

# Chapter 8

## Approaching the morphosyntax and semantics of mood

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### 1 The issue

Within a minimalist framework of sound-meaning correlation, in this chapter I articulate my hypotheses on the difference between sentence mood and verbal mood. Sentence mood relates sentence types to illocutionary types of root sentences, while verbal mood relates the propositional content of root and embedded clauses to worlds. I focus on declarative speech acts in the indicative and the subjunctive verbal moods in Russian. I am especially interested in the paradigmatic and syntagmatic distribution of the subjunctive marker and in its invariant, grammatically determined meaning. I show how verbal mood and tense are interrelated and pay some attention to conditional modifiers.

In the sound-meaning correlation of utterances, we are accustomed to reckoning with reference to eventualities, to their participants  $x$  and to time spans  $t$ . In view of much of the work on event semantics, one could content oneself with extensional semantics. Nevertheless, we have to ask ourselves how intensional factors of meaning come into play (cf. Montague 1970b, 1970c, 1970a, 1973 [all reprinted in Thomason 1974]; Heim & Kratzer 1998; von Stechow & Heim 2011; von Stechow 2012, and many others).

I would like to ask the question “Where are the worlds?” (cf. Zimmermann 2010, 2013, 2015, 2017). Clearly people’s worlds are connected with their mental states. But how is this fact reflected in the structure of linguistic utterances? By



what means of expression do we refer to worlds – that is, to people’s mental states?

Within a minimalist framework of sound-meaning correlation, I concentrate on mood in its relation to worlds and time, and I argue for differentiating between sentence mood and verbal mood. The analysis here offers some improvements on my earlier work (Zimmermann 2009, 2010, 2013).

The Russian system of tense and mood markers and the meaning associated with them deserve special attention, in view of their peculiarities in contrast with other Slavic and non-Slavic languages. I start with declarative root sentences with the indicative and subjunctive moods, as shown in (1) and (2), respectively.

- (1) V        poslednie gody v Potsdame vosstanavl-iva-l=sja  
      during last        years in Potsdam reerect-IPFV-PTCP.PST[M.SG]=REFL  
      gorodskoj dvorec.  
      town        castle  
      ‘During the last few years in Potsdam the town castle was reerected.’
- (2) Pri        GDR by<sub>α</sub>    gorodskoj dvorec ne  
      during GDR would town        castle not  
      vosstanavl-iva-l=sja                    by<sub>-α</sub>.  
      reerect-IPFV-PTCP.PST[M.SG]=REFL would  
      ‘During the GDR the town castle would not have been reerected.’

While the preterite indicative in (1) is expressed by the inflectional affix *-l*, the subjunctive in (2) is composed of this suffix and the clitic particle *by*. I will show how the lexical entries and syntactic configurations determine the modal and temporal interpretation of these sentences.

## 2 Basic assumptions

My considerations are built on a conception of minimalism and on the differentiation between grammatically determined semantic form (SF) and conceptual structure (CS) (Bierwisch 1983, 1985, 2007; Bierwisch & Lang 1987; Dölling 1997; Lang & Maienborn 2011).

In the correlation between sound and meaning in linguistic expressions, the lexicon plays a central role. Every lexical entry contains a phonetic characterization (except for zero morphemes), a morphosyntactic categorization, and the SF of the pertinent lexical item. I show that the association of certain grammatical

formatives with their SF is delayed and conveyed only in the functional domains in the left periphery of the clause.

Syntactic representations are of a purely syntactic nature. For clauses, I assume the following hierarchical domains.<sup>1</sup>

- (3) (ForceP) CP MoodP TP PolP  $\nu$ P \*VP

As I show later in the chapter, functional domains can be fused. ForceP delivers various illocutionary types of sentences. It is absent in embedded clauses. CP characterizes the various sentence types (Brandt et al. 1992; Zimmermann 2009, 2010, 2013, 2015, 2017). In generative grammar, it is not unusual to assume a functional projection MoodP (cf. Lohnstein 2000; Giannakidou 2009, 2011b, 2011a, 2014, 2016). I show which kind of meaning is contributed by this functional phrase. TP relates the topic (reference) time  $t$  to the utterance time  $t^0$ . In PolP, the decision between affirmation and negation takes place. As for aspect (Klein 1994), I assume that it is delivered by the verb.<sup>2</sup> The main verb of clauses is the head of VP. Its arguments are merged in  $\nu$ P and/or VP. In general, I assume that the syntactic domains  $\nu$ P and VP serve to describe a situation with its participants and modifiers, while the functional domains ForceP, CP, MoodP, and TP relate  $\nu$ Ps to discourse or to matrix clauses.<sup>3</sup>

As regards morphology, I adhere to a conception according to which the lexicon brings in fully derived and inflected word forms (Wunderlich 1997). Thus the finite verb in (1) is represented in the lexicon with its word structure (4a), morphosyntactic categorization (4b), and semantics (4c).<sup>4</sup>

<sup>1</sup>Cf. Ambar's (2016) split categories of the left periphery:

- (i) XP\* EvaluativeP AssertiveP XP\* FinP TP ... (with XP\* for dislocated DPs)

Ambar (2016) assumes that EvalP and AssertP are pragmatic categories that allow for semantic decomposition of modality and constrain the influence of pragmatic factors on the semantic interpretation of clauses.

<sup>2</sup>Russian deverbal nominalizations like *razrabatyvanie* vs. *razrabotka* 'elaboration' are derived lexically and based on the corresponding verb stem plus aspectual markers and their semantics. Therefore, I depart from de Swart (2016), who assumes the existence of aspect phrases below the tense phrase.

<sup>3</sup>In Slavic grammatical tradition, the factors represented in these functional domains are characterized as components of "predikativnost'" ('predicativity'), cf. Pitsch (2014: 177ff.).

<sup>4</sup>For reasons of explicitness, redundant morphosyntactic features are not omitted. Elementary semantic types are  $\langle e \rangle$  for various sorts of individuals,  $\langle t \rangle$  for propositions, and  $\langle s \rangle$  for worlds. Argument positions can be associated with morphosyntactic conditions on the pertinent argument expression.

- (4) a. [[[[[voz[ stanavl']] iva] l] sja]  
 b. +V–N–pf+part+*l*-part+pret–imp–subj–fin+max  
 c.  $\lambda y_{\langle -\text{neut} - \text{fem} - \text{pl} \rangle} \lambda t \lambda e [[\tau(e) \supseteq t] \wedge [e \text{ INST } [\text{REERECT } y\ x]]]$   
 with  $\tau \in \langle e, e \rangle$ ,  $\supseteq, \text{REERECT} \in \langle e, \langle e, t \rangle \rangle$ ,  $\text{INST} \in \langle t, \langle e, t \rangle \rangle$

The clitic *sja* marks the passive voice of the imperfective verb and blocks its external argument position.<sup>5</sup> Imperfectivity of the verb in (1) and (2) is expressed by the suffix *-iva*. The suffix *-l* expresses preterite tense and indicative – that is, nonimperative and nonsubjunctive mood.<sup>6</sup> The word-structure feature +max characterizes the verb form in (4a) as capable of being merged in syntax. The SF of the verb consists of the argument structure (thematic grid) and the predicate-argument structure. The argument position  $\lambda y$  is associated with selectional agreement requirements –neut, –fem, and –pl for the pertinent argument expression, *gorodskoj dvorec* ‘the town castle’. The person features  $\alpha I$ ,  $\beta II$  associated with the external argument position of a verb would characterize it as a finite verb form (Pitsch 2014: 129). Correspondingly, the verb form in (4) is categorized as –fin. The *l*-participle does not inflect for person, like participles in general.

As in Pitsch (2013, 2014), inflectional affixes are considered to be formal reflexes of their meaning represented by functional (zero) heads.<sup>7</sup> These heads c-command the verb form and select certain of its morpho-syntactic features (cf. Sternefeld 2006).<sup>8</sup> While (5) represents the lexical entry of the suffix *-l* in the word structure (4), the functional zero heads  $T^0$  in (6) and  $\text{Mood}^0$  in (8) deliver the respective temporal and modal meaning components.<sup>9</sup>

<sup>5</sup>Passivization as an operation on the argument structure of the verb takes place in the lexicon. Other functions of the formative *sja* are left out of consideration here. Cf. Fehrman et al. (2010).

<sup>6</sup>Morphosyntactic features are chosen in correspondence with their phonetic realization. In Russian, the subjunctive and the imperative are signaled by special overt morphemes. This is not the case with respect to the indicative. Likewise, the neuter and the feminine gender have explicit markers, in contrast to the masculine.

<sup>7</sup>On the split between semantics and morphology, cf. von Stechow (2012: section 8).

<sup>8</sup>My treatment of selection departs from the common system of feature checking in generative syntax (cf. von Stechow 2012: section 8 and Ambar 2016). It deserves additional study to compare the different approaches to selection, especially with regard to minimality.

<sup>9</sup>I do not use terms like PAST in syntax. Instead the involved constituents have corresponding features like +pret, and the functional head is phonetically zero.

### 3 Tense morphology and tense meaning

Russian has a nonhomogeneous tense system. While the preterite is expressed by an ancient Slavic participle form, the *l*-participle, which agrees with the subject in gender and number and is based on the infinitival stem, nonpreterite verb forms agree with the subject in person and number and are based on the present stem. Thus the suffix *-l* in (1) and (2) has the following lexical representation:

- (5) a.  $/-l/$   
 b.  $+part+l-part+pret-imp(-subj)_{\beta}-fin\alpha max$   
 c.  $\lambda P_{\langle +V-N-pres\ stem-max \rangle} \lambda x_{\langle -neut-fem-pl \rangle}_{\alpha} \lambda t \lambda e [P\ x\ t\ e]$   
 with  $P \in \langle e, \langle e, \langle e, t \rangle \rangle \rangle$

The suffix *-l* selects the infinitival verb stem and adds the features  $+part$ ,  $+l-part$ ,  $+pret$ ,  $-imp$ , and optionally  $-subj$  and  $-fin$ .<sup>10</sup> The word-structure feature  $\alpha max$  co-varies with the presence of masculine agreement features in the external argument position. In (1) and (2), the *l*-participle agrees with the masculine ( $-neut-fem-pl$ ) subject and counts as a  $+max$  verb form. The semantic representation of the *l*-participle in (5c) amounts to an empty function, at the level of word structure. Its temporal semantic contribution is delivered by a zero formative in  $T^0$ .<sup>11</sup>

- (6) a.  $/\emptyset/$   
 b.  $+T$   
 c.  $\lambda P_{\langle +pret-imp(-subj)_{\alpha} \rangle} \lambda t \lambda e [(t < t^0) \wedge ]_{\alpha} [P\ t\ e]$   
 with  $P \in \langle e \langle et \rangle \rangle$

The functional zero head  $T^0$  selects a preterite complement and relates its topic time  $t$  to the utterance time  $t^0$ . This relation characterizes the topic time as being before the utterance time, but only in the indicative ( $-imperative, -subj$ ). In the subjunctive ( $-imperative, +subj$ ), this relation is absent (see Section 4.3).

<sup>10</sup>I do not agree with Ambar's (2016) analysis of the Russian subjunctive. She assumes that in Russian subjunctive clauses the particle *by* is combined with the past indicative form of the verb. The past verb form selected by the subjunctive particle *by* is left unspecified with respect to mood, in my system (see (5b), (6c), and (17b)–(17c)).

<sup>11</sup>In current generative syntax, the feature  $+pret$  in (5b) would be  $u(n)interpretable past$ , which is checked by the feature  $i(n)interpretable past$  in  $T^0$ , instead of the selection feature  $+pret$  in (6c).

## 4 The analysis of mood

In the analysis of mood, the left periphery of clauses with its functional domains TP, MoodP, CP, and ForceP is important.

### 4.1 Verbal mood: The indicative

Verbal mood relates propositions to mental models (Lohnstein 2000) by reference to worlds  $w$  and/or situations  $\sigma$  and binds the referential argument  $e$  of verbs. In situation semantics, Kratzer (1989, 2004, 2011) regards worlds as maximal situations,  $\sigma \leq w$ , and propositions of type  $\langle s, t \rangle$  as sets of possible situations. In this sense, one could understand intensionalization of propositions of type  $\langle t \rangle$  as in (7a) or (7b) (see fn (23)).

- (7) a.  $\wedge p = \lambda w [\dots w \dots]$   
 b.  $\wedge p = \lambda \sigma [\dots \sigma \dots]$

In the following, I take (7a) for granted. In Russian, verbal mood is realized as indicative, subjunctive, or imperative. Their respective SFs are brought in by the functional zero head Mood<sup>0</sup>. In (8), the indicative verb form is associated with its meaning.

- (8) a.  $/\emptyset/$   
 b. +Mood  
 c.  $\lambda P_{\langle -\text{imp-subj} \rangle} (\lambda w) \exists e [[P t e](w)]$   
 with  $w \in \langle s \rangle, P \in \langle e, \langle e, t \rangle \rangle$

The functional zero head Mood<sup>0</sup> selects an indicative complement, blocks its topic-time argument position,<sup>12</sup> binds the referential eventuality argument  $e$ , and optionally relates the pertinent proposition to worlds. The latter operation takes place in cases of intensionalization. Since in example (1) MoodP is the complement of the declarative operator, which selects  $\wedge p$  (see Section 4.2), MoodP must deliver a world-related complement.

<sup>12</sup>Unbound variables can be activated by lambda abstraction in SF, or they are specified, co-indexed, or existentially bound in CS. In indicative root clauses like (1),  $t$  is a parameter and gets existentially bound in CS.

## 4.2 Sentence mood

While Brandt et al. (1992) and Reis (1997, 1999) regard CP as the highest functional projection for root and embedded clauses, I have deviated from this conception since 2004 with my contribution “Satzmodus” (published in 2009). I accept Krifka’s (2001, 2004, 2013) assumption of illocutionary type operators for root clauses converting propositions of type  $\langle s, t \rangle$  into illocutionary types. This takes place in ForceP, as shown in (9).

- (9) a.  $/\emptyset/$   
 b. +Force  
 c.  $\lambda^{\wedge} p$  [DECLAR/QUEST/EXCLAM/DIR  $\wedge p$ ]  
 with DECLAR, QUEST, EXCLAM, DIR  $\in \langle \langle s, t \rangle, a \rangle$

Example (9) contains lexical entries for +Force zero morphemes with their respective SF. The corresponding illocutionary-type operators are parameters that vary according to the social-cultural and linguistic context. They allow one to derive the commitments and modal mental states (see (11)–(13)) connected with the pertinent speech act (for parameters in SF and their specification, see Dölling 1997). As a rule, Force<sup>0</sup> and C<sup>0</sup> are fused in root clauses.

Example (10) is the lexical entry of the fused functional heads Force<sup>0</sup> and C<sup>0</sup> in declarative root clauses. Syntactically, it represents declarative root clauses as the unmarked sentence type by the feature –wh. Semantically, it selects a nonimperative (indicative or subjunctive) intensional propositional argument and combines it with the declarative illocutionary type.<sup>13</sup> The choice between indicative and subjunctive is free (unselected) in declarative and interrogative root clauses.

- (10) a.  $/\emptyset/$   
 b. +Force+C–wh  
 c.  $\lambda^{\wedge} p_{\langle -imp \rangle}$  [DECLAR  $\wedge p$ ]

For my considerations of root declarative clauses, the following meaning postulates (MPs) are important:

<sup>13</sup>Corresponding unmarked complement clauses are introduced by the complementizer *čto* ‘that’. It has the lexical entry (i). Semantically, it is an empty function (Zimmermann 2015, 2016).

- (i) a.  $/\check{c}to/$   
 b. –Force+C–wh  
 c.  $\lambda p_{\langle -imp \rangle}[p]$   
 with  $p \in \{t, \langle s, t \rangle\}$

$$(11) \quad \text{MP 1: } \forall \wedge p [[\text{DECLAR} \wedge p] \rightarrow \forall w [[w \in \wedge p \cap \text{CG}] \rightarrow [w \in M_{\text{VOLIT}} sp]]]$$

For all assertions, it follows that the speaker wants the pertinent proposition to be in the common ground.<sup>14</sup> The same is true with questions. But assertions and questions differ with respect to the following MP:

$$(12) \quad \text{MP 2: } \forall \wedge p [[\text{DECLAR} \wedge p] \rightarrow \forall w [[w \in M_{EP} sp] \rightarrow [w \in \wedge p]]]$$

MP 2 in (12) relates declarative root sentences to the epistemic mental model of the speaker  $M_{EP} sp$ . As will become clear, indicative declarative root clauses open a veridical modal space with respect to the mental state of the speaker (cf. Giannakidou 2014, 2016).

I believe that these characterizations coincide with Truckenbrodt's (2006a, 2006b) semantic interpretation of the syntactic feature +C, –wh, but with one difference from my system of assumptions. Truckenbrodt does not assume illocutionary-type operators. For me, there is an important difference between a small universal set of mental models and their specification in the SF of language-specific lexical entries. Therefore, I assume that the following MP applies to veridical verbs like *assume* and *believe*, which describe particular modal mental states:

$$(13) \quad \text{MP 3:} \\ \forall \wedge p \forall x [[\text{ASSUME/BELIEVE/...} \wedge p x] \rightarrow \forall w [[w \in M_{EP} x] \rightarrow [w \in \wedge p]]]$$

With these components of morphosyntactic expressions and empty functional categories, the semantic structure of (1), whose syntax is represented in (14),<sup>15</sup> will be (15).

- (1) V      poslednie gody v Potsdame vosstanavl-iva-l=sja  
       during last          years in Potsdam reerect-IPFV-PTCP.PST[M.SG]=REFL  
       gorodskoj dvorec.  
       town          castle  
       'During the last few years in Potsdam the town castle was reerected.'

$$(14) \quad [_{\text{ForceP/CP}} V \text{ poslednie gody}_i [_{\text{ForceP/CP}} \emptyset [_{\text{MoodP}} t_i [_{\text{MoodP}} \emptyset [_{\text{TP}} t_i [_{\text{TP}} \emptyset [_{\text{PolP}} \emptyset [_{\text{VP}} v \text{ Potsdame } [_{\text{VP}} [_{\text{V}} \text{ vosstanavlivalsja} ] [_{\text{DP}} \emptyset [_{\text{NP}} \text{ gorodskoj dvorec} ]]]]]]]]]]]]]]]]$$

<sup>14</sup>As for the common ground, see (19c) and footnote 26.

<sup>15</sup>In root clauses, movements to ForceP/CP as in (14) and (16) take place in PF in order to mark the beginning of a clause and are not visible in LF.



- (15) DECLAR  $\lambda w \exists e [[t < t^0] \wedge [[\exists! y [[\text{TOWN CASTLE } y] \wedge [[\tau(e) \supseteq t] \wedge [e \text{ INST } [\text{REERECT } y \ x]]]] \wedge [\text{LOC}(e) \subset \text{POTSDAM}]] \wedge \exists z [[\text{LAST YEARS } z] \wedge [t \subseteq z]]]] w]$ <sup>16</sup>

### 4.3 Verbal mood: The subjunctive

Now let us turn to the subjunctive (cf. Quer 1998; Hacquard 2006; Giannakidou 2009, 2011b, 2011a, 2014, 2016; von Stechow & Heim 2011) and to the morphosyntactic and semantic representation of sentence (2), with its syntactic structure (16).<sup>17</sup>

- (2) Pri GDR by<sub>α</sub> gorodskoj dvorec ne  
 during GDR would town castle not  
 vosstanavl-iva-l=sja by<sub>-α</sub>.  
 reerect-IPFV-PTCP.PST[M.SG]=REFL would  
 ‘During the GDR the town castle would not have been reerected.’

- (16) [<sub>ForceP/CP</sub> Pri GDR<sub>i</sub> [<sub>ForceP/CP</sub> ∅ [<sub>MoodP</sub> t<sub>i</sub> [<sub>MoodP</sub> by<sub>α</sub> ∅ [<sub>TP</sub> ∅  
 [<sub>PolP</sub> [<sub>DP</sub> ∅ [<sub>NP</sub> gorodskoj dvorec]]<sub>j</sub> [<sub>PolP</sub> ne  
 [<sub>VP</sub> [<sub>V</sub> [<sub>V</sub> vosstanavlivalsja] by<sub>-α</sub>] t<sub>j</sub> ]]]]]]]]]]

In Russian, the subjunctive is expressed by the preterite form of the verb or the infinitive<sup>18</sup> and the enclitic particle *by*. As shown in (16), the particle is adjacent to the verb or to the first constituent of the clause.<sup>19</sup> In complement or conditional clauses, it is cliticized to the respective complementizer *čto* ‘that’ or *esli* ‘if’. I assume that *by* is merged in V and can move to Mood.<sup>20</sup> Its lexical entry is given in (17).

- (17) a. /by/, V<sub>-</sub>, C<sub>-</sub>, XP<sub>-</sub>  
 b. +subj  
 c.  $\lambda P_{\langle \{+pret/-part\}-fin+max \rangle} [P]$

<sup>16</sup>The unbound variables *t* and *x* in (15) are parameters and will be existentially bound in CS. As regards the modifiers and the subject in (1), I assume that they are merged and interpreted as adjuncts of TP and VP and in the complement position of V, respectively.

<sup>17</sup>Isačenko (1962), Barnetová et al. (1979), and Švedova (1980), describe the Russian subjunctive in detail. Concerning generative approaches to mood, see Ambar (2016).

<sup>18</sup>Infinitival control constructions with the subjunctive marker *by* are not considered here.

<sup>19</sup>In colloquial Russian, the particle *by* can occur twice, after the verb and on the left periphery of the pertinent clause.

<sup>20</sup>Migdalski (2006) and Tomaszewicz (2012) assume for Polish that *by* is merged as the head of a special modal functional phrase between TP and NegP (my PolP) and moved to the left periphery. In Ambar (2016), the Russian subjunctive marker *by* is merged as the head of EvalP and the complementizer *čto* is raised from FinP to this position.

The particle selects a maximal nonfinite preterite or nonparticipial (infinitival) verb form and adds the feature +subj to it.<sup>21</sup> Its subjunctive semantics is delivered by the functional head Mood<sup>0</sup> in (18). The meaning in (17c) is an empty function.<sup>22</sup>

- (18) a.  $/\emptyset/$   
 b. +Mood  
 c.  $\lambda P_{\langle +\text{subj} \rangle} \lambda w \exists e [[\sim[w R_{\text{conf}} w_u]] : [[P t e]w]]$   
 with  $w, w_u \in \langle s \rangle, P \in \langle e, \langle e, t \rangle \rangle, R_{\text{conf}} \in \langle s, \langle s, t \rangle \rangle$

The semantic contribution of the subjunctive is comparable to the indicative and adds the restriction that the worlds  $w$  do not conform to the world of the modal subject  $u$ .<sup>23</sup> This characteristic restriction of the subjunctive corresponds with semantic properties of prospective predicate expressions like *trebovat* ‘require’ and *dlja togo* ‘in order to’, which embed clauses with *by*.<sup>24</sup> The modal subject  $u$  will be specified as the speaker in the context of the declarative sentence mood.

As the equivalences in (19) show, I regard the proposition  $\lambda w [[\sim[w R_{\text{conf}} w_u]] : [w \in \wedge p]]$  as tantamount to  $\lambda w \sim \forall w' [[[w' \in M_{EP} u] \wedge [w' \leq w]] \rightarrow [w' \in \wedge p]]$  – that is, it is similar to what Giannakidou (2016) characterizes as nonveridicality, in contrast to  $\lambda w \forall w' [[[w' \in M_{EP} u] \wedge [w' \leq w]] \rightarrow [w' \in \wedge p]]$  (cf. the meaning postulates in (12) and (13)). Moreover, with  $u$ =speaker, we are dealing here with a negated presupposition.<sup>25</sup>

<sup>21</sup>Observe that the selected verb form is unspecified for mood (cf. (6c)).

<sup>22</sup>As with tense (see footnote 11), the feature +subj in (17b) could be u(n)interpretable subj, which is checked by the feature i(n)terpretable subj in Mood, instead of the selection feature +subj in (18c).

<sup>23</sup>The relation  $R_{\text{conf}}$  is comparable to the accessibility relation between worlds described by Kratzer (1991b, 1991a). Taking into account developments in situation semantics, (8c) and (18c), equivalently, could be represented as (i) and (ii), respectively.

- (i)  $\lambda P(\lambda \sigma)_\alpha \exists e [[(e \leq \sigma) \wedge]_\alpha [P t e]]$   
 (ii)  $\lambda P \lambda \sigma \exists e [[[\sim[\sigma R_{\text{conf}} \sigma_u]] \wedge [e \leq \sigma]] \wedge [P t e]]$   
 with  $P \in \langle e, \langle e, t \rangle \rangle, \sigma, \sigma_u \in \langle s \rangle, \leq \in \alpha, \alpha \in \{\langle s, \langle e, t \rangle \rangle, \langle s, \langle s, t \rangle \rangle\}$

<sup>24</sup>The treatment of mood selection in complement clauses demands a thorough examination of the logical properties of the matrix predicates (see Schwabe & Fittler 2014a, 2014b). The subjunctive typically occurs also in case of dependence on negated nonfactive verbs. Dahl (1971) observed a striking parallelism between definiteness and unspecificity of noun phrases and between presupposed and subjunctive clauses. This parallelism is relevant for indicative and subjunctive in relative clauses, too.

<sup>25</sup>It seems conceivable to interpret the subjunctive dependent on emotive predicates in some Romance languages as a negated presupposition – that is, the speaker is not certain about the truth of the embedded proposition (cf. the assumptions of Giannakidou 2016).

- (19) a.  $\forall w \exists^{\wedge} p [ [\sim [w R_{\text{conf}} w_u]] : [w \in {}^{\wedge} p] ] \leftrightarrow \sim \forall w' [ [w' \in M_{EP} u] \wedge [w' \leq w] ] \rightarrow [w' \in {}^{\wedge} p] ]$   
 b.  $\forall w \exists^{\wedge} p \forall w' [ [ [w' \in M_{EP} u] \wedge [w' \leq w] ] \rightarrow [w' \in {}^{\wedge} p] ] \leftrightarrow [ [w \in M_{EP} u] \wedge [w \in {}^{\wedge} p] ]$   
 c.  $\forall w \exists^{\wedge} p \text{ Gen } x [ [ [ [\text{PERS } x] \wedge [w \in M_{EP} x] ] \wedge [w \in {}^{\wedge} p] ] \leftrightarrow [w \in \text{CG}] ]$ <sup>26</sup>

Thus, in contrast to Wiltschko (2016) and Christodoulou & Wiltschko (2012), I assume that functional categories do have content and that the semantic characterization of the subjunctive in (18c) is the SF pendant of the syntactic feature  $[-\text{coin(cident)}]$  in  $\text{Infl}^0$  in the analysis of the subjunctive by the authors.<sup>27</sup>

Now, the preterite form of the selected verb with the subjunctive marker *by* deserves special attention. The preterite functional zero head  $T^0$  varies in its meaning contribution depending on the value of the feature  $\alpha_{\text{subj}}$  (cf. (6c)). The temporal characterization is absent in the subjunctive. This phenomenon is called “fake preterite” and corresponds to the infinitive, lacking temporal specification.<sup>28</sup> Thus the preterite verb form *vosstanavlivalsja* in its temporal meaning in (1) is characterized by (6c) as referring to a time span before the utterance time. This is not the case for this verb form in (2), where it is accompanied by the subjunctive marker *by*. In (2) the relation of the topic time  $t$  to the utterance time is unspecified in SF and resides in the knowledge of the speaker, including the linguistic context. If examples (1) and (2) are considered as a coherent text, the temporal interpretation of the topic time in (2) in CS is inherited from (1), where  $t$  is expressed as being before the utterance time. If (2) is considered independently of (1),  $t$  is existentially bound, leaving the relation to  $t^0$  unspecified in CS – that is, whether  $t$  is to be interpreted as being before  $t^0$  or if it is not.<sup>29</sup>

Thus, the SF of the inner MoodP in (16) will be (20).

<sup>26</sup>Example (19c) concerns the common ground (CG). Only if a world  $w$  with  $[w \in {}^{\wedge} p]$  belongs to the epistemic mental model of the speaker and the hearer (and possibly others) does it belong to the CG. For different assumptions, cf. Portner (2007, 2009); Zanuttini et al. (2012); and Ambar (2016).

<sup>27</sup>Observe that the indicative (see (8)) by itself is not related to a mental model, but only via the MPs 2 and 3 in (12) and (13), which are based on the realization of  $\text{Force}^0$  as DECLAR or on corresponding matrix predicates, respectively. This shows the dependency of mood interpretation on syntactically higher factors. With regard to these interpretations, I fully agree with the findings of Wiltschko (2016) and Christodoulou & Wiltschko (2012). Our disagreement concerns the division of labor between morphosyntax and semantics.

<sup>28</sup>Characteristically, embedded infinitival control constructions can be marked by the subjunctive formative *by*, depending on the embedding predicate.

<sup>29</sup>There is no tense agreement in Russian subjunctive clauses comparable to that in Romance languages.

$$(20) \quad \lambda w \exists e [[\sim R_{\text{conf}} w_u]] : \exists! y [[[\text{TOWN CASTLE } y] \wedge \sim [\tau(e) \supseteq t]] \\ \wedge [e \text{ INST } [\text{REERECT } y x]]] w]]$$

The semantic contribution of the presence of the subjunctive particle *by* characterizes the worlds  $w$  to which the proposition expressed by the MoodP applies as not conforming with the world of the modal subject  $u$ .

Observe that in (20) there are two different occurrences of negation. The first one is brought in by  $\text{Pol}^0$  and negates the propositional kernel of the clause. The second one is delivered by the restriction connected with the subjunctive mood (cf. (18c)). It is relevant that the subjunctive meaning represented by the empty functional category  $\text{Mood}^0$  takes scope over the so-called sentence negation in  $\text{Pol}^0$  (cf. (16)).

In a sense, one could regard the zero heads  $T^0$  and  $\text{Mood}^0$  together as a covert auxiliary verb that conveys discourse-oriented meaning components of the clause. I leave open the question whether  $T^0$  and  $\text{Mood}^0$  are fused in syntax, as assumed by Pitsch (2014).

#### 4.4 Conditional modifiers

First, the conditional adverbial modifier *pri GDR* in example (2) will be integrated into the sentence structure. Conditional modifiers are merged and interpreted as adjuncts of MoodP (see the trace  $t_i$  in (16)). The conditional meaning of the preposition *pri* is represented in (21).<sup>30</sup> The semantic template (22), which relates DP meanings to worlds (cf. Schwarz 2012), applies to the proper name *GDR* with the resultant representation (23).

$$(21) \quad \begin{array}{ll} \text{a.} & /pri/ \\ \text{b.} & -V-N \\ \text{c.} & \lambda p \lambda q \lambda w \forall w' [[ [p w'] \rightarrow [q w'] ] w] \end{array}$$

$$(22) \quad \lambda u \lambda w \exists z [[z \leq w] \wedge [z = u]] \\ \text{with } z, u \in \langle e \rangle$$

$$(23) \quad \lambda w \exists z [[z \leq w] \wedge [z = GDR]]$$

With the semantic components of  $\text{Force}^0/C^0$  in (10), of *pri* in (21), and of its complement in (23), the SF of sentence (2) is (24).

<sup>30</sup>Other meanings of the preposition *pri* are ignored here.

- (24) DECLAR  $\lambda w \forall w' \exists z [ [ [ [z \leq w']$   
 $\rightarrow \exists e [ [\sim [w' R_{\text{conf}} w_u]] : \exists! y [ [ [ \text{TOWN CASTLE } y] \wedge \sim [ [\tau(e) \supseteq t] \wedge$   
 $[e \text{ INST } [\text{REERECT } y \ x]]] ] w'] ] ] w]$

The implication in the scope of the declarative sentence-type operator can be true if both the antecedent and the consequent are not true in the speaker's epistemic mental model. In the SF (24), the nonconformity of  $w'$  and  $w_u$  is not represented for the antecedent. But since – according to the knowledge of the speaker – the *GDR* does not belong to the world  $w_u$  in the given temporal context and, consequently,  $w'$  does not conform to  $w_u$ , the implication in (24) is true.

In contrast to example (2) with the conditional PP *pri* *GDR*, the corresponding conditional clause in (25) with the conjunction *esli* 'if' expresses the restriction that the *GDR* does not exist in the world of the speaker.<sup>31</sup>

- (25) Esli by GDR suščestvova-l-a, gorodskoj dvorec ne  
 if would GDR exist.IPFV-PTCP.PST-F.SG town castle not  
 vosstanavl-iva-l=sja by.  
 reerect-IPFV-PTCP.PST[M.SG]=REFL would  
 'If the GDR had existed, the town castle would not have been reerected.'

The meaning of the conjunction *esli* corresponds to the meaning of *pri* in (21c). Thus the SF of the conditional clause in (25) will be (26).

- (26)  $\lambda q \lambda w \forall w' \exists e' [ [ [\sim [w' R_{\text{conf}} w_u]] : [ [ [\tau(e') \supseteq t] \wedge$   
 $[e' \text{ INST } [\text{EX:16:IST } GDR]] ] w'] ] \rightarrow [qw'] ] w]$

Examples (27)–(29) illustrate the possibility of variation in the expression of Russian conditional constructions (Švedova 1980: vol. 2, 104ff).

- (27) Esli by syn uči-l=sja, mat' by ne  
 if would son learn.IPFV-PTCP.PST[M.SG]=REFL mother would not  
 ogorča-l-a=s'.  
 worry.IPFV-PTCP.PST-F.SG=REFL  
 'If the son would {learn/have learned}, the mother would not {worry/have worried}.'

<sup>31</sup>On the syntax of conditional clauses see Bhatt & Pancheva (2006) and Tomaszewicz (2012); on the semantics cf. Kratzer (1991b, 1991a).

- (28) Uči-l=sja by syn, mat' by ne  
learn.IPFV-PTCP.PST[M.SG]=REFL would son mother would not  
ogorča-l-a=s'.  
worry.IPFV-PTCP.PST-F.SG=REFL
- (29) Uč-i=s' (by) syn, mat' by ne  
learn.IPFV-IMP.2SG=REFL would son mother would not  
ogorča-l-a=s'.  
worry.IPFV-PTCP.PST-F.SG=REFL

In (28), the subjunctive verb seems to substitute for the conditional conjunction.<sup>32</sup> In the colloquial variant (29), the substituting entity is the second-person singular form of the imperative,<sup>33</sup> with or without the subsequent subjunctive particle *by*.

There is a close semantic relationship between the subjunctive and the imperative that allows for their mutual substitution in many cases (see Zimmermann 2009, 2017; Dvořák & Zimmermann 2007). The temporal unspecificity of the subjunctive and its characteristic restriction are valid for the imperative too.<sup>34</sup>

While in (28) and (29) there is a conditional zero conjunction, to which the raised verb is adjoined, (31) and (32) syntactically are not sentences with a conditional clause, in contrast to (30). Nevertheless, the referential parallelism of the subject in (31) and (32) and the anaphoric pronoun *eto* 'this' in (30), as well as its relation to the proposition of the antecedent, deserve special attention.

<sup>32</sup>Cf. the corresponding substitution of the conditional conjunction in German:

(i) {Würde der Sohn lernen / lernte der Sohn}, {würde die Mutter  
would.3SG the son learn.INFV learn.3SG.PST the son would.3SG the mother  
nicht besorgt sein / wäre die Mutter nicht besorgt}. / Hätte der Sohn  
NEG worried be.INFV were.3SG the mother NEG worried had.3SG the son  
gelernt, wäre die Mutter nicht besorgt gewesen.  
learn.PTCP.PST were.3SG the mother NEG worried be.PTCP.PST  
'Learned the son, would the mother not be worried. / Had the son learned, would  
mother not have been worried.'

<sup>33</sup>In Russian, the second person singular form of the imperative can be used with explicit singular and plural subjects in conditional constructions like (29) and in cases like in (i).

(i) Vse šli guljat', a my uč-i=s'.  
all went walk and we learn.IPFV-IMP.2.SG=REFL  
'All took a walk, and we must learn.'

<sup>34</sup>Kaufmann (2012) analyzes imperatives as not referring to a time span before the utterance time. She characterizes this restriction as a presupposition.

- (30) Esli by Sergej menja poseti-l, èto menja  
 if would Sergej me visit.PFV-PTCP.PST[M.SG] this me  
 ob-radova-l-o by.  
 PFV-please-PTCP.PST-N.SG would  
 ‘If Sergej would {visit/have visited} me, it would {please/have pleased} me.’
- (31) Posešćenie Sergeja menja ob-radova-l-o by.  
 visit Sergej.GEN me PFV-please-PTCP.PST-N.SG would  
 ‘{A/The} visit from Sergej would {please/have pleased} me.’
- (32) Kniga menja ob-radova-l-a by.  
 book me PFV-please-PTCP.PST-F.SG would  
 ‘{A/The} book would {please/have pleased} me.’

The semantic interpretation of the subject phrases in (31) and (32) involves reference to possible worlds (situations) that must be related to the worlds (situations) the respective sentences refer to. Moreover, the far-reaching semantic synonymy of constructions like (30) and (31) with a nominalization must be taken into account.

First, I propose the application of the template (22) and of a conditional template, (33), to the noun phrases in (31) and (32). The resultant semantic representation for example (32) is (34).

- (33)  $\lambda p \lambda q \lambda w \forall w' [[p w'] \rightarrow [q w']] w$
- (34) DECLAR  $\lambda w \forall w' \exists x_i [ [ [ [ \text{BOOK } x_i ] \wedge \exists z [ [z \leq w'] [z = x_i]] ] ] ]$   
 $\rightarrow [ [ \sim [w' R_{\text{conf}} w_u] ] ] :$   
 $\exists e [ [ \tau(e) \subseteq t ] \wedge [ e \text{ INST } [ \text{PLEASE } sp x_i ] ] ] w'$   
 with  $\text{BOOK} \in \langle e, t \rangle$ ,  $\text{PLEASE} \in \langle \alpha \rangle$ ,  $\alpha \in \{e, t\}$

A tacit assumption in this analysis is the movement of the subject phrase of (32) to MoodP, and then to ForceP/CP (see (35)). The last occurrence of its trace  $t_i$  is semantically interpreted as  $x_i$ .

- (35)  $[_{\text{Force/CP}} [_{\text{DP}} \emptyset \text{ kniga}]_i \emptyset [_{\text{MoodP}} t_i [_{\text{MoodP}} \emptyset [_{\text{TP}} \emptyset [_{\text{PolP}} \emptyset [_{\text{vP}} t_i \text{ menja obradovala by}]]]]]]]$

The syntactic derivation and semantic interpretation of (31) proceed analogously. Thus the semantic representation of (31) will be (36).

$$(36) \quad \text{DECLAR } \lambda w \forall w' \exists x_i [[x_i \text{ INST } [\text{VISIT } sp \text{ SERGEJ}]] \wedge \exists z [[z \leq w'] \\ \wedge [z = x_i]] \rightarrow \exists e [[\sim[w' R_{\text{conf}} w_u]] : [[\tau(e) \subseteq t] \wedge \\ [e \text{ INST } [\text{PLEASE } sp x_i]]]w']]w] \\ \text{with VISIT} \in \langle e, \langle e, t \rangle \rangle$$

It must be mentioned that DPs in general and as such the nominalization in (31), *poseščenie Sergeja* ‘Sergej’s visit’, are not specified for tense or for the reference to mental models. Therefore the antecedent of the implication in (34) and (36) lacks the modal specification  $\sim[w' R_{\text{conf}} w_{sp}]$ , which can only be added in CS. Thus the implication in the scope of the declarative operator is true and is in accordance with MP 2 in (12).

$$(12) \quad \text{MP 2: } \forall \wedge p [[\text{DECLAR } \wedge p] \rightarrow \forall w [[w \in M_{EP} sp] \rightarrow [w \in \wedge p]]]$$

In (30), both the antecedent and the consequent have the modal specification  $\sim[w' R_{\text{conf}} w_{sp}]$ , which is expressed by the subjunctive, represented on the level of SF.

Now, we must ask how the pronominal subject of (30) is related to the conditional clause, which is merged and interpreted as adjunct of MoodP and moved to ForceP/CP.<sup>35</sup> As in Zimmermann (2016) for German *es* ‘it’, I propose the SF (37) for the Russian anaphoric pronoun *eto* ‘this’.

$$(37) \quad \lambda P \exists x [[x = y] \wedge [P x]] \\ \text{with } P \in \langle \alpha, t \rangle, \alpha \in \{e, t, \dots\}$$

In CS, the parameter  $y$  in this generalized quantifier is co-indexed with a coreferential proposition in the conditional antecedent in (30). This is shown in (38).

$$(38) \quad \text{DECLAR } \lambda w \forall w' \exists e' [[[\sim[w' R_{\text{conf}} w_u]] : [[[\tau(e') \subseteq t'] \wedge [e' \text{ INST } \\ [\text{VISIT } sp \text{ Sergej}]]]_i w']] \rightarrow \exists e [[\sim[w' R_{\text{conf}} w_u]] : [[[\tau(e) \subseteq t] \wedge \\ [e \text{ INST } [\text{PLEASE } sp x_i]]] w']]w]$$

#### 4.5 The flexible temporal interpretation of subjunctive clauses

Finally, I will make some observations on the flexible temporal interpretation of subjunctive clauses. Without context, the examples (39) and (40) with the subjunctive do not have any specified temporal relation to the utterance time  $t^0$ . I assume that the topic-time argument  $t$ , unbound in SF, is existentially quantified in CS or specified in dependence on the context, as in (2), on the basis of (1). The

<sup>35</sup>Cf. Schwabe (2016) for German.



clauses in (39) and (40) can refer to the past or to the non-past. The first one has to do with a counterfactual interpretation of the subjunctive, and the second one with the so-called conditional.<sup>36</sup>

- (39) Boris kupi-l by mašinu.  
 Boris buy.PFV-PTCP.PST[M.SG] would car  
 ‘Boris would {buy/have bought} {a/the} car.’

- (40) Ja izvini-l-a=s’ by.  
 I apologize.PFV-PTCP.PST-F.SG=REFL would  
 ‘I would {apologize/have apologized}.’

In contrast to German, which marks counterfactivity with subjunctive pluperfect verb forms, Russian counterfactual interpretations reside exclusively in the context.

- (41) A: Počemu Nina ne (na-)αpisa-l-a emu?  
 why Nina not PFV- write.IPFV-PTCP.PST.IND-F.SG him  
 ‘{Why did Nina not write him/Why has Nina not written him}?’  
 B: Esli by Nina zna-l-a ego adres, ona by  
 if would Nina know.IPFV-PTCP.PST-F.SG his address she would  
 emu (na-)αpisa-l-a.  
 him PFV- write.IPFV-PTCP.PST.-F.SG  
 ‘If Nina would have known his address, she would have written him.’
- (42) A: Počemu Nina ne (na-)αpiš-et emu?  
 why Nina not PFV- write.IPFV-PRS.IND.3.SG him  
 ‘Why {does/will} Nina not write him?’  
 B: Esli by Nina zna-l-a ego adres, ona by  
 if would Nina know.IPFV-PTCP.PST-F.SG his address she would  
 emu (na-)αpisa-l-a.  
 him PFV- write.IPFV-PTCP.PST.-F.SG  
 ‘If Nina knew his address, she would write him.’

From the questions, speaker B knows that Nina has not written/did not write him, in case (41), and that she does not/will not write him, in case (42).

<sup>36</sup>Giannakidou (2014) regards the past (in contrast to the future) as a veridical domain. Counterfactual propositions typically have to do with a presupposed – i.e., veridical – proposition in the past.

## 5 Summing up

In this chapter I have shown how the morphosyntactic and semantic components of root and conditional clauses determine their semantic form (SF), which is enriched by meaning postulates and on the level of conceptual structure (CS).

Root clauses are characterized by illocutionary-type operators in Force, fused with C. The reference of root and embedded clauses and of noun phrases to worlds (situations) is anchored in the functional categories Mood and D, respectively.

Concerning verbal mood, I have concentrated on the question of what subjunctive is in Russian. I believe that the subjunctive always expresses the restriction that the pertinent world does not conform to the world of the respective modal subject *u*. It can be shown that this is valid for all occurrences of the subjunctive, in both root and embedded clauses. Furthermore, subjunctive clauses are temporally underspecified. Their topic time *t* is not related to the utterance time  $t^0$ , in SF. The subjunctive shares these two semantic properties with the imperative. Therefore subjunctive verb forms and the imperative can occur in complementary distribution in many cases.

Conditional modifiers, PPs or clauses, are considered to be adjuncts to MoodP. They describe circumstances that restrict the set of worlds to which the respective matrix clause refers. I have proposed two templates that accommodate the subject phrase of certain nonembedded clauses to this function.

In the sound-meaning correlation the differentiation between SF (as the grammatically determined meaning of the overt and covert morphosyntactic components of clauses) and CS (as a representation of nonlinguistic knowledge) proved essential. In particular, the treatment of the topic-time argument as a parameter in SF explains the flexibility of the temporal interpretation of Russian subjunctive clauses.

The treatment of the functional categories T and Mood as zero categories with the meaning contribution of selected verb forms opens a window for interesting comparative analyses of languages and language types. Whereas the selected morphosyntactic formatives and their categorizations may vary considerably, the categorial and semantic contribution of the selecting functional categories tends to be universal.

## Abbreviations

2	second person	N	neuter
3	third person	NEG	negation
F	feminine	PFV	perfective aspect
IMP	imperative mood	PRS	present tense
IND	indicative mood	PST	past tense
INFV	infinitive	PTCP	participle
IPFV	imperfective aspect	REFL	reflexive
M	masculine	SG	singular

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