenative, whereas syntax is recursive. Still they belong to the same type of structural module, which we will refer to as *morpho-syntax*. Looking at verbs only, we assume that a root *(skriv, schreib* 'write'*)* is merged with an inflection morpheme in the morphological module. The result is a finite, imperative or infinitive verb, which in syntax becomes the projective head of the syntactic tree, representing a corresponding clause type. Depending on category and different functional nodes, like T and C for verbs it may be merged to a categorical head giving rise to a vP for verbs.

Thesis 3. The possibilities of merging a specific node is determined by the root and the inflection morpheme. For verbs, we get three types of little v, based on three types of inflection:

(2)   a. Little v hosts *finite* inflection (e.g. tense in Germanic languages: *skriver*, *schreibt,* 'writes')

        b. Little v hosts *imperative* inflection (2nd person, sing./plur.: *skriv*, *schreib(e)/t,* 'write')

        c. Little v hosts *infinitive* inflection (*skriva*, *schreiben*, 'write')

Merging additional functional heads to the three vPs, gives us three basic syntactic clause types, the *finite*, the *imperative* and the *infinitive* clause type. Note that only the finite clause projects TP and hence gets a subject, and that the inifinitive clause with its infinitive verb has only infinitive inflection: Swedish *-a*, German *-en*.

Thesis 4. We will distinguish between three types of embedding: *Proper embedding*, *Pseudo-embedding* and what we will call *Centaur-embedding*, only the two first being possible in modern Swedish and German. We will further argue that the imperative clause in modern Swedish and German cannot embed at all, the reason being that its independent morpho-syntactic structure with an inflected verb with *2nd person, sing./plur.* prevents it from projecting TP, TP being a prerequisite of a subject. The Centaur-embedding is only found in Old Nordic and is no real embedding of the imperative clause but a centaur of a finite clause on top of the tree and an imperative vP at the bottom.

Thesis 5. Each clause targets the *semantic* interface in order to find its proper semantic interpretation and will crash if not accepted. We argue that a finite clause (always with TP) and a non-finite clause (never allowing TP) map onto quite different modal operators at the semantic interface. We assume a *correspondence* relation between *finiteness* and *truth-oriented* modality, on one hand, and between *non-finiteness* and *action-oriented* modality, on the other. The correspondence relation is no stipulation, since the whole syntactic structure of each clause type is built up from the morphological basis via projection and merging of

lexical and functional nodes in order to allow a specific mapping at the semantic interface onto a matching modal operator, taking the clause in its scope.

Thesis 6. At the illocutionary interface the different clause types find their corresponding speech act types. We define the speech act system as the system of the acts the speaker performs when uttering a clause. Austin (1962) called it "How to Do Things with Words". The finite clause with its truth-oriented meaning maps per default onto a *constative* speech act type at the illocutionary interface, where the speaker talks ABOUT the proposition of the clause, anchoring it in time and space in the actual world. The imperative and the infinitive clause with their action‑oriented meaning per default map onto a *constitutive* speech act type, where the speaker talks TO the addressee, see Platzack & Rosengren (1998). The finite clause has a wider area of application than the other two clause types.

2 The morpho-syntactic structure of vP, TP and CP

In section 2.1 below we present some central assumptions of the feature-driven version of the minimalist program that we use for our analysis of clause types in Swedish and German. In general, we will be close to but not slavishly follow Chomsky (1995), (2008) and Pesetsky & Torrego (2001, 2004, 2007).[2] In particular, even if we may strive for the "Strong Minimalist Thesis" (SMT), see Chomsky (2007: 4), we will give preference for descriptive adequacy over explanatory adequacy, in cases where conflicts appear.

We continue in section 2.2 and 2.3 with the relation between morphology and syntax, discussing the formation of the verb and its way to syntax, where it will become the head of the syntactic clause. In section 2.3, 2.4 and 2.5, finally, we specify the structure and function of vP, TP and CP respectively, as the cornerstones of the syntactic clause.

2.1 The computational machinery: Features, Merge, EPP and the operation Agree

Features enter the syntactic computation either as valued or unvalued; the purpose of the computation is to value all unvalued features.

The central player of the Minimalist syntactic derivation is the operation *Merge* that builds structure. Merge operates on (bundles of) features (valued or unvalued) that provide the building material for syntactic structure. Merge takes a feature bundle and adds it to another feature bundle, creating a minimal structure, see (3):

(3)   a. Pick the feature bundle A and merge it to an available feature bundle B:

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[2] In Pesetsky & Torrego (2007), the authors have made their feature driven approach more fine graded, complicating the derivation but reaching a level of detail that does not seem to be needed for our purposes here.

b.
$$A \; B \; \text{-->} \quad \overset{\text{A/B}}{\underset{\text{A} \quad \text{B}}{\wedge}}$$
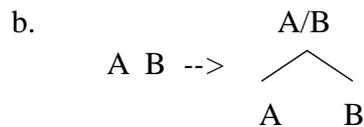
The result of merging A and B is labeled either A or B. Merge can now take a new feature bundle X from the lexicon and merge it to the root of the structure, illustrated in (4), or it may take the feature bundle B, already present in the derivation, and remerge it to the root of the structure, yielding (5); this operation may also be called "Move":

(4)
$$\overset{\text{X}}{\underset{\text{X} \qquad \overset{\text{A/B}}{\underset{\text{A} \quad \text{B}}{\wedge}}}{\wedge}}$$

(5)
$$\overset{\text{A}}{\underset{\text{B} \qquad \overset{\text{A/B}}{\underset{\text{A} \quad \text{B}}{\wedge}}}{\wedge}}$$

The operation Agree, see Chomsky (2001: 3ff.) and below, establishes a connection between an unvalued and a valued instance of a feature, valuing the unvalued one, see (6). The derivation will crash if there is any unvalued feature left at the semantic interface.

(6) **The operation Agree**

Step 1: Select a *probe* i.e. a head with at least one unvalued feature [¬F], where [F] is a variable over features.

Step 2: Search the c-command domain of the probe for the closest *goal* with a valued instance of the same feature, [F].

Step 3: Value the unvalued feature of the probe in accordance with the value of the goal.

Agree may be accompanied by movement of the bearer of the valued feature to the bearer of the unvalued feature. This operation will be triggered by the feature *EPP*[3], associated with an unvalued feature, here expressed as [¬F^{EPP}].

It should be noticed that, although the computation seems to proceed from right to left, and from bottom to top, a generative system does not involve any temporal dimension. The computation is, as Chomsky (2007: 6) expresses it, "similar to other recursive processes such as construction of formal proofs. Intuitively, the proof "begins" with axioms and each line is added to earlier lines by rules of inference or additional axioms. But this implies no temporal ordering. It is simply a description of the structural properties of the geometrical object "proof". The actual construction of a proof may well begin with its last line, involve independently generated lemmas, etc. The choice of axioms might come last. The same is true of generation vs. production of an expression, a familiar competence-performance distinction."

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[3] EPP (Extended Projection Principle) was originally introduced (Chomsky 1982)) to capture the fact that a sentence must have a subject. Even if EPP is more widely used here, inspired by Pesetsky & Torrego (2001), the original use is partly retained, since EPP determines that there is a visible subject in languages like German and the Scandinavian ones.

2.2   The relation between morphology and syntax

Without arguments[4] we have chosen a version of the minimalist program where words are created in an autonomous morphological module by merging roots with categorial inflection morphemes taken from lexicon. Hence words ("Lexical Items" in the terminology of Chomsky (2008: 6)), can be seen as atomic elements from the point of view of syntax. Each word (i.e. lexical item) is, according to Chomsky (2007: 6), "a structured array of properties (*features*) to which Merge and other operations apply to form expressions." Cf. also Sternefeld (2010: 77f.).

Both morphology and syntax are right-branching but differ from one another in that morphology is concatenative, whereas syntax is recursive. In Swedish this demands a shell structure not available for word structure (see 2.4 below, and Haider, 2010 and 2015: 18f., for a detailed analysis of this difference). Most important from our point of view is however that the *verb,* by virtue of it being the result of a concatenation of a root and an inflection morpheme, becomes the head of the syntactic derivation of the clause and thereby determines the projection line.

We find three categorial inflection possibilities in the Swedish and German morphological paradigm system:

(7)   a.   **The finite inflection** comprises person (1/2/3) and number (sing./plur.), mode (indicative/subjunctive) and tense (present/past),

   b.   **The imperative inflection** only comprises person (2nd person, sing./plur., sometimes 1st person, plur.),

   c.   **The infinitive inflection**, expressed by a final-*a* in Swedish and *-en* in German, is defined ex-negativo, neither person, number, mode nor tense.

Since word formation is not recursive and hence does not allow a shell structure (see Haider 2015, 18f. and fn. 7), we will in principle just find the following three formations of a verb as demonstrated below, where a root *(skriv, schreib* 'write'*)* is combined with a *finite, imperative* or *infinitive* verbal inflection morpheme, i.e. a categorial head (verb) with a valued inflection feature, *finite, imperative* or *infinitive*.

(8)   v[fin]/[imp]/[infin]
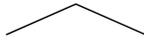
                 R   [fin]/[imp]/[infin]
                 skriv   -er/0/-a   Swedish
                 schreib   -t/0(-e)/-en   German

Note once more that the lexical item is built in the morphological module and will only there explicitly demonstrate its structure. Hence only the inflected verb will be visible in syntax, however inherently carrying its inflectional information with it. By delivering this information to syntax it determines the projection of the syntactic tree.

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[4] But see Cecchetto & Donati (2015) for a recent discussion.

For the time being we need not further discuss the finite and infinitive inflection. We shall return to all three inflection types when discussing their role in clause structure. The imperative inflection, however, being central in our explication of the imperative clause, needs further comment since its status is debated. Some linguists look upon it as an inflection type which is neither finite nor infinite. Most modern theoretic approaches, however, try hard to find evidence for regarding the imperative as a finite inflection, although the verb clearly may carry an imperative morpheme. Platzack & Rosengren (1998), on the other hand, argue that the imperative clause lacks finiteness because it lacks TP (FinP).

Empirically we will support our assumption that the imperative verb actually is imperative and not finite with the well-known behavior of clitic object pronouns in Italian (the same behavior is found e.g. in Spanish). The clitic object pronoun in Italian takes a position to the left of the finite verb and to the right of the imperative verb, the gerund, the participle and the infinitive (when representing independent clauses). This is a typical morphological property but with syntactic consequences. We will mention one example in order to illustrate this sharp distinction. See Renzi et al. (2001: I 565ff.) for a thorough description of the rules [5].

(9)   Lo mangio. (1st person, sing. fin.)
        it I eat
(10)   Mangialo! (2nd person, sing. imp.)
        eat it

We conclude that the imperative clause (10) obviously behaves as we would expect when the clause has a non-finite verbal form. In (9) the finite verb is in T and hence the clitic can left adjoin to T. In the imperative case, where T is lacking, no similar adjunction is possible, and the clitic will appear to the right of the verb in C. The important difference between the imperative verb and the infinitive verb is that the former has 2nd person represented in its inflection, whereas this is not the case with the latter. We assume that the clitics are generated in the syntactic position of the relevant DP and from there obligatorily move to a clitic position to the verb (cf. Renzi et al., 2001, I 569f.).[6] See also Wratil's (2005: 137ff.)

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[5] Renzi et al. (2001: I 565), "Ci sono due possibilità: il pronome può apparire o in posizione preverbale o in posizione postverbale. Si ha la prima possibilità … nel caso in cui la forma verbale con cui il pronome occorre abbia tempo finito, la seconda … quando la forma verbale presenti un tempo non finito: infinito, participio, gerundio, e quando la forma verbale è imperativa. … Quando nella forma verbale con tempo finito è presente un ausiliare, il pronome clitico precede l'ausiliare".

[6] The following examples may demonstrate the difference between the imperative clause and the finite clause. Note that the finite clauses in context may be used as a order, but semantically are assertions, see section 6:

	imperative	*finite*	*infinitive verb*
(1)	Vattene!	Ti ne vai.	andarsene
	disappear	you disappear.	
(2)	Mangiatelo!	Lo mangiate.	*mangiare*
	eat it	you eat it.	
(3)	Compriamolo!	Lo compriamo.	comprare
	we buy it!	we buy it.	
(5)	Dimmi!	Mi dica.(3rd pers., sing. politeness)	dire
	tell me!	me tell	

See Renzi et al. (2001: III 156f.) as to the negated imperative and the position of the clitics.

decsription of the historical development of the two possible pronominal possibilities, the proclitization in finite clauses and the enclitization in imperative and infinitive clauses.

To our knowledge the behavior of the Italian and Spanish clitics has until now, although well-known, not been used as an argument in favor of the assumption that the imperative clause is non-finite.

2.3 The syntactic derivation of vP

In the present section, we will briefly show how vP is established. Following Cecchetto & Donati (2015: 14), we assume that "[a] word which is delivered by morphology to syntax, is intrinsically endowned with a category feature". For verbs, we assume the verbal feature [v], for nouns the nominal feature [n] and for adjectives the adjectival feature [a].

Simplifying, the first step in the derivation is to merge the verb *v* with a DP bearing an internal theta-role in relation to *v*. This is illustrated in (11) for Swedish and German by a finite clause. Specific theta roles are not indicated in the trees. Like all DPs, the object *boken /das Buch* carries a valued φ-feature. The tense inflection on the verb indicates that the verb carries a valued finiteness feature, rendered by [fin]. There are two possible orders: little *v* is merged to the left of DP, as in Swedish (11a)**,** or *v* is merged to the right of DP, as in German (11b).

(11) a. (Johan) köpte boken.   b. (Johann) kaufte das Buch.

$$
\begin{array}{cc}
\text{vP} & \text{vP} \\
v \quad\quad \text{DP} & \text{DP} \quad\quad v \\
\text{köpte} \quad \text{boken} & \text{das Buch} \quad \text{kaufte} \\
\text{[fin]} \quad\quad [\varphi] & [\varphi] \quad\quad \text{[fin]}
\end{array}
$$

The different order of v and DP in Swedish and German is parametrically determined, Swedish being head-initial and German being head-final (see Haider, 2010 and 2015, for a detailed analysis[7]). In particular it results in the well-known position of the verb to the right in German embedded clauses. Since the VO/OV distinction is not in focus, we will not further
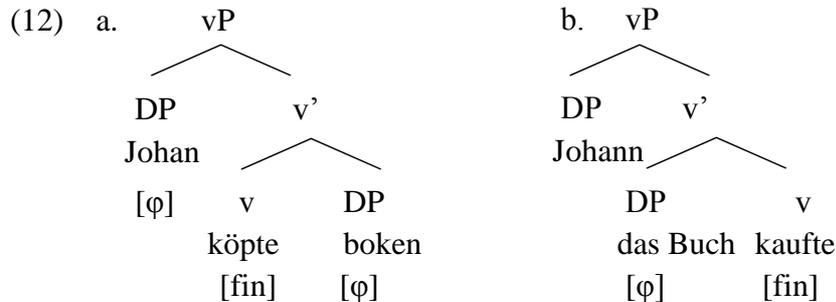
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[7] Haider (2015: 12ff.) argues that all languages are rigtht-branching but differ parametrically in being either head-initial or head-final. Swedish is a SVO-language, whereas German is a SOV-language. This difference between Swedish and German, both being Germanic V2-languages, has the consequence that the head of the clause in Swedish will have to move to a position in vP from where it may c-command downwards, whereas the head in a German clause c-commands the whole vP from its basic position. Swedish like other head-initial languages will therefore have to reinstantiate v by moving it to a higher position in vP, resulting in a shell-structure, which is not necessary in German because of OV. The following formulas represent Swedish (a.) and German (b.) (somewhat simplified) as representatives of head-initial and head-final languages:

a. ……………. $[V_i \rightarrow [YP [v' e_i \rightarrow ZP]]]$
b. ……………. $[… [YP \leftarrow [v' ZP \leftarrow [v' ZP \leftarrow [v' V^0]]]]]$

The fomulas demonstrate the parametrization of the two languages, including the movement of the verb to the top of v' in Swedish, allowing it to c-command the whole v'. To the left of the vP we will find the functional projections, one of them, as we shall see, being the functional projection c-commanding XP, the subject.
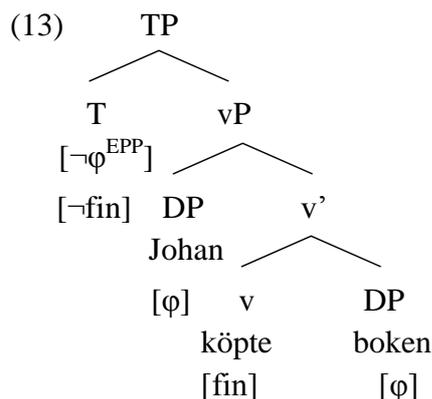
represent the assumed shell structure in our trees. We will return to the shell structure e.g. when discussing the infinitive clause, where we will see consequences of it as to the position of the negation.

The last step in the derivation of vP is to merge the external argument, if the verb provides for one, to the structure in (12). Note that the external argument is not a subject. In order to become a subject it needs a functional projection, i.e. T, see section 2.4:

(12)   a.   vP   b.   vP

        DP   v'   DP   v'
        Johan   Johann
        [φ]   v   DP   DP   v
              köpte   boken   das Buch   kaufte
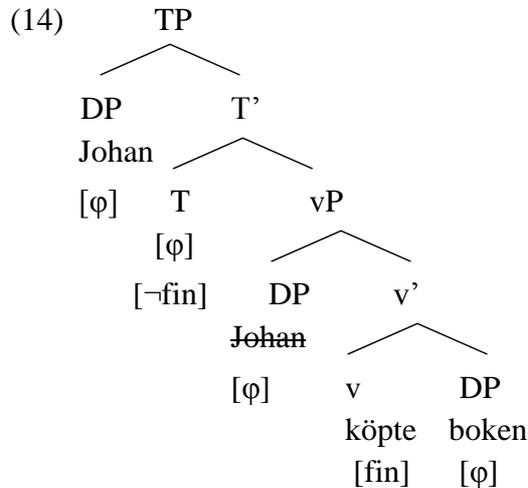   [fin]   [φ]   [φ]   [fin]

2.4   The syntactic derivation of TP

As is evident from our assumptions until now, the structure of vP is in principle the same in all clause types, the only difference being VO versus OV for the Swedish and German clauses respectively. Only the finite clause, however, is compatible with TP. In the absence of sentence adverbs and auxiliaries, the next step in the derivation of the *finite* clause after the establishing of vP, therefore, is to merge T to vP, creating TP, the functional projection of tense. The result is depicted in (13), where we only illustrate the Swedish finite clause, assuming T to carry both unvalued [φ]-features and an unvalued [fin]-feature:

(13)   TP

        T   vP
      [¬φ^{EPP}]
      [¬fin] DP   v'
              Johan
              [φ]   v   DP
                   köpte   boken
                   [fin]   [φ]

In the Germanic languages in general, the subject is visible in SpecTP, indicating the presence of an EPP feature, see section 2.1 above. The presence of a visible subject is accounted for by postulating that EPP is attached to the unvalued [φ]-features in T, hence the proper

formulation of this feature will be $[\neg\varphi^{EPP}]$. This forces the closest c-commanded DP, i.e. *Johan*, to move to SpecTP[8] to pronounce the Agree-relation[9].

(14)
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              TP
           ／    ＼
        DP          T'
        Johan    ／    ＼
        [φ]    T         vP
              [φ]     ／    ＼
             [¬fin]  DP        v'
                     J̶o̶h̶a̶n̶   ／    ＼
                     [φ]     v        DP
                            köpte    boken
                            [fin]    [φ]
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The derivation of TP, as illustrated in (14), is not complete, since T contains an unvalued finiteness feature, the presence of which would lead to a crash at the semantic interface. However, this problem is easily overridden. Acting as a probe, T with feature [¬fin] will establish an Agree relation with [fin] in little *v* and thereby the finite feature in T is valued. There is no reason to assume that the verb moves from *v* to T in Swedish;[10] if so, we would, contrary to facts, have expected the finite verb to appear in front of the negation in an embedded clause, taking for granted that the negation in Germanic VO languages is adjoined to vP and thus to the right of a verb that has moved to T.

2.5   The syntactic derivation of CP

Depending on inflection type, merging vP (TP in the finite case) with a functional head (C) gives us three independent basic syntactic clause types, the *finite*, the *imperative* and the *infinitive* clause type.

The three clause types are illustrated with Swedish examples in (15a)-(15c) and German examples in (16a)-(16c):

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[8] Since DP is a phrase, it cannot move to T, which is a head. Notice that the result of the subject moving to SpecTP in many languages is visually expressed on the verb in T as subject-verb agreement.

[9] Sternefeld (2010: 84) defines the relation between the finite verb and the subject in the following way: "Die finiten Formen lassen sich im Deutschen dadurch charakterisieren, dass ihre Morphologie Informationen über das Tempus und das Subjekt des Satzes kodiert; Finitheit ist in erster Linie eine Abstraktion aus den Kongruenzmerkmalen für das Subjekt und den Merkmalen für Präsens und Präteritum. Die nicht-finiten Formen werden, wie die hier verwendete Bezeichnung schon suggeriert, ex negativo bestimmt."

[10] As we will see immediately, the verb moves visibly to C (verb second). See the discussion in Brandtler (2008) about T to v or v to C

(15)   a.1. Kalle läser boken.   a.2. Läser Lisa boken?   a.3.Vad läser Anna?
            Kalle read book-the   read Lisa book-the   what read Anna
        b. Läs boken!
            read book-the
        c. Inte röra spisen!
            not touch stove-the

(16)   a.1. Peter liest das Buch.   a.2. Liest Johanna das Buch?   a.3. Was liest Petra?
            Peter read the book   read Johanna the book   what read Anna
        b. Lies das Buch!
            read the book
        c. Den Herd nicht rühren!
            the stove not touch

The three types of verbal inflection in a.-c. can be seen as three types of valued features, *fin* (finite), *imp* (imperative) and *inf* (infinitive), situated in little v. These features correspond to the three clause types introduced in Thesis 2, section 1.2, above and discussed below, i.e. *finite*, *imperative* and *infinitive* clause types.

Technically, the correspondence between C and little v is achieved if C is merged to the structure with the corresponding three types of unvalued features, as illustrated in (17).

(17)   a. C with feature [¬fin]:   finite clause
        b. C with feature [¬imp]:   imperative clause
        c. C with feature [¬ inf]:   infinitive clause

Probing its c-command domain, (17a) will crash unless it finds a finiteness feature, (17b) will crash unless it finds an imperative feature, and (17c) will crash unless it finds an infinitive feature.

It is well-known that Swedish and German are so-called V2-languages, i.e. that finite clauses normally occur with the finite verb in second position and the subject, as in (15a1) and (16a1), or some other phrase, in SpecCP. This is the default finite clause type (see below 3.1.2).

In SpecCP we may also find a *wh*-phrase, see (15a3) and (16a3) and below section 3.3.2, traditionally called a *wh*-question. We further find finite V1-clauses with the verb in first position (15a2) and (16a2), traditionally called *yes/no* questions. These clauses differ from the standard V2-clause by not allowing a SpecCP-position at all. All of these *finite* clauses belong to the same clause type, because their verb is finite. We will return to them in section 3.1.2 and section 6.

Another clause with V1 is the *imperative* clause (15b) and (16b), with a structure differing from the finite clause (see section 3.2). Finally we find an *infinitive* clause type (15c) and (16c), which differs from both finite and imperative clauses (see section 3.3).

Until now we have not discussed the relation between our classification in three clause types *finite, imperative* and *infinitive clause* types and the traditional classification in *declarative*, *interrogative* and *imperative* clause types. As to the *declarative clause* type it

overlaps with our default *finite clause* type. Still there are important differences between them. The declarative clause in the traditional descriptions (see Meibauer et al., 2013 and section 5) is assumed to have *sentence mood*, which is regarded as the modal meaning of the clause type (therefore also the term *declarative*). Our solution is different, since in our framework the finite clause is just a morpho-syntactic unit without any modal meaning connected with it. It receives its modal meaning at the semantic interface (see section 5).

What is more important, however, is that our classification also differs from the traditional one in *not* allowing *interrogativity* to be a marker of clause type modality. The reason is that our classification (see once more (17) above) is a classification founded only on the *verbal head* of the clause and interrogativity is not related to the morpho-syntactic verb that determines the basic syntactic structure of all clauses (main as well as embedded clauses). We think that the traditional distinction between *declarative*, *interrogative* and *imperative* clause types in fact is the result of a mismatch between a morpho-syntactic definition in terms of verbal features and a semantically influenced definition of the clause type in terms of ±*wh*-features. Since we argue that it is the basic morpho-syntactic verb that determines the clause type, *interrogativity* has to be explained in another way. This concerns both interrogative V1-clauses and interrogative *wh*-clauses. See Sternefeld (2010: 283ff., 407f., 319ff. and 426ff.), who presents a consistent classification of clauses only in terms of verbal features and emphazises the autonomy of syntax, however in a theoretical framework different from ours.

We will not go further into detail in Sternefeld's account. Instead we will just describe our syntactic solution with regard to *interrogative clauses*. We argue that the syntax of V1-clauses does not distinguish at all between a finite interrogative V1-clause and a finite "declarative" V1-clause[11]. This distinction is semantic, most likely also prosodic, but not syntactic (cf. also Sternefeld, 2010, 319ff.). Hence there does not exist an interrogative V1-clause type. Not until the V1-clause at the semantic interface maps onto a proper operator, it will get its interrogative meaning (see section 5).

We will further assume that C, besides having the finite feature $[\neg\text{fin}^{\text{EPP}}]$, may have a feature $[\neg\text{wh}^{\text{EPP}}]$. If a C is picked from lexicon with $[\neg\text{fin}^{\text{EPP}}]$ and $[\neg\text{wh}^{\text{EPP}}]$, the $[\neg\text{wh}^{\text{EPP}}]$-feature will probe a *wh*-phrase. If it finds one it will demand that it moves to SpecCP (cf. e.g. French where the *wh*-phrase normally does not move). If no *wh*-phrase is found, the derivation will crash. The clause with both $[\neg\text{fin}^{\text{EPP}}]$ and $[\neg\text{wh}^{\text{EPP}}]$ is in traditional linguistics called a *wh-question*, see (15a3) and (16a3).

In our languages the *wh*-phrase, when moved to C, c-commands the whole clause. Note that this does not imply semantic scope, since syntax and semantics are totally distinct modules in our framework. Hence there does not exist an interrogative *wh*-clause type either. Like the interrogative V1-clause it will not get its interrogative meaning until it at the semantic interface maps onto a proper operator. We will return to interrogativity in due course in 3.3.2 and section 5.

In the following section we will concentrate on the default V2-clause, the imperative clause and the infinitive clause.

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[11] This latter clause is a finite V1-clause with a similar function as the standard V2-clause. Cf. Önnerfors (1997) and Mörnsjö (2002), who, however, both differ from us and from one another in their theoretic solutions.

Summarizing: In the morphological module verbs are built by concatenation between a root and an inflection morpheme. The inflection morpheme is the head of the concatenation, the result being v. v targets the syntactic interface and becomes the head in a clause, projecting complements (internal and external arguments) and functional nodes. There are three types of verbal inflection, [*fin*], [*imp*] and [*infin*], that give rise to three clause types, the *finite*, *imperative* and *infinitive* clause types. They have in principle the same vP in Swedish and German. Only the finite clause is compatible with TP, the prerequisite for a subject. An important difference is VO (Swedish) vs. OV (German), which is due to a different syntactic parametrization of Swedish and German but has no great impact on the relevant properties of the clause types. Interrogativity is not a marker of clause type modality, since it is not related to the morpho-syntactic verb that determines the basic syntactic structure of all clauses (main as well as embedded clauses). Interrogativity is a semantic property (see section 2.5 and 5).

3 Syntactic properties of the three clause types

3.1 The finite clause type

3.1.1 The T-projection and the subject position in SpecTP

As argued in section 2.3 above, the lexicalization of little v by a finite inflection [fin] correlates with the presence of a T-projection in the finite clause type, not allowed in the imperative and infinitive types. The presence of T is a prerequisite for the presence of a subject in the structure. Notice that T not only probes [fin] in v, it also probes the [φ]-features of the external argument in SpecvP, see section 2.4.

Hosting a subject hence is a property that is specific to the finite clause type. The question arises what may qualify as a subject.
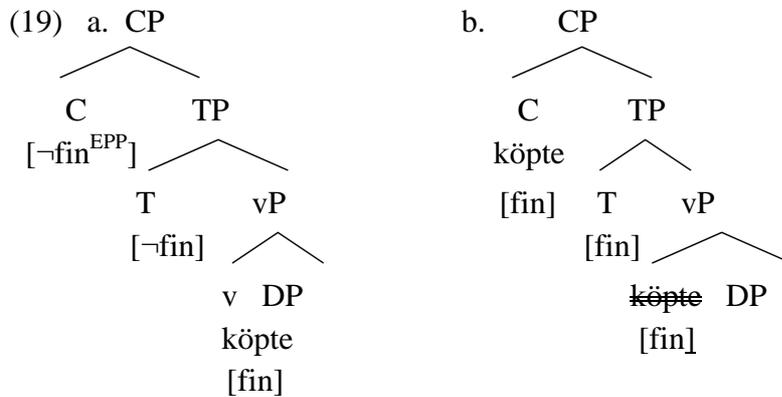
3.1.2 Verb Second and the Finiteness Feature

As already mentioned in section 2.5, it is well-known that both Swedish and German are V2-languages, like most Germanic languages, with the exception of English. In this section we will concentrate on the default finite V2-clause type.

In (18) we find Swedish and German examples, where the finite verb (in bold face) always occupies second position, irrespectively of the status of first position (object or adverbial or subject):

(18) a. 1. Boken köpte han igår.
         Book-the bought he yesterday

a. 2 Das Buch **kaufte** er gestern.
      the book bought he yesterday

b. 1. Igår **köpte** han boken.
        yesterday bought he book-the

b. 2. Gestern **kaufte** er das Buch.
      yesterday bought he the book

c. 1. Han **köpte** boken igår.
        he bought book-the yesterday

c. 2. Er **kaufte** das Buch gestern.
      he bought the book yesterday

We follow standard assumptions that first position in a main finite clause is SpecCP, the finite verb is in C and that the subject is in SpecTP *when not in first position*. In (19) we schematically illustrate the derivation of V2-clauses in Swedish. Structure (19a) is the structure when T has merged to vP, and C has merged to TP, and (19b) shows the result of Agree applied to (19a):[12]

(19) a. CP
         ┌──────┴──────┐
         C   TP
      [¬fin^{EPP}]   ┌────┴────┐
                       T   vP
                     [¬fin]   ┌──┴──┐
                              v   DP
                            köpte
                            [fin]

b. CP
   ┌──────┴──────┐
   C   TP
  köpte   ┌────┴────┐
  [fin]   T   vP
           [fin]   ┌───┴───┐
                  ~~köpte~~ DP
                  [fin]

To save space, the specifiers of C, T and v are not shown. See above section 2.5.

In the corresponding German case, the only difference is the difference between VO and OV (see 2.3). The movement of the verb to C disguises this difference between Swedish and German.

As demonstrated in (18) the subject, object or adverbial, e.g. may be hosted in SpecCP. This choice is not determined by the syntactic structure, but by the pragmatic use. But note that syntax demands that the position is made visible in normal standard V2-clauses and that one option among others is, as mentioned in section 2.5, that C may host an unvalued *wh*-feature [¬wh^{EPP}] that forces a *wh*-phrase to move to SpecCP as in (20), preventing any other phrase from going there.

(20)   a. Vad köpte han igår?
            what bought he yesterday
        b. Was kaufte er gestern?
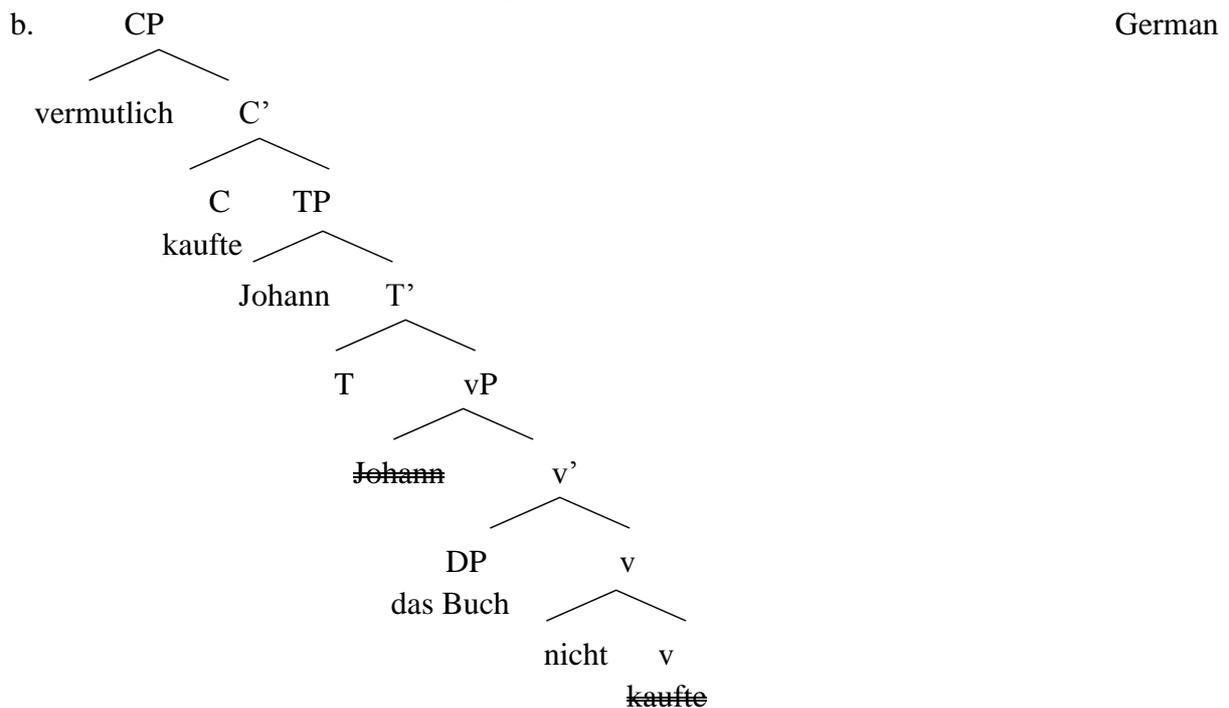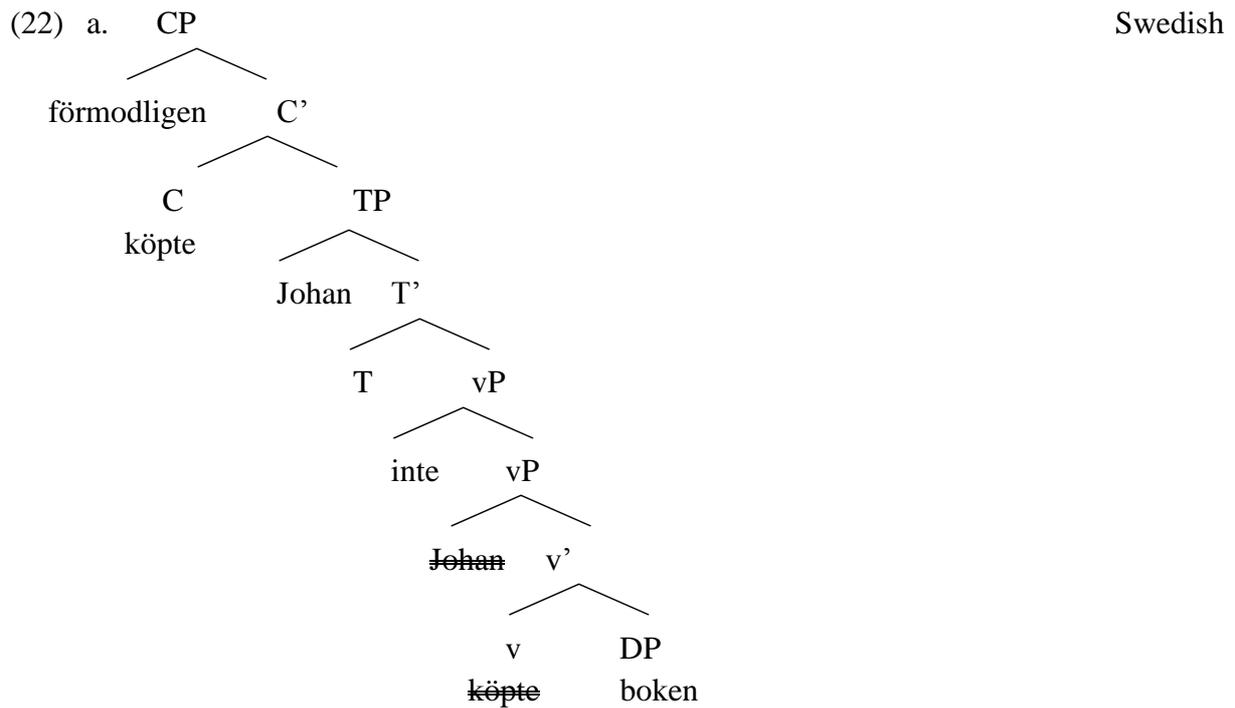   what bought he yesterday

However, note that there is a difference between standard V2-clauses and *wh*-clauses. In the first case, where there is no *wh*-feature in C, nearly any phrase in vP, e.g. the subject-phrase, object-phrase, adverbial-phrase, may move to SpecCP. This movement is often called *topicalization*. In the second case, however, the *wh*-feature in C will probe a *wh*-phrase, i.e. an interrogative phrase with a *wh*-pronoun (see (20)), and force it to move to SpecCP. This movement is often called *wh-movement*. We will regard the *wh*-feature in C, i.e. [¬wh^{EPP}], as a syntactic feature of the same kind as [¬fin^{EPP}] but nominal rather than verbal in character. At the semantic interface it will force the *wh*-clause to map onto a truth-functional operator. We will return some more in detail to this in section 6.

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[12] T also hosts features for number, person and gender, here referred to as φ-features.

3.1.3 The finite V2-clause type in Swedish and German

We will now present the derivation of the whole finite clause type in Swedish and German at the chosen level of specification.

(21)   a. Förmodligen köpte Johan inte boken.
           probably bought Johan not book-the
        b. Vermutlich kaufte Johann das Buch nicht.
           probably bought Johann the book not

(22) a.   CP   Swedish

         förmodligen   C'

                      C   TP
                    köpte
                           Johan   T'

                                   T   vP

                                        inte   vP

                                              ~~Johan~~   v'

                                                        v   DP
                                                      ~~köpte~~   boken

      b.   CP   German

         vermutlich   C'

                     C   TP
                   kaufte
                         Johann   T'

                                  T   vP

                              ~~Johann~~   v'

                                          DP   v
                                       das Buch

                                               nicht   v

                                                       ~~kaufte~~

The Swedish and German trees in (22a/b) differ in two interrelated respects. As already mentioned vP is head initial (VO) in Swedish and head final (OV) in German. A consequence of this difference is that the Swedish negation is a NegP, adjoined to vP, whereas the German negation is a negative particle (head) adjoined to little v.The feature driven derivation proceeds in the same way in both languages and the arguments occur in the same order (we therefore use the same simple tree, not a shell-construction concerning the Swedish clause as argued by Haider (see Haider, 2015:12ff. and fn.7). These differences do not affect our analysis.

Step by step:
Step 1:   Pick v with the feature [fin] in the morphological module.
Step 2: Swedish: merge *boken* to v and the external argument *Johan* to v', resulting in a vP, and then adjoin the neg-phrase to vP. German: adjoin the negative particle to v and then merge *das Buch* to v and the external argument Johann to v', resulting in a vP.
Step 3: T with the feature [¬fin] is merged to vP and valued by [fin] in little v.
Step 4: T with the feature [¬φ ^{EPP}] probes vP and finds DP in SpecvP with the feature [φ] and moves to SpecTP due to EPP.
Step 5: Merge C to T and move the finite verb to C, due to EPP.
Step 6: Merge the adverbial *förmodligen/vermutlich* with CP.[13]

3.2   The imperative clause type

3.2.1 The differences between the finite and imperative clause

As mentioned in section 3.1, only a verb inflected for finiteness can project a TP with a subject. "Subject" is the name of a DP in SpecTP that takes part in two agree relations between TP and little vP, one involving [φ]-features in SpecTP and SpecvP, the other one involving the finiteness features in T and little v. Together the two Agree-relations constitute a nexus relation, i.e. a symmetric relation where neither part (subject nor predicate) is subordinated in relation to the other. Finiteness thus is defined by the Agree-relation between subject and verb. Hence, the finite clause maps per default onto a truth-oriented operator at the semantic interface (see section 5).

Many linguists think imperative clauses are finite, although the verb is imperative. See however Rosengren (1993) and Platzack & Rosengren (1998). We argue that the verb of the imperative clause, as the result of the morphological concatenation of a root and an imperative verb inflection, is not only an imperative verb qua inflection, but also the head of the imperative clause and determines its projection. The non-finite status of the verb (see sections 2.2-2.4) prevents it from projecting TP and a subject. Its inflection for 2nd person, sing./plur. makes it *deictic* (see Liedtke: 1993)*,* pointing to the addressee. By moving to C the verb finally defines the imperative clause as 2nd person, sing./plur., too. The imperative clause hence is *imperative* and *non-finite* and it maps onto an *action-oriented* operator (see section 5) at the semantic interface, because of the inflection of the verb.

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[13] Alternatively, the adverbial is probed by a feature in C with EPP and is moved to SpecCP.

3.2.2   The position of the imperative Verb

In the Germanic languages, here illustrated with Swedish and German, the imperative clause type has an initial verb inflected for imperative (the inflection often being hononymous with the stem or some finite inflection):

(23)   a. Skjut!   Hjälp honom genast!   Swedish
       b. Schiess!   Hilf ihm sofort!   German
          shoot   help him immediately

If the clause contains a sentential adverb or a negation, this is preceded by the imperative verb:

(24)   a. Köp inte boken.   Swedish
          buy not book-the
       b. Kauf das Buch nicht!   German
          buy the book not

However, whereas a Swedish imperative clause is almost always introduced by the imperative verb, see (25b) and (27b), a German imperative clause may also be introduced by an object or an adverbial but not by a subject, as illustrated in (26) and (28).[14] Structurally, we will regard this as a kind of topicalization, not to be compared with *wh*-movement, which is obligatory in German, see 2.5):

(25)   a. *Vapnen låt ligga!   Swedish
          weapons let lie
       b. Låt vapnen ligga!   Swedish
          let weapons-the lie
(26)   Die Waffen lasst liegen!   German
       the weapons let 2nd plur. lie
(27)   a. *Dit inte spring!   Swedish
           there not run
       b. Spring inte dit!   Swedish
          run not there
(28)   a. Dorthin lauf nicht!   German
          there run not

---

[14] An exception in Swedish and German is the case where the addressee is highlighted as one among other possible addressees in a group, being the group the speaker is talking TO; thus, the fronting has a kind of quantificational effect.
(i) En av er, håll igen dörren!
    one of you keep closed door-the

3.2.3 ImpPron

One of the most discussed questions is the status of what we here will call *ImpPron*, i.e. the pronoun that may appear optionally in imperative clauses. Is it or is it not a subject? In our framework it cannot be a subject, since the imperative clause does not project a TP. But what is it then?

Significantly, there are two relations involving the subject DP and the predicate in a finite clause, the nexal one just described above in 3.2.1, and the *theta-role* relation between a DP in SpecvP and little v, expressing the highest thematic role of the verb. Notice that the theta-role in SpecvP is present independently of clause types, when the lexical entry of little v demands it and whether or not vP is merged with T.[15]

Hence, there will always be a DP (a noun or a pronoun) in the SpecvP of a finite clause that represents the highest thematic role of the verb, and this DP will become the subject when moving to SpecTP. In the imperative clause the highest thematic role is a feature bundle with the features for 2nd person, sing./plur. that will not move, there not existing a TP, and that in the default case will not be expressed separately at all, then being only visible in the inflected imperative verb. Sometimes it may be expressed by a pronoun (not by a noun).

We argue that the difference between the finite clause and the imperative clause is already present in the morphological representation of their verbs, the finite verb allowing all tenses, all persons and all numbers, whereas the imperative verb only has one form, i.e. 2nd person, sing./plur. We further argue that this difference between the two verb forms is visible also in the different syntactic projections of the two types of verb. The finite clause projects TP, which correlates with its broad morphological range, and hence obligatorily demands that the DP in vP moves to TP and there, through the above mentioned nexus relation, will make the DP a subject. In the imperative clause with only 2nd person features representing the highest theta-role there does not exist any TP and hence no movement to SpecTP. The realization of these features by an *ImpPron* in vP, therefore, will never be able to become an obligatory subject, but may very well express the theta-role in vP and may therefore also be expected to agree with the verb and bind anaphors (see below). Note, however, that this does not mean that there is any nexus-relation between *ImpPron* and the verb, since this relation demands TP. Note also that *ImpPron*, being possible but not necessary and when chosen always being *visible*, must not be mixed up with *covert* pronouns like *pro* and *PRO* having quite another function in *finite* clauses, being necessary in pro-drop languages and in subordinated clauses respectively.

Let us now discuss the empirical evidence, some of which is already presented in Platzack & Rosengren (1998), in order to support the above argumentation.

(29) a. Stäng (du) fönstret!   Swedish
          shut you window-the
      b. Hilf (du) ihm!   German
          help you him

---

[15] The highest role will be merged in the complement of v in unaccusatives and passives.

Since there cannot be any subject in imperative clauses, *du* in the above examples are instances of *ImpPron.* This pronoun enters syntax in SpecvP with a valued [φ]-feature, including a valued 2nd person feature, representing the addressee. As shown by the Swedish examples in (30a), a predicative adjective agrees with the imperative verb but also with *ImpPron*. In (30a) we have a single addressee, in (30b) multiple addressees.

(30)   a. Var försiktig (du)!
            be careful (sg.) you (sg.)
        b. Var försiktiga (ni)!
            be careful (pl.) you (pl.)

Platzack & Rosengren (1998) also notice that *ImpPron* binds anaphors (31a/b) and does not turn up in control infinitives (31c/d). See the following Swedish and German examples:

(31)   a. Skriv en bok om dig själv/er själva!
            write a book about yourself
        b. Schreibt ein Buch über euch selbst.
        c. Besök London utan att PRO se en fotbollsmatch!
            visitLondon without to attend a game-of-soccer
        d. Besucht London ohne PRO ein Fussballspiel zu sehen!

The same results, with the exclusion of predicative agreement, can be obtained for the other Germanic languages (see Rosengren 1993; Platzack & Rosengren 1998).

We argue that it is the verbal inflection of the head that determines agreement in these cases as well as in the cases with a visible *ImpPron*, since the *theta-role* relation between a DP in SpecvP and little v, expressing the highest thematic role of the verb, is visible. The obligatoriness of the subject in finite clauses as well as the lack of a subject in imperative clauses hence follows from the different structures of the two clause types.

We therefore also expect differences between the behavior of the pronouns in the finite and imperative clause. According to Platzack & Rosengren (1998:199ff.), *ImpPron* in the imperative clause, not being a subject, differs in a subtle but clear way from the 2nd person pronoun, being the subject in the finite clause, cf. (32):

(32)   a. Du hilfst mir.
            You help me
        b. Hilf (du) mir!
            help you me

The clause in (32a) is a finite clause, the utterance referring to an event in the actual world.[16] As mentioned already in thesis 4 and above, this clause is semantically *truth*-oriented (see section 5). The imperative clause in (32b) can never be truth-oriented (see section 5); the utterance will be interpreted as a *direct* expression of an order or permission for the addressee

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[16] This clause will sometimes also be interpreted indirectly in certain contexts, with the same meaning as an imperative clause (32b). Even then it keeps its truth value.

to act according to a norm. This clause is semantically *action*-oriented (see above and section 5) and therefore has no truth-value.

Let us now look at the word order differences between the subject and the *ImpPron* in Swedish and German:

(33)   a. *Du skjut!   Swedish
            you shoot
        b. *Du schiess!   German
            you shoot
        c. Skjut du!   Swedish
            shoot you
        d. Schiess du!   German
            shoot you

Obviously, the pronoun cannot front the imperative clause (cf. however below (36)-(38)). If it had occurred in a finite clause in first position, it would have been in one of the possible and even preferred positions of the subject pronoun. This cannot be explained by stating that the imperative clause is a V1-clause, since SpecCP in German may host an object-DP or an adverbial (see ex. (26) and (28) repeated here) but never a subject:

(34)   Die Waffen lasst liegen! (Platzack & Rosengren, 1998)
        The weapons let lie
(35)   Dorthin geh nicht! (Platzack & Rosengren, 1998)
        There go not

Platzack & Rosengren (1998) explain this movement in German by arguing that the object and the adverbial are topics, moved to SpecCP for pragmatic reasons. What this means is that the *ImpPron* never can be a topic. What then may be the function of *ImPron*, this pronoun not at all being frequent, always occurring after the verb and not being allowed to be the topic? The answer is that it *highlights* the addressee as one among other possible addressees, being the group the speaker is talking TO. It therefore has a kind of quantificational effect.

That this is a correct analysis is supported by the fact that not only *ImpPron* is possible but also a quantificational pronominal DP in 3rd person. This DP may be fronted, then being in SpecCP, but may also stay within vP (39):

(36)   *En av er* håll igen dörren!   Swedish
        one of you keep closed door-the
(37)   *Einer (von euch)* geh morgen hin!   German
        one (of you) go tomorrow there
(38)   *Jeder* verlass den Raum!   German
        everyone leave the room
(39)   Hört mal *alle* her!   German
        listen part. all part.

Obviously the 3rd person DPs and pronouns, when used, may, but must not, agree with the imperative verb, being 2nd person (39). It cannot be a vocative either (see Platzack & Rosengren, 1998, fn.2). This becomes evident when both a vocative and an *ImpPron* are present in the same clause (possible in Swedish, German and even in Italian, despite being a pro-drop language, see Renzi et al. 2001: III 392f.)

(40) a. *Peter, Johanna* und *Mia*, hört *alle* her!
      b. *Peter, Johanna* och *Mia*, lyssna alla!
         Peter, Johanna and Mia, listen all

(41) a. *Du mit dem grünen Hut*, geh *du* sofort das Auto holen!
      b. *Du med den gröna hatten*, gå du med detsamma och hämta bilen!
         you with the green hat, go you at once and fetch car-the

(42) *Peter*, sei *du* doch mal so nett und hilf mir!
      Peter, be you *part*. so nice and help me

Furthermore, since the subject in the finite clause type moves to SpecTP and from there moves on to SpecCP but the *ImpPron* neither can move to SpecTP nor to SpecCP, it is not surprising that *ImpPron* may occur more freely in the clause, see the examples in (43)-(46), taken from Platzack & Rosengren (1998: 207).

Imperative clause

(43) Spring (du) bara (DU) hem (du) meddetsamma (du)
      run you just you home you immediately you

Finite clause

(44) Igår sprang (du) bara (DU) hem (*du) meddetsamma (*du)
      Y-day ran you just you home you immediately you

Imperative clause

(45) Lauf (du) nur (DU) nach Hause (du) sofort (du)!
      run you just YOU home you at once you

Finite clause

 (46) Gestern liefst (du) nur (DU) nach Hause sofort (*du).
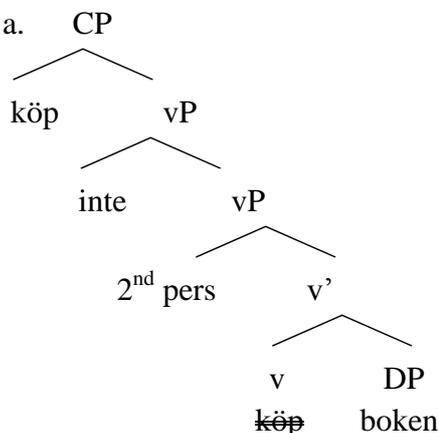   Y-day ran you just YOU home at once you

Notice that the pronoun after *bara/nur* is highlighted (focused).

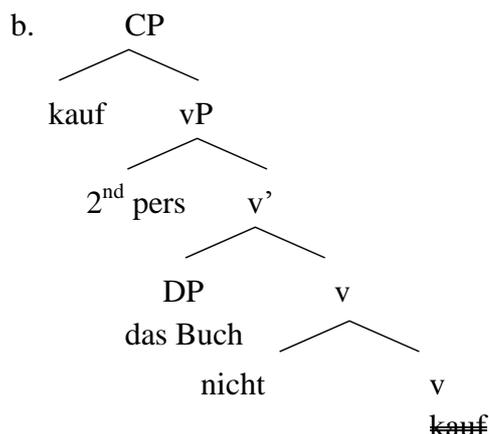### 3.2.4   The structure of the imperative clause in Swedish and German

We will assume that the imperative clause has the following structure without any TP and consequently without any subject in both Swedish and German. See (47):

(47) a. Köp inte boken! Swedish
          buy not book-the
      b. Kauf das Buch nicht German
          buy the book not

(48) a. CP Swedish

```
        CP
       /  \
     köp   vP
          /  \
        inte  vP
             /  \
         2ⁿᵈ pers  v'
                  /  \
                 v    DP
                k̶ö̶p̶  boken
```

      b. CP German

```
          CP
         /  \
       kauf  vP
            /   \
        2ⁿᵈ pers  v'
                 /  \
                DP    v
             das Buch /  \
                   nicht  v
                         k̶a̶u̶f̶
```

The imperative clause types in Swedish and German also differ, like the finite clause types, with respect to the status of the negation and the head-initial (VO) versus the head final (OV) status of the vP.

The derivation proceeds in the following steps.
Step 1: Pick v with the feature [imp] in the morphological modul.
Step 2: Swedish: merge *boken* to v, resulting in a vP and then adjoin the neg-phrase to vP. German: Adjoin the negative particle to v and then merge *das Buch* to v, resulting in a vP.
Step 3: C with the feature [¬imp^{EPP}] is merged to vP, valuing the unvalued imperative feature in C.

Summarizing: The imperative clause differs from the finite clause in not projecting TP, and therefore does not allow a subject. This difference determines the two clause types regarding both the clause structure and, especially, the status and function of what we have called *ImpPron*, always being optional and when present *visible*. It further differs from the

corresponding pronoun in finite clauses by having a somewhat different meaning and a greater freedom as to where it may occur in the clause. When *ImpPron* occurs, its function is obviously to highlight the person spoken TO, often as one of a group of persons being the addressees. As demonstrated it cannot front the clause in German, this position being the position where the finite clause prefers its subject. Its specific function as highlighting one or more persons among possible addressees explains its optionality. As oberserved above, there may also be quantificational DPs in 3rd person that may be fronted to SpecCP or stay behind within vP. However, not seldom, they do not agree with the verb, since they are not *ImpPron*. *ImpPron* is just marginally important, its function being more or less pragmatic in character.
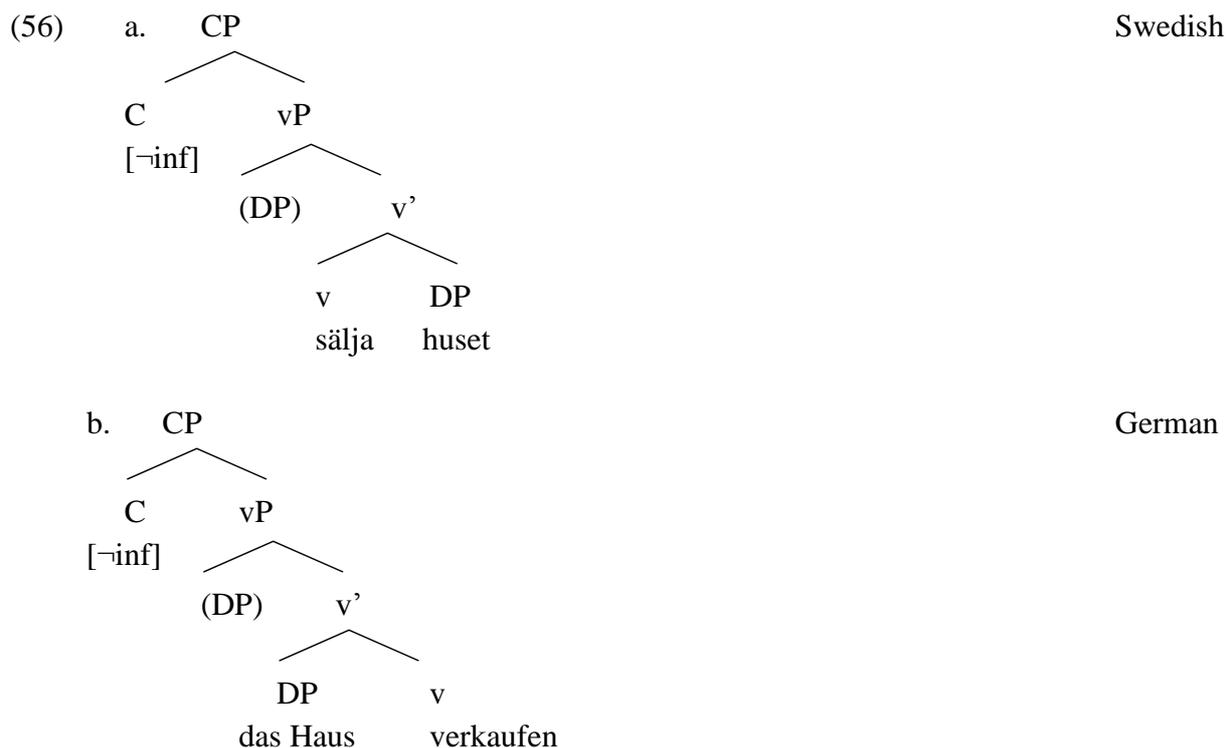
3.3   The infinitive clause type

3.3.1   The bare infinitive clause type

The bare infinitive clause type is more or less identical with the default vP of all clause types. It differs from the *wh*-infinitive clause type, which in addition has a *wh*-phrase (see 3.3.2), as well as from the imperative clause type, the most prominent difference being the position of the verb. The imperative verb is expressed in C and hence placed in front of the negation. The infinitive verb is in v and hence placed after the negation, see below 3.3.3. The bare infinitive clause occurs both in Swedish and German but seems to be much more frequent in German.

(49)   Röra i gröten!
       stir in porridge-the
(50)   Sälja huset!
       sell house-the
(51)   Tvätta sig ordentligt!
       wash yourself properly
(52)   Den Saal verlassen!
       the hall leave
(53)   Noch einmal zwanzig sein!
       once more twenty be
(54)   Sich ordentlich waschen!
       yourself properly wash
(55)   Radfarher rechts abbiegen!
       Cyclists to the right turn

The order VO vs. OV has of course consequences for the word order of the Swedish and German infinitive clauses. Otherwise they seem to have the same structure. There is no evidence that the verb moves anywhere, neither in Swedish nor in German. We will assume the following CP-structure:

(56)   a.   CP   Swedish

```
            CP
           /  \
          C    vP
        [¬inf]  /  \
            (DP)   v'
                  /  \
                 v    DP
               sälja  huset
```

b.   CP   German

```
            CP
           /  \
          C    vP
        [¬inf]  /  \
            (DP)   v'
                  /  \
                 DP   v
             das Haus verkaufen
```

We thereby assume consistently that C is merged to vP, since it is an independent clause, an assumption supported by the presence of *wh*-infinitive clauses, see 3.3.2. Note the difference between the independent and the subordinated infinitive clause, namely that the independent infinitive verb does not allow the complementizer *att* in Swedish nor the infinitive particle *zu* in German, more or less obligatory in subordinated infinitive clauses. C, therefore, will have only the feature [¬inf] assumed above, i.e. no EPP feature. We will return to this when discussing the infinitive clause with a *wh*-phrase.

The brackets around the DP in SpecvP signal that the clause must not have a visible external argument. Still we assume that a highest thematic role may be projected. In certain contexts a DP may occur very restrictedly as 3rd person, sing./plur., with a quantificational meaning. It picks out one person or a whole group of persons that the speaker is talking TO. Cf. above the imperative clause, see section 3.2.3, where the *ImpPron* may have similar functions.

In the absence of a *wh*-word, the infinitive clause in Swedish always begins with the infinitive verb, see examples (49)-(51) above. This word order is of course not available for German (see (52)-(55)), where the unmoved verb will be at the end of the clause.

3.3.2   The infinitive clause type with a *wh*-phrase

The presence of a *wh*-phrase introducing the infinitive clause tells us that there exists a C and hence a possible SpecCP. Both Swedish and German must front a *wh*-phrase if there is one in the numeration (see Teleman et al., 1999, volume IV, chapter 39, for Swedish, and Reis, 2003 for German). We will assume that the infinitive clause like the finite clause may take a C from lexicon with the features [¬inf] [¬wh^{EPP}]. The [¬wh^{EPP}] feature will probe a *wh*-phrase which

will move to SpecCP, exactly as it does in the corresponding finite clause. See the following *wh*-infinitive clauses in Swedish and German:

(57) a. Vart vända sig?   Swedish
         where to turn REFL
      b. Wohin sich wenden?   German, Reis (2003), ex. (1a)
         where to REFL turn
(58) a. Varför läsa den här boken?
         why read this here book-the
      b. Warum dies Buch lesen?
         why this book read

For some reason, Swedish *wh*-infinitives are mainly productive with the *wh*-adverbial *varför* 'why'; with other *wh*-words, the expression is more or less frozen, see Teleman et al. (1999), volume IV, chapter 39, and section 6. Some examples are given in (59), where # indicates semi-productivity:

(59) a. #Vad göra?
         what do
      b. #Vart vända sig?
         where turn himself

Wh-infinitives are, however, more productive in German, see Reis (2003), from which the following examples are taken:

(60) a. Wem noch trauen?   Reis (2003), ex. (1d)
         whom DAT still trust
      b. Welche Dämme dieser Lawine entgegensetzen?   Reis (2003), ex. (1c)
         which dams this DAT avalanche build-against

Note that the independent infinitive clause does not allow a *varför* 'why' to take scope over an embedded clause:

(61) a. Varför sa han att han hade skrivit brevet?
         why said he that he had written the letter
      b. Warum sagte er, dass er den Brief geschrieben hatte?
         why said he that he the letter written had
(62) a. Varför säga att han hade skrivit brevet?
         why say that he had written letter-the
      b. Warum sagen, dass er den Brief geschrieben hatte?
         why say, that he the letter written had

In (61a) *varför* may take scope over the whole clause but may also be interpreted as having scope only over the embedded clause. In (62a) *varför* has only scope over the matrix clause,

i.e. the infinitive clause. We think that the reason has to be looked for in the different structure of the finite clause and the infinitive clause. Since the finite clause consists of two finite clauses, it is possible to interpret *varför/warum* as belonging to the matrix or to the subordinated clause. The infinitive clause consists of an infinitive matrix and a finite clause, a combination which obviously prevents ambiguous scope. Since this fact is of no interest in our context, we will not discuss it further.

3.3.3   The infinitive clause type with a negation

Let us begin with some Swedish and German examples:

(63)   a. Inte glömma skorna!   Swedish
           not forget shoes-the
       b. Die Schuhe nicht vergessen!   German
           the shoes not foget
       c. Varför inte köpa boken?   Swedish
           why not buy book-the
       d. Warum das Buch nicht kaufen?   German
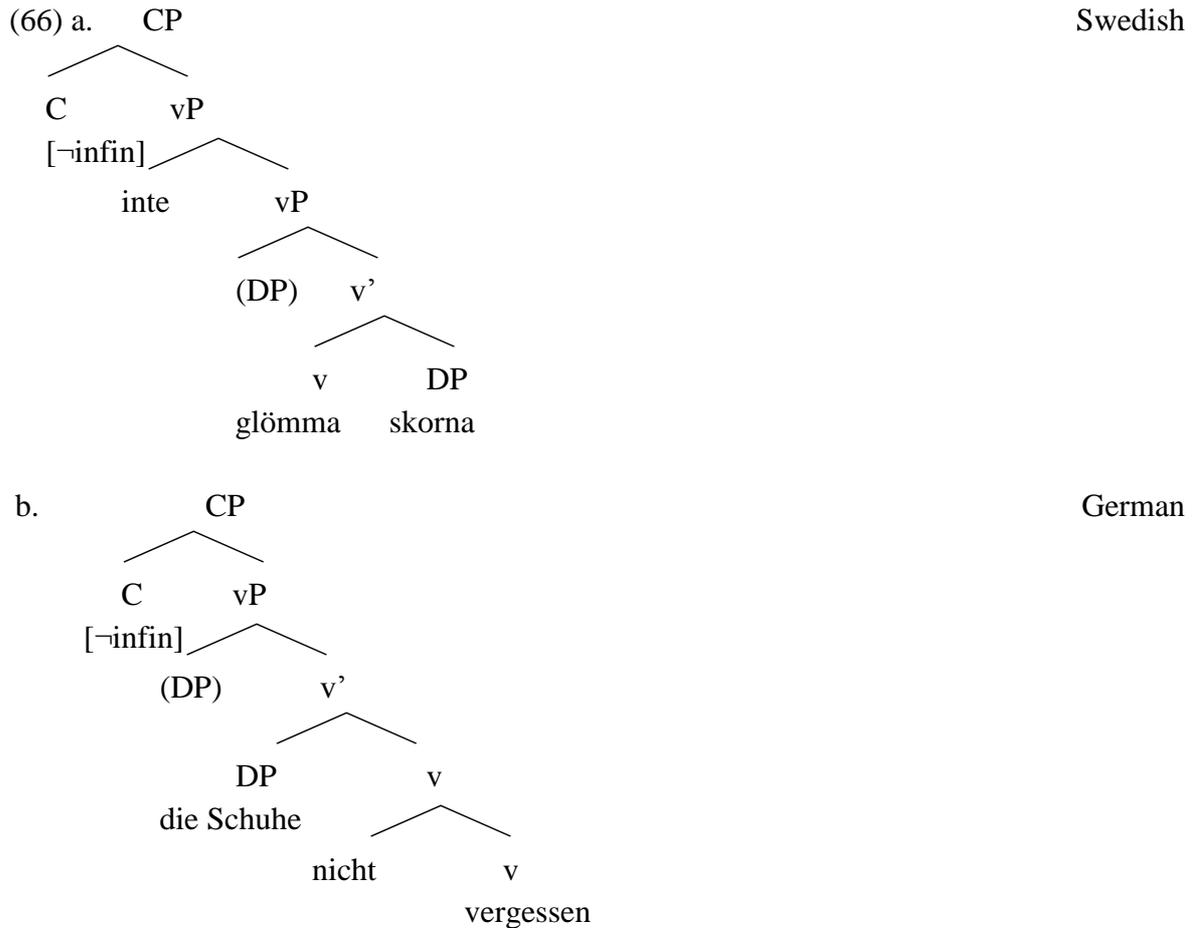   why the book not buy

We do not think that the negation in (63a) is in SpecCP, since that would have blocked the *wh*-phrase in (63c) from moving to SpecCP and eliminate the EPP-feature on [¬wh^{EPP}] in C. We argue that the negation in (63a) is adjoined to vP (Swedish) and in (63b) to v (German), see section 2.3 above. Note also that the negation may turn up in SpecCP in a finite clause (64c), but not an imperative clause (64a), cf. (64).

(64)   a.   *Inte rör spisen!
                not touch the stove
           b.   Rör inte spisen!
                touch not the stove
           c.   Inte rörde han spisen.
                not touched he the stove

As for German we do not see any reason to assume that the object in (63b) above is in SpecCP, as there is nothing that triggers movement. We believe that the object is in its base position. This in turn is supported by the following clause, where we will assume that the inverted word order between the two objects is a result of scrambling, which is a movement within the vP (see Haider & Rosengren, 2003):

(65)   Warum *das Buch* nicht *Peter* schenken?
       why the book not Peter give

Hence the following trees may demonstrate the structure of (63a) and (63b):

(66) a.   CP   Swedish

```
(66) a.        CP                                    Swedish
              /  \
             C    vP
          [¬infin] / \
               inte   vP
                     /  \
                  (DP)   v'
                        /  \
                       v    DP
                   glömma  skorna
```

```
   b.            CP                                   German
               /   \
              C     vP
          [¬infin] /  \
               (DP)    v'
                      /  \
                    DP     v
                die Schuhe / \
                        nicht  v
                           vergessen
```

The derivation proceeds in the following steps:

Step 1: Pick v with the feature [inf] from the morphological module.

Step 2: Merge the negative phrase, if there is one, to vP in the Swedish case, and the negative particle, if there is one, to v in the German case.

Step 3: Merge C with the feature [¬inf] to vP, valuing the unvalued infinitive feature in C.

4   Embedding

One of the recently most discussed questions in the description of imperative clauses is whether they may be embedded and, if that should be the case, if the embedding is similar to or identical with embedding of finite clauses. We will begin in sections 4.1 and 4.2 with short presentations and analyses of two types of embedding of finite clauses, which we will call *proper* embedding and *pseudo*-embedding, see examples (67) and (68) below. What is assumed to be embedding of imperative clauses, e.g. the Old Swedish example in (69), differs in several respects from proper embedding and pseudo-embedding. Such *Centaur*-embedding, as we will call it, is presented and discussed in section 4.3.3.

(67)   *Modern Swedish: Proper embedding*
        Han visste att Johan inte hade boken.
        He knew that Johan not had bok-the

(68)   *Modern Swedish: Pseudo-embedding*
    Han visste att Johan hade inte boken.
    He knew that Johan had not book-the
(69)   *Old Swedish: Centaur-embedding*
    Jac bidher thik at thu ey owergiff mik.
    I beg you that you not abandon-imp me

Note that centaur-embedding like (69) is not well-formed in modern Swedish or German, see the Swedish example in (70):

(70)   *Modern Swedish: Centaur-embedding:*
    *Jag ber dig att du inte övergiv mig.
    I ask you that you not abandon-imp me

The most obvious differences between the three types of embedding are listed in (71); notice that there are two types of Centaur-embedding, with the imperative verb in front of (71c) or after (71d) the sentential adverb:

(71)   *Embedding types* (SA short for sentential adverb)
    a. Proper embedding: complementizer>subject>SA>finite verb
    b. Pseudo-embedding: (complementizer)>XP>finite verb>subject>SA
    c. Centaur-embedding   1: complementizer>subject *du* 'you'>imperative verb>SA
    d. Centaur-embedding   2: complementizer>subject *du* 'you'>SA>imperative verb

4.1   Proper embedding

Properly embedded clauses are *subordinate* finite clauses that are embedded within a higher finite clause (or a nominalization of such a clause), called the matrix, within which the embedded clause is satisfying a *thetarole*.[17]
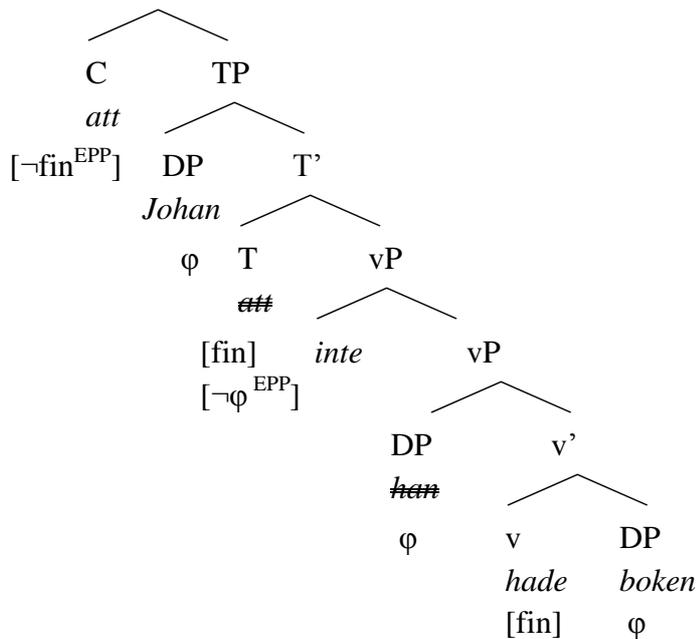
    The main difference between the finite main clause and the finite embedded clause is found in the T-projection. T hosts an unvalued finiteness feature in both cases, but in addition, T is spelled out as a complementizer like Swedish *att* 'that' and German *dass* 'that' in the properly embedded case. When C with unvalued finiteness feature with EPP is merged to TP, the presence or absence of the complementizer makes a difference: due to EPP, C will probe little v in the main clause, forcing the finite verb to move to C (V2), whereas in the embedded clause, the complementizer moves to C, leaving the finite verb in v. That the verb is in v predicts that the finite verb of an embedded clause appears after the negation, irrespectively of its status as a negative phrase adjoined to vP as in Swedish, or as a negative particle, adjoined to little v, as in German. In (72) we present a Swedish and a German properly embedded clause with a negation. As was the case for main clauses, the main syntactic differences between a Swedish *att*-clause and a German *dass*-clause is the difference between VO and OV within vP. See above 2.3.

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[17] Not all subordinate clauses are embedded. See a.o. Reis (1997).
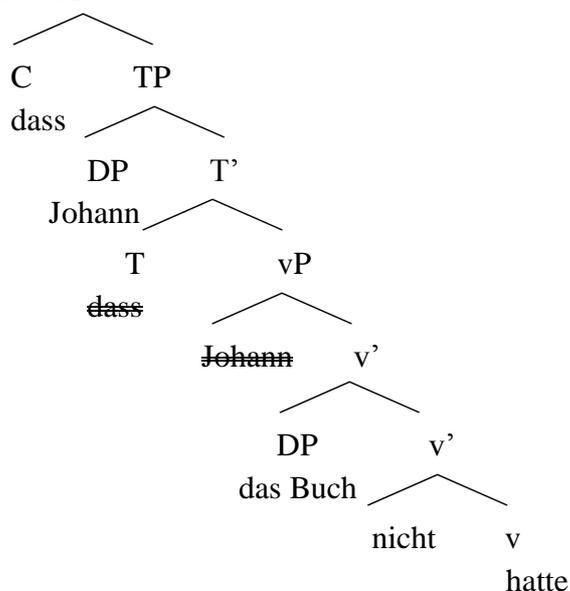
(72) a. Han visste, att Johan inte *hade* boken.   Swedish
          he knew that John not had book-the
      b. Er wusste, dass Johann das Buch nicht *hatte*.   German
          he knew that John the book not had

In rough outline, the embedded clause in (72a) has the structure in (73a) (Swedish), the embedded clause in (72b) the structure in (73b) (German):

(73) a. Han visste CP   Swedish

```
                    CP
                   /  \
                  C    TP
                 att   /\
             [¬finᴱᴾᴾ] DP   T'
                      Johan  /\
                        φ  T    vP
                          att  /  \
                         [fin] inte  vP
                        [¬φ ᴱᴾᴾ]    /  \
                                  DP    v'
                                  han  /  \
                                   φ  v    DP
                                     hade  boken
                                     [fin]   φ
```

      b. Er wusste   CP   German

```
                    CP
                   /  \
                  C    TP
                dass   /\
                     DP    T'
                   Johann  /\
                        T    vP
                      dass  /  \
                        Johann  v'
                               /  \
                             DP    v'
                          das Buch /\
                                 nicht  v
                                       hatte
```

Parts of the derivation:
1. The negative marker *inte* is merged to vP in the Swedish case (73a) and creates a new vP, with the feature [fin]. In the German case the negative particle *nicht* is merged to little v.

2. T with the features [¬φ ^{EPP}] and [¬fin] is merged to vP and is spelled out as *att* (Swedish) or *dass* (German).
3. T probes [φ] in SpecvP. Due to EPP *Johan* is moved to SpecTP; since *Johan* is a phrase, it must move to SpecTP and cannot move to T.
4. [¬fin] in T is valued by probing [fin] in little v.
5. C with feature [¬fin^{EPP}] is merged to TP. Due to EPP in C, the finite verb in v (main clause) or *att* in T (embedded clause) is moved to C, valuing [¬fin^{EPP}] in C.

The derivation of the German case proceeds in the same way, differing only with respect to the negation being a particle, not a phrase, and the OV order of vP.

Observe that C according to this description has the same features both in main clauses and embedded clauses. Observe also that according to the analysis, there must be a finiteness feature within vP for [¬fin] in T to probe; if not, [¬fin] in T will not be valued, and the derivation will crash. Alternatively, the complementizer *att/dass* is inherently valued for finiteness, with the consequence that the unvalued finite feature in T will disappear when *att*/*dass* is inserted.

Note finally, that the complementizer in C will prevent the clause from targeting the semantic interface on its own, and thereby anchoring the proposition in time and space.

4.2 Pseudo-embedding

In this section, we will discuss what we call *pseudo-embedding*, i.e. finite V2-clauses, with the structure of finite main clauses, that are c-commanded by a finite superordinated head C of a matrix clause. The following examples (we will only look at finite clauses without a *wh*-phrase) illustrate the Swedish and German clause types:

(74) a. Han tror att vi kan inte ändra detta beslut.
          he believes that we may not change this decision
      b. Han tror att detta beslut kan vi inte ändra.
          he believes that this decision can we not change
(75) a. Er glaubt, wir können diesen Beschluss nicht ändern.
          he believes we can this decision not change
      b. Er glaubt, diesen Beschluss können wir nicht ändern.
          he believes this decision can we not change

As is evident there is a difference between Swedish and German. The Swedish pseudo-embedded clause, more or less obligatorily, demands an introducing *att*. The German clause does not allow the corresponding complementizer *dass*.

The clause type illustrated in (74) and (75) has been very much discussed in recent syntactic literature, starting with the observations in Hooper & Thompson (1973) and Andersson (1975), see also Reis (1997), Brandtler (2008), Petersson (2014) and Julien (2015) among many others. Petersson (2014) and Reis (1997), independently of each other, convincingly argue for Swedish and German respectively, that "embedded" V2-clauses are

not properly embedded. Petersson and Reis mention much the same empirical facts, cf. Petersson (2014: 33ff.):

(76)   a. *Pseudo-embedded clauses cannot be topicalized.*
       *Att fönstret stängde han tror jag
       That window-the he closed believe I
       Jag tror att han stängde fönstret.
       I believe that he closed window-the
    b. *Pseudo-embedded clauses are islands for movement.*
       *Vad trodde hon att han hade inte stängt?
       what believed she that he had not closed
       Vad trodde hon att han inte hade stängt?
       what believed she that he not had closed
    c. *Pseudo-embedded clauses are restricted to certain types of matrix predicates (say, believe, hope, find etc.) not allowing factive and negated predicates.*
       *Jag beklagade att han hade inte stängt fönstret.
        I deplored that he had not closed window-the
        jag beklagade att han inte hade stängt fönstret
        I deplored that he not had closed window-the

Both Petersson and Reis struggle with the question how the theta-role of the matrix clause can be satisfied when the clause is not properly embedded and therefore cannot carry a structural theta-role. Their solutions differ, however. Petersson argues that *att* is a kind of pronoun and thereby a constituent of the matrix clause, whereas Reis proposes adjunction of the embedded clause to the right in VP, which, at least in our framework, is not possible.

But Reis (1997: 139, ex. (69a) [=77b] also refers to other empirical data in order to support that the clauses are what she calls "*relatively unintegrated*", namely data in the embedded clause, which signal dependence, like *variable* binding and *subjunctive*.

(77)   a. [Var och en]$_i$ vill gärna tro, att han$_i$ är alltid omtyckt. (variable binding)
       everyone will willingly believe that he is always liked
    b. Jeder$_i$ möchte gerne glauben, er$_i$ *sei* unheimlich beliebt. (variable bind., subjunct.)
       everyone$_i$ will willingly believe he$_i$ is enormously liked

Reis also points to another important fact, namely that the whole clause, i.e. the matrix and the "embedded" clause, has only one focus-background domain. The same holds for Swedish:

(78)   a. Peter trodde, att Anna skulle inte besöka sin MOR i morgon.
       Peter believed, that Anna would not visit her mother tomorrow
    b. Peter glaubte, Anna würde morgen ihre MUTter nicht besuchen.
       Peter believed, Anna would tomorrow her mother not visit

We think that the fact that the matrix clause has an unsatisfied thetarole contributes to the interpretation that the V2-clause is "relatively unintegrated" in German. However, we do not

think that this is a syntactic fact, but the result of the semantic interface looking for a way to accept the construction as embedded.

Returning now to the above properties (76), which perhaps are the result of the fact that the pseudo-embedded clauses have to follow the matrix *linearily*, in order to allow them to be interpreted as a complement of the matrix-verb. Every movement that will disturb this word order between matrix and subordinated clause will make the whole derivation crash, because only with this order is the c-command linearily visible. Note, however, that the subordinated V2-clause may be more or less deeply embedded as long as the embedding is to the right of the matrix head (see Reis, 1997, who demonstrates this, which, of course, also is a way to support its subordinative character).

The property (76c), i.e. that the matrix only allows certain types of predicates is another fact that may be explained by the conflict between the structure of the V2-clause as a main clause and its pseudo-embedding in the matrix. In order to pseudo-embed a V2-clause the main verb of the matrix has in principle to be a *non-factive* verb (*believe, hope, think* etc.), since the syntactic structure of the V2-clause otherwise would be interpreted as an independent clause with all the consequences of an independent finite clause (truth value, illocutionary force etc.). In order to avoid this, the matrix verb has to prevent the semantic interface from recognizing that the embedded clause in fact is a V2-clause, normally interpreted as an independent clause. We will return to this when discussing if the imperative clause may be embedded.

Let us finally look at some prosodic data, cited in Petersson (2014: 57f.) "According to Roll & al. (2009), the left edge of a main clause in standard Swedish is "marked by a high (H) tone associated with the last syllable of the first prosodic word" (Roll & al., 2009: 59). As shown by Roll (2006), this high tone is also present in "embedded V2"-clauses but, crucially, not in canonical *att*-clauses. In other words, the prosody of 'embedded V2'-clauses patterns with that of main clauses rather than that of subordinate clauses. Consider figure A below, which is taken from Roll (2009: 35) (reproduced with permission from Mikael Roll)":

Figure 1
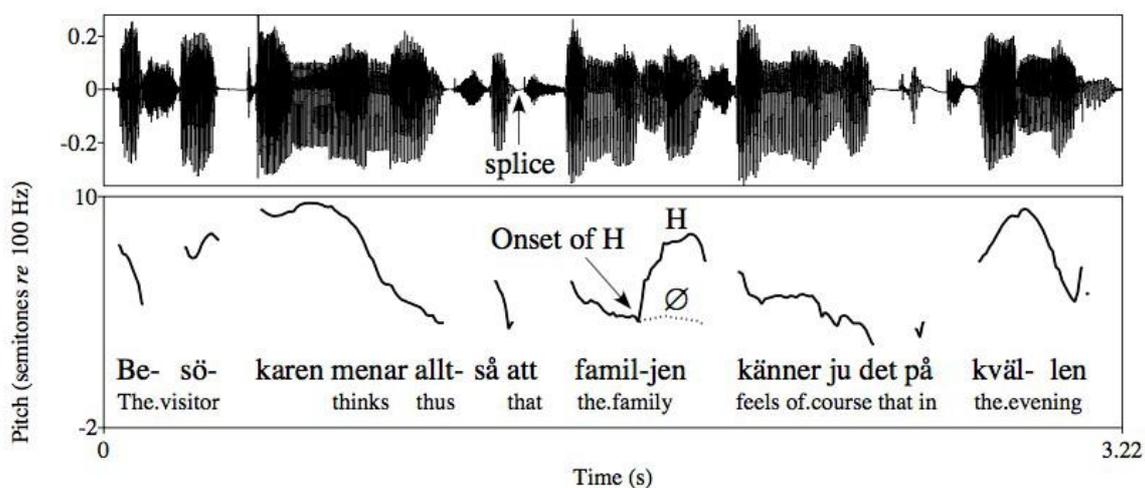
Petersson, interpreting this as a proof that the second V2-clause is just a main clause, uses it as support for his assumption that it cannot embed properly. We will, of course, agree, with the *restriction* that it is not to be interpreted as an *independent* finite clause, which is supported by the fact that only *non-factive* predicates are allowed. It is actually a *pseudo-embedded* clause.

We will now return to the important difference between Swedish and German, already mentioned above. Swedish, but not German, more or less obligatorily demands that the pseudo-embedded clause is introduced by an *att* 'that', which we regard as a complementizer, contra Petersson (2014), who regards it as a pronominal element, merged in C. German does not allow a complementizer.

Following Holmberg & Platzack (1995), we will argue that the pseudo-embedded clause is introduced by two CPs, where the obligatory complementizer *att* 'that' is heading for the highest CP and the finite verb of the embedded clause heads for the second CP. The V2-clause cannot embed properly, because the verb has moved to the embedded C and therefore prevents the complementizer from being merged in T and move to C, as in the proper embedding, see section 4.1. The effect we get can be described as a finite main clause introduced by two Cs (CP recursion). Notice that the higher C in a case with CP recursion does not seem to allow a specifier, which is in line with the observation in (76b) that this type of embedding are islands for movement out of CP (no available escape hatch), and also the observation in (76a) that the pseudo-embedded clause cannot be topicalized, which also involves SpecCP.

As to the difference between Swedish and German regarding the complementizer, we will simply assume that it is *visible* in Swedish and *invisible* in German, noticing that there is no structural difference except visibility between Swedish and German in this case.

Our solution hence is that there are two CP projections introducing the pseudo-embedded clause, the lower of them having the same structure as an ordinary main clause, and the higher of them being the result of merging the complementizer *att* to the higher CP. Swedish and German only differ as to the visibility of the complementizer. Swedish thereby signals pseudo-embedding overtly, whereas German prefers not to visualize the complementizer.[18] Hence Swedish uses the complementizer as a syntactic *bridge* in order to prevent the semantic interface to see the V2-character of the embedded clause, whereas German uses the invisibility of the complementizer as a syntactic *break*, a gap over which the semantic interface will build a *bridge*.

All taken together, the pseudo-embedded V2-clause is interpreted as embedded, *despite* of its V2-struture. Syntax does a lot to make this possible. One specific property, besides the complementizer, is the demand of *linearity*, which may be more important in German than in Swedish, where a complementizer explicitly signals embedding.

It is interesting that this type of syntactic conflict, which syntax tries to overcome in different ways, also exists in other cases. Confer, among others, Culicover & Jackendoff (1997: 195ff):

---

[18] We will assume that the theta-role is provided by the highest C in the embedded finite clause.

"[T]he left-hand conjunct in 'left-subordinating' *and*-constructions (e.g., *you drink one more can of beer and I'm leaving*) behaves like a subordinated clause. …. Our final conclusion is that it is possible to separate genuine syntactic conditions on linguistic form from the reflections of semantic conditions in the syntax. The reflections of semantics in the syntax are more numerous than are generally assumed within the Government-Binding tradition – but syntactic conditions do not wither away altogether. There is still room for an autonomous syntax, and autonomous conceptual structure, as the Chomskyan tradition has always maintained." (216)

In (79-80) below,we demonstrate the structure of the Swedish pseudo-embedded V2-clause (the German clause is assumed to have an invisible complementizer, where Swedish has *att*). See (78) with the subject in the lower SpecCP:

(79) Kalle trodde att Johan hade *inte* den boken.
      Kalle believed that Johan had *not* that book-the

(80) Kalle [$_{V'}$ trodde CP]
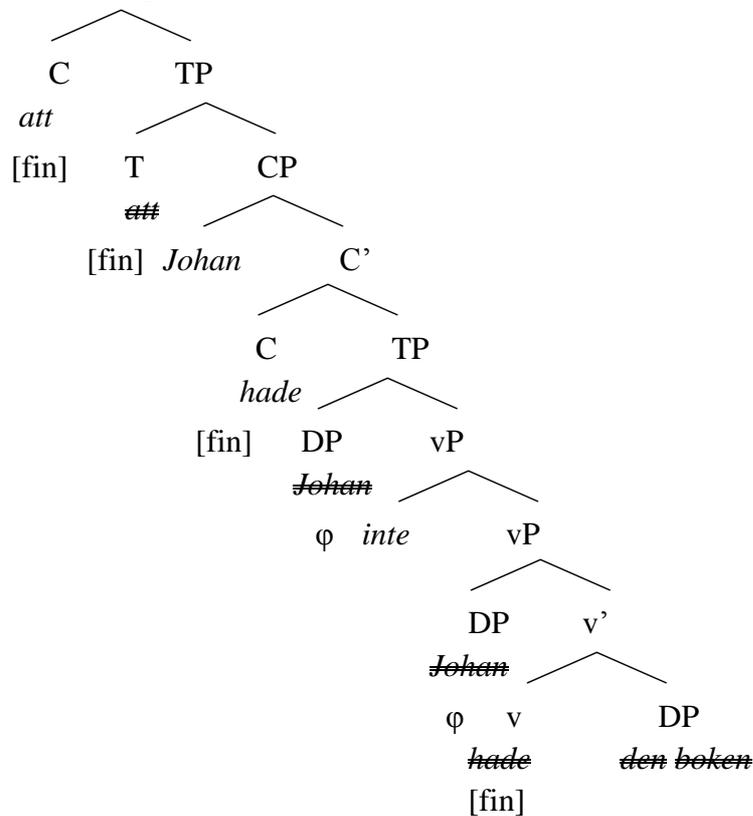
The derivation proceeds in the following steps:
1. DP *den boken* with feature φ is merged with the *v hade* creating vP with the feature [fin].
2. DP *Johan* with feature φ is merged to vP with feature [fin].
3. The negation *inte* is merged to vP, creating a new vP with the feature [fin].
4. T with the features[¬φ^{EPP}] and [¬fin] is merged to vP.
5. T probes [φ] in Johan in SpecvP and *Johan* is moved to SpecTP due to EPP.
6. T probes its c-command domain and evaluates its unvalued fin-features
7. C with the feature [¬fin^{EPP}] is merged to TP, and v with feature [fin] is moved to C due to EPP, evaluating C.

8. *Johan* in SpecTP is merged to C, creating the structure of a main clause with topicalized subject.

9. T with the lexical content *att* and the feature [¬fin] is merged to TP.

10. C with the feature [¬fin^{EPP}] is merged to TP, evaluating its finiteness feature and moving *att* to C, due to EPP.

Pseudo-embedded V2-clauses with the object or an adverbial in the lower SpecCP are analysed in a parallel way, the main difference appearing at step 8, where the adverbial or the object but not the subject take part in the evaluation of SpecCP.

(81) a. Kalle trodde att den boken hade Johan inte förra veckan.
          Kalle thought that that book-the had Johan not last week
      b. Kalle trodde att förra veckan hade Johan inte den boken.
          Kalle thought that   last week had Johan not that book-the

Summarizing: (a) The V2-clause cannot embed properly, because the finite verb is in C and embedding demands a complementizer in C, the position of the finite verb in main clauses. We propose a solution with two CP; (b) the V2-clause in Swedish and German may only pseudo-embed when the matrix has a *non-factive* predicate, otherwise the construction will crash at the semantic interface, the reason being that a *factive* predicate would allow the V2-clause to become an assertive speech act; (c) the languages differ as to the realization of the pseudo-embedding. Swedish uses the complementizer *att* which moves from the upper T to the upper C, whereas German, that does not allow visible *dass*, just links the two clauses overtly, relying on linearity, subjunctive, matrix verb a.o.; (d) there are, however, other properties the two languages have in common: the variable binding and the integration manifested in one focus-background domain; (e) pseudo-embedding is *marked* compared with proper embedding.

4.3   Embedded imperative clauses?

Nobody questions that the imperative clause structurally is an independent clause with its verb in first position, in our framework in C. We have seen above that *proper* embedding in both our languages means that a finite clause is connected with a matrix clause by means of a finite complementizer that occupies C, satisfying the theta-role of the matrix, and thereby preventing the verb from moving to C.

We have also seen that V2-clauses, i.e. clauses with the verb in C, cannot be properly embedded because the verb occupies C. We called this type of embedding *pseudo-embedding*. Swedish prefers a visible complementizer, whereas the complementizer in German is invisible; in other respects it is like the Swedish complementizer.

Certainly it would be most surprising if the imperative clause with its specific syntactic properties actually could embed *properly* in a finite matrix, as this possibility is not open for the V2 clause. Hence, we do not find any empirical reason for assuming that imperative clauses may embed *properly*. Our doubts are strengthened by the fact that there does not exist any imperative complementizer. Nevertheless, embedded imperative clauses have been

claimed to exist, in modern language as well as in e.g. Old Scandinavian. We will therefore examine some of the most dominant arguments that have been offered in linguistic literature.

4.3.1   Modern Swedish and German

One of the most interesting attempts to prove that imperative clauses may embed is found in the works of Kaufmann (2012, 2014). Note, however, that Kaufmann does not discuss the above mentioned proper- and pseudo-embedded types of embedding. In fact, she does not look at embedding as a strictly *syntactic* phenomenon but primarily as a semantic and sometimes even pragmatic phenomenon. This is particularly evident in her paper with Stegovec (2015) which treats "embeddings" of modern Slovenian imperative clauses, where the whole argumentation is based on different levels of reported speech and context. Although we think that embedding primarily is a syntactic phenomenon (of course not denying that it may have semantic and pragmatic consequences), we will look at Swedish and German clauses from Kaufmann's perspective. Kaufmann (2012: 208ff.) notes that the following clause is ambiguous:

(82)   Ich sag dir, geh nach Hause.
        I say you, go home

According to Kaufmann, (82) is ambiguous between an embedded imperative clause and an instance of direct speech. She therefore examines examples with indexicals, asking speakers to decide if there is more than one possible way to interpret them:

(83)   Ich hab dir *gestern* schon gesagt, geh da *heute* hin.
        I have you yersterday already said, go part. today there

According to Kaufmann (2012: 209) "[m]ost speakers accept (16) [= (83)] with *heute* 'today' referring to the day of the actual utterance context. Under such an interpretation, the imperative clause cannot be analyzed as an instance of direct speech." She concludes that if it is not direct speech then it must be an embedded clause.

Kaufmann does not tell us however, why this interpretation by "most" speakers proof that the clause is embedded.[19]

We believe that indexicals like temporal adverbs do not have anything to tell us about syntactic embedding. What they possibly tell us is that a given meaning of e.g. *heute* normally will be bound to the actual day the clause is uttered. When the adverb is used in a way where this meaning may not be correct or at least ambiguous, we will have to look for other ways of interpreting it, such as the context of the utterance. We cannot infer from this that the imperative clause in (83) is embedded in the matrix. First, it is obvious that (83) cannot be a case of proper embedding, as there is no complementizer or other marker of the embedding. But could it be some kind of pseudo-embedding that prevents the verb from raising to C? As Petersson (2014: 36) and Reis (1997: 123) have argued, what we call pseudo-embedding is

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[19] To obtain this, we need a way to link together syntactic structure and deixis, e.g. something similar to Julien (2015), who bases her account of indexicals on Sigurdsson's syntactic account of logophoric agent and patient.

only possible with a matrix with non-factive and non-negated predicates. These predicates are doxastic, or just verba dicendi, e.g. verbs meaning 'say', 'maintain' (which therefore are verbs that should not be used in this context, because it is difficult to determine if the following clause is or is not direct speech).

Reis argues that this type of embedding may always appear with only one focus domain, i.e. one main non-contrasting focus accent in the clause. Testing Kaufmann's examples as to the possibility to have only one focus domain will not be possible, however. These clauses are built in a way that more or less automatically leads to a *contrastive* focus reading of the two adverbs, one accent on *gestern* and one on *heute*. Even when it seems possible to have only one accent, e.g. on *heute* only, the accent seems to be contrastive:[20]

(84) a. Ich habe dir GEStern schon gesagt, geh da HEUte hin!
      b. Ich habe dir GEStern schon gesagt: Geh da heute hin!
      c. Ich habe dir gestern schon gesagt: Geh da HEUte hin!

In order to get better examples just for this test, we propose the following clauses:

(85) a. Han RÖT, (?att) stäng DÖRren!
      b. Er BRÜLLte, schliess die TÜR!
         he roared (that) close the door
(86) a. Jag ber/BER dig, (?att) gå inte DIT!
      b. Ich bitte/BITte dich, geh nicht dortHIN!
         I beg you go not there

Note that the complementizers in (85a) and (86a) normally are not used in Swedish, so we have better not discussing them as even optional. This is expected, since *att* actually should not be able to be a complementizer for the imperative clause. In (85) we believe that we get two accents, one in each clause, i.e. one on *röt/brüllte* and one on *dörren/Tür*. The fact that two accents are possible in (85) speaks against the assumption that the imperative clause is pseudo-embedded. Instead it speaks in favor of a non-embedded imperative clause. In (86) there may be two accents but also only one accent on *dit* and *dorthin*. In this case the matrix, however, is performative, the type of clause Kaufmann calls "double access" (2012: 206f.), and the two clauses together normally are interpreted as *one directive* speech act. (See section 6 where this is discussed in detail.)

In (85) at least and in (86), when there are two accents, we also find the above mentioned pause (fig. 1) between the matrix and the imperative clause. This is however no support for the assumption that the imperative clause is *pseudo-embedded*. On the contrary, the pause may be expected in this case, if the imperative clause may never be embedded at all. We would, however, like to find some more substantial empirical evidence for the assumption that the imperative clause neither is *properly embedded* nor *pseudo-embedded*. Such evidence is found in the following clauses:

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[20] Note that the verb *sagen* is not suited as the verb of the matrix, because it means 'say' and it therefore is easier to interpret the "embedded" clause as direct speech.

(87) a. *Jag vill, gå inte dit!
      b. *Ich will, geh nicht hin!
          I will, go not there
(88) a. ?Jag vill, (att) du går inte dit!
      b. ?Ich will, du gehst nicht hin!
          I will, you go not there

In (87) the matrix expresses a bouletic meaning (see section 5). Why is it ungrammatical? The ungrammaticallity of (87) should be surprising, since the verbs *vilja* 'will' and *wollen* 'will' in principle express the same modal meaning as the imperative clause. As for (88) we do not think that it really is ungrammatical, although it especially in Swedish seems a little strange. In Reis (1997: 123), this type of bouletic verb ("Präferenzprädikat") is one of the possible verbs that allow V2- clauses to *pseudo-embed* (in our terminology) but then, of course with a *finite* subordinate clause. Since the "embedded" clause in (87) is *imperative* and not *finite,* we will not expect that it may embed at all. The clause therefore supports our assumption that imperative clauses cannot even *pseudo-embed*.

Summarizing: We conclude that the imperative clause is an *independent basic clause type* that neither may *properly embed* nor *pseudo-embed*, because the imperative clause is not finite. But if it is neither proper embedding nor pseudo-embedding, then what do we see in (85) and (86) above?

We think, (85) is an instance of direct speech. The verbs of the matrix in similar cases probably always are verbi dicendi.What (85) means is, of course, that the speaker did not want the addressee to go there. Note that this clause cannot be performative. In (86), we have however, a performative clause, where the matrix describes the speech act performed. If this clause is not *1st person* and *present tense*, the clause will be interpreted as an assertion of the whole proposition. We will return to this in section 6.

We shall now look at Old Nordic, where the data are very interesting and have been taken as evidence for Old Nordic allowing embedding of imperative clauses.

4.3.2   Old Nordic

In old Nordic in general we find imperative clauses connected with a finite matrix by the complementizer *att/at.* See Rögnvaldsson (1996) and Delsing (1999); see also Platzack (2007). In a material based on 19 Old Swedish texts (mainly religious and historical texts), Delsing has found 77 imperative clauses that as it seems are "subordinated" to a finite main clause. The following examples are taken from Delsing's material:

(89) *Jak man-ar thik   ... At thu **sigh** mik sannindh*   (Leg-Bil 272)
      I urge-pres you that you tell-imp me truth
(90) *Wi bidh-iom oc at thu **førlat** os the syndh*   (Mos 210)
      we beg-pres also that you forgive-imp us this sin
(91) *Jak bidh-ir thik at thu **döp** mik mz thässom*   (Bo 38)
      I beg-pres you that you baptize-imp me with this

(92)   *vakta at thu ey **atirgak** til synda fylsko ---*   (MP1 157)
       beware that you not return-imp to sin's filth

There are at least four properties of these clauses which need to be discussed in order to understand the construction:

(a)   The matrix clause
(b)   The subject
(c)   The position of the negation
(d)   The subjunctive counterparts of this construction

(a)   All examples in Delsing's material have *performative* matrix clauses, i.e. a matrix clause describing the illocutionary act performed by the clause *here* and *now*. The performative matrix always has present tense and 1st person (see especially section 6). The most frequent verbs appearing in Delsing's material are *bidhia* (37) 'beg', *mana* 'remind'(8), *vakta* 'take care' (7), *biudha* 'offer' (5).

(b)   All Delsing's examples except two have a pronominal subject *thu* 'you' in the normal position next to the complementizer and strictly in front of the imperative verb. Since the imperative clause in Old Nordic normally does not realize the pronoun, this fact is difficult to explain. See the following example:

(93)   *Jak man-ar thik ...At thu **sigh** mik sannindh*   (Leg-Bil 272)
       I urge-pres you that you tell-imp me truth

Delsing assumes that the two cases, where a visible subject is lacking, indicate that these two clauses are real main clauses.
       Interestingly, however, is that the subject never occurs to the right of the verb. This is very surprising, since the verb found in independent imperative clauses always has to appear in front position, i.e. in front of what may be a subject. We therefore think that the pronoun in these clauses (89)-(92) is a real subject and hence the structure must contain a TP.

(c)   In the material excerpted by Delsing, there are 13 examples with a sentential adverbial. Of these, 8 precede the verb, 5 follow it. The above example (92) demonstrates the first type with the negation in front of the imperative verb, the example (94) the second type with the negation following the imperative verb.

(94)   *Jac bidhir thic...at wt **giwt** ey thit blodh*   (HML 297)
       I urge you that out pour-imp not your blood

As Delsing maintains, the 8 examples with the adverbial in front of the verb cannot easily be explained as main clauses because of the fact that two items would be in front of the verb. If we, however, assume that all examples are embedded, we will have to explain why the

clauses with the adverbial to the right of the verb are *grammatical*. We will therefore look for some other property of these clauses responsible for the two types of word order.

(d)   Old Swedish normally has subjunctive in properly embedded clauses after verba dicendi (like German today). Since we discuss the imperative clause, we are interested in those matrix verbs that may have a similar meaning as the corresponding verbs with an imperative clause, like 'wish', 'order' and 'prohibition'. We find a rich material in Mattsson (1933: 96ff.) with clauses properly embedded in a matrix with a verb with this meaning. But first of all, the most important fact is perhaps that we do *not* find any examples where the embedded clause has a finite verb in indicative. This means that we have to compare embedded subjunctive clauses with corresponding imperative clauses in order to see if the above mentioned two word orders may appear even when the clause is a properly embedded *att*-clause with a subjunctive verb.

Mattsson observes a difference in this type of embedding compared with other embeddings: a subjunctive verb after a matrix with one of these meanings has an *optative* or *hortative* meaning. Mattsson thinks that the verb of the matrix is the reason why the subjunctive verb gets this meaning. He mentions the following matrix verbs: (a) *vilia, yskia, biþia, mana, biþa, befala, sighia* ('order') a.o. and (b) *göma, akta, (at)vakta* a.o. Delbrück calls them "zielstrebige" Verben (Mattsson's comment, Beiträge 29: 214) and the *att*-clauses obviously have a touch of finality. What is more is, that these clauses often have present tense in the subjunctive form, although the matrix is past tense. We also find both the word order *verb > negation*, e.g. examples (95-98, 100), and the word order *negation> verb* (99).

(95)   Wir firibiuþum þæt at böndær giæri eigh
        we forbid that that farmers do not ...
(96)   at þe laten sik eigh finnæz wrangæ domæ györa
        that they let themselves not be-found wrong judgements do
(97)   at han läte sik ey forlanga ...
        that he let himself not demand
(98)   at iak stal eigh fæ þit
        that I stole not cattle yours
(99)   thz biwdhir iak thik at thu ey andreledh göre
        that beg I you that you not otherwise do
(100)   at han take ey aff liffs trae oc liwer ewinnelika
        that he takes not of life's tree and lives eternally

Mattsson also gives examples where the embedded clause has an imperative verb and reminds us that the use of imperative instead of subjunctive may be the result of a contamination of "oratio obliqua och oratio recta" in the spoken language.
        Interestingly, we also find embedded clauses with imperatives of auxiliaries, according to Mattsson in order to make sure that the correct meaning is final.

(101)   þo mana iac þik at þw sculi ey astunda …
        then ask I you that you should not ask for

This is important because this type of "embedding" is not possible today.

Summarizing: We think that the above data clearly lead to the following conclusions: The structural facts indicate that the old Nordic "embedded" imperative clauses have a structure, which we call "Centaur-embedding". This type of embedding obviously has a subject which resembles the subject in the corresponding subjunctive clause.

We, therefore, follow the explanation of Mattsson that there may be a kind of contamination between direct and indirect speech, a result of the matrix verb optionally selecting either the imperative or the subjunctive when it emphasizes an optative or hortative meaning. The fact that all imperatives are found in clauses with a performative matrix, makes us believe that the matrix licenses the imperative verb in the "embedded" clause, perhaps because the subjunctive and the imperative at this time are closely related to the optative and hortative subjunctive that still was strong also in main clauses.

This clause is accepted at the semantic interface because of its meaning. That the clause does not crash at the semantic interface is a consequence of both its structure and the meaning of the performative matrix clause. In the following section 4.3.3 we will propose a structure for the Centaur-embedding in Old Nordic.
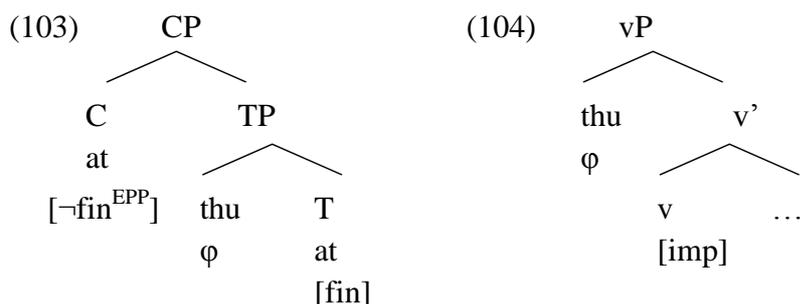
4.3.3 Centaur-embedding: Structural suggestions

We will take our point of departure in the properties listed as (a)-(d) above, suggesting a structural account of these facts. As mentioned, we will argue that what looks like embedded imperatives in Old Nordic has a very special structure, which we have called a *Centaur*, indicating that what looks like an embedded imperative clause has two lines of derivation, one projecting a finiteness feature and responsible for the finite complementizer *att* and the subject *thu*, the other projecting an imperative feature that is responsible for an imperative vP. Since the basis for the projection of a clause usually is the verbal feature in little v, it might seem that we are in a hopeless situation, since there should not be such a thing as "both x and z" to determine the projection line, only x or z. However, recall our claim that the complementizer *at* carries a valued *fin*-feature, when inserted from the lexicon in T, thus providing a finite projection line. Furthermore, the subject *thu* 'you' is merged in *SpecvP* and due to the unvalued [φ]-feature in T must be spelled-out in SpecTP. Hence, notwithstanding the fact that the standard independent Old Nordic imperative clause, like the imperative clause in present day Swedish and German, is verb initial, does not project TP and hence does not have a subject, we see that the centaur, because of its upper part having a TP also has a subject.
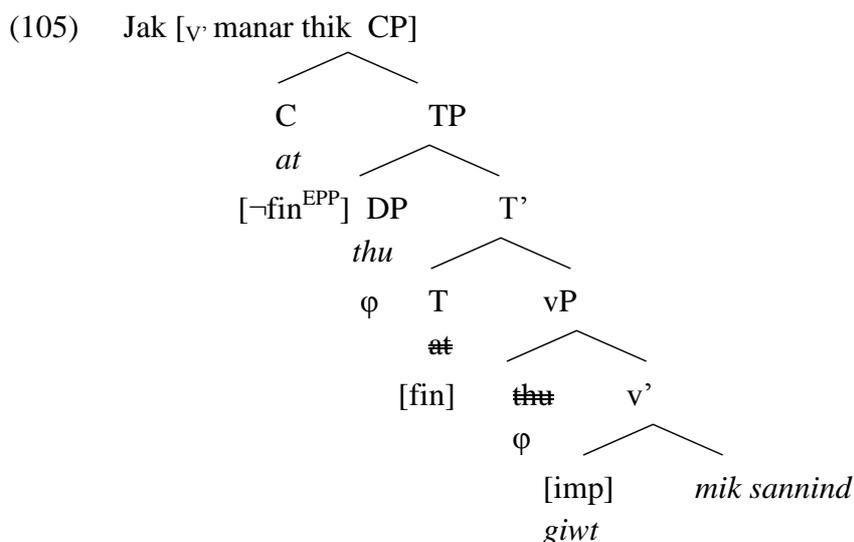
The two projection lines for the embedded imperative in (102) are outlined in (103) and (104).

(102)   *Jak man-arthik ... At thu **sigh** mik sannindh*   (Leg-Bil 272)
         I urge-pres you that you tell-imp me truth

(103) represents the finite projection line, (104) the imperative projection line:

(103)
```
              CP
            /    \
          C        TP
          at      /  \
      [¬fin^EPP] thu   T
                  φ    at
                     [fin]
```

(104)
```
              vP
            /    \
          thu     v'
          φ      /  \
                v     …
              [imp]
```

and (105) represents the combination of these two lines, the Centaur-structure of (102):

(105)   Jak [v' manar thik CP]
```
                     /    \
                   C        TP
                   at      /   \
              [¬fin^EPP]  DP      T'
                         thu     /  \
                        /       T     vP
                       φ       ~~at~~  /  \
                             [fin]  ~~thu~~   v'
                                     φ      /   \
                                         [imp]   mik sannind
                                          giwt
```

Summarizing: The two different trees (103) and (104) illustrate parts of a finite and parts of an imperative projection line, respectively. The finite tree looks like the top part of a *proper* embedding that enters the derivation, when *at* is merged. The imperative tree corresponds to the vP-part of an imperative projection, lacking the CP part of such a tree. (101) and (102) are combined with the help of the T-projection, which introduces a finite projection line and that needs a subject (*thu* 'you' in SpecvP) to value its unvalued φ-feature. Hence the top and the bottom of the combined structure in (103) belong to different projection lines, which is the reason we call it *Centaur-embedding*.

We have proposed that the performative clause licenses the imperative verb, especially since the subjunctive and the imperative at this time are semantically related, both being able to express *deontic* meanings. So the speaker might as well utter a vP, projected by an imperative verb, as a vP, projected by a subjunctive verb. We have called this a centaur, because neither the upper part nor the lower part of the clause are fullfledged clauses. *So it is of course no proper embedding of an imperative clause. Neither is it a proper embedding of a finite clause.* It is what Mattson calls *a contamination* of two structures. Since it is a frequent structure, more frequent than the corresponding subjunctive clause structure, we may assume that the explicitness of the performative matrix is the trigger of the imperative verb (the whole clause being an *order* or a *request* illocutionarily, see section 6 below).

5   The semantics of the clause types

5.1   Introduction

We are now ready to look at the semantic interface and what happens there.[21] We assumed in the introductory theses that the morpho-syntax, the semantics and the illocutionary system are autonomous and interdependent modules.They are autonomous because they are characterized by their own specific system of principles, units and rules, and they are interdependent because they are dependent on one another for their realization, ending up in utterances produced and understood by speaker and addressee.

In section 2-3 we defined three *independent* clause types, the *finite,* the *imperative* and the *infinitive* clause type. They are projections of a finite, imperative and infinitive verb, and differ structurally from one another as a result of the difference between the inflection of the verbal head being finite in the finite clause but non-finite in the imperative and infinitive clause. The projection of the *independent finite* clause has a functional node TP and a subject, which is not present in the imperative and infinitive clauses. In both cases the verb moves to [Cfin]. Note that subordinated clauses are always dependent clauses, being part of a matrix clause that in turn itself may be a subordinated or an independent clause, and that imperative clauses do not allow embedding at all.

Traditionally it is assumed that *sentence types* have *sentence mood* and very often also that only *independent* sentences may have sentence mood (see Meibauer et al., 2013: 4ff.). The term *sentence mood* is, however, difficult to grasp. Meibauer et al. summarize: "Vielmehr hat man oft unter ‚Satzmodus' die Semantik eines Satztyps verstanden, also das, was ein bestimmter Formtyp, wie z.B. der Imperativsatztyp, semantisch (im Sinne der ‚Modalität' eines Satztyps) kodiert." We think that the intuition behind the notion *sentence mood* of the clause type in terms of *sentence type modality* is on the right track. We do not think, however, that the syntactic clause type encodes its modality.

In BRRZ (1992) we find a modular generative approach, where what we here call the *Semantic module* is called *Semantic Form* (SF), in turn related to *Logical Form* (LF). In this account it is assumed that a syntactic tree is homomorphically translated into a semantic tree. *Sentence mood* is an attitude free specification of the semantics of the sentence referring to an *event*. The semantics is based on the formula ∃e [e INST p), introduced by Bierwisch (1988), where *e* is a symbol for *event* and the mapping of the sentence onto semantics is guided by an assumed referential argument from the lexicon that has to be bound by a functional head.

There are several reasons the system in BRRZ does not work in our theoretical approach. *Firstly*, we do not think that there is any need of an instantiation of p in semantics by an event variable. *Secondly*, the existential quantifier is a *first-order* logical quantifier, taking *e* in its scope, quantifying over it. We propose an operator higher up in the hierarchy, i.e. a *modal* operator, onto which the clause type will map. *Thirdly*, the above formula in BRRZ is the formula of the *declarative sentence,* that is assumed to be present in all sentence

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[21]   In this section and section 6, we will primarily use German examples. It is seldom the case that we need to compare with Swedish or some other language (if so, we will, of course, do it), the reason being that these sections are of very general character and apply to very many languages.

types. In order to distinguish between this sentence type and other sentence types, BRRZ assume that other operators are added to the basic type. Since our clause types all are the result of the projection of a verbal head, they will of course be on the same clause type level, i.e. it is not possible that a clause type may be included in another clause type. *Finally*, the clause types are the traditional clause types, i.e. the *declarative, interrogative* and *imperative* clause types. As we argue in section 2.5 and 3.1.2 the interrogative clauses do not constitute clause types of their own. They are finite as are the standard finite clause types. Interrogativity is a semantic property. We will return to the interrogative clauses below.

Returning now to our own framework, we assume that the three modules are autonomous and interdependent; we further assume that the syntactic clause at the semantic interface maps onto a modal operator which takes the whole proposition in its scope and creates a new proposition, providing it with a modal meaning, which we call *clause type meaning*. Let us first look at the finite clause type.

5.2 The finite clause type

The modal operator, that a finite clause may map onto, is a *unary non-truth functional operator*, e.g. an *alethic*, *epistemic* or a *doxastic* operator. Of these operators only the *alethic* operators are strictly *truth-oriented*, as the other two are relating to the truth in a different way. There has been some discussion about what the difference is, if any, between e.g. the *alethic* and the *epistemic* modality, see below. We will call the meaning of the clause types their *intension*. Not until the clause maps onto a speech act type, does it get its *extension*. Cf. Frege (1892), who introduced this distinction.[22]

First, however, we will introduce the different *alethic* operators. There are three subtypes of alethic operators, *necessarily p*, *possibly p* and *contingently p* ($\Box p$, $\Diamond p$ and ∇p, called 'box', 'diamond' and 'nabla', respectively, see Herrick (2000: 441ff.).

The *box* typically operates on mathematical or analytic propositions, like *2+2 = 4*, and '*All bachelors are unmarried'* (106) and (107). They may not be contradicted. The diamond may be paraphrased by "It is possible that p is true", see Herreck (2000: 443ff.). Since we are more interested in *synthetic* propositions, the truth of which can only be determined by looking at what the proposition is referring to in the actual world, we need another alethic operator than the box and the diamond. Cf. the following clauses:

(106)   2 + 2 = 4.
(107)   Alle Junggesellen sind unverheiratet.
         all bachelors are unmarried
(108)   Peter hat gestern seine Mutter besucht.
         Peter has yesterday his mother visited

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[22] We are aware of the fact that *intension/extension* is not used by Frege in the way we use it here, as Frege did not approach language in a modular fashion. What is important to us is that the terms as such allow us to distinguish clearly between the semantic and the illocutionary module. The clause with a specific *intension* maps onto a speech act type and gets its *extension,* when referring to the actual world.

The propositions of (106) and (107) are both in the scope of □. As to (108), it is obvious that the proposition cannot be *necessarily true*. We will assume that it is in the scope of the *contingent* operator, nabla, ∇. In Herreck (2000: 449), this operator is paraphrased in the following way: "If P is contingent, in some circumstances P would be true, and in some circumstances P would be false. In other words, P's truth value depends on (is contingent upon) the circumstances that obtain or do not obtain." We will further assume that we need the concept of possible worlds semantics in the case of the alethic operators. See Herreck (2000: 449ff.) for a thorough analysis of this concept.

The formula of ∇p therefore will be the following:

(109)   *∇p, iff p is true in some possible worlds and false in others.*

In our framework this means that a synthetic clause like (108), that has mapped onto a contingent operator, does not tell us the *truth value* of the proposition, it only tells us that the proposition may be *true* in some possible worlds and *false* in others (cf. German *wahrheitswertfähig* = 'capable of getting a truth value', which however is not quite the same). Not until the speaker utters a clause with the contingent operator, which maps onto a proper speech act at the illocutionary interface, he is asserting that it is true.[23]

We assumed above, thesis 5, that there exists a *correspondence relation* between the *finiteness* of a clause and a *unary non-truth functional* operator, which it may map onto. Note that none of the above clauses (106)-(108) have a lexically expressed modal operator. They are *bare* finite clauses, identical with their proposition. Still we assume that they are in the scope of a *unary non-truth functional operator*. Obviously they map directly, without any help from a lexically expressed operator, onto a proper modal operator at the semantic interface. The box may be expressed in (106) and (107), but the clause is normally bare. As to the contingent operator, i.e. the operator a synthetic clause may map onto, it normally is bare, too.

We find, however, cases where the alethic operator has to be expressed lexically. Let us look at the following clause, where the modal operator is lexically expressed. See BRRZ (1992: 66ff.) for a detailed analysis, from which we only deviate slightly:

(110)   Vielleicht hat Peter seine Mutter gestern besucht.
         perhaps has Peter his mother yesterday visited

In (110) the proposition contains an adverb *vielleicht* and the proposition in (108). We will assume that the proposition *p* is in the scope of a *non-truth functional* operator, expressed by

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[23] A very interesting paper is Nelson & Zalta (2012), who discuss logical truth in terms of R-validity (R = real world validity) instead of G-validity (G = general validity) . "What drives the proponent of *R*-validity is the idea that a formula is true in a model just in case it is true in the distinguished actual world of that model. …. Intuitively and informally, a formula is *R*-valid just in case, for every model, it is true at the distinguished world of the model. A formula is *G*-valid, on the other hand, just in case, for every model, it is true in every world of the model." They propose to extend the definition of logical truth with an *actuality operator*. We will not discuss the philosophical question and the proposed solution with an actuality operator. We will however use the contingent operator in our *linguistic* framework to represent *the contingency* between the semantic and the illocutionary module. The truth-value of a clause in the semantic module is contingent upon a speech act type in the illocutionary module, referring to an event in the actual world.

vielleicht, i.e. the modal operator ◊, which modalizes the proposition, telling us that 'Peter may have visited his mother yesterday', exactly as we understand it in our standard language. The whole proposition, however, including *vielleicht*, will map onto the contingent operator and hence be true or false.

Note that *notwendigerweise* ('necessarily') is not acceptable, see (111), since the result would be an interpretation that there were no other possibility, and that is normally not the case with a syntethic clause:

(111)   *Notwendigerweise hat Peter seine Mutter gestern besucht.
             necessarily has Peter his mother yesterday visited

Important are also the *epistemic* and *doxastic* operators. Let us confer them with (108), here repeated as (112), which consists of only one clause and proposition and does not express the operator explicitly. In the following examples (113)-(116), we find two clauses, one being the matrix, the other being a subordinated clause:

(112)   Peter hat gestern seine Mutter besucht.
             Peter has yesterday his mother yesterday visited
(113)   Anna weiss, dass Peter gestern seine Mutter besucht hat.
             Anna knows that Peter yesterday his mother visited has
(114)   Ich weiss, dass Peter gestern seine Mutter besucht hat.
             I know that Peter yesterday his mother visited has
(115)   Anna glaubt, dass Peter seine Mutter gestern besucht hat.
             Anna believes that Peter yesterday his mother visited has
(116)   Ich glaube, dass Peter gestern seine Mutter besucht hat.
             I believe that Peter yesterday his mother visited has

The verbs in the matrix of (113)-(116) have an *epistemic* or *doxastic* meaning. The clauses (114) and (116) differ from the clauses (113) and (115) in having a matrix with an epistemic and a doxastic verb with *1st person, present tense.* These clauses refer to the *speaker* and will map onto an *epistemic* or a *doxastic* operator at the semantic interface.[24] The other clauses (113) and (115) have a matrix with the same verbs with *3rd person present tense*. In such clauses, of course, the interface cannot recognize a speaker-oriented operator. The epistemic and doxastic verbs in these clauses are *subject*-oriented and part of the proposition. The clauses, therefore, will map onto a *contingent* operator that takes the whole clause including the epistemic and doxatic verbs in its scope.

What we see in (114) and (116) is well-known from logic, where the epistemic and doxastic modality often is paraphrased with 'it is known that', 'it is believed that' etc. (see e.g. Hughes & Cresswell, 1996: 14f.). In our framework, which is linguistic, the difference in this case, however, is expressed explicitly by the difference between *1st person, present tense* and *3rd person present tense*, the result being that only the verbs in (114) and (116) are interpreted as *non truth functional* operators on the same level as the contingent operator,

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[24] These types of clauses, (114) and (116), with an epistemic/doxastic verb in 1st person, present tense are in Rosengren (1984, 1985) called *Einstellungsbekundung* (*Attitude expression*).

while the verbs in (113) and (115), which are subject-oriented, cannot be interpreted as operators. Note that the difference between the epistemic and doxastic verbs in (113)/(115) and (114)/(116) is a difference between the scope of the verbs. The clauses with *1st person, present tense* have a wider scope than those with *3rd person present tense.*

It is illuminating to compare the scope differences of the epistemic and doxastic verbs above with the scope differences of modal verbs. We shall only briefly discuss this and return to it more in detail when discussing the imperative clause:

(117)   a. Du musst/kannst deinen Freund gerettet haben.
       You must/may your friend saved have
       Paraphrase: For all we know/believe, you have saved your friend
    b. Du musst/kannst deinen Freund retten.
       You have to/can your friend save
       Paraphrase:You have to/are able to save your friend
    c. Peter muss morgen wieder zu Hause sein.
       Peter must tomorrow again home be
       Paraphrase 1: For all we know, Peter is back home again to morrow
       Paraphrase 2: Peter has to be back again tomorrow.

The verbs in (117a) express speaker-oriented *epistemic* modality. The verbs in (117b), express subject-oriented *deontic* modality. The epistemic modal verb has, compared with the deontic modal verb, the widest scope (see Hacquard, 2009: 4). What interests us here, is that the modal verbs seem to be ambiguous, being either *epistemic* or *deontic*. This ambiguity has been discussed in linguistic literature at some length. See the influential work by Kratzer (1977), where Kratzer argues that they are not really ambiguous in the lexicon (see also Hacquard, 2009: 10). Their different meanings are according to Kratzer (simplified here) the result of a mapping onto *contextually* provided *conversational backgrounds* (see Hacquard, 2009: 12f.). We agree with the assumption that these modal verbs may be non-ambiguous in the lexicon. But we do not believe in a solution with conversational backgrounds.

We think that the different meanings in (117a/b) is a matter of *scope of the modal verbs*. The paraphrases demonstrate that (117a) is in the scope of an *epistemic operator*, and (117b) is in the scope of a *contingent operator,* taking the rest of the proposition with its *modal* verbs, meaning 'must, have to/be able to/be allowed to' in its scope. As expected, we therefore also find ambiguous clauses. (117c) is such a clause, as the paraphrases demonstrate. It may be interpreted either as a clause in the scope of the an epistemic operator or as a clause in the scope of the contingent operator, taking the whole proposition in its scope. Hence, these verbs do not have different meanings in the lexicon, they have different scopes in the above clauses, sometimes being ambiguous in the same clause. We will return to this interesting fact below, when discussing what Han (1999) calls *deontic modal sentences,* comparing them with imperative clauses. Note that both operators, the epistemic as well as the contingent, are truth-oriented, none is action-oriented.

We have until now only described and discussed the finite V2-clause, which we regard as the default independent finite clause type, mostly mapping onto the contingent operator.

But as already mentioned in section 2.5, there also exist finite V1-clauses without any SpecCP-position. Thus, the declarative V1-clause is a marked clause in the Germanic V2-languages, as it maps onto the same contingent operator as the V2-clause does[25].

We will concentrate on finite *interrogative* clauses, which in our framework cannot be basic clause types, since their basic finite morpho-syntactic *verb* has no impact on the clause type meaning (see section 2.5). The interrogative clause is simply in the scope of the contingent operator, like the finite clause discussed above, see (112).

Obviously interrogative clauses are used to express questions that demand answers. The finite *V1-clause*, when uttered, therefore is either interpreted just as a *contingent* clause (see fn. 25) or as an *interrogative* V1-clause, expressing what is called a *yes/no* question, the answer being *yes* or *no*:

(118) a. Kommt Peter morgen?
         Come Peter tomorrow
      b. Ja/Nein
         yes/no

The finite *wh*-clause is a V2-clause in Swedish and German with a *wh*-phrase in SpecCP, that has moved from its basic position in vP (see section 2.5 and 3.1.2), representing a gap in the proposition. It is normally called a *wh*-question:

(119) a. *Wer* kommt morgen?
         who comes tomorrow
      b. Peter.

We interpret this specific property of the interrogative clauses as a semantic property, i.e. as semantic *openness* (see also BRRZ, 1992, and Rehbock, 1992b). In our framework the proposition of the interrogative V1-clause is *open* as to its *truth value*. The proposition of the *wh*-clause instead has a gap that has to be closed by a proper phrase out of a set of possible answers. This *openness* of the two interrogative clauses is the result of two different *open*-operators the proposition is mapping onto. We will follow Rehbock (1992b: 178ff.) as to a definition of the operators involved[26]. The V1-clause maps onto a truth functional *unary propositional* operator of the same kind as NEG, taking the whole proposition in its scope, giving rise to a new proposition that is *undetermined* as to its truth value[27]. The *wh*-clause will map onto a *first order logic operator* of the same type as the *universal quantifier*, that takes the variable x of the proposition in its scope and binds it, relating it referentially to a set of

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[25] See Önnerfors, 1997, and Mörnsjö, 2002):
(i) Kam ein Mann zur Tür herein.
    came a man the door through
[26] We differ from both BRRZ (1992) and Rehbock (1992a), however, since the contingent operator takes the clause with the open-operator in its scope, whereas BRRZ and Rehbock in the theoretic framework of BRRZ assume that the *open*-operator takes the whole proposition with its sentence mood in its scope. From our viewpoint this does not work, since the open-operator cannot take the higher modal operator in its scope.
[27] The openness of the proposition is not to be mixed up with the modal meaning of the contingent operator, true in some possible worlds and false in others. It is a *unary propositional* operator operating directly on the actual proposition.

possible "answers" that may close the gap (Rehbock 1992b: 189). Rehbock distinguishes between the two operators by using two omega symbols, upper case omega, Ω, for the first type, and lower case omega, **ω**, for the second type. The two propositions with their two open-operators will both map onto the modal contingent operator.

Note that there is an important difference between the two operators. The V1-clause will just map onto Ω and then map onto the contingent operator to get its clause type meaning, with the result that the proposition in the contingent clause is open. The interrogative *wh*-clause will look for the corresponding operator **ω,** which will bind the variable *x* in the *wh*-phrase, and then map onto the contingent operator and get its contingent clause type meaning.

Note also that the two operators, the open-operator and the modal contingent operator, both are *truth-oriented* and cooperate in order to create an open proposition, that will be the prerequisite for a *question* in the illocutionary module. The *question* hence is a speech act that will request an answer, see section 6.

5.3   The imperative clause type

Let us now move on to the imperative clause and see what happens there. The imperative clause is one of three clause types. We will therefore expect that it also maps onto a *modal operator*. We argued in section 3.2.1 that it differs from the finite clause by (a) having a projecting non-finite imperative verb in 2nd person instead of a finite verb, (b) therefore not allowing a subject, (c) neither allowing embedding nor pseudo-embedding.

Von Wright (1951: 1ff.) was one of the first (if not the first) to recognize that we need another clause modality than the truth-oriented one. In (1951) he made a sharp distinction between

> "the alethic modes or modes of truth" and "the epistemic modes or modes of knowing" on one hand, and "the deontic modes or modes of obligation, on the other." The first ones are true or false, the second type "are concepts such as the obligatory (that which we ought to do), the permitted (that which we are allowed to do), and the forbidden (that which we must not do).

He asks what are

> "the things which are pronounced obligatory, permitted, forbidden, etc.... and continues "we shall call these "things" acts. …. "There is one relevant respect, in which the deontic modalities differ from the alethic, epistemic, and existential modalities. It can be illustrated as follows: If a proposition is true, then it is possible … and not falsified …. But if an act is performed (or not performed), then nothing follows as regards its obligatory, permitted or forbidden character. There is thus an important sense in which the deontic modalities unlike the alethic, epistemic, and existential ones have no logical connexions with matters of fact (truth and falsehood)."

The above difference between two kinds of modalities has also very clearly been developed in a paper by Han (1999: 2ff.), where she compares *imperative* clauses with what she calls *deontic modal sentences*. She proposes

"that imperative mood contributes as essential part of its meaning that (i) there is an obligation or a permission and that (ii) the speaker issues the obligation or the permission. These cannot be contradicted nor qualified. On the other hand, deontic modal verbs in the indicative mood contribute as assertion that there is an obligation or a permission in the current world. This assertion can be contradicted and qualified.…This captures the intuition that the speaker imposes an obligation or a permission on the addressee to bring about the state of affairs denoted by the core proposition of an imperative and helps us to define formally the semantics of imperatives."

Let us first look at what Han (1999) says about the differences between the *imperative* clause and what she calls *deontic modal sentences*. The following examples together with the comments are all taken from Han:

"Imperatives cannot be either true or false. But deontic modal sentences have truth values.

(120) [= (33)]   a. Finish the paper by tomorrow!
                 b. You must finish the paper by tomorrow

For instance, (33a) cannot have a truth value under any circumstances. But (33b) is either true or false, depending on the state of the world. Imperatives do not assert anything about the current world. Thus, they cannot have a truth value. However, deontic modal sentences assert that there is an obligation or a permission in the current world.

The deontic modal force cannot be negated in imperatives. In a negative imperative, negation does not have scope over the deontic modal force contributed by the imperative mood. The deontic modal force of the imperative mood always has scope over the negation.

(121a) [= (24)]   Don't go. ≡ It is necessary that you not go.
                  ≠ It is not necessary for you to go.
(121b) [= (25)]   Nobody move.
                  ≡ It is necessary for everybody not to move.
                  ≠ It is not necessary for everybody to move.

Moreover, if the addressee replies 'no' to an imperative, s/he is refusing to do what s/he is being commanded or requested to do, as in (26b). S/he cannot be contradicting the modal force itself, as shown in (26c) to (26e).

(122) [= (26)]   a. Go home.
                 b. B: No, I will not.
                 c. #B: No, I don't have to. Nevertheless, I will go home.
                 d. #B: No, not necessarily.
                 e. #B: No, that is not true. I can stay.

Imperatives cannot take a sentential adverbial that qualifies the deontic modal force.

(123) [= (29)]   #Perhaps, take the exam.

However, deontic modal sentences can take a sentential adverbial that qualifies the deontic modal force.

(124) [= (30)]   Perhaps, you must take the exam.

If imperative mood contributes an obligation or a permission as an essential part of its meaning, then it is not surprising that the modal force cannot be qualified in imperatives. Furthermore, if

deontic modal verbs contribute an obligation or a permission as an assertion, then it is not surprising that the modal force can be qualified in deontic modal sentences."

We agree with Han (1999) that there is an important difference between *imperative* clauses and what she calls the *assertion* of deontic modal clauses. Cf. the above example (117b), where the modal verbs *must* and *can* were said to be *deontic* and *subject-oriented* with a more narrow scope than the *epistemic must* and *can* in (117a), which are *speaker-oriented*. Here, we will compare the imperative clause with what Han calls deontic modal sentences (clauses like (117b).

The imperative clause (120a) resembles (117a) by mapping *directly* onto a modal operator. This operator is of course not an *epistemic* operator but a *deontic* operator. The imperative clause differs, however, from the epistemic (117a) in being a bare clause type, i.e. it does not lexically express the operator.

The deontic modal clause (120b) resembles the clause (117b) in being finite and having a modal verb that has the same scope as the modal verb in (117b), i.e. the modal verb is *subject*-oriented. The clause therefore cannot map onto a deontic operator, although the verb is deontic, it maps onto a contingent operator that takes the whole clause with its modal verb in its scope, mapping onto an *assertion* at the speech act interface, exactly what Han (1999) proposes, however without discussing the scope difference.

The imperative clause, being an independent clause type with an imperative head, hence maps directly onto a *deontic* operator at the semantic interface.The deontic logic is the logic of Obligation and Permission, the operators being *O* (for Obligation) and P (for Permission).We will use the following descriptive formula to represent the deontic operator *O*:

(125)   *Op, iff p denotes an **action** that is **obligatory** according to certain **norms** in an **ideal** world.*[28]

We will call the deontic logic *action-oriented* logic, opposed to the above *truth-oriented* alethic, epistemic and doxastic logic.[29] Note that the speaker always talks TO the addressee and the action always is prospective. Not until the clause arrives at the illocutionary interface and maps onto a proper speech act type (= Searle's *directive*), does the proposition get its *extension*.

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[28] Note that *action* here means something like 'episode' or 'occurrence', i.e. something that may happen, and must not get mixed up with *action* like *activity*.

[29] A somewhat confusing attempt to support the idea that the imperative clause has a truth value and consequently a subject is found in Kaufmann (2012: 86f.). She tries to prove it in the following way: "What I will defend is the truth-conditional equivalence of one reading of (35a) with (35b):

(35)   a. You should open the door!
        b. Open the door!

To obtain the equivalence, I propose that the imperatives contain a modal operator that is interpreted as human necessity/…/ OP".

We do not quite understand, why it is necessary to obtain an equivalence between the clauses and cannot quite see how there can be created one by just inventing a modal operator with the meaning necessary. Kaufmann herself is aware of her own theory being complicated: "However, at first glance, it suffers a huge draw-back in that it assigns truth-values to imperatives."

Note, once more that the *alethic* operators, and particulary the contingent operator, normally take bare clauses in their scope, where the operator is not lexically expressed. Exactly the same holds for the *imperative* clause. It always maps directly onto the *deontic* operator and can of course never be truth-oriented. This will prove very important when discussing the speech act types it may map onto.

Now, if the proposition denotes an action that is obligatory according to a certain norm, it is, of course, of interest to look at what verbs are incompatible with imperative clauses, because of their meaning. Han (1999: 4) regards the following examples, which contain individual‑level stative predicates, as anomalous:

(126) [= (9)]   a. *Know the answer.
                  b. *Be intelligent.
                  c. *Be tall."

She compares them with what she calls *deontic modal sentences* (finite clauses with a modal verb), which are quite normal:

(127) [= (13)] My blind date must be tall.

Interesting, therefore, are the following clauses:

(128)   Hab einen schönen Tag!
       have a nice day
(129)   Werde bald gesund!
       be soon well

They are totally grammatical, although the verbs are not activity predicates. Sometimes these clauses are called *bouletic*, meaning that the speaker expresses a *wish*. We will return to this in section 6, when discussing the illocutionary system, but will here just underline that the speaker's wish is always involved when he utters an imperative clause. We will therefore regard the above clauses as deontic, which also includes bouletic.

Still there are verbs that cannot project an imperative clause at all. In German such a verb is *grauen* 'dread'. This verb is an impersonal verb, i.e. a verb that does not project an external theta‑role and therefore cannot occur in an imperative clause. Cf. (131), where Swedish *gruva* is a reflexive verb and therefore may occur in an imperative clause, although the clause sounds a little strange, probably because the verb is not agentive. However, the clause is not ungrammatical.

(130) a. Mir graut vor ihm.
        me dread *prep*. him
     b. *Grau dir nicht vor ihm!f
        dread you not for him
(131) a. Jag gruvar mig inte för honom.
        I do me not dread for him
     b. ?Gruva dig inte för honom!
        dread you not for him

We mentioned above that the proposition of the imperative clause seldom allows an adverbial qualification. This expectation comes more or less true. Only lexical items that fit into the deontic meaning of the clause are allowed.

(132) Lüg mich *vielleicht/*wahrscheinlich* nie wieder an.
　　　 Lie to me *perhaps/probably* never again
(133) *Notwendigerweise*, lüg mich nie wieder an!
　　　 necessarily, lie me never again to
(134) Lüg mich *lieber* nie wieder an!
　　　 lie me *rather* never again to
(135) Lüg mich *bitte* nie wieder an!
　　　 lie me *please* never again to

Recall that the imperative clause never can be performative. Cf. (132) with (136):

(136) Ich bitte dich (hiermit), dass du mich nie wieder anlügst.
　　　 I beg you (hereby) that you me never again lie to

This clause is not an imperative clause but still expresses a request like (132). We will return to its speech act type in section 6.

5.4　The infinitive clause

We have arrived at the *independent infinitive clause* (see Reis, 2003, and Gärtner 2013, 202ff. for thorough analyses of German independent infinitive clauses). There are two subtypes of independent infinitive clauses, the *bare infinitive clause* and the *infinitive wh-clause*. What characterizes both and distinguishes them from the above finite and imperative clauses is their syntactic structure (see section 3.3).

5.4.1　The bare infinitive clause type

The bare infinitive clause consists of only a default vP that in principle is identical with the vP of the other two clause types, but is just *infinitive*, not *finite* and not *imperative*. Since it is structurally underspecified it is difficult to grasp. We think that the problems materializing themselves in linguistic literature, depend on this underspecification, i.e. the fact that the bare infinitive clause does not have anything in its structure that explains its specific clause type semantics and hence its illocutionary function, since it consists of a default *infinitive* vP. In our framework the verb however projects a CP (see also below), because the infinitive clause is an independent clause type, see section 3.3.1. The brackets round the DP in the SpecvP signal that the clause normally does not have a visible external argument. Only in certain contexts a 3rd person DP may occur, quantifying over a set of addressees (see Reis, 2003: 185). Note that the independent infinitive clause normally does not allow the infinitive marker *zu*, which is more or less obligatory in subordinated infinitive clauses. This fact emphazises that it is an independent clause type.

The syntactic consequence of the clause being ***infinitive*** prevents it, as expected, from expressing what traditionally are called interrogative *yes/no*-questions and declarative V2- and V1-clauses (cf. Reis, 2003:161 and fn.7), these being finite. In our framework, finiteness triggers the mapping onto the contingent operator, whereas non-finite clauses, like the imperative and infinitive clause, cannot map onto this operator as a consequence of their not allowing T. This does not prevent the infinitive clause from mapping *directly* onto another operator, if it can find one that accepts it.

In this section we try to understand its semantics and look for an operator that may accept the infinitive clause. We discuss its illocutionary function in section 6. Cf. the following examples, where we compare the infinitive clauses with corresponding imperative clauses and with clauses with a modal verb:

(137) a. Die Schuhe nicht vergessen!
        the shoes not forget
    b. Vergiss die Schuhe nicht!
    c. Du darfst die Schuhe nicht vergessen.

(138) a. Die Finger weglassen!
        the fingers keep away
    b. Lass die Finger weg!
    c. Du sollst die Finger weglassen.

(139) a. Die Butter schmelzen lassen!
        the butter melt let
    b. Lass die Butter schmelzen!
    c. Du musst die Butter schmelzen lassen.

(140) a. Den Rasen nicht betreten!
        the lawn not walk onto
    b. Betrete nicht den Rasen!
    c. Du darfst den Rasen nicht betreten.

(141) a. Radfahrer rechts abbiegen! (Reis, 2003: 159)
        cyclists to the right turn
    b. Biegt rechts ab, Radfahrer!
    c. Radfahrer sollen/müssen rechts abbiegen.

The question arises, of course, from where the deontic meaning of the infinitive clause comes. Reis (2003: 183f.) mentions that there exists a correlation between the invariably modal meaning of these bare infinitive clauses and their lack of finiteness. This, however, is according to her nothing else "than restating the facts".

Since they are *independent non-finite* clauses and hence cannot map onto the contingent operator, we assume that they map *directly* onto a *deontic* operator, like the imperative clause. The paraphrases above indicate this. We will return to them in section 6, when discussing and describing their illocutionary function.

Until now we have only discussed *addressee*-oriented infinitive clauses, where the addressee is expected to act. However, the underspecification of the bare infinitive clause will not prevent it from being also *speaker-oriented* (though not both at the same time, see Reis,

2003:195, who we think was first to notice this). In contrast, the imperative clause can never be speaker-oriented, due to the inflection of the verbal head for 2nd person.

Let us finally look at the following clauses:

(142) a. Noch einmal Venedig sehen! (Reis, 2003: 188)
once more Venice see
b. Ich möchte/will nochmals Venedig sehen/hoffe nochmals Venedig zu sehen.
I will once more Venice see/hope once more Venice part. see
(143) a. Noch einmal zwanzig sein! (Reis: 162)
once more twenty be
b. Ich möchte noch einmal zwanzig sein.
I will once more twenty be

The clauses (142a) and (143a) obviously, as the paraphrases (142b) and (143b) with *möchten, wollen* and *hoffen* demonstrate, may be interpreted as speaker-oriented, telling us what the speaker himself *wants* to do or even to be. They get a *bouletic* interpretation, which we regard as a subcategory of the deontic meaning. Note that the paraphrases (142b)-(143b) express an attitude and are propositional attitude expressions (cf. below 6.4.3). Compare also (142a)-(143a) to the above imperative clauses (128)-(129), that also are bouletic, but addressee-oriented. We will return to (142) and (143) in section 6 and there dicsuss their illocutionary speech act type.

5.4.2 The infinitive *wh*-clause type

For the infinitive *wh*-clause we assumed (as in the case of the bare infinitive clause, see 3.3.2), that the infinitive verb projects a CP, to which the *wh*-phrase has to move from its position in the default vP, as in normal *wh*-clauses. Note, however, that the *wh*-phrase is never the external argument. Cf. Reis (2003: 191), where we find a thorough discussion of this specific type of interrogative clause. She calls them *uncertainty* questions and emphazises that they are not information-seeking in contrast to finite *wh*-clauses. Cf. the following clauses, all taken from Reis (2003: 155):

(144) a. Wohin sich/mich denn wenden?
where part. you turn
b. Wohin soll ich mich wenden?
where shall I me turn
(145) a. Wem noch trauen?
on whom part. rely
b. Wem soll/darf man noch trauen?
on whom have to/is allowed to part. rely
(146) a. Wo eine Bleibe finden?
where find a place
b. Wo kann ich eine Bleibe finden?
where can I a place find

The clauses are obviously interrogative clauses, which is confirmed by *denn*, a particle which otherwise only occurs in standard interrogative clauses. Like the bare infinitive clause, the *wh*-infinitive clause may be paraphrased by clauses with deontic verbs like *sollen, können, müssen,* more seldom *dürfen.* Interestingly, this type of clause is not really productive in Swedish. We think there is a conflict between the *wh*-phrase, that normally is in the scope of the contingent operator, and the vP, mapping onto a deontic operator. This conflict has to be resolved in some way or other in order to allow the clause to be grammatical. This may be the reason that they are not productive in Swedish.

Let us finally look at one other type of infinitive *wh*-clause that is mostly addressee-oriented. Reis (2003: 177) refrains from analyzing them, because they seem to be quite another type than all the other *wh*-clauses. Interesting is of course that this type is the only really productive type in Swedish (and, as it seems, in English), see section 3.3.2:

(147) a. Varför inte läsa boken?
          why not read the book
       b. Varför skulle jag/du inte läsa boken
          why should I/you not read the book
(148) a. Varför tvätta händerna nu igen?
          why wash the hands now again
       b. Varför behöver jag tvätta händerna igen?
(149) a. Varför resa till Venedig igen?
          why go to Venice again
       b. Varför skulle jag/du resa till Venedig igen?
(150) a. Warum darüber traurig sein? (Reis, 2003: 176)
          why about that sorry be
       b. Warum solltest du denn darüber traurig sein?
          why should you part. over that sorry be

The paraphrases with modal verbs indicate that the clauses are deontic: the denoted action is related to some norm, which may be the norm of the speaker or some more generic norm. Most of them are only *addressee*-oriented. These clauses may allow an answer, at least when not meant rhetorically. But there is a rhetorical flavor to them. Note that their syntactic structure differs from the syntactic structure of the other infinitive *wh*-clauses in that the *wh*-phrase is not moving from a vP-internal position. It is directly inserted from the lexicon and projected on top of the vP, taking the whole vP in its scope. Hence, it is outside the deontic proposition, which is questioned as a whole. There is, therefore, no conflict between the contingent operator and the deontic vP that has to be resolved (cf. section 5.4.2). We think that this structure may be the reason that these clauses deviate from the other infinitive wh-clauses in being addressee-oriented per default. Their structure may also explain that they are productive in Swedish.

6   The Speech act system

6.1   Introduction

We have until now described the morpho-syntax and the semantics of three clause types, the *finite*, the *imperative* and the *infinitive* clause types. We will now turn to quite another module in the linguistic system, the *illocutionary system* or *speech act system.* Whereas morpho-syntax is the study of the structure of clauses and semantics is the study of the meaning of these clauses, constituting together the *grammatical* system, *the speech act system* is the study of *the act(s) the speaker performs, when uttering a clause*. The *speech act system* hence is the system within the overall *linguistic system,* defining the *illocutionary force* (the term was introduced by Austin, 1970, for the conventionally defined effect of a specific speech act, e.g. when a speaker utters an imperative clause with the intention to make the addressee do something).

Although our theoretical framework differs from the framework of BRRZ (1992), our analysis and conclusions with regard to the illocutionary system agree in more than one way with the analysis and description made in BRRZ. We will however only discuss the three clause types mentioned above, the *finite*, *imperative* and *infinitive* clause.[30] This means, as we already mentioned in 2.5, that we do not regard interrogative clauses as independent syntactic clause types, as is the standard assumption.[31] See also Sternefeld (2010: 283ff., 407 and 426ff.), who argues against the standard assumption of a specific empty syntactic interrogative operator. We argue with Sternefeld that *interrogativity* has to be explained in semantic terms with speech act consequences (see section 5). To these consequences we will return below.

It is important to notice that the difference between the grammatical system and the speech act system is a difference between the *structure* and *function* of clauses. Very often the semantic system and the speech act system are not kept strictly apart. In our modular approach, however, they are not only built up by different principles, units and rules but are also interacting, in other words, they are both *autonomous* and *interdependent*. The basic entity in this system is the *morpho-syntactic clause.* It will automatically head for the semantic interface in order to receive a clause type meaning. If it is not accepted by the semantic system it will crash, if it is accepted it will in turn head for the illocutionary interface. There it will map onto a proper speech act type. Sometimes it will find more than one. The addressee will hopefully interpret the speech act as the speaker intended. All this is

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[30] Note that we are talking about *independent* clause types in our framework, i.e. *finite, imperative* and *infinitive* clause types, which are projections of a *finite*, *imperative* and *infinitive* head, and we do not discuss independent clauses, where the head is not finite, imperative or infinitive, e.g. is a participle. There are of course also independent clauses, some of them without a verb, some of them consisting of one word only. We will concentrate on the clause types analyzed in section 2-4. We will also once more emphazise that we do not treat different possible contexts, that the clause may occur in.

[31] Cf. the modular approach of BRRZ (1992: 51f.), where the interrogative sentence types are treated as clause types with a specific feature [+w], distinguishing them from the declarative sentence type with [-w], with the consequence that e.g. an interrogative V1-clause has an *Open*-operator that takes ∃e [e INST p) in its scope. This is not possible in our framework.

strictly *linguistic*, not pragmatic. Indirect speech acts therefore are not explained by this system. In order to interpret an utterance of a clause as indirect, we need another system, that tells us that the performed speech act is not intended to be interpreted *literally* but *indirectly,* i.e. a pragmatic system.

A speech act never has a truth value. Levinson (1983: 246f.) summarizes this in section 5.2. "*Thesis: speech acts are irreducible to matters of truth and falsity* in the following way: "Illocutionary force is an aspect of meaning …. that is quite irreducible to matters of truth and falsity. That is, illocutionary force constitutes an aspect of meaning that cannot be captured in a truth-conditional semantics. Rather, illocutionary acts are to be described in terms of felicity conditions, which are specifications for appropriate usage."

But what then exactly is a *speech act*? Let us begin with Austin, who may be said to be the first who really saw the difference between structure and function of clauses. He says (cit. from Levinson, 1983: 227) that "the total speech act in the total speech situation is the *only actual* phenomenon which, in the last resort, we are engaged in elucidating". We think this is important to understand. Up until the point where the clause maps onto a speech act, the clause exists only below the surface of speech, i.e. as a morpho-syntactic structure with a specific clause type semantics. When uttered, the clause surfaces, and becomes *speech* with the above mentioned properties. The difference between the structure and meaning of the clause type and its speech act function, hence, is like an ax with a shaft and a head, and what can be done with it. It is of no use when nobody swings it.

In "How to do things with words" (1962) Austin emphasized that there besides utterances having a truth value existed quite another type of utterance used to *do* things. Austin called these utterances *performatives* and contrasted them with what he called *constatives*. He talked about speech acts which in one way or other change the world, e.g. *baptizing*, *marrying etc*. These performative speech acts are based on conventional agreements, and they are, when performed by the right person in the right context, *felicitous* but do not have a truth value. Cf. the following example:

(151)   Ich eröffne (hiermit) die Sitzung!
          I open (hereby) the meeting

The speaker uses this speech act in order to open the meeting here and now. The result is that the meeting, from the moment the speaker utters the speech act, is opened (provided the speaker is authorized to open it) and the world is thereby changed. Searle called this speech act type *declaration*. What Austin failed to acknowledge was that there does not exist a contrast between constatives and performatives, as all speech acts have performative variants. Still Austin's identification of a performative speech act gave rise to the discussion of what exactly a performative speech act is. The following speech act is a performative speech act, too, but does not change the world:

(152)   Ich verspreche (hiermit), dass ich morgen komme.
          I promise (hereby) that I tomorrow come

The difference between (151) and (152) is obvious on more than one level. We see at once that (151) differs from (152) in that (151) consists of only one clause with only one proposition and one finite verb. This verb is performative and denotes at the same time the action of opening (by BRRZ, 1992: 63 called *verbum operandi*). (152) obviously consists of two clauses with two finite verbs and hence two propositions. The first clause is performative, the verb being a *verbum dicendi*, describing the *speech act*. The embedded clause denotes *the action* the speaker promises to carry out. Only (151) results in the world being changed, (152) describes a specific speech act.[32] We also see that in both cases the verb is *1st person present tense*, a formula that we will discuss at some length below. Cf. (152) to (153), where it is not present tense and the clause therefore is not performative:

(153)   Ich versprach *hiermit, dass ich morgen komme.
        I promised hereby that I tomorrow come

As expected, *hiermit* is only possible in (152). In accordance with these facts, we will, of course, not expect there to be a *performative speech act type*. We regard performativity as a tool (an IFID, see below), which the speech act system makes available and through which the speaker makes explicit the speech act he performs. All performative clauses are finite clauses. Sometimes, as in (151) above, performativity is a constitutive part of the speech act, but very often, as in (152), it is only used to make explicit, which speech act the speaker performs.

Searle (1969, 1979) tried to expand Austin's definitions to five different speech act types, the well-known list being (a) representatives (assertions), (b) directives, (c) commissives, (d) expressives and (e) declarations. They are all on the same level. This system has been critizised mostly because it lacks a theoretical consistency (see the very interesting criticism in Levinson, 1983: 240ff.). It is obvious, as we shall see below, that this taxonomy neither covers all speech act types nor differentiates between them in a theoretically satisfactory way. Still Searle's taxonomy, in combination with Austin's, clearly demonstrates the thesis above of Levinson (1983: 246f.).

6.2   The parameters of the speech act system

Let us first look at the basic parameters of the speech act system. Note once more that our framework is strictly linguistic,which means that we are just describing clause type structures and their meanings, as well as what can be *done* by uttering a specific clause with a certain syntactic structure and meaning, i.e. what speech act can be performed by it (which can be more than one). We will assume that the speech act system does not look outside into a wider

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[32] Note that *change of the world* in (151) here means that by uttering the clause the speaker changes the actual world, i.e. opens the meeting. In (152) we just find a performative clause that describes the speech act the speaker performs when uttering the clause. The subordinated clause refers to an event he promises to carry out. The consequence of course also is that the *performative* clause with 1st *person, present tense* is not a speech act type itself, it only describes a speech act. In the marked case only, it may be interpreted as an *assertion* of a *promise*.

pragmatic frame. This means, as already mentioned, that we will not discuss indirect speech acts. The speech act parameters, which we propose, are well-known:

(a)   **Speaker and Addressee.** The speech act is an (intentional) *act* with a specific *force,* performed by the *speaker,* mostly addressing an *addressee*. The speaker performs a speech act by uttering a finite or non-finite *clause. Speaker* and *addressee* are hence basic parameters, being the frame of the *speech act*. Sometimes speaker and addressee are part of the proposition of the clause.

(b)   **Proposition.** The clause the speaker uses when performing a speech act will always contain a *proposition* with a matching *content*. The proposition is semantically in the scope of a *modal operator*. It is *truth-oriented* or *action-oriented.*

(c)   **Force**. The illocutionary force of a speech act is the effect a speaker intends it to have.

(d)   **Direction of fit.** A very important parameter is what Austin and Searle call *direction of fit*, see Searle (1979), and Searle & Vanderveken (1985). We think, thereby following Rehbock (1992a: 100ff.), that we only need *two directions of fit*: *Word to World* (= the words fit to an independent state of affairs in the actual world) or *World to Word* (= the actual world will have to change in order to fit the words).The two directions of fit will distinguish between two types of speech acts, the semantically *truth-oriented* and the semantically *action-oriented*.

(e)   **IFIDs.** The propositions of the morpho-syntactic clauses will sometimes contain lexical expressions, which the speech act system recognizes as specific illocutionary entities that identify and indicate the actual speech act. These lexical expressions we call *illocutionary force indicating devices* (henceforth IFIDs) see Levinson (1983: 238).[33] We discussed some of them in section 5.2, where we distinguished between *bare* clauses (clauses where the operator the clause mapped onto was not expressed lexically) and clauses, where e.g. the *epistemic*, *doxastic* and *evaluative* operators were expressed lexically. These operators will be identified as IFIDs at the illocutionary interface. The formula *1st person present tense* (see the discussion of the performative clause above) is such an IFID, too, often occurring together with the particle *hiermit* ('hereby'). The illocutionary interface will always scan each clause to identify IFIDs. Not until this examination is fulfilled, does the system decide onto which speech act(s) the clause may map.

(f)   **Speech acts are felicitous or infelicitous.** Levinson (1983: 236) emphazises, that Austin (1962) changed his definitions more and more and finally arrived at the conclusion "that all utterances, in addition to meaning whatever they mean, perform specific actions (or 'do things') through having specific *forces*". Actions cannot have a *truth value*. Hence all speech acts are either *felicitous* or *infelicitous.*

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[33] Note that we do not discuss the influence of intonation and e.g. question tags in this section.

6.3   The speech act types

Although the imperative clause is in focus in our paper, we have to know what can be done with a *finite* clause, that per default is semantically *truth-oriented*, in order to understand what can be done with an *imperative* clause, that per default is semantically *action-oriented*. We will therefore first describe the truth-oriented speech acts, and then continue to the action-oriented speech acts, where we will find the imperative clause. The following table represents our speech act types:

Table 1: Speech act types

Word to World

Constative speech acts	**Truth-oriented propositional attitude expressions**
Assertions (Searle's representatives) *Questions*	*epistemic, doxastic, evaluative* etc.

World to Word

Constitutive speech acts	**Action-oriented propositional attitude expressions**
Declarations and *Expressives* *Interactionals* (Searle's *Directives,* *Commissives* and some more)	*wish, hope, expectation etc.*

The two directions of fit*, Word to World* and *World to Word* are the basic watershed dividing two main groups of speech act types, the constative speech acts and the corresponding propositional attitude expressions*,* on one hand, and the constitutive speech acts and the corresponding propositional attitude expressions, on the other. Following Rehbock (1992: 96ff. and 102) we deviate from Searle in assuming only these two directions of fit (cf. Searle, 1979, and Searle & Vanderveken 1985: 52ff., 92ff.).

This *vertical* contrast between the two directions of fit is accompanied by a *horizontal* contrast between the constative and constitutive speech act types*,* on one hand, and the truth-oriented and action-oriented propositional attitude expressions, on the other. The table hence reproduces two dimensions of four different basic speech act types, each type having a vertical and horizontal relation, respectively.

Austin and Searle did not discuss the *propositional attitude expressions* as speech act types. This speech act type, which in Rosengren (1984, 1985) and BRRZ (1992) is called *Einstellungsbekundung* (attitude expression), is a speech act type that explicitly expresses the *speaker's attitude* to a proposition, see also Rehbock, 1992a: 127ff. They are truth-oriented and action-oriented, respectively. They hence correspond to the constative and constitutive speech act types, with the directions of fit, *Word to World* ('epistemic, doxastic evaluative' etc.), and *World to Word* ('wish, hope, expectation' etc.).

In the following section we first describe and discuss the speech acts with a direction of fit *Word to World*, i.e. the assertions and the corresponding propositional attitude expressions. In section 6.4 we describe and discuss the speech acts with a direction of fit *World to Word,* the declarations, expressives and interactionals, on one hand, and the corresponding propositional attitude expressions, on the other.

6.3   Word to world

The clauses realizing these speech acts are always *finite*. Note that there are finite clauses realizing other speech act types as well (see below). Hence, there is no one-to-one relation between the direction of fit *Word to World* and *finite clauses*.

6.3.1   Constative speech acts: Assertions

Levinson (1983: 242) emphasizes that nearly all languages have basic clause types, which seem to be universal and may perform certain speech acts. This requires an explanation. In our framework a *bare finite* clause (a finite clause without IFIDs), by default maps *directly* onto an *alethic (*a *contingent)* operator at the semantic interface. The operator takes the proposition in its scope, thereby defining its clause type meaning. See (154):

(154)   Peter hat seine Mutter gestern besucht.
          Peter has his mother yesterday visited

With its clause type meaning defined, the bare finite clause heads for the illocutionary interface, where it per default maps onto an *assertion, referring to an event in the actual world* (its *extension*). The addressee may answer 'This is not true'. Notice that in this case speaker and addressee are not represented within the proposition. The event is independent of them. Note also, once more, that the clause does not have any IFIDs.

Since all non-performative speech act types may have performative variants, we expect that the *assertion* also has one or more performative variants. This expectation comes true. See the following examples:

(155)   Ich behaupte (hiermit)/stelle (hiermit) fest, dass Peter gestern seine Mutter besucht hat.
          I claim/state (hereby) that Peter yesterday his mother visited has

The clauses consist of two clauses, the matrix and the subordinated *dass*-clause. The matrix has the structure *1st person present tense*, made available by the speech act system as an IFID (see above, 6.2 e). By uttering (155) the speaker describes his speech act explicitly by using *verba dicendi*. The speech act system will recognize the IFID and interpret the clause as performative, in this case as a *variant of an assertion*. Bare finite clauses with all other persons and tenses (e.g. (154) above) will per default result in standard assertions. The same holds in the marked case, when the speaker asserts the *whole* proposition of (155), including the performative matrix (see Rehbock, 1992a: 150ff.), but in this case the clause illocutionarily is an assertion of the speakers's claim that p.

Note, that by explicitly describing what speech act is performed here and now, using a verbum dicendi, the performative speech act will always be *constitutive*. The performative clause, however, is not a speech act type itself. It just functions as an IFID describing what kind of speech act the utterance is. Rehbock (1992a: 152ff.) argues that the proposition in (155) is asserted. Though we agree with him in principle, we argue that the whole clause (155) is to be regarded as a variant of an assertion. But there is a difference between uttering the bare finite clause (154) and the performative variant (155), namely that the performative variant, being performative, directly relates to the *speaker*. The speaker explicitly claims that the proposition refers to an event in the actual world.

The examples (154) and (155), hence, clearly demonstrate the principal difference betweeen a bare finite clause, that *directly* maps onto the contingent operator and from there onto an assertion, on one hand, and a performative variant of this speech act, where the *speaker* claims/states that such an event exists in the actual world. Both are truth-oriented assertions.

Before leaving the assertion and its variants, we will just once more mention another constative speech act:

(156)   Peter kommt vielleicht morgen.
        Peter comes perhaps tomorrow

As already argued in section 5.2, this proposition is modalized by a *non-truth functional operator*, the diamond, $\Diamond$. The proposition refers to an event that *may* happen tomorrow. This proposition, including *vielleicht*, will at the semantic interface map onto the contingent operator and from there head for the illocutionary interface and map onto an assertion. For further discussion of these and other similar operators see the detailed analysis in BRRZ (1992: 66ff.) within a theoretical framework similar to ours.

6.3.2   Constative speech acts: Questions

Questions have always been a problem for speech act theories. As BRRZ (1992: 52) argue there are many reasons why questions cannot be directives as Searle (1969) and other linguists sometimes have proposed. BRRZ categorize them as subtypes of *Darstellungshandlungen* together with *assertions*. In our framework they are more complex. Since they obviously express questions and demand answers, there must be something more that distinguishes them from assertions. Cf. the following examples (157-159):

(157)   Peter kommt morgen.
        Peter comes tomorow
(158)   Kommt Peter morgen?
        comes Peter tomorow
        Answer: yes/no
(159)   *Wer* kommt morgen?
        who comes tomorrow
        Answer: Peter.

(157) is per default interpreted as an assertion. Syntactically it is a V2-clause, the default finite clause type in the Germanic languages studied here. (158) is a finite V1-clause, which, when uttered, by default will be interpreted as expressing what is called a *yes/no* question, requiring an answer. Note that a finite V1-clause may also be interpreted as an assertion. See section 5, fn. 5, and (160):

(160)   Kam ein Mann zur Tür herein.
          came a man through the door in

Hence, the position of the verb is not what makes (158) a question.

The finite *wh*-clause in (159) is a V2-clause, in our languages with a *wh*-phrase in SpecCP, moved from its basic position (see section 2.5 and 3.1.2), representing a gap in the proposition. It is normally called a *wh-question*. The answer is a DP that may close the gap. So (158-159) give rise to answers, which (157) and (160) do not.

In section 5.2 we argued that interrogative clauses are in the scope of two operators that denote two types of semantic *openness* (see Rehbock, 1992b: 176ff.).The proposition in the *yes/no* question is semantically *open* with regard to its *truth value*. The proposition of the *wh*-clause instead has a gap in its proposition, that has to be closed by a proper phrase out of a set of possible answers. Following Rehbock, we assume two different *unary truth functional open-operators,* $\mathit{\Omega}$ and $\mathit{\omega}$. The clauses with their operators map onto the contingent operator. The speech act system, when scanning these clauses, will identify these open-operators as well as the contingent operator. It will interpret the combination of the contingent operator and the two open-operators as two different types of *questions,* which demand two types of answers. The answers in turn will refer to an event in the actual world. See also BRRZ (1992: 52), where we find much the same argumention.

Below, 6.4.2 (187)-(188), we shall see that questions may also be used in interactional speech acts.

6.3.3   Truth-oriented propositional attitude expressions

Truth-oriented propositional attitude expressions express the speaker's attitude to the truth of the proposition. Rosengren (1984, 1985), BRRZ (1992: 56ff.), and Rehbock (1992a: 113ff.) argue that they are a specific speech act type, see section 5.2 and 6.3:

(161)   Ich weiss/glaube (*hiermit), dass Peter gestern seine Prüfung bestanden hat. *epistemic/ doxastic*
        I know/believe (hereby) that Peter yesterday his exam passed has
(162)   Ich bedaure (*hiermit), dass Peter gestern verreist ist. *evaluative*
        I deplore (hereby) that Peter yesterday went away has

We discussed their semantics in section 5.2 (113)-(116) above. They have the same matrix with the IFID *1st person, present tense* as the performative clause in (155), but they are not variants of an assertion. They express directly a truth-oriented operator, e.g. an *epistemic*, a *doxastic* or an *evaluative* operator. Note that they are not performative and therefore do not

allow *hiermit.* Hence, although the matrix is the same in (155) and in (161)-(162), i.e. *1st person, present tense,* they differ from one another in that the performative clause in (155) only describes the speech act it maps onto, i. an *assertion*, whereas the matrices in (161) and (162) are part of the proposition and mediate important information about the speaker's attitudes. These latter clauses map directly onto a *propositional attitude expression*. This difference becomes evident, when we look at the verbs in the matrix of (155) and the matrices of (161) and (162). In (155) the verbs are *verba dicendi* and describe the speech act, in (161) and (162) the verbs denote an *epistemic*, a *doxastic* and an *evaluative* operator. This difference between a performative variant of an assertion and a propositional attitude expression is therefore very substantial.

The obvious question is how the speech act system is able to distinguish between the two different speech act types in (155) and (161)-(162), as the syntactic structure of the matrix clause is identical. The answer is that the speech act system sees the same as we see, namely that the performative matrix in (155) describes a speech act with a verbum dicendi, whereas the verb in the matrix of the attitude expression denotes a semantic operator, which may be epistemic, doxastic or evaluative.

In section 5.2 we also discuss the semantics of modal verbs, see (117), which seem to be ambigue, repeated here as (163-165).

(163)   Du musst/kannst deinen Freund gerettet haben.
        you must/may your friend saved have
        Paraphrase: For all we know/believe, you have saved your friend)
(164)   Du musst/kannst deinen Freund retten.
        you have to/can your friend save
        Paraphrase:You have to/are able to save your friend)
(165)   Peter muss morgen wieder zu Hause sein.
        Paraphrase 1: For all we know, Peter is back home again to morrow
        Paraphrase 2: Peter has to be back again to morrow.

We argued that (163) and (164) differ as to the scope of the modal verbs. The proposition in (163) is semantically in the scope of a *non-truth-functional* operator. The modal verb relates to the *speaker* and the clause therefore will be interpreted as an *epistemic propositional attitude expression*. The proposition in (164) is in the scope of the contingent operator, the modal verb relating to the *subject.* The clause therefore maps onto an *assertion* in the speech act system. Hence, we think that the different meanings between (163) and (164) are a matter of *different scope* of the modal verbs, and we conclude that the speech act difference between them, resulting in a *propositional attitude expression* in (163) and an *assertion* of a modalized clause in (164), respectively, is solely due to the different semantic scope of the same modal verbs.

6.4   World to Word

The speech acts with the direction of fit *World to Word*, where we find the imperative clause type, differ from the speech acts with the direction of fit *Word to World* by being either

constitutive speech acts or *propositional attitude expressions.* The common denominator of the *constitutive* speech acts is that a speaker by *uttering* them, change the world with a result that did not exist before uttering the speech act. (See Rehbock,1992a:148, who suggests this term instead of Austin's *performative*). The change may be *simultaneous* with the speech act or *prospective,* i.e. may become a later result of the speech act. This last type is expressed per default by the *imperative* clause type. The attitude expressions with this direction of fit differ from the above truth-oriented propositional attitude expressions by being *action-oriented*, expressing *wish, hope, expectation etc,* see below.

6.4.1   Constitutive speech acts: Declarations and Expressives

We will begin by briefly describing what Searle called *declarations* and *expressives*. They differ from *assertions* as well as from *interactionals*, where we find the *imperative* clause. In Searle's speech act system declarations and expressives are two different speech act types on the same level as e.g. assertions. We will, however, treat them together as a specific kind of speech act type, based on the observation that these two speech acts have very much in common. By uttering the clause the speaker changes the world here and now. Important is that they are always *performative*, which may be tested by inserting *hiermit*. We also find the same formula *1st person, present tense.* What distinguishes these clauses from standard performative clauses, however, is a.o. that both declarations and expressives are clause types of their own and have a matrix with a verb that at the same time is performative and denotes the action, see (166-168). (See also BRRZ, 1992: 63, and below.) Naturally, it is also possible to interpret them as an assertion of the speech act (this being constative), but this is the marked case.

In order for a *declaration* to be felicitous, the speaker, when uttering the clause, must be conventionally authorized to change the world: the child from not having a name to having a name, the meeting from not existing to being opened.

(166)   Ich taufe dich (hiermit) auf den Namen Felix. Du heisst jetzt Felix. (The result)
         I baptize you (hereby) on the name Felix. Your name is now Felix.
(167)   Ich eröffne (hiermit) die Sitzung. Die Sitzung ist eröffnet. (The result)
         I open (hereby) the meeting. The meeting is opened.
(168)   Ich schenke dir hiermit das Buch. Das Buch gehört jetzt dir. (The result)
         I give you hereby the book. The book belongs now to you.

We will summarize how BRRZ put it (1992: 63): the proposition of the *declaration* describes a non-linguistic state of affairs, that comes about exactly by referring to this state of affairs. Because of this type of reference we find a large number of verbs, which are semantically unrelated, namely verbs denoting state of affairs, which may be brought about by uttering such verbs. BRRZ call these verbs *verba operandi*.

Searle's *expressives* are also conventional and the verbs are well-known. They resemble declarations in that they change the world, but the change is located in the speech act itself (cf. BRRZ (1992), i.e. by uttering the clause the speaker performs a conventional *speech act* here and now, not a state of affairs in the actual world. Hence, the speaker *constitutes* a

speech act directed to the adressee, like *thanking*, *congratulating* etc. The verbs are *verba dicendi* (see BRRZ 1992: 63):

(169) Ich danke dir (hiermit) für deine Hilfe/dass du mir geholfen hast.
       I thank you (hereby) for your help/that you me helped have
(170) Ich heisse dich (hiermit) herzlich willkommen.
       I call you (hereby) heartly welcome
(171) Ich gratuliere dir (hiermit) zu deinem Erfolg.
       I congratulate you (hereby) to your success
(172) Ich will mich (hiermit) für mein Benehmen dir gegenüber entschuldigen.
       I will (hereby) for my behavior towards you apologize

As expected, the two speech act types, the declarations and the expressives, cannot be contradicted, since they are constitutive.

Note that the verbs are not expressing an attitude of the speaker. The speaker may feel quite differently compared with what he expresses in his speech act and the speech act is still felicitous.The expressives must not be mixed up with what has been called propositional attitude expressions.

We will once more have to ask, how the illocutionary system recognizes these two types of speech acts. We will assume that the system recognizes them as we do, by looking at the verbs and combine them with the IFID *1st person, present tense*.

6.4.2   Constitutive Speech acts: Interactionals

Up until this point we have described *constative* and *constitutive* speech acts, *Assertions, Questions, Declarations* and *Expressives* in the left column, and *Propositional attitude expressions in the right column* (see table 1 above), all realized by finite clauses. We have not found any speech act that may be realized by an imperative or infinitive clause.

The following group of speech acts, which is the location for the imperative clause type, differs totally from the above described speech acts, since both speaker and addressee interact in the speech act. Some of them are performed by an *imperative* clause but not all. We find also finite as well as infinitive clauses. Note that all these interactional speech acts are *constitutive* (see below).

BRRZ (1992: 50ff.) call these speech acts *Regulations*. They comprise Searle's Directives and Commissives but also some other speech acts. Instead of *Regulations*, we call them *Interactionals,* since this term better captures the fact that speaker and addressee normally interact. Rosengren (1984, 1985) and BRRZ (1992: 52f.) propose the following parameters:

Speaker/Addressee *wishes*
Speaker/Addressee *decides*
Speaker/Addressee *acts*.

A cross classification results in eight illocutionary types, where only the following six are *interactional*, meaning that the speaker as well as the addressee are represented. We will concentrate on these speech act types:

Table 2. Interactional subtypes

Initiative	*Reactive*
Order	*Offer*
S wishes	A wishes
S decides	A decides
A acts	S acts
Request	*Promise*
S wishes	A wishes
A decides	S decides
A acts	S acts
Request of permission	*Permission*
S wishes	A wishes
A decides	S decides
S acts	A acts

These speech act types differ from constitutive declarations and expressives by being *prospective.* Instead of simultaneously creating a new event, the event may come about by the speaker or addressee as the result of the speech act.

The column labels we use are the labels proposed in BRRZ except *Offer*, which we think could be the label of the first constellation in the second column. We will, however, not discuss the labels, since they just are meant as *labels* of different constellations of parameters and have no position of their own in the system. Instead we look particularly at each constellation and ask which of them may be expressed by an imperative clause and which may be expressed by a finite (including interrogative) or infinitive clause. Note that the two columns differ with regard to the constellations, the speech acts in the left column being *initiative* (out of the blue) and in the right column being *reactive*, meaning that the speaker reacts on a possible *wish* of the addressee. Let us first look at the imperative clause.

The imperative clause type

The *imperative clause* is, as the finite and infinitive clause, an independent clause type. It differs, however, syntactically from the finite clause by being *non-finite* and lacking TP, hence having neither tense nor subject. These properties it shares with the infinitive clause. Its head is an inflected verb for *2nd person*. Thereby it differs from the finite clause with its extensive inflection for *person, number, mode* and *tense*, and from the infinitive clause, that is just *infinitive*. The imperative clause may, therefore, seem to be a clause type between the finite and infinitive clause, without specific properties of its own. This is, however, misleading, as we have tried to prove. The imperative clause is an autonomous clause on the

same level as the finite clause, with its own properties, based on the head of the clause being 2nd person,sing./plur. Besides being independent and on the same level as the finite and infinitive clause, it is always a *bare* clause (cf. the finite clause, that may be bare but also occurs with lexically expressed operators, IFIDs). It maps directly onto an *action-oriented (deontic)* operator, and, as we shall see, will directly map onto an *interactional* speech act type at the illocutionary interface, thereby both semantically and illocutionarily differing totally from the finite clause.

Before discussing the different speech act types, we will, however, return once more to Levinson (1983: 244), who emphazises that clause types should play an important role in speech act theory, since they are basic and found in nearly all languages. Levinson sees an association between *performative* and *clause type*. "We may also treat the three basic sentence types in English, namely the imperative, the interrogative and the declarative, as containing grammaticalized conventional indicators of illocutionary force, namely those associated respectively with the explicit performative prefixes (or phrases) *I request you to, I ask you whether, I state to you that.* ….We may say that sentences in the imperative, interrogative or declarative….are implicit performatives**.**"

We object against this association between *performative* and *implicit* and argue that none of the clause types, neither those Levinson calls sentence types nor the clause types we propose in our framework, the *finite, imperative* and *infinitive* clause types, may be implicit performatives.We think *implicit performative* is a contradiction in adiecto. Since performative clauses normally tell us what kind of speech act is performed in an explicit way, they cannot be implicit. And since all three clause types by definition, without any help of what Levinson calls performative prefixes, map directly onto a semantic operator that correponds to their finite, imperative and infinitive morpho**-**syntactic structure, respectively, they cannot be performative. They are *bare* clause types, normally lacking IFIDs (note however *bitte* ('please') in (135), (179), (183), meaning 'request'). Consequently, they do not allow *hiermit* as the following finite and imperative clauses demonstrate:

(173) Besuch *hiermit Mutter! *Imperative*
       Visit *hereby mother
(174) Du besuchst *hiermit Mutter. *Finite*
       You visit *hereby mother

Whereas the bare finite clause in (174) is *constative*, the imperative clause in (173) is *constitutive*. An imperative clause can never be used to talk ABOUT an event, i.e. be constative. This is morphologically manifested already in the inflection of the imperative verb for 2nd person, which determines not only its clause type semantics (a *deontic* clause type meaning) but also determines its speech act potential. It expresses a *constitutive* speech act, e.g. an *order, request* or *permission,* where the speaker talks TO the addressee (see Platzack & Rosengren, 1998) in order to make him carry out a specific action. As we shall see below, it may, however, have performative variants.

This is in accordance with what Han (1999: 2ff.) concludes (see section 5.3), who, however, does not strictly distinguish between semantics and speech act system. She argues that *imperative* clauses differ from what she calls *deontic modal sentences* by being directly

deontic (in our framework a semantic property), whereas what she calls *deontic modal clauses* are assertions (in our framework an illocutionary property).

We agree in principle with Han, but will briefly return to the discussion of (163)-(165). In (164) the modal verbs have a *narrow* scope (being *subject-oriented)*. They therefore cannot be *non-truth functional* operators as they are in (163). They modalize the rest of the proposition and are themselves in the scope of the contingent operator. The result is exactly what Han claims, namely that *deontic modal sentences* are *assertions*.

We, therefore, claim that the finite clauses in (164), because of the narrow scope of the modal verb never can map onto a deontic operator *directly*, and therefore may never express an *order, request* or *permission*, which is exactly what the imperative clause always does. Neither are they variants of the imperative clause. They are assertions *of a modalized* proposition, and as such talk ABOUT an event in the actual word, namely that the subject *has to/may* help his friend.

For real variants of imperative clauses, see (175)-(177):

(175)   Ich verlange (hiermit) von dir, dass du ihm hilfst.
         I demand (hereby) of you that you him help
(176)   Ich bitte dich (hiermit), mich morgen zu besuchen.
         I ask you (hereby) me tomorrow to visit
(177)   Ich erlaube dir (hiermit), baden zu gehen.
         I permit you (hereby) bathe to go

These performative clauses are of course finite and constitutive, as are all performative clauses. They allow, as expected, *hiermit*. What makes them variants of imperative clauses, is that the performative matrix expresses the speech act explicitly, which the imperative clause never does. Note, however, that the performative verbs in this case express *an order, a request* and *a permission*, respectively, whereas the performative verbs in (155) express *a claim* or *a statement*.)

This demonstrates that the performative variants in (155) and in (175)-(177) relate to the speaker and thereby distinguish explicitly between different subtypes of illocutions, in (155) *statement* and *claim* and in (175)-(177) *order*, *request* and *permission*. Note that the performative matrix is to be regarded as an IFID. Note also that these clauses in the *marked* case may be assertions of the whole proposition, including the performative IFID. Quite naturally, they are then assertions of the whole proposition and not variants of the imperative clause.

We have already noticed that the imperative clause may perform three of the six constellations *order, request* and *permission.* Two of them are SSA and SAA, where the speaker wishes and decides in the first one and the addressee decides and acts in the second one. These constellations may be regarded as the *default* constellations of the imperative clause. The third constellation is ASA in the second column, i.e. a permission, where the addressee wishes and acts but the speaker decides, which we regard as a reactive speech act to SAS in the left column. Cf. the following clauses, where (178) and (179) perform the first two initiative constellations in the left column, and (180) is the reactive constellation in the right column.

(178)   Hilf ihm! *Order*
          Help him
(179)   Besuch mich doch (bitte) morgen! *Request*
          Visit me part (please) to morrow
(180)   Geh baden, wenn du willst! *Permission*
          Go bathing if you want

What keeps these three constellations together? The answer is their morpho‑syntactic structure (2nd person, sing./plur.) and their clause type meaning, corresponding directly to the meaning of the deontic operator, which the imperative clause maps onto at the semantic interface, see the deontic formula in section 5, (125). The imperative clause hence is at the same time very *simple* and *univocal* as well as very *restricted* as to its area of application. The finite clause neither has the simplicity and unambiguity nor the restrictions.

Note also that we sometimes only need one imperative verb to build an imperative clause as in (181). We also find clauses without any verb at all, like (182).These are of course not imperative clauses, since they have no imperative verb, but they are still clauses that have the same illocutionary force as (182), being an *order*:

(181)   Geh!/Kom!/Verschwinde!
          Go/come/disappear/
(182)   Raus!
          Out

The imperative clause also allows a few IFIDs e.g. the particle *bitte* (‘please’), that emphazises that the speech act is to be interpreted as a request and not as an order, and e.g. *gefälligst* (‘will you’), meaning that the addressee has to do what the speaker wants.

(183)   Hol doch bitte/gefälligst die Zeitung!
          Get *part* please/will you the newspaper

Summarizing: We conclude that the imperative clause will never be a constative speech act, it is always *constitutive.* It is caracterized by being an independent *bare* basic clause type, similar to the finite clause. It differs however a.o. from the finite constative clause (assertion) and the other finite *constitutive clauses* (declaration and expressive).What characterizes it particularly is the very close relation between its morpho‑syntactic structure, its deontic meaning and what can be done by uttering it. Note, however, that the imperative clause has to pay for this slimness and unambiguity of clause and clause type meaning by being restricted to a few (but very important) speech act constellations. It can only be used to express *Order, Request* and *Permission*.

The finite clause type

We have argued that the imperative clause because of its structure and clause type meaning may express three of the speech act constellations in the above table 2. But there are three more constellations that the imperative clause cannot express. One of them is the *promise*,

which Searle called *commissive*. He assumes that a promise commits the speaker to carry out an action and regards it as a specific speech act type on the same level as the directive. In the above table 2 the promise has the constellation ASS, the addressee wishes, the speaker decides and acts. It is a *reactive* speech act type in the sense that the speaker promises an act he believes the addressee wants him to carry out. Its default expression is a *performative* clause with the verb *versprechen* ('promise', having many synonyms) in (185). We may regard (185) as the answer to a *Request* expressed by an imperative (184):

(184)   Besuch mich doch morgen!
        Visit me *part.* tomorrow
(185)   Ich verspreche dir, dass ich dich morgen besuche.
        I promise you that I you tomorrow visit

Hence it is reverse to the request, where the speaker wishes. So we will not expect the imperative clause to realize this constellation. Cf. however, the following clauses (186), taken from BRRZ (1992: 62, see also Rehbock, 1992a: 155ff.), who assume that they may be assertions (the default interpretation), or, in a proper context, which is the marked case, be interpreted as resultative utterances:

(186)   a. Dies ist ein Schiff. *Deklaration*.
            This is a ship
        b. Karl wird ab morgen das Kommando übernehmen. *Directive*.
            Karl will from tomorrow the command over take
        c. Ich werde den Sekt nicht vergessen. *Promise*.
            I shall the champagne not forget

In our framework these clauses are assertions, since they have nothing, no IFID e.g., that indicates that there may be another interpretation. What BRRZ call their marked interpretation, needing a proper context, is *pragmatic* and lies *outside* the speech act system that we try to describe in this paper. Note, however, that the assertion is basic and a prerequisite for the pragmatic interpretation, not the other way around.

There remain two further constellations that cannot be realized by the imperative clause. Cf. the following clauses:

(187)   Darf ich (*hiermit) baden gehen?
        may I (hereby) bathe go
(188)   Soll ich (*hiermit) Kaffee kochen?
        shall I (hereby) coffee cook

These speech act types are interactional, SAS and AAS, respectively. See BRRZ (1992: 64) who analyze them in some detail. They emphazise that the interrogative clause, because of its openness, is suitable for this type of interactional speech act, where the speaker does not know, if the event will come about. They also point to the interaction between the interrogative clause and the modal verbs. The modal verbs express speaker attitudes: *dürfen* expresses a *volitive* attitude on behalf of the speaker and *sollen* expresses that the *volitive*

attitude may be an attitude on behalf of the addressee. We agree with BRRZ in principle and think that our semantic definition of the interrogative V1-clause predicts its appropriateness for the realization of these two speech act types. Semantically it carries (see above 5.3.2) the openness of all V1-questions. But something more is required. This is contributed by the modal verbs *dürfen* and *sollen,* which make these clauses interactional.

We therefore argue that the interrogative clause together with *dürfen* ('may','be allowed to') denotes the constellation SAS (speaker wants, addressee decides, speaker acts) and together with *sollen* ('should', 'are to', 'are supposed to') denotes the constellation AAS (addressee wants, addressee decides, speaker acts). This means that the modal verbs are a necessary part of the proposition and that their meaning cooperates with the interrogativity of the V1-clause. Although the system will recognize the well-known structure *1st person, present tense*, it will not interpret these clauses as performative, which the ungrammaticality of *hiermit* demonstrates. The verbs with their meaning prevent this interpretation. These clauses, therefore, like the imperative clause, map directly onto an interactional speech act, i.e. onto a *request of permission* and onto an *offer*, respectively.

The infinitive clause type

The third clause type in our framework is the *infinitive clause.* We will begin with the bare infinitive clause (see its semantics in section 5.4.1):

(189) a. Die Schuhe bitte nicht vergessen!
           the shoes not forget
       b. Vergiss bitte die Schuhe nicht!
           forget the shoes not
       c. Du darfst die Schuhe nicht vergessen.
(190) a. Schnell mal die Zeitung holen!
           quickly *part* the paper fetch
       b. Hol doch schnell mal die Zeitung!
           fetch *part* quickly the paper
       c. Du sollst schnell mal die Zeitung holen.
(191) a. Die Finger weglassen!
           the fingers keep away
       b. Lass die Finger weg!
           keep the fingers away
       c. Du sollst die Finger weglassen.
(192) a. Den Rasen nicht betreten!
           the lawn not go on
       b. Betrete nicht den Rasen!
           not go on the lawn
(193) a. Nicht hinauslehnen!
           not lean out
       b. Lehne dich nicht hinaus!
           lean you not out

Both their structure and semantics determine the infinitive clauses. Because of their infinitiveness they cannot map onto *assertions*. Since they are independent clauses, they may, however, map directly onto a *deontic* operator like the imperative clause. We, therefore, expect them to realize much the same speech act types as the imperative clause. This expectation does not come quite true. As the paraphrases demonstrate, they seem to express the iniative *order* and *request* but not the reactive *permission*. The reason may be that they are syntactically underspecified as they lack an explicit addressee and therefore are less distinctive than the imperative clause. At the same time, however, they are more flexible than the imperative clause, by allowing a speaker-oriented interpretation, see (196)-(197) below.

Its underspecification, however, also allows them to be much more *generic* than the imperative clause may be. In *German*[34], they are therefore often used on public *warning signs* and *ban signs*, where the addressee is 'to whom it may concern', see (192)-(193), and in cookbook instructions like (195), where the infinitive clause is nearly the only possibility. It is worth pointing out that they may project a 3rd person DP (194), that represents an external thetarole with a *quantificational* meaning, picking out one person or a whole group as the person/group the speaker is talking TO:

(194)   Radfahrer rechts abbiegen! (Reis, 2003: 159)
        Cyclists to the right turn
(195)   Dann die Kartoffeln in die Pfanne geben! (Reis, 2003:159)
        Then the potatoes in the pan give

We may conclude that bare infinitive clause, from a linguistic point of view, is able to do both more and less than an imperative clause, due to its structural underspecification.

Until now we have only discussed *addressee*-oriented infinitive clauses, where the addressee is expected to act. The underspecification of the bare infinitive clause will also allow it to be *speaker-oriented*, but never both (see Reis, 2003:195, who, we think, was first to notice this). The imperative clause can never be speaker-oriented, due to the inflection of its main verb, being 2nd person. Let us look at the following clauses:

(196)   a. Noch einmal Venedig sehen! (Reis, 2003: 188)
           once more Venice see
        b. Ich möchte/will nochmals Venedig sehen/hoffe nochmals Venedig zu sehen.
           I should like once more Venice see/hope once more Venice to see
(197)   a. Nocheinmal zwanzig sein! (Reis, 2003: 188)
           once more twenty be
        b. Ich möchte noch einmal zwanzig sein.
           I should like once more twenty be

The clauses (196a) and (197a) obviously may be interpreted as expressions of what the speaker himself *wants* to *do* or even to *be*, not what the addressee *ought to* do or *may* do/be,

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[34] Note that Swedish is much more restricted, as regards the use of independent infinitive clauses.

as the paraphrases (196b) and (197b) with *möchten, wollen* demonstrate. They are bouletic, which we regard as subcatery of deontic. What kind of speech act are (196a) and (197a) then?

They differ from all the other six interactional speech act types by not being interactional. The speaker expresses a wish to act, if it is possible in his world, which in the case of (197a) it is not. We think that the independent infinitive clauses allow this because of their underspecification and will regard them as *propositional attitude expressions,* like their paraphrases. Hence, they may be compared with the imperative clause, which they resemble by mapping *directly* onto an *action oriented* speech act, i.e. here a *propositional attitude expression,* see section 6.4.3, below. Note, once more that they differ from the imperative clause in not being interactional.

Notice also that the verbs are what Han calls individual level stative predicates and may be compared with the above corresponding imperative clauses (see 5.3, (128)-(129)) that also are bouletic. Since these latter clauses are imperative clauses, it is still the addressee that is expected 'to be well' or 'have a nice day'. We normally do not find this type with infinitive clauses.

A short look at the semantics of the *wh*-infinitive clauses demonstrates a conflict between the *wh*-phrase and the propositional part of the clause, see section 5.3. This influences its speech act potential. These clauses are interrogative clauses but still not standard interrogative clauses, as we already mentioned, because of the underspecification of the infinitive clause and the conflict with the *wh*-phrase. For this reason, they cannot be classified as pure questions, i.e. *word to world*. Nor are they pure interactionals, i.e *world to word*. Since they do not contribute to the comparison between the finite and imperative clause and Swedish primarily allows those with a *why***-**phrase, we will not discuss them further here.

6.4.3   Action-oriented propositional attitude expressions

The propositional attitude expressions with the direction of fit *World to Word* differ from the truth-conditional propositional attitude expressions with the direction of fit *Word to World*. They are semantically action**-**oriented. They express the speaker's *wish, hope, expectation* etc:

(198)   Ich will/hoffe/erwarte (*hiermit), dass du bald wieder kommst.
       I will/hope/expect (hereby), that you soon again come
(199)   Ich würde mich freuen, wenn du morgen kämest.
       I would be glad if you to morrow would come
(200)   Ich hoffe, dass du morgen kommst.
       I hope that you to morrow come
(201)   Ich erwarte, dass du mich morgen besuchst.
       I expect that you me to morrow visit
(202)   Ich will/möchte baden gehen.
       I will/want bathe go

Whereas a truth**-**oriented attitude expression refers to the speaker's *belief*, with regard to the truth of the proposition, the *action-oriented* attitude expression is prospective, similar to the imperative clause, and refers to the speaker's wish with regard to a future action.

Levinson (1983: 241) presents a short discussion around the predictability of the felicity conditions from general considerations of rationality and cooperations of the sort represented by Grice's maxims. He refers in a footnote to an unpublished paper by Grice (1973). "Grice … has himself suggested such a classification under a further restriction: he hopes to achieve a motivated taxonomy by building up complex communicative intentions, or illocutionary forces, from just two primitive propositional attitudes, roughly *wanting* and *believing*."

We think that this corresponds very well with our whole speech act system (see table 1), where the speaker's *belief* and *wish* are so fundamental and basic, that the speaker need not express them explicitly in order to distinguish between *Word to World* and *World to Word*, *belief* being the basic property of the first group and *wish* being the basic property of the second. Only when the speaker wants to shed light on these basic attitudes for some reason or other, does he need to express them in terms of a propositional attitude expression.

7   Summary and concluding remarks

In this paper we have presented a detailed case study of the imperative clause type in two Germanic languages, Swedish amd German, in a modular framework. We have argued that there are three independent clause types the *finite*, the *imperative* and the *infinitive* clause type, where the relation of the imperative clause type to the other two clause types is in focus. The differences between the three clause types have been derived from a morphologically founded distinction between the three verbal paradigms, the *finite*, the *imperative* and the *infinitive* one.

We have shown how the three basic clause types are built up by three autonomous and interdependent modular systems, a *morpho-syntactic*, a *semantic* and a *speech act* system, which account for the different properties of these clause types. The morpho-syntactic system, based upon the Minimalist program, see Chomsky (1995) and many others, operates with valued and unvalued features of various kinds, like [finite] and [φ], calculating the syntactic interface that constitutes the input to the semantic and the speech act interfaces. The semantic system supplies modal operators, that provide the clause type with a clause type meaning, and the speech act system turns the clause with its clause type meaning and morpho-syntactic structure into a speech act, being the *act the speaker performs,* when uttering the clause. Not until the clause is accepted as a proper *speech act* at the speech act interface, does it become speech.

We have argued that *morphology* is the module where words are created by merging roots with inflection morphemes. Looking at verbs only, we have assumed that in morphology a root *(skriv, schreib* 'write'*)* is merged with an inflectional morpheme. The result is a *finite*, *imperative* or *infinitive* verb, which in syntax will become the projective head of the syntactic tree, representing a corresponding clause type. We claim that the imperative clause is *non-finite*. Depending on category and different functional nodes, like T and C for verbs, the verb may be merged to a categorical head giving rise to a vP for verbs. Merging a verb with an inflection morpheme like [finite], [imperative] and [infinitive] hence is a basic step in building a particular clause type.

We have further argued that only the finite feature is compatible with projecting TP and thus allowing a subject in SpecTP, whereas CP, projected by all three features (the finite, imperative and infinitive ones), provides for different clause types with different meanings, resulting in different speech acts. This difference between the finite clause type with TP and the other two clause types without TP may be said to the be the most basic difference between the clause types. "Subject" hence is the name of a DP in SpecTP that takes part in two Agree relations between TP and little vP, one involving the [φ]-features in SpecTP and SpecvP, the other one involving the finiteness features in T and little v. Together the two Agree-relations constitute a nexus relation, i.e. a symmetric relation where neither part (subject nor predicate) is subordinated the other part. Finiteness is thus defined by the Agree-relation between subject and verb.

As a consequence of our analysis, what is often regarded as a subject in the *imperative* clause is not a subject but a theta-role carrying a DP. We call this DP *ImpPron*. It is optional, which the subject never is, and it differs as to its behavior in the clause in more than one way from the subject in a finite clause.

As mentioned above, we have only three independent clause types, the *finite*, *imperative* and *infinitive* clause types. Traditional linguistics normally distinguish between *declarative*, *interrogative* and *imperative* clause types, with two types of *interrogative* clause types. In our framework the interrogative clause cannot be an independent basic clause type on a par with the finite and imperative clause type, since its verb, although finite, is not the verb defining the *interrogativity* of the clause. We claim that the interrogative clauses are just finite clause types with the same [fin]-feature as the other clause types with a finite verb. As to V1-clauses, syntax does not distinguish at all between an interrogative V1-clause and other finite V1-clauses. Hence there does not exist an interrogative V1-clause type. As to interrogative *wh*-clauses we will further assume that C, besides having the finite feature [¬fin^{EPP}], may have a feature [¬wh^{EPP}]. If a C is picked from lexicon with [¬fin^{EPP}] and [¬wh^{EPP}], the [¬wh^{EPP}]-feature will probe a *wh*-phrase and demand that it moves to SpecCP. The difference between standard finite clauses and the interrogative finite clauses hence has to be defined semantically. The V1-clauses and *wh*-clauses will not get their interogative meaning until they map onto a proper semantic operator at the semantic interface. At the illocutionary interface they will become *yes/no-* and *wh-questions*.

We have furthermore distinguished between three types of embedding. We distinguish between *Proper embedding*, where T hosts an unvalued finiteness feature which is spelled out as a complementizer, and *Pseudo-embedding*, being the embedding of a V2-clause, where we assume that the pseudo-embedded clause is introduced by two CPs. Only these two types of embedding are possible in modern Swedish and German. We also find an "embedding" in Old Nordic, which we call *Centaur-embedding*. It is a centaur with an upper part of a finite clause, with a subject, and a lower part of an imperative vP, from where the subject moves to the upper part. This "embedding", found in Old Nordic, only occurs with imperative clauses. We conclude that the *imperative* clause type cannot embed at all, since it is not finite and hence does not have a complementizer or any other entity or structure, that allows it to embed. It only exists as an *independent* clause.

The finite and the imperative clause (as well as the infinitive clause) have in common

that they map *directly* onto a modal operator at the semantic interface. We have claimed that there exists a *correspondence* relation between *finiteness* and *truth-oriented* modality, on one hand, and between *non-finiteness* and *action-oriented* modality, on the other. Each clause type is targeting the *semantic* interface in order to find its proper semantics and will crash when not accepted. The finite clause (always with TP) will map onto a *truth-oriented* operator and the imperative and infinitive clauses (witout TP) will map onto an *action-oriented* operator. The correspondence relation is no stipulation, since the whole syntactic structure of each clause type is built up from the morphological basis via projection and merging of lexical and functional nodes in order to allow a specific mapping at the semantic interface onto a matching modal operator, taking the clause in its scope.

At the illocutionary interface the different types of clauses will find their corresponding speech act types, onto which the clauses will map with their clause type meaning.We have defined the speech act system as the system of *the acts the speaker performs when uttering a clause*. We argued that there exists a basic watershed between *Word to World* and *World to Word*, deviding the speech acts types in two distinct groups, each of the groups being in turn divided in two further groups. *Word to World* hence comprises the *constative speech act* types, where the speaker per default maps *directly* onto an *assertion* (or a *question*) and talks ABOUT an event, anchoring it in time and space in the *actual* world, and the corresponding *truth-oriented* propositional attitude expressions, where the speaker expresses his *attitudes* to a proposition. *World to Word* comprises the *constitutive speech act types,* i.e. the *declarations* and *expressives*, but also the *interactional* speech act types and the corresponding *action-oriented* propositional attitude expressions. The imperative clause may map onto three of the six interactional speech act types. The speaker talks TO the addressee in order to make or allow him to act according to a norm.

The finite clause has a wider range of usage than the imperative clause. Per default it maps onto a constative assertion (or a question), but it also maps onto constitutive declarations and expressives as well as onto propositional attitude expressions. The imperative clause, being slim and univocal, as a consequence is restricted to a few (but important) speech act constellations. It can only be used to express an *Order, Request* and *Permission*.

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