PART I

Basic configurations

1

Verbal phrases

1.1 Verbs and their arguments

The verb is the center of the syntactic universe. The distribution of arguments and modifiers within a Russian sentence is primarily determined by the verbal predicate; it is the verbal predicate that tells us which nominal elements (NPs) are available, or required, or not.[1] Thus in (1), we see a range of possibilities for the appearance of arguments, depending on the kind of verbal predicate used:

(1) a. Stemnelo. "zero-place predicate"
got dark
'It got dark.'

b. Deti begajut. "one-place predicate" (agentive)
children-NOM run
'The children are running.'

c. Pojavilsja mal'čik. "one-place predicate" (non-agentive)
appeared boy-NOM
'There appeared a boy.'

d. Aleksandra kupila plat'e. "two-place predicate"
Alexandra-NOM bought dress-ACC
'Alexandra bought a dress.'

e. Aleksandra pokazala plat'e svoim rodstvennikam.
Alexandra-NOM showed dress-ACC her relatives-DAT
'Alexandra showed the dress to her relatives.' "three-place predicate"

f. Prodavščica prodala Aleksandre plat'e za 13 dollarov
salesgirl-NOM sold Alexandra -DAT dress-ACC [for 13 dollars]
'The salesgirl sold Alexandra the dress for 13 dollars.'
"four-place predicate"

In (1) we see standard cases of the varying *valence* (Russian *valentnost'*) of Russian verbs. (1a) is a "zero-place predicate," so-called because it requires no (nominal) arguments. (1b) and (1c) are standard intransitives, or "one-place

[1] In some languages, a verbal phrase *always* acts as the primary predicate, although it is well known that in Russian this is not always the case. I return in Chapters 3 and 5 to apparently verbless and to *bezličnye* ('impersonal') sentences.

predicates," differing in the kind of single argument involved (an Agent in (1b) and a Theme in (1c)). (1d) is a standard transitive or "two-place predicate," while (1e) is a typical ditransitive or "three-place predicate."[2] Finally, (1f) shows that, at least optionally, some verbs allow for a fourth argument, in the form of a prepositional phrase *for 13 dollars*, although its status as a true argument can be debated.[3]

Traditionally, the relationship between verbal predicates and the NPs, PPs, or other phrases they require are given by a kind of lexical rule listed in the grammar along with the verbs, or kind of verbs, in question. Such notations are meant to reflect the internalized knowledge that speakers of the language have about such relations and are said to represent the "argument structure," "valence," or "diathesis" of the verb in question, as in (2).

(2) Basic representation of argument structure[4]

a. <temn-ej- >	
b. <beg-aj- >	[NP_1 ___]
c. <kup-i- >	[NP_1 ___ NP_2]
d. <pokaz-a- >	[NP_1 ___ NP_2 , NP_3]
e. <prodaj- >	[NP_1 ___ NP_2 , NP_3, (PP_4)]

[2] See Babby (2009) for an extensive discussion of pre-syntactic operations affecting argument structure in Russian. Arguments are standardly contrasted with **adjuncts**, comprising various modificational phrases, such as time and place expressions, attributive adjectives, adverbs and other elements, which can be fairly freely added to any of the constructions above. I return to a discussion of the syntax of adjuncts below.

[3] It is often assumed that verbs do not have more than three arguments in their initial argument structure (Babby 2009), all other elements being adjuncts. However, the distinction between arguments and adjuncts is not nearly as clear-cut as much of generative linguistics assumes it to be. See in this regard Rizzi (1990). In some traditional frameworks, indeed, it is possible to encounter analyses that argue for four-, five-place predicates (or more) (see Apresjan 1974). Note that the shells presented below for VP structure allowing three arguments can easily be extended further to allow for additional arguments (Larson, in press) and that therefore nothing crucial about VP structure depends on exactly how the argument/adjunct distinction is defined.

[4] The morphological forms given in (2) are based on a one-stem verbal morphology system (Levin 1978). I assume that morphological derivations are handled in a component of the grammar separate from syntactic combinations (Halle & Matushansky 2006, Babby 2009), though this assumption is not entirely trivial. For present purposes, however, it is sufficient to represent the verbal forms this way and assume that in combination with the various *features* of the expression (tense, agreement, aspect and so on), the proper morphological form emerges. This notation should not be taken to imply any kind of stance on the technical details of exactly how the morphological component functions with regards to verbal or any other kind of morphology.

The parentheses in (2e) represent optionality of the element in question. The notion of optional arguments is generally accepted (e.g., Švedova *et al.* 1980, although the details of exactly which arguments are optional with which predicates is a delicate issue of lexical semantics that cannot directly concern us here). What matters for our purposes is that the verbal lexemes determine the distribution of NPs, so that the deviance of the examples in (3) can be directly related to the lexical verbal requirements given in (2):

(3) a. *Ulica stemnela.
street-NOM got dark
'The street got dark.'
b. *Deti begajut marafon.
children-NOM run marathon-ACC
'The children are running a marathon.'
c. *Aleksandra kupila.
Alexandra-NOM bought
'Alexandra bought.'

1.2 Building syntactic structure

Lexical requirements such as (2) can be simplified in terms of their syntactic requirements, in that reference to the *phrasal* nature of the arguments (NP, PP, etc.) can be dispensed with, on a view of syntactic combinations whereby categorical selection is simply the relationship between one lexical item and the *head* of the relevant argument. The underlying assumptions that allow this simplification are given in (4):

(4) Basic principles of syntactic construction
a. Lexical items are bundles of features (phonological, semantic, syntactic,…).
b. Phrases are projections of lexical items, built from combinations of lexical items.

Given (4), all lexical items consist of bundles of features, one of which is their categorical status (such as N or V, generally assumed to be a grammatical primitive).[5] Thus, the lexical entry for *kupit'* ('buy') might look something like (5):[6]

[5] Certain recent work, especially Borer (2005), maintains that it is possible to dispense with the features [N] and [V] as grammatical primitives, in a system whereby the lexicon consists of roots, whose categorical status is determined by the nature of the functional elements a root is combined with. I will continue to assume the standard approach, namely that [N], [V], and possibly other categorical features are grammatical primitives that cannot be derived. See Adger (2003) for a similar approach.

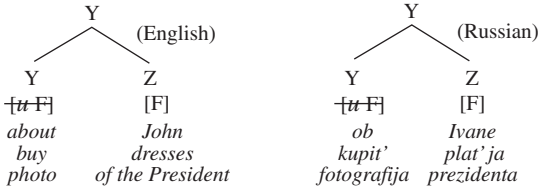
[6] I will not attempt to reduce the meaning of lexical items further than to simply say that *buy* means 'BUY.' The aspectual information indicated by "(pf)," and

(5) PHON: <kup-i- >
SYN: [V], [*u*N], [*u*N]
SEM: [BUY] (pf)

PHON, *SYN*, *SEM* represent the *kinds* of features associated with lexical items. *PHON* represents the lexical item's idiosyncratic phonological make-up and *SEM* encodes the core meaning of the lexical item. I will focus here on the syntactic features. The feature [V] indicates that the lexical item at hand is itself a verb. The two [*u*N] features indicate that this verb carries two *uninterpretable* [N] features, which must be eliminated as it is combined with other elements in the creation of a verbal phrase.[7] This featural specification represents its *valence* or *selectional requirements*, namely that it requires two NP arguments. The phrasal nature of those complements is a purely syntactic fact, which results from the system of combinations presented directly below. Elimination (satisfaction) of such features is achieved when the two elements are combined, following the basic operation **Merge**, given in (6):

(6) MERGE:
a. Combine Y and Z to form X: [$_X$ Y Z].
b. X is (always) a projection of either Y or Z.

(7) Samples of Merge



As a verb is combined (or "merged") with nominal phrases (elements carrying interpretable [N] features), the uninterpretable N features on the verb are eliminated and syntactic (phrasal) structure is built up.[8] Thus, a verb like *buy*

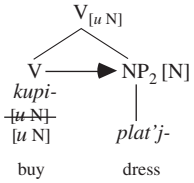
Footnote 6 (*cont.*)
verbal aspect generally, is something I return to at the end of this chapter. For now, I simply list it as a lexical property, although there exist various proposals that aspectual status is determined syntactically (Ramchand 2008). Here, the purpose of the "(pf)" notation is simply to acknowledge the relationship between this particular piece of morphology (as opposed to its imperfective counterpart <pokup-aj->). I take no stand on the question of whether this information is truly lexical.

[7] Uninterpretable features must be eliminated during the course of a syntactic derivation of a Logical Form that is readable by the non-linguistic systems it interfaces with. See Adger (2003) for details of a phrase-building system based on feature elimination.

[8] I assume a version of Bare Phrase Structure (e.g., Adger 2003, based on Chomsky 1995), whereby no kind of phrasal templates, such as "X-bar Theory" (Jackendoff

first combines with a noun like *dress*, eliminating one of the verb's uninterpretable N features, and forming a syntactic object that carries the remaining features of *kupi*, that is forming a part of a verb phrase. This is shown in (8):[9]

(8) a. *kupi*-[V], [*u*N]$_1$, [*u*N]$_2$ + *plat'j*-[N] → [$_V$ *kupi*-, *plat'j*-][V], [*u*N]$_1$, [~~*u*N~~]$_2$
b. Verb plus object structure:[10]



Notice that in (8b), it is the verb whose features are projected to the newly formed unit after their combination and not those of the noun. This is exactly what it means for the verb to select the noun, and not the other way around. The fact of projection of the verbal features is a side effect of the fact that the verb has selectional requirements to be fulfilled, whereas the noun does not (although we will see in Chapter 2 that nouns may also have argument structure). To borrow from Adger (2003): "the head that selects is the head that projects." Thus, the notion of *projection* along with a simple system of concatenation derives the structure in (8).[11]

An additional instance of Merge, needed to satisfy the final [*u*N] feature (representing this verb's Agent argument) creates a phrase in which all of the selectional requirements of the verb are satisfied. Such a phrase is then a completed Verb Phrase or VP as shown in (9):

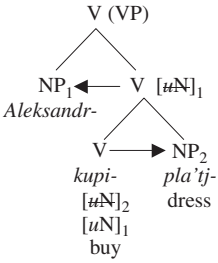
1977, Webelhuth 1995) are required. However, the nature of the system of concatenation assumed is not directly relevant to the general issue of argument structure, which is assumed in some form or another, by all theories of grammar.

9 The subscripted numbers on the arguments are given for expository purposes only and crucially are *not* required in actual lexical representations such as (5), given the Thematic Hierarchy provided below.

10 I omit the verb's own categorical [V] feature from now on for ease of exposition.

11 Note that the *directionality* of initial Merge, that is the linear ordering between the selecting element and what it selects, depends on the language in question. Russian, like English, is a "head-initial" language, in which selecting heads are to the left of the first element they select, thus it is prepositional (and not postpositional), SVO (and not SOV), and so on. One advantage of the Merge system is that directionality of first Merge becomes a feature of a language as a whole and need not be stated for specific lexical items or categories. Japanese and other languages show the opposite ordering. This "choice" is known as the "Head Direction Parameter," easily learnable on the basis of simple evidence, while the system of Merge itself is presumably universal. The Japanese version of (7) is shown here:

(9) Structure of a VP with a verb taking two arguments (first version)[12]



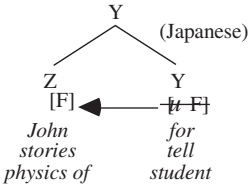
Notice that in (9), as opposed to (8), all the verbal requirements for combinations have been satisfied, and therefore need not project any further. This will result in a well-formed VP, whose category is determined by its no longer projecting, which is in turn determined by the verbal element's uninterpretable features being satisfied.

The issue naturally arises as to whether or not the specific thematic relations required by the verbs in question must be stated within each lexical entry. I assume, following Larson (1988), Grimshaw (1990), Baker (1996), Adger (2003), and many others, that the particular thematic roles follow from some kind of universal hierarchy, and that they do not therefore need to be stated individually. The hierarchy assumed can be stated as follows:

(10) a. Thematic Hierarchy
Θ AGENT > Θ THEME > Θ GOAL > Θ OBLIQUE (manner, location, time, …)

Footnote 11 (*cont.*)

(i) Head-final Merge order



Second instances of Merge appear to the left, probably universally (Kayne 1994).

Indeed, Kayne (1994) and others have argued for a universal directionality, arguing that natural language does not in fact contain a Head Direction Parameter, and that its apparent effects (SOV order, postpositions, and so on) are derived from a universally head-initial base. Because this issue is not of relevance to the syntax of Russian, a clearly head-initial language, I will not take a stand on the degree to which head-finality in Japanese-type languages is derived rather than basic.

[12] Notice, however, that many standard syntactic theories assume a unique position for Agent arguments outside the core VP, usually within what is known as the *v*P shell (Larson 1988), regardless of the number of other arguments. If there is such a unique position for *Agents*, the structure as presented here will of course have to be modified by introduction of a higher "shell" of the VP (see below). Such additional structure is required in ditransitives in any event, as we will see shortly.

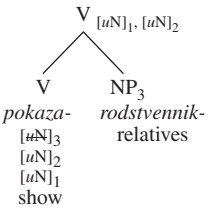
b. If a verb determines θ-roles θ1, θ2,…, θn, then a role on the Thematic Hierarchy is assigned to the lowest argument in constituent structure, the next lowest to the next lowest argument, and so on (Larson 1988: 382).

(10) guarantees that the first argument merged with *buy* is the object that is bought (Theme) and the second the Agent of buying, and not the reverse. Given this, now consider the structure of a ditransitive VP, such as the one shown in (1e), repeated here as (11):

(11) Aleksandra pokazala plat'e rodstvennikam.
Alexandra-NOM showed dress-ACC relatives-DAT
'Alexandra showed the dress to her relatives.'

In (11) we see that the verb *pokaza-* ('show') requires three arguments. Following (10) the Dative Goal argument is the first to combine with the verb, and the Accusative Theme argument is the second.[13] The first instances of combination in (11) will be the same as in (8). Each instance of concatenation extends the verbal structure. This is shown in (12):

(12) a. *pokaza-* $[uN]_1$, $[uN]_2$, $[uN]_3$ + *rodstvennik-*[N]→ $[_V$ *pokaza-*, *rodstvennik-*]
$[uN]_1$, $[uN]_2$, $[\sout{uN}]$

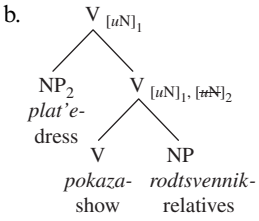
b.


Next, this partial structure will combine with *plat'e* ('dress') as shown in (13):

[13] The reader may wonder why it is assumed that the internal structure of VP is not a flat, triple-branching structure, whereby the verb and both its internal arguments are branches of a single common VP node. There are strong reasons to suspect that there are asymmetries among internal arguments that require a description such as the one given here, rather than a flat structure within VP (Kayne 1984; Barss & Lasnik 1986; among others). For Russian as well, it appears that the binary branching (and hence asymmetrical) structure best captures the relations among the internal arguments. In particular, it appears that the Larsonian approach (ACC > DAT) is the right one, as we will see in Chapter 4. Evidence for this position in Bailyn (1995a,b, 2010) is taken from asymmetries in binding possibilities, interaction with secondary predicates, and other syntactic effects. (For the opposite view, see Junghanns & Zybatow 1997 and Dyakonova 2005, 2007, 2009). However, for the purposes of a system of syntactic concatenation, it is not crucial what the order of combination is. The eventual resolution of this question would not affect the nature of syntactic phrase construction, and therefore I will illustrate only the ACC > DAT order. I return to this issue in more detail in Chapter 4.

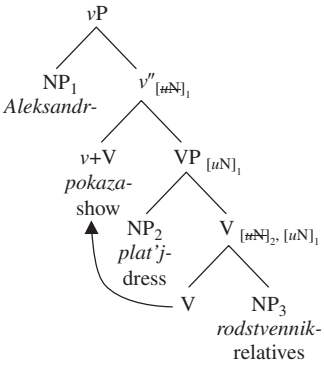
(13) a. [$_V$ *pokaza-*, *rodstvennik-*] [*u*N]$_1$, [*u*N]$_2$ + *plat'e* [N] →
[$_V$ [*pokaza-*, *rodstvennik-*] *plat'e-*] [*u*N]$_1$, [~~*u*N~~]$_2$

b.



Here we do not (yet) have a fully satisfied verbal predicate. Clearly, an additional instance of Merge is needed to satisfy the final [*u*N] feature (here the verb's Agent argument). Once this has been provided, all of the selectional requirements of the verb will be satisfied.[14] Such a phrase is then an extended Verb Phrase or *v*P as shown in (14):[15]

(14) VP structure with three arguments



[14] The introduction of a higher *v* head, to which lexical V raises, rather than the simple further extension of VP through the merger of a third argument, is a standard assumption in syntactic analyses of verbal phrases across languages (Larson 1988; forthcoming; Chomsky 1995). What varies considerably across analyses, however, is *motivation* for the introduction of *v* and for the obligatory V→*v* movement that ensues. I do not take a stand on that issue here. See Larson (1988), Pollock (1989), Bowers (1993), and Larson (forthcoming) for discussion.

[15] I have not yet said anything about the relationship between verbal phrases and tense. This is deliberate, in that the phrase [*Alexandra buy dress*] is not inherently tensed or untensed. The fact that overt agentive arguments usually do not appear in untensed sentences (**Alexandra to buy a dress*) is a side effect of the grammar's *case* requirements and not related to verbal argument structure per se (hence the availability of *I want* [*Alexandra to buy a dress*]). The syntax of Russian case is taken up in Part II.