

Chapter 1

A little Polish Lesson

This thesis studies aspectual pairing in contemporary Polish. The purpose of this chapter is to set the stage for the work that follows. We begin in Section 1.1 by introducing the reader to some basic concepts of Polish aspect at the level of verb.¹ We hope this section will give readers with no previous knowledge of Polish some grasp of the role verbs play in the Polish aspectual system. We also want to convey a sense of why it is that many linguists regard the Polish aspectual system as complex, even somewhat mysterious. By the end of the section the reader will be acquainted with some notions that play an important role in this thesis (for example, what aspectual pairs are) and will have a basic awareness of some of the issues that make the study of Polish aspect difficult and controversial. We conclude the section by briefly sketching the central claim of the thesis: namely that the vast majority of Polish verbs really do come in aspectual pairs, and that far from being a mysterious process, aspectual pairing in Polish is simple and regular, and gives rise to a semantically significant verb classification. Following this, in Section 1.2 we discuss in detail the evolution of the Polish aspectual system. Although the argumentation in this thesis is synchronic, we feel that a diachronic perspective on aspectual pairing in Polish is crucial for a full understanding of the issues involved. In particular, we feel that a diachronic perspective enables us to see how the kind of verb classification we shall propose later in the thesis could have arisen; this section supplies the necessary background information. Finally, in Section 1.3 we present a chapter by chapter overview of the work that follows.

1.1 Aspect in contemporary Polish

This thesis is concerned with aspectual pairing in contemporary Polish. But what is aspect and what do we need it for? In what follows we will attempt to give an informal explanation of some of the most notable features of the Polish aspectual system. We

¹Aspect is a phenomenon that plays a role at many levels of language, such as the verb phrase level, the sentential level, and the discourse level. As the title of this thesis indicates, this thesis is almost wholly concerned with the role of verbs in the Polish aspectual system.

shall try, as far as possible, to avoid theory-laden terminology. Roughly speaking we shall attempt to explain the basic concepts in much the same way that a teacher of Polish as a second language would explain them to a student.

In English, if you want to say that (at the present moment) something is happening, then the sentence in which you describe the activity of interest will be in the present progressive tense: for example, *Janusz is writing a letter*. On the other hand, if you want to assert that some state holds (at the present moment) you will use a sentence in the simple present tense: for example, *Marta believes Piotr*. In Polish, the corresponding sentences would be *Janusz pisze list* and *Marta wierzy Piotrowi*.² The verbs involved (*pisać* ‘to write’ and *wierzyć* ‘to believe’) are called *imperfective* verbs, and their occurrences in the above sentences are in the present tense. Present tensed imperfective verbs can be used either to assert that a process is ongoing at the present moment (as *Janusz pisze list* does) or that a state holds at the present moment (as *Marta wierzy Piotrowi* does). Although in English we are forced to use distinct tense forms, in Polish we are not.

Time passes, and present states of affairs become past. If you want to talk about them, you need to ‘move back’ in time to the particular moment at which they were true. In English you do that by putting the sentence into the past tense. Imagine you want to talk about the writing of a letter some time ago by Janusz, or about Marta’s (now long vanished) belief in Piotr. All you need to do in English is transpose the previous present tensed sentences into the past tense: *Janusz was writing a letter* and *Marta believed Piotr*. And you can do the same in Polish. You simply put the sentences in the past tense (Polish has only one) to obtain *Janusz pisał list* and *Marta wierzyła Piotrowi*. Just as before, you are presenting the process as ongoing and the state as holding at a particular time — however, because you used the past tense, you are expressing that the particular moment belongs to the past. (A book on Polish grammar would tell you that what you did was to change the tense of the sentences while leaving their aspect intact.)

So far, the two languages seem fairly similar. In both, tense inflections serve to locate events and states at various temporal locations, and if anything it is English (with the distinction it draws between the present progressive and the simple present tense) which seems slightly more exotic. But now for something intrinsically Polish (something which has counterparts in other Slavic languages). Every Polish native speaker knows that the verb *pisać* does not live alone. It has a twin, *napisać*. And this is the verb that native Polish speakers reach for when they need to talk about completed actions. For example, whereas an English speaker would (once again) change the tense and say *John wrote a letter*, a Polish speaker would reach for the twin verb and say *Janusz napisał list*. This asserts that the Janusz letter-writing activity occurred in the past (the tense inflection gives us that) and that the activity was completed (the use of the verb *napisać* tells us this). The pair *pisać/napisać* is the first example in this thesis of a Polish aspectual pair.

Now, the native English speaker who has never encountered Polish before may feel

²In the second sentence *Piotr* is written *Piotrowi* because the verb *wierzy* needs its argument in the dative case.

slightly suspicious. Why do we say that *pisać* and *napisać* are twins? That is, why do we talk as if they were distinct verbs? After all, it is fairly obvious that *napisać* is formed from *pisać* by some sort of prefixation process. Moreover the relationship between the two forms seems very close — every bit as close as the relationship between (say) the English words *writing* and *wrote*. But we're not tempted to describe *writing* and *wrote* as 'twin verbs' (they're clearly just inflectional variants of one verb). So what justifies our use of this fanciful terminology for the Polish verbs?

This question is not as naive as it may seem, indeed it opens the door to a host of issues that have been debated for well over a century, as we shall see in the following chapter. But although we cannot dismiss this question, we can immediately point to some facts which show that, whatever the relation between Polish aspectual twins may be, it is far more interesting than the relation that holds between (say) *writing* and *wrote*.

For a start, while every Polish native speaker can instinctively reach for a verb's aspectual twin, there is not one 'twinning mechanism' but two. In *pisać/napisać* we have an example where the perfective twin is built by prefixation of an underlying imperfective verb. But there are verbs where the underlying verb form is perfective (for example, *kupić* 'to have bought') and an imperfective form is built from it by a process that is usually called 'suffixation' (the imperfective twin of *kupić* is *kupować* 'to be buying'; as this example shows, more than mere suffixation can be involved in this process). Furthermore, there are a handful of Polish aspectual pairs where it is meaningless to talk of a 'twinning mechanism'. For example *brać* 'to be taking' has as its aspectual twin the perfective verb *wziąć* 'to have taken'. There is no morphological link whatsoever between these forms — we simply have a pair of aspectually paired verbs, one of which deals with ongoing actions, the other with completed actions. (Such twins are traditionally called *suppletive pairs*. They are a remnant of an earlier stage in the evolution of Polish, and only a handful of them remain, but as the *brać/wziąć* example shows, some suppletive pairs are heavily used.) In short, whatever the link between the verbs in an aspectual pair is, it is evidently more interesting (and more complex) than the link between English verb forms such as *writing* and *wrote*.

Second, it is important to realize that each verb in a verb pair is 'self-contained' as far as tense inflections are concerned. For example, above we used *napisać* in a past tensed sentence, but even though *napisać* deals with completed reading events there is nothing intrinsically past-tensed about it: it *can* be used in the present tense, and indeed so can *kupić* and *wziąć* and all Polish perfective verbs. All in all, there is at least prima-facie motivation for referring to pairs like *pisać/napisać*, *kupić/kupować*, and *brać/wziąć* as 'twin verbs'.

As we've just mentioned, perfective verbs can be used in the present tense. But what do they mean when used in this way? Actually we have to be careful when talking about 'the' meaning of Polish perfective verbs, as for some of them there is a striking semantic irregularity. But let's put this aside for a couple of paragraphs and concentrate on 'ordinary' Polish perfectives. What is their present tense meaning?

Consider, for example, the sentence *Janusz napisze list*. Given the aspectual infor-

mation (the use of *napisać* rather than *pisać*) this sentence is asserting the completion of some writing episode. However in this sentence *napisać* has the present tense form *napisze*. Now, logically speaking the completed writing cannot be taking place at the present moment (for if it was taking place now, it could not be completed) and in fact, this morphologically present tensed sentence behaves semantically like a future tensed sentence: the best English translation for it is probably *John will have written a letter*.

Let's consider more examples, this time involving the pair *kupić/kupować*. The imperfective member of this pair is *kupować* ('to be buying') and the perfective member is *kupić* ('to have bought'). So to assert that a buying activity is ongoing, a Polish native speaker would reach for the verb *kupować*. The present tensed usage of *kupować* locates the buying at the utterance time: for example *Piotr kupuje książkę* means *Piotr is buying a book*. The past tense usage of *kupować* locates the buying at some past time: for example *Piotr kupował książkę* means *Piotr was buying a book*. On the other hand, to assert that a buying activity is completed, a Polish native speaker would reach for the twin verb *kupić*. The past tense usage of *kupić* locates the completed buying event at some past time: for example *Piotr kupił książkę* means *Piotr bought a book*. The present tensed usage of *kupić* locates the completed buying event at some future time: for example *Piotr kupi książkę* means *Piotr will have bought a book*.

Let's summarize what we have learned from the writing and buying examples. First, in these examples the semantic relation between the perfective and imperfective forms was clear: the perfective form was for completed processes, the imperfective for ongoing processes. That is, they code for a simple binary opposition: the usual Polish terminology for this opposition is *dokonany* (completed) versus *niedokonany* (non-completed). Moreover, the distinction between completed and ongoing was manipulated by the Polish tense system in a straightforward way; the only point that needs to be kept in mind is that perfective verbs in the morphological present tense have a future tense readings. It is also worth emphasizing that our talk in the above examples of Polish native speakers 'reaching' for the aspectually appropriate verb should be taken seriously. There is no native speaker intuition concerning 'directionality' or 'difference of process' in the use of imperfectives and perfectives. As we have seen, in some verbs the perfective form (for example, *napisać*) is formed out of an underlying imperfective form (*pisać*), via a prefixation process that many linguists would argue is a clear example of derivational morphology. On the other hand, in some verbs the imperfective form (for example, *kupować*) is formed out of an underlying perfective form (*kupić*), via a 'suffixational' process that many linguists would argue is a clear example of inflectional morphology. Furthermore, in yet other verbs (namely verbs in suppletive pairs such as *brać/wziąć*) all linguists (as far as we are aware) would agree that there is no morphological link whatsoever between the two verbs. But the native Polish speaker is blind to this diversity — the native speaker simply chooses the appropriate member of the pair (perfective or imperfective) appropriate for the communicational task at hand. There is no consciousness that considerable theoretical complexity hides beneath the surface; as far as the native speaker is concerned, the workings of the pairing system are a 'black box'.

As we have presented it so far, the semantic distinctions drawn by the Polish as-

pectual system are very regular: the choice between imperfective and perfective forms corresponds to the binary opposition between ongoing and completed. However, as we mentioned above, there is a striking semantic irregularity: perfectives of state verbs don't code for completion at all — in fact they code for exactly the reverse. Let's consider the matter.

We have already given examples involving a state verb, namely *wierzyć* ('to believe'). As we mentioned, this is an imperfective verb (thus it is better translated as 'to be believing'). We saw that the English sentence *Marta believes Piotr* could be rendered in Polish as *Marta wierzy Piotrowi*, and that the English sentence *Marta believed Piotr* could be rendered as *Marta wierzyła Piotrowi*. Thus, as far as imperfective state verbs are concerned, there is nothing semantically anomalous: the use of the imperfective simply means that the state is holding at some time.

But every Polish native speaker knows that *wierzyć* has a perfective twin, namely *uwierzyć*. But what does it mean? Well, when used in the past tense, as in *Marta uwierzyła Piotrowi*, it means *Marta began/had begun to believe Piotr*, and when used in the present tense, as in *Marta uwierzy Piotrowi*, it means that *Marta will start to believe Piotr*. That is, far from asserting the completion of the state of believing, *uwierzyć* is a way of picking out the *starting* point of the belief. To use the traditional terminology, *uwierzyć* has an *inchoative* (or *ingressive*) reading, and so do all other perfective Polish state verbs.

This is an interesting anomaly. Moreover it is a widespread one. It is not confined to Polish, or even to the Slavic languages — Comrie observes that there are similar effects in Spanish, Ancient Greek, and Mandarin Chinese (Comrie, 1976, page 18-20). Unfortunately, it is hard to get a solid theoretical handle on why perfectivised state verbs should behave like this. There is perhaps an intuition that whereas it is the endpoint that is important to processes, it is the beginning (or 'inception') that is important to states. If this were so, then perhaps we could argue that the function of a perfective verb was to view an eventuality from the perspective of its most important point: this could explain why perfective process verbs have completion readings and perfective state verbs have inchoative readings. However, in the absence of any really convincing account of why it is that inceptions are crucial to states and conclusions crucial to processes such an argument would merely shift the problem rather than solve it. In this thesis we are not going to try and explain why perfective state verbs behave in this way; we'll simply accept their inchoative readings as a fact of contemporary Polish.

That concludes our informal introduction to the role verbs play in the aspectual system of contemporary Polish. And, given our account, it must seem that verbs play a rather straightforward and (with the exception of perfective state verbs) semantically regular role. However, at the start of the chapter we warned the reader that the study of aspect in Polish (and indeed, in Slavic languages generally) is regarded as difficult and controversial. The following quotation gives an idea of the sentiments that the study of aspect sometimes inspires:

The study of aspect has been likened to a dark and savage forest full

of “obstacles, pitfalls, and mazes which have trapped most of those who have ventured into this much explored but poorly mapped territory.” (Macaulay, 1978, page 416ff.), quoted after (Binnick, 1991, page 135)

Why the controversy? Quite simply, the informal account of Polish aspect which we have just given — which we think is close to the kind of pre-theoretical account of Polish aspect you will find in elementary texts — simplifies (perhaps oversimplifies) a number of issues. First, our informal account treats prefixation and suffixation as simply two alternate ways of producing aspectual pairs: many Slavic linguists would object to this. Second, our informal account did not draw attention to a complicating factor concerning prefixation in Polish. Thirdly, the account given above was verb centered and emphasized the role of certain (temporal) binary oppositions (such as completed versus ongoing). However some recent Western work has emphasized the role of the verb phrase level and the importance of non-temporal notions in the analysis of Slavic aspect. Let’s briefly discuss each of these issues.

Prefixes versus suffixes

Many Slavic linguists draw a sharp distinction between prefixes and suffixes. They view prefixation as a derivational process, and ‘suffixation’ as an inflectional (or grammatical) process. Such linguists typically view aspect as an ‘obligatory grammatical category’ of Polish verbs. Now, grammatical variants of a verb are not thought of as differing in lexical meaning (for example, in English we don’t think of *writing* and *wrote* as differing in lexical meaning, they merely differ as regards tense). Moreover, the purpose of a derivational process is to create new words (and, hence, presumably, to embody new meanings). If all these ideas are combined (and traditional Slavic linguists tend to combine them) then we reach the following conclusions:

1. A pair such as *kupić/kupować* (and indeed any pair in which an imperfective form is built from a basic perfective form by suffixation) is a ‘true’ aspectual pair: they are grammatical variants of each other (as suffixation is a grammatical operation) and there is no difference in lexical meaning, only in aspectual value.
2. A pair such as *pisać/napisać* (and indeed any pair in which a perfective form is built from a basic imperfective form by prefixation) is not a ‘true’ aspectual pair: they are entirely different words (prefixation being a derivational operation) and there is a difference in lexical meaning in addition to the change in aspectual value.

While this view has a certain elegance, it also has a clear drawback: it fails to address the native speaker intuition that verbs come in aspectual pairs. The vast majority of aspectual pairs in Polish are formed via prefixation — if only the verb pairs formed by suffixation are legitimate, verb pairing in Polish becomes a marginal phenomenon.

Moreover, the viewpoint sketched above (which is probably fairly close to the ‘received’ view — if such a thing exists — in Slavic linguistics) generates controversy. Why? Well, it is certainly true that prefixisation in Polish is predominately derivational. Here, for example, is a table listing various verbs formed by prefixisation from *pisać*:

<i>pisać</i> ‘to write-impf’	<i>napisać</i> ‘to write-perf’
	<i>popisać</i> ‘to write-perf’
	<i>podpisać</i> ‘to sign-perf’
	<i>przepisać</i> ‘to copy-perf’
	<i>przepisać</i> ‘to prescribe-perf’
	<i>dopisać</i> ‘to add more writing-perf’
	<i>spisać</i> ‘to make a list of/to draw up-perf’
	<i>wpisać</i> ‘to write in-perf’
	<i>zapisać</i> ‘to write down/to take down-perf’

Clearly the majority of these verbs have distinct (though related) lexical meanings from *pisać*. However matters are far less clear with *napisać* (a verb we have already discussed) and indeed with *popisać* (a verb we will frequently encounter later). Even supporters of the ‘suffixisation only’ view of aspectual pairing are hard pressed to point to any concrete change in lexical meaning in these examples: both verbs change the aspectual value of *pisać*, and assert that the writing is completed (but there is an interesting difference between *napisać* and *popisać*, which we will analyse in detail later in the thesis, concerning the kind of writing episode that was completed). Some supporters of the ‘suffixisation only’ view have developed ingenious arguments to show that some extra component of meaning change (over and above completion) has crept in, while opponents of this view have developed equally ingenious arguments to show that they have not.³ Other ‘suffixisation only’ writers concede that the meaning change involved is minimal and try to develop a theoretical position which accommodates such intimately linked pairs as *pisać/napisać* (and *pisać/popisać*). For example, Czochralski, in what is probably the most detailed investigation of the Polish aspectual system describes *pisać/napisać* as being an example of ‘resultative Aktionsart’ that has given rise to ‘secondary pairs’ in order to fulfill a communicative need (Aktionsart is a German word which means ‘manner of action’; we discuss Aktionsart and its relationship with aspect in the following chapter).

One final remark. The received view on suffixisation is not completely watertight (as some ‘suffixisation only’ authors such as Isačenko concede). For a start (as the *kupić/kupować* example shows) ‘suffixisation’ can be a complex process: here there is a vowel change (*i/a*), and a suffix *-ow-* is also added (one could also say that *-i-*

³A note for readers who know no Polish. All the verbs in the above table are perfective. In Polish, whenever a verb is derived from a basic imperfective verb by prefixisation, the resulting verb is perfective. So the dispute is not about whether prefixisation forms perfective verbs from basic imperfective verbs (it is clear that this always happens) — rather it is about whether it is possible for a prefixisation to create a perfectivised verb without changing the lexical meaning.

is replaced by *-owa-*). Moreover, ‘suffixisation’ is a process that can be involved in lexical change (though not in nearly such a productive way as prefixisation is). We’ll have more to say on this topic later in the thesis.

Empty prefixes

There is another important remark we need to make about the aspectual twins formed by prefixisation: the formation process is non-uniform. Although we did not emphasize it in our informal introduction, the alert reader will have noticed that the aspectual twin of *pisać* was formed using the prefix *na-*, whereas the aspectual twin of *wierzyć* was formed using the prefix *u-*. And this is a general phenomenon in Polish — different imperfective verbs are linked to their perfective aspectual twins via a seemingly haphazard choice of prefixes. To give three more examples, the perfective aspectual twin of *robić* (‘to be doing/making’) is formed using the prefix *z-*, the perfective aspectual twin of *gotować* (‘to be cooking’) is formed using the prefix *u-*, and the perfective aspectual twin of *czytać* (‘to be reading’) is formed using the *prze-*. That is, in Polish there is no special prefix the only task of which is to form a perfective aspectual twin out of a basic imperfective verb (indeed, as far as we are aware, no Slavic language has such a prefix, though Lithuanian, a language from the closely related Baltic group, apparently does (Hewson and Bubenik, 1997, page 84)). To be sure, there are some rule-of-thumb regularities about which prefixes go with which verbs, and there is one prefix (namely *z(a)-*) which is used more than any other. Nonetheless, non-Polish speakers who want to learn the language face a tedious task here: the perfective twins corresponding to basic imperfective verbs via prefixisation simply have to be learned by heart.

Time to introduce an important piece of terminology. The prefix used to form the aspectual twin of an imperfective verb is traditionally called the ‘empty prefix’ for that verb. For example, the empty prefix for *pisać* is *na-*, and the empty prefix for *wierzyć* is *u-*. Why ‘empty’? The idea is that the ‘empty prefix’ does not change the meaning of the basic imperfective verb — it simply forms a twin verb that differs only in aspectual value (it will be perfective). Of course, someone who takes a ‘suffixisation only’ view of aspectual pairing will deny that there are any empty prefixes in Polish at all — or to be more precise, such a person will deny that any prefixisation can ever truly be empty. A ‘suffixisation only’ theorist will insist that every prefixisation must always contribute some lexical meaning change in addition to the change in aspectual value.

Another remark. Originally, Polish prefixes were prepositions. If we think about these items independently, then they can have a prepositional meaning. Simplifying somewhat (these prepositions can have several meanings) we might say that *na-* means ‘on’, *z-* means ‘with’, *u-* means ‘at’, and *prze-*, if associated with the preposition from which it derives (namely, *przez*), means ‘through’. However they do not retain these meanings when used as prefixes to build aspectual pairs. To put it another way, in the complex perfective verbs formed by prefixisation, the prefixes are ‘emptied’ from their lexical meaning; they merely contribute the completion meaning to the basic verb.

Or at least, that's the way that someone who believes that prefixation is a legitimate way of forming aspectual twins would view matters. Some authors who follow a 'suffixation only' view argue that empty prefixations can never be truly empty precisely because the prefixes carry with them some remnant of the original prepositional meaning, and that this remnant gives rise to change in lexical meaning.

Verb versus verb phrase

Our informal presentation of Polish aspect was verb-centered and stressed the role of certain binary oppositions in the semantics of aspect (ongoing versus completed for most verbs, and ongoing versus inchoative for state verbs). Recent Western work suggests that this traditional view may be oversimplified. The title of a recent book by Henk Verkuyl gives a good indication of the path explored in this line of work: "*Aspectual issues. Structuring Time and Quantity*". The word 'time' will not come as a surprise — but what about 'quantity'?

Roughly speaking, these theories emphasize that the role the verb phrase plays in the semantics of aspect must not be underestimated, and stress the link between Slavic perfectivity/imperfectivity and Germanic determiners. Some versions of these approaches suggest that there is a link between Slavic markers of perfective aspect and Germanic definite articles; other versions stress the link between imperfectivity and the lack of a definite article. For example, some researchers in this tradition argue that perfectivity (which we introduced above simply in terms of temporal completion) requires an argument whose quantity is determinate: while we can say *Piotr was drinking/drank vodka* (note that *vodka* in this imperfective sentence has no determiner), in its perfective counterpart we have to say that *Piotr drank the vodka* (note the definite article *the*).

This line of work is important for several reasons. For a start, such ideas lie at the heart of much recent formal work. Moreover, by drawing attention to the role of the verb phrase, and the importance of non-temporal concepts, they suggest that traditional Slavic approaches may be too narrow. Thirdly, the link made between Germanic determiners and Slavic aspectual markers emphasizes that a deeper understanding of Slavic aspect may require not merely comparison amongst the Slavic languages themselves, but comparisons with more distantly related languages.

Sketchy as the above remarks are, the reader should now be in a position to appreciate why the study of Polish aspect can get complicated. Given this, it may be useful to outline right away the line this thesis is going to follow, and the position it takes on the three issues just mentioned.

The starting point of this thesis is the view that the native speaker intuition that Polish verbs come in pairs is an intuition well worth taking seriously. We will do so as follows. First, we abstract away from the difference between derivational and inflectional processes and simply talk of *formants*. We will isolate four formants: empty prefixes, the delimitative *po-* prefix, the semelfactive *-na-* suffix, and the type of 'suffixation' discussed above (as we shall see, all four formants have long been discussed in the aspectual literature). Secondly, we define what it means for a pair of verbs to

be aspectual twins. Crucially, we do this in a way that does *not* appeal to subtle semantic judgments. In our view, the sort of semantic judgments made in discussions of (say) the existence or non-existence of empty prefixes are not sufficiently robust to form the basis for a theory. Instead, we introduce a generalised form of a classic test known as the *secondary imperfectivisation test*, and define a mirror image test called the *secondary perfectivisation test*. Roughly speaking, the secondary imperfectivisation test tells us that a perfective verb v_2 formed from a basic imperfective verb v_1 by one of our formants is an aspectual twin of v_1 only if it is impossible to obtain another imperfective verb v_3 by applying a formant to v_2 . Under this criterion, *napisać* turns out to be an aspectual twin of *pisać*, for it is not possible to apply any further formants to *napisać*. To put it another way: the only way back to imperfectivity is to ‘undo’ the *na-* prefixation and return to the original imperfective verb *pisać*. That is (to use the traditional terminology) *napisać* cannot be ‘secondarily imperfectivised’. On the other hand, *podpisać* (‘to have signed’) which like *napisać* is formed from *pisać* by the application of a prefix, is *not* an aspectual twin of *pisać*. Why not? Because it *is* possible to ‘secondarily imperfectivise’ this verb. In particular, by making use of the ‘suffixation’ formant we obtain *podpisywać* (‘to be signing’). That is, *podpisać* fails the secondary imperfectivisation test, and hence it is *not* an aspectual twin of *pisać*. Rather, it should be thought of as a basic perfective verb, whose aspectual twin is *podpisywać*.

We then ask a rather simple question which does not seem to have been asked before: which verbs form aspectual pairs with which formants? When we classify Polish verbs on this basis (using the secondary imperfectivisation and perfectivisation tests as our criteria for what constitutes an aspectual pair) we discover that there are five aspectually basic classes of Polish verb (and a further eight classes formed from them by formant application). And something interesting emerges. Although our verb classes were defined purely in terms of the formants they use (that is, they were not defined using semantic criteria) they turn out to have semantic significance: class₁ verbs turn out to be states or gradual transition verbs, class₂ verbs turn out to be process verbs, class₃ verbs are culminating process verbs, class₄ verbs are unitisable process verbs, and class₅ verbs are culmination verbs (the terms ‘culminating process’ and ‘culmination’ are taken from Moens and Steedman (1987); we use the term ‘unitisable process’ to describe such Polish verbs as *pukać* (‘to be knocking’) which describe eventualities which can be broken up into a sequence of ‘units’).

The resulting system is a mixture of traditional and non-traditional ideas. To give one of the novel consequences of our analysis, the verbs in some of our imperfective verb classes turn out to have more than one perfective twin. For example, according to the secondary imperfectivisation test, not only is *napisać* as aspectual twin of *pisać*, so is *popisać*. Now, *pisać* is a class₃ verb (that is, a culminating process verb) and according to our classification all class₃ have two perfective twins, one formed by its empty prefix and one formed by the delimitative *po-* prefix. Indeed, according to our analysis the verbs in class₄ (that is, the verbs we call unitisable process verbs) have three perfective twins!

On the other hand, much turns out to be fairly traditional: imperfectives code for

ongoing eventualities, and perfectives (with the exception of perfective state verbs which code for inchoativity) code for completed eventualities. But there is an important twist: some perfectives are fussy about the *kind* of completed eventuality that they want. For example, consider the imperfective verb *pisać* ('to be writing'), a culminating process verb. Its perfective twin *napisać* demands that a reading event *which reached its culmination point* be completed, whereas its perfective twin *popisać* demands that a reading event which did *not* reach its culmination point be completed. Perfective forms of class₄ verbs (unitisable process verbs) can be even fussier. For example, the verb *pukać* ('to be coughing') belongs to class₄ (that is, it is a unitisable process verb) and hence has three perfective twins: *puknąć*, *popukać* and *zapukać*. These demand the completions of a minimal, a non-minimal, and an arbitrary, knocking event respectively (the form *puknąć* is what would traditionally be called the 'semelfactive' form of the verb).

We have given few details here, but as we shall see in Chapters 4 and 5 it is possible to make these ideas precise and to develop a model-theoretic semantics that draws the kinds of semantic distinctions just noted. So instead of discussing them further here, let us consider where this thesis stands on the three issues mentioned above.

As should be clear, the approach developed in this thesis differs from many traditional Slavic analyses by taking seriously the native speaker intuition that most Polish verbs are paired. This means that we accept both prefixation and suffixation as legitimate methods of pair formation: for us, they are simply alternative formants, and have equal theoretical status. On the other hand, we agree with traditional views that the level of verb has a special role to play in Polish aspect. In our view, the verbal level is the ultimate source of the aspectual distinctions made in contemporary Polish. While the role of verb phrases is clearly important, it only comes into play after the verb has made its contribution. As the semantic account we shall develop in Chapter 4 (and formalize in Chapter 5) will make clear, important (temporal) semantic contributions are made at the verbal level. Finally, we feel that the traditional view that verbal-level aspectual distinctions in Polish are concerned with temporal binary oppositions is essentially correct. But to this traditional view we add the observation that certain classes of imperfective verbs (namely, culminating process verbs and unitisable process verbs) have more than one perfective twin. These 'extra' twins enable further distinctions to be drawn about the kind of eventuality that has been completed.

1.2 The evolution of Polish aspect

The reader should now have a reasonable picture of the basics of verbal aspect in contemporary Polish, some understanding of why the study of Polish aspect can get complicated, and a preliminary idea of where this thesis is heading. But our account so far has been synchronic, and in our view a full understanding of Polish verbal aspect requires a diachronic perspective too. Accordingly, in this section we describe in detail how verbal aspect in Polish evolved. Readers uninterested in this topic can skip directly to the end of this chapter (where they will find a chapter-by-chapter overview of the thesis) without losing track of the main line of argument (though such readers

should be warned that one section of the final chapter requires some familiarity with the material presented here).

We start by presenting the following schematization of the evolution of Polish aspect:

1. Proto Indo-European family: until 30th century B.C.
2. Development of the proto-languages of the Indoeuropean language families: 30th – 11th/10th century B.C.
3. Formation of the Balto-Slavic family: 10th – 6th B.C.
4. Development of the Proto Slavic family: 6th/5th century B.C.– 6th/7th century A.D.
5. Development of the West-Slavic family: 7th – 10th century.
6. Old-Polish: 10th – 15th/16th century.
7. Middle Polish period: 16th — 18th century (1772).
8. New Polish period: 1772 – 1939.
9. Contemporary Polish.

This periodization of the Polish language is conventional, and parts of it are more closely connected to social and national developments than to linguistic realities. Nonetheless, it will be a useful guide in what follows.

1.2.1 Aspect in Proto Indo-European

Aspect in Proto Indo-European was a lexico-wordformational category: the basic aspectual opposition between completed and ongoing events was formally expressed by the opposition between *flexion themes*. The Proto Indo-European flexion theme consisted of the root (that is, the lexical element) and the theme suffix (that is, a theme-forming element); some flexion themes were identical to the root. A flexion theme together with a flexion ending made up a Proto Indo-European verb form. Some researchers refer to the two flexion themes as ‘aspectual themes’ (Długosz-Kurczabowa and Dubisz, 2001, page 283-284).

Długosz-Kurczabowa and Dubisz (2001) write that the differentiation of aspectual themes characteristic for Proto Indo-European are echoed in Greek (for example, Old Greek imperfective *deik-ny-nai* ‘to be showing’ and perfective *deik-s-nai* ‘to have shown’) and Latin (for example, imperfective *dīc-ēbā-m* ‘I was saying’ and perfective *dīx-i* ‘I said’) (Długosz-Kurczabowa and Dubisz, 2001, page 283).⁴

⁴The comparison of the differentiation of aspectual themes of Proto-Indoeuropean to the aspectual systems of Greek and Latin may give a very first impression of how the aspectual encoding by means of aspectual themes might have look like. But it should be kept in mind that there are important differences between the Latin and the Greek aspectual systems (Kuryłowicz, 1964, page 90ff.).

Late Proto Indo-European

The Late Proto Indo-European period was marked by the development of dialects, which would later crystallise into proto languages of the Indo-European language family (such as Proto Italic, Proto Germanic, Proto Slavic, and so on). The interactions between these dialects triggered several morphological processes, an important example of which is the process of ‘morphological perintegration’: a shift of the border between root and formant in a word as a result of the secondary decomposition of that word into morphological elements.

In the process of morphological perintegration the three-element structure of the Late Proto Indo-European verb (consisting of a lexical element, a theme-forming element and an ending) started to shift into a two-element structure (consisting of a lexical element and an ending). As a result of this process, the flexion theme of the verb did not consist any longer of two elements (that is, a lexical element and a theme-forming element), but formed one single unit (in which the two elements were collapsed). The transformation of the three-component structure of a verb into a two-component structure proceeded slowly, so that in the Proto Slavic period there still existed verbs which were not yet affected by this morphological change. The process of morphological perintegration was conditioned by phonetic changes and tendencies to analogy, and was connected to the disappearance of the paradigm-forming function of theme-forming suffixes (Długosz-Kurczabowa and Dubisz, 2001, page 266).

As the distinction between the two flexion themes was becoming less and less sharp, it was getting harder and harder to clearly mark the fundamental distinction between completed and ongoing events; the aspectual system of the Late Proto Indo-European started to have gaps.

At the same time, there started to develop flexio-temporal means of encoding the distinction between completed and ongoing events. The development of aspectual tenses has decisively affected the majority of Indo-European (proto) languages. Indeed, in the majority of Indo-European (proto) languages, these flexio-temporal means *took over* the semantic functions of the Proto Indo-European opposition between aspectual themes, and matters have remained this way until the present day (think of contemporary French and its use of the *Imparfait* and *Passé Simple*).

However in Proto Slavic the aspectual tenses were just a temporary phenomenon: roughly, they developed in Late Proto Slavic, and in Old Polish they represented relics from the past. Moreover, aspectual tenses were never the only means of marking aspectual distinctions in (Proto) Slavic languages, and researchers generally argue that they never were the dominating aspectual system (see for instance Lehr-Splawiński and Bartula (1959) on Old Church Slavonic). This is because Proto Slavic retained many characteristic features of the Proto Indo-European verbal flexion, including the encoding of aspect by lexico-wordformational means. Researchers agree that as far as verbal flexion is concerned, Proto Slavic was the most conservative of the proto languages of the Indo-European family — indeed, that it practically represents a *continuation* of the Proto Indo-European verb system; see for instance Klemensiewicz et al. (1965), Rospond (1971), Długosz-Kurczabowa and Dubisz (2001). Nonetheless, for a certain period of time there co-existed two aspectual systems.

1.2.2 Aspect in Proto Slavic

Let us examine in more detail the (competing) aspectual systems of Proto Slavic. As we have just noted, Proto Slavic like other proto languages of the Indo-European family, was confronted with the reality of fading away of the difference between the two aspectual themes, and so with the growing difficulty of clearly expressing whether an event was completed or ongoing. Two ways of filling the aspectual gaps were on offer. One was to make use of the innovative aspectual tenses. The other was to keep what remained of the old Proto Indo-European lexico-wordformational means of encoding aspect, and try to hijack new wordformational means to cover the gaps. As we have said, the first, innovative way, was taken and consistently followed by most Indoeuropean proto languages. But Proto Slavic, although keen to explore this new way of expressing aspect, was essentially conservative: the flexio-temporal means of expressing aspect were a temporary innovation of Late Proto Slavic. During the period between Late Proto Slavic and Old Polish, aspectual tenses first lost their aspectual functions and then they disappeared. It were the lexico-wordformational means of encoding aspectual distinctions that established themselves in Polish. In what follows, we first discuss the lexico-wordformational system of aspect, and then we turn to the flexio-temporal aspectual system; we summarize the discussion by making some general remarks about the aspecto-temporal information expressed by Proto Slavic verbs.

The lexico-wordformational system of aspect

Due to its strong commitment to the mechanism of the Proto Indo-European aspectual system, Proto Slavic constantly ‘hijacked’ new wordformational means for aspectual purposes: that is, it reached for a wordformational morpheme and used it to cover a gap in the system of aspect. Let’s make this point more vivid. Suppose that Proto Slavic was confronted with a situation that there existed a verb expressing completion of a certain sort of event, but that there did not exist a verb expressing that the event of that sort was in progress. What did Proto Slavic do? In such a case, Proto Slavic reached for a word-formational morpheme and used it to derive an aspectual twin verb for the single (unpaired) verb. As a result of this twinning process, the two verbs (one basic and one derived from it by means of a hijacked wordformational morpheme), both referred to the same sort of event, but one of them (namely, the basic verb) expressed that that event was completed, and the other (namely, the derived verb) expressed that that event was ongoing. At some point, due to the — as researchers describe it, very intense and lively — process of aspectual pairing, enough verbs had an aspectual twin to push out the opposition between completed and non-completed tenses. Długosz-Kurczabowa and Dubisz say that an important reason for the disappearance of aspectual tenses in Slavic was that aspect had already been established in Proto Slavic as a category with lexico-wordformational-phonological carriers (Długosz-Kurczabowa and Dubisz, 2001, page 284).

That is, from a diachronic perspective the process of aspectual pairing lies at the heart of Slavic aspect, and we shall now introduce some ideas that will help us to

understand it better. We shall discuss the concept of aspectual pairs, and explain what it means for one member of an aspectual pair to be basic, and what it means for the other to be derived from it by means of an aspectual formant. We also discuss the idea of hijacking and give some examples of hijacked formants.

Aspectual pairs We might say that an aspectual pair is a pair of verbs, both of which can be used to describe the same sort of event, but of which one refers to the event of that sort as completed, and the other refers to it as ongoing.⁵

But doesn't this description of an aspectual pair mean that the Proto Indo-European verb system could be characterized as consisting of aspectual pairs? After all, we said that most verbs in Proto Indo-European came in two different aspectual themes. Nonetheless, if formal criteria are considered, we cannot talk of aspectual pairs in Proto Indo-European in quite the same way as in Slavic languages. Why not? Because in Proto Indo-European, the pairs of verbs minimally differing in aspect were both 'basic', in a sense in which (most) Slavic verbs forming aspectual pairs are not. That is, in Proto Indo-European, it was not the case that one member of such a pair was derived from the other. But in Slavic, the relation between the members of an aspectual pair crucially relies on the fact that one verb is basic (in the sense of word-formational, and not morphemic analysis, as we shall soon explain) and the other is derived from it by means of a formant (that is, a hijacked word-formational morpheme). In this sense one could say that one verb of a Slavic aspectual pair codes for aspect 'lexically', and the other expresses aspect by 'word-formational' means. But how did such kind of structure of a (Proto) Slavic aspectual pair develop from Proto Indo-European?

The sort of structure that characterizes a (Proto) Slavic aspectual pair seems to be the result of the fact that Proto Slavic inherited a verb system with aspectual gaps. The Proto Indo-European inheritance did not make all verbs available in the two (aspectual) flexion themes. So Proto Slavic hijacked word-formational means to reconstruct the verb that in Proto Indo-European was built by means of the contrasting flexion theme. But why did the reconstruction of aspectual counterpart verbs trigger off a whole re-structuring of the inherited system of aspect?

Proto Slavic created aspectual mates for single (unpaired) verbs by hijacking existing word-formational morphemes, and by creating new morphemes for the purpose of hijacking. For instance, if there existed a single (unpaired) verb referring to an ongoing event, a prefix was hijacked as a formant to derive a completed twin for that verb — clearly, the process of prefixation unambiguously marked which verb was basic, and which was derived from it. But the existing morphemes were not enough to meet the huge task of covering all the gaps, and new morphemes had to be created. New morphemes, in particular, suffixes, were extracted from existing verbs. As a result of this, the verbs from which a suffix was extracted became morphologically re-interpreted: that is, the originally basic verb was gradually re-analysed as derived. Let's explain this by means of an example. The suffix *-nq-* formed a flexion theme of

⁵This working definition doesn't cover perfective state verbs (these have inchoative readings) but it suffices for present purposes.

a certain conjugational class that for the most part consisted of verbs denoting completed events. These verbs had their ongoing correlatives in verbs containing *-a-* (and hence belonging to a different conjugational class). The suffix *-nq-* started to grow independent: already in Proto Slavic, it started to be used as a perfectivising formant outside of its own conjugational class. As a result of a growing productivity of the suffix *-nq-* (which later changed to *-nq-*), verbs containing it got re-interpreted as derived; and the corresponding verbs containing suffix *-a-* established themselves as basic.

Now that the distinction between the basic and the derived verb has come to play such an important role in our discussion, time is ripe to explain the notion of a ‘formant’, which makes all the difference.

Remarks on formants and morphemes We said that the concept of an aspectual pair, as we use it, crucially relies on the idea that one verb is basic and the other is derived from it by means of an aspectual formant. But we also saw that several word-formational means have been employed to derive aspectual twins. May we generalize over suffixisation and prefixisation as a mechanism of forming aspectual pairs? Or to put it another way: don’t we lose some important information when we ignore the differences between suffixes and prefixes, and simply call them both ‘formants’? No, we don’t think so. Abstracting away from whether suffixisation or prefixisation is used in deriving words is a fully justified strategy in morphological investigations. Moreover, as shall become clear in Chapter 4, where we investigate aspectual pairing in contemporary Polish, working at a higher level of formants enables us to see patterns of aspectual pairing.

There are two basic ways of thinking about the structure of words, and the two determine the distinction between what is traditionally called a ‘word-formational’ and a ‘morphematic’ analysis (Długosz-Kurczabowa and Dubisz, 2001, page 338), (Klemensiewicz et al., 1965, page 162), (Rospond, 1971, page 151f.); for more details see Puzynina (1977). While the word-formational analysis is concerned with the mechanism of deriving new words, the morphematic analysis is concerned with precisely analysing their structure.

A morphematic analysis decomposes a word into its smallest meaningful elements: that is, morphemes. A word-formational analysis, on the other hand, makes clear the *mechanism* of creating a word — which is thus always thought of as consisting of two components: a ‘theme’, or a ‘stem’ and a formant; (a ‘theme’ might well consist of a ‘root’ and a ‘theme-forming suffix’, but these two elements are not distinguished in the word-formational analysis). The two-element word-formational analysis relates to the idea of a two-element apperception, consisting of ‘genus proximum’ and ‘differentia specifica’. In word-formational analysis, it is a daily practice to speak of a ‘basic’ and a ‘derived’ verb, the derived verb being derived from the basic verb by means of a formant.

We will use the notion of formant in order to make clear the *mechanism* of aspectual pairing in Polish. We will speak of an aspectual pair as consisting of a basic and a complex verb, whereby the latter is derived from the former by means of an aspectual formant. An aspectual formant is a morpheme that is used to create an aspectual

pair — be it a prefix or a suffix. It is important to interpret our use of the term ‘basic verb’ within the context of the word-formational and not the morphematic analysis, for the verbs that we call basic can very well (and indeed often do) have a complex morphematic structure.

Now that the reader has some understanding of what a basic verb of an aspectual pair is (and thus what it means for aspect to be ‘lexically’ encoded) it is time to move to a more ambitious task: understanding how aspectual twins were created. We shall first explain what it means for a word-formational morpheme to be hijacked, and then we shall give some concrete examples of word-formational means hijacked for the purpose of aspectual pairing.

Hijacking The process of hijacking word-formational means for the purpose of deriving aspectual twins for unpaired verbs was an extremely important and productive process in Proto Slavic, and in contemporary Polish it still occurs when an aspectual twin is needed (we’ll see some nice examples in the last chapter when we consider some contemporary Polish computer terminology).

But what exactly do we mean when we say that a word-forming morpheme was “hijacked” for aspectual purposes? The idea behind this term is that a morpheme that is or was used for word-formational purposes becomes employed to derive an aspectual twin for a verb that lives alone.

Our metaphor of hijacking incorporates a basic observation from the study of morphology: namely, that a morpheme can be used for both word-formational (derivational) and grammatical (inflectional) purposes. Often, we only can judge in a particular context what function of a morpheme we are actually dealing with (Rospond, 1971, page 151f.). Hence, it seems more accurate to think of morphemes as being *used* for word-formational or grammatical purposes rather than *being* word-formational or grammatical morphemes. For instance, Klemensiewicz et al. list all verbal suffixes and prefixes from Old Polish and demonstrate how most of them have these two functions (Klemensiewicz et al., 1965, page 242-253). The same strategy is applied by Rospond, who discusses the different morphemes that have combined with verbs since the early stages of Slavic (Rospond, 1971, page 226f.). Rospond remarks that often it is hard — or indeed impossible — to distinguish a grammatical morpheme from a word-formational one due to the permanent interrelation between the historical development of both kinds of morphematic elements.

Aspectual formants Which morphemes were hijacked to be aspectual formants? As we said above, Proto Slavic hijacked prefixes and suffixes as formants. But we also remarked that some formants were already there, ready to be hijacked, but some others had to crystallise out first. Let us consider the employed formants in some more detail.

It seems that prefixes were (and are) particularly attractive means of aspectual pairing. Rospond notices that in Old Polish, prefixes were the most widely used class of affixes applied to verbs. He points out that the fundamental function of prefixes had an aspectual character:

‘In contrast to nouns, verbs do not have many suffixes at their disposal, but they are characterized by a rich prefixation. The fundamental function of prefixes is to express aspect — in particular, it expresses perfectivity (*napisać* ‘to write-perf’), or verbal sort, that is several modifications of the way the completed or non-completed action (state) took place (‘to swim’ — ‘to swim around’, ‘to swim off’, ‘to swim across’, etc.)’ (Rospond, 1971, page 229).

Długosz-Kurczabowa and Dubisz (2001) write that in Proto Slavic, the innovative use of prefixes for the purpose of marking aspectual distinctions, happened on a broad scale.

It should be noted that the Proto Slavic prefixal formants were not so strongly grammaticalized as they are in contemporary Polish. That is, the closeness between an aspectual prefix and the basic verb with which it combined was much looser than it is nowadays. There was a great deal of freedom in the application of prefixes: formally different prefixes did not necessarily induce semantic differences (perhaps one could say that there existed many ‘prefixal doublets’). Indeed, only in the last thirty years of the 19th century and at the beginning of the 20th century did a stabilization of the prefixation process take place: as Długosz-Kurczabowa and Dubisz (2001) put it, ‘prefixes became semantically (stylistically, or chronologically) specialized’ (Długosz-Kurczabowa and Dubisz, 2001, page 344). But in spite of this difference the fact remains that hijacking prefixes as aspectual formants was an important — maybe the most important — point in the history of Slavic aspect. It helped fix what we regard as the most fundamental fact about contemporary Polish aspectual pairs: namely that one member of the pair can be regarded as basic, and the other as derived from it by means of a formant.

But there were (and are) also suffixes employed to derive imperfective twins of perfective verbs. Where did they come from? In general, a great number of suffixal formants — among which, aspectual formants — developed in the process of morphological perintegration and absorption (Klemensiewicz et al., 1965, page 172), typically conditioned by the tendency to analogy. An important characteristic of the evolution of aspectual suffixes that started in Proto Slavic and continued for many centuries, was the striving for uniformity. The origin of suffixal aspectual formants can be traced back, more or less directly, to theme-forming morphemes of Proto Indo-European. Three suffixes should be mentioned as the most important and most productive among the suffixes that were hijacked for aspectual pairing: *-ja-*, *-va-*, *-no-*.

The formant *-ja-* later developed into *-a-*. It was used to describe iterative and non-completed single events (Klemensiewicz et al., 1965, page 246). Rospond writes that the formant *-ja-* was one of the most productive carriers of iterativity, and it was accompanied by the extension of the root vowel (Rospond, 1971, page 228) (as the reader shall see in Chapter 4, in contemporary Polish the process of morphological change is often accompanied by changes in the root vowel). Lunt (1974) says that this suffix was a productive way of forming imperfective forms of verbs from different conjugational classes (Lunt, 1974, page 79). Some researchers call the formant *-ja-* a ‘durative theme suffix’ (Moszyński, 1984, page 266), (Długosz-Kurczabowa and

Dubisz, 2001, page 278). Interestingly, this suffix as part of the formant *bě-ja-x'* (that is, the sygmatic aorist form of the durative theme *bě-ja-*) became a part of the theme suffix *-ax-* that in Late Proto Slavic derived Imperfect tense forms. Later, it became more and more independent, and in 14th and 15th century Polish it was used more and more often with other verbs, by analogy (Lehr-Splawiński, 1951, page 174).

The formant *-va-* later developed into *-wa-*. It was even more clearly distinguished and more expansive than the formants *-ja-* and *-a-*. It also coded for iterated and ongoing events. It formed the basis for a couple of other formants that developed from it in the process of morphological perintegration and absorption — in particular, it formed the basis for the absorptive formants *-ava-* and *-yva-*, which later collapsed with *-ova-* (with its original structure *-ov-a-*) that was a theme of a certain conjugational class, and by analogy got directly hijacked for the purpose of imperfectivisation. Formant *-ywa-*, as the most expansive variant of *-wa-*, later started to push out its competitors. The descendants of *-wa-* got into close interaction with *-a-*.

The formant *-nq-* later developed into *-nq-*. Apart from its important word-formational functions (namely, forming a conjugational theme, and deriving verbs from nouns and adjectives), it expressed completed, and in particular, momentaneous events (Rospond, 1971, page 229), (Klemensiewicz et al., 1965, page 246), among others. This 'semelfactive' *-nq-* suffix is one of the four formants on which our classification is built.

Aspectual pairing Długosz-Kurczabowa and Dubisz (2001) write that in Proto Slavic the 'complete and incomplete wordformational shape of the verb was established' (Długosz-Kurczabowa and Dubisz, 2001, page 285). Lunt (1974) observes that the process of aspectual pairing was an important process marking Proto Slavic. He argues that the system of aspectual pairs permeated the whole verbal system of Old Church Slavonic (the language of the oldest Slavic manuscripts). Like Długosz-Kurczabowa and Dubisz (2001) for Polish, Lunt argues for Old Church Slavonic that the formation of aspectual pairs was an important 'part of the word-formation of verbal stems' (Lunt, 1974, page 74). Lunt writes:

The formation of new prefixed forms and of mates of the opposite aspect for various newly-created or already extant verbs must have been an active process in OCS as it is in all modern Slavic languages. It is certain that the suffix *-aj* (with or without modification of the root), and, to a lesser extent *-ova*, were productive for making imperfectives to various other classes of verbs, and it is probable that *-nq* was productive for making perfectives. Patterns of like formations could easily be extended. (Lunt, 1974, page 79)

Similarly, Dostál (1954) describes the Proto Slavic system of verbs. He argues that in order for the aspectual system, based on the opposition between completeness and non-completeness, to work, it is necessary to have available a pair of verbs for each lexical meaning. He argues that in order to meet this need, Proto Slavic used suffixes (in particular, the iterative suffixes) to imperfectivize perfective verbs, and different

prefixes to perfectivize imperfective verbs. He remarks that both processes were very lively.

Putting it all together Here is a list of the lexico-wordformational carriers of aspect used in Proto Slavic (Długosz-Kurczabowa and Dubisz, 2001, page 284).

- Aspectual ambivalence

Depending on the context, a given verb could express the meaning of perfectivity or imperfectivity, which can be interpreted as the result of fading away of the Proto Indo-European difference between two aspectual themes. Some examples of such Proto Slavic verbs are **iti* ‘to go’, **viděti* ‘to see’, **vitati* ‘to welcome’.⁶
- Homonymy of aspectual pairs

Similar in shape and cause to aspectual ambivalence. Some examples are: Proto Slavic imperfective **pomazati* - *pomazajq*, *pomazaješi* vs. perfective **pomazati* - *pomažq*, *pomažeši*.
- Suppletion of the suffixless themes

A result of Proto Indo-European aspectual differences in themes. Compare Proto Indo-European imperfective **Ees-* ‘to be’ vs. perfective **bhūH-* ‘to have become’; Proto Slavic imperfective **jes-* (present theme), **bě-* (past theme) vs. perfective **bqd-* (present, future theme), **by-* (past theme).
- Differentiation of the theme suffixes

These suffixes extended the lexical morpheme and built a new form of the flexion theme. At the same time, they encoded the perfective and imperfective aspect. For instance, Proto Slavic imperfective **dvig-a-ti*, **sěd-a-ti* vs. perfective **dvig-nq-ti*, **sěd-ø-ti*.
- Vowel alternations in the roots of prefixed verbs

Examples: imperfective **prinositi* ‘to be bringing’ vs. perfective **prinesti* ‘to have brought’, imperfective **isceljati* vs. perfective *isceliti*.
- Suppletion of the roots of prefixed verbs

Example: imperfective **proxoditi* ‘to be coming’ vs. perfective **proiti* ‘to have come’.
- Aspect-forming prefixes

They introduce the meaning component of completion. Examples are: imperfective **xvaliti* ‘to be praising’ vs. perfective **poxvaliti* ‘to have praised’, **pisati* ‘to be writing’ vs. perfective **napisati* ‘to have written’, **dělati* ‘to be doing, making’ vs. perfective **s’dělati* ‘to have done, made’, **lubiti* ‘to like, love’ vs. perfective **v’zľubiti* ‘to have started to like, love’.

⁶The asterisk (**) is used to mark the reconstructed verbs.

Długosz-Kurczabowa and Dubisz (2001) write that the majority of the lexico-wordformational carriers of aspect just listed were simply inherited from Proto Indo-European; ‘aspect-forming prefixes’ form the only genuinely innovative part of the list. Let’s spell this out a little. The ‘suppletion of the suffixless themes’ and the ‘suppletion of the roots of prefixed verbs’ is a direct Proto Indo-European inheritance. The ‘aspectual ambivalence’ and the ‘homonymy of aspectual pairs’ are the result of fading away of the Proto Indo-European opposition between aspectual themes. The origin of the ‘differentiation of the theme-suffixes’ and the ‘vowel alternations in the roots of prefixed verbs’ can be traced back to the Proto Indo-European differences in aspectual themes.

So in Proto Slavic, the development of the suffixal aspectual formants has commenced, and would continue for many centuries. The hijacking of prefixes was quite a success — but still, just an innovation; so time had to pass before prefixes could get fully assimilated as aspectual formants.

On the other hand, the effects of fading away of the Proto Indo-European thematic differences (such as aspectual ambivalence, homonymy, or suppletivism) must have been rather unpleasant. The need to cover all the gaps in the aspectual system was pressing. And as we have already remarked, an alternative was simultaneously being explored: the use of aspectual tenses. Although this method was ultimately to be wiped out by the success of aspectual pairing, for a while it was an interesting alternative. Let’s take a closer look.

The flexio-temporal system of aspect

The urgent need to express whether an event was completed or ongoing induced Late Proto Slavic to try out the innovative aspectual tenses. The tenses offered themselves as a fresh and user-friendly means of encoding aspectual opposition: in contrast to lexico-wordformational means of expressing aspect, which were still not fully grammaticalized, the flexio-temporal means could be used with all verbs in a uniform way. Moreover, reaching for tenses was a natural and promising move in the light of the beginning of a gradual change in the morphological structure of the Late Proto Slavic verb. As we said, in Late Proto Slavic, there occurred a tendency to change the three-component morphological structure of the Proto Indo-European verb (consisting of the root, the theme-forming suffix, and the flexion ending) into a two-component structure (consisting of the root possibly extended with a theme-forming suffix, and the flexion ending). A flexio-temporal aspectual marker was an easy-to-handle marker: it simply needed to be added to the theme (that is, roughly, to that part of word that remains after the ending is removed).

We shall now describe two simple tenses: the Aorist(s) and the Imperfectum, and two compound tenses: the Perfectum and the Plusquamperfectum. Researchers agree that the Imperfectum was used to describe states and actions that hold (singly or iterated) and that the Aorist was used to describe single completed actions. But there is disagreement as to the semantics of the compound tenses. A great majority of researchers refer to the compound tenses as ‘Perfectum’ and ‘Plusquamperfectum’, and

describe these tenses as referring to the events that took place in the past but whose results are relevant at the time of reference; see for instance Klemensiewicz et al. (1965). A few researchers believe that it is incorrect to characterize the two compound tenses in terms of the semantic element of ‘resultativity’, and they argue that it is incorrect to refer to these tenses as ‘Perfectum’ and ‘Plusquamperfectum’; see for instance Słoński (1953). We shall join the majority of researchers and speak of Perfectum and Plusquamperfectum.

The tenses did not all occur at the same time. The first tense form was the Aorist, and originally it did not have aspectual functions. Due to the development of other tenses, which expressed aspectual meanings, the Aorist assumed its secondary aspectual function.

Aorist The Aorist was the elementary past tense in Proto Slavic. It was inherited from Proto Indo-European. But it should be emphasized that in Proto Indo-European, as well as originally in Proto Slavic, this tense merely located the event in the past with respect to the moment of speech, and it did not express aspectual distinctions. Only in Late Proto Slavic did the Aorist start to assume a secondary semantico-aspectual function. That is, in Late Proto Slavic, the center of gravity of this tense form shifted from the general function of denoting a past event to denoting an event that is momentaneous and completed, and hence belongs to the past. This change was triggered by the emergence of Imperfectum, Perfectum and Plusquamperfectum.

In total, Slavic knew three forms of the Aorist: two forms were primary and the third one developed by merging the two primary ones. The two primary aoristic forms were the ‘Sygmatic Aorist I’ and the ‘Asygmatic Aorist’. These two forms had a different distribution across the conjugational classes of verbs (for the description of the conjugational classes see for instance (Długosz-Kurczabowa and Dubisz, 2001, page 272)). Roughly speaking, the use of the Sygmatic Aorist I was very broad: it was used in four of the five conjugational classes. It was formed by adding to the infinitival theme the theme suffix *-s-* (hence the name of this aorist form) that in certain positions became *-x-*. The Asygmatic Aorist was formed from the present tense themes ending with *-o/-e-*; that is, it was formed from verbs belonging to one single conjugational class (namely, conjugation I). The third form of the Aorist, the ‘Sygmatic Aorist II’ developed in Late Proto Slavic as a secondary form, formed on the basis of the two earlier aoristic forms. It was formed from the infinitival theme by adding to it the complex thematic suffix *o-x-*. Roughly, the range of the Sygmatic Aorist II was limited to the verbs that had the Asygmatic Aorist. For more details see (Długosz-Kurczabowa and Dubisz, 2001, page 276-277).

Imperfectum The primary function of the Imperfectum was to describe a durative (that is, long lasting or repetitive) event that was not completed. Only secondarily was the Imperfectum used to denote a past event. This secondary function might follow from the aoristic origin of the Imperfectum (Długosz-Kurczabowa and Dubisz, 2001, page 278). The Imperfectum was expressed by the theme suffix *-ax-*. The origins of this suffix are not completely clear. Perhaps it was abstracted from the formant *bě-ja-*

x' on the basis of the opposition $b\check{x}-b\check{x}ax'$. The form $b\check{x}-ja-x' \rightarrow b\check{x}'$ was the original Sygmatic Aorist of the durative theme $b\check{x}-ja-$; $b\check{x}-ja-$ arose as a result of extending the imperfective root $b\check{x}-$ with the durative theme suffix $-ja-$.

Compound Past Tenses: Perfectum and Plusquamperfectum The two complex forms of the past tense must have existed already in Late Proto Slavic, since they are attested in Old Church Slavonic (that is, the earliest documented form of Slavic). However, on the basis of functional considerations it can be assumed that the Perfectum and Plusquamperfectum developed after the aspecto-temporal functions of the Imperfectum and Aorist had been established (in particular, the aspectual complementarity of the Imperfectum/Aorist opposition). Both Perfect and Plusquamperfect were used to denote events that happened before the moment at which that event was regarded, but whose results still existed at that particular moment. In the case of the Perfectum, the point of reference was the the present moment, and in the case of the Plusquamperfectum, it was a certain time in the past. The Perfectum was formed from the active past participle II and the auxiliary *byti* 'to be' in the present tense form. Plusquamperfectum was formed from the active past participle II and the auxiliary *byti* 'to be' in the past tense form (either aorist or imperfectum).

Verbs in Proto Slavic

As a summary of our presentation of the Proto Slavic verb system, a few rather general remarks reflecting the way the historical linguists perceive the aspecto-temporal information encoded in the Proto Slavic verb.

Researchers investigating the evolution of the Slavic languages generally agree that the earliest and the contemporary Slavic verbs express two kinds of temporal information: localization of the event with respect to the speech time, and the information about the temporal constituency of the event itself. The first kind of information is contributed by 'tense'. Tense is standardly explained as pointing to future or past, as regarded from the speech time; present tense expresses that an event is simultaneous with the speech time, or is a universal 'truth'. The second kind of information is called 'aspect'. Historical linguists generally agree in analysing the opposition between the 'complete' (that is, perfective) and the 'incomplete' (that is, imperfective) aspect as describing an inherent property of the event referred to by the verb. They often say that the 'reference point' for aspect is not, as it is for tense, the moment of speech, but the moment of the completion of the event (Rospond, 1971, page 305); or, that the 'reference point' for aspect is the temporal border (that is, the beginning or the end) of the event (for instance, Klemensiewicz et al. (1965)). They like saying that the perfective aspect expresses that we look at the event from the moment of its completion, and hence we perceive it as something that happened in the past. By contrast, the imperfective aspect expresses that we consider the event before it was completed, and hence we perceive it as something that is happening at the present moment.

Historical linguists generally agree that in contrast to tense, aspect expresses an inherent property of the denoted event. Hence they agree that aspect is a verbal pro-

perty, which may be expressed lexically or by wordformational means. See for instance Leskien (1962), Słoński (1953), Dostál (1954), Lehr-Spławiński and Bartula (1959), Kuryłowicz (1964), Klemensiewicz et al. (1965), Vaillant (1966), Rospond (1971), Lunt (1974), Stieber (1979), Kuraszkiewicz (1981), and Długosz-Kurczabowa and Dubisz (2001), among others.

As an illustration of this point of view, consider the following quotation from Lehr-Spławiński and Bartula (1959).

W języku scs. — jak w innych językach słow. — formy czasownikowe wyrażają nie tylko czas w stosunku do chwili, w której mówimy (teraźniejszy, przeszły, przyszły), ale także przebieg czynności czy stanu w stosunku do czasu w ogóle (czynność dokonana lub niedokonana). Ten drugi moment znaczeniowy nie jest w językach słowiańskich — w przeciwieństwie do przeważnej części języków indoeuropejskich (por. np. język grecki lub łaciński) — związany z formą czasu (prae., imper., perf., aor., fut., fut. exact.), ale tkwi w poszczególnych czasownikach i w bardzo ograniczonej tylko mierze bywa modyfikowany przez formy czasowe (np. aor. dla wyrażenia czynności momentalnej, imperf. dla wyrażenia czynności długotrwałej). Ze względu na przebieg czynności (actio) dzielimy czasowniki scs. na: 1) słowa niedokonane (imperfectiva), wśród których odróżnić trzeba słowa oznaczające czynność trwałą (durativa) od słów wyrażających czynność powtarzającą się (iterativa, częstotliwie) i 2) słowa dokonane (perfectiva). (Lehr-Spławiński and Bartula, 1959, page 65)

[In Old Church Slavonic — as in other Slavic languages — verbal forms do not only express time with respect to the speech time (past, present, future), but also the course of an action or state with respect to time in general (a completed or non-completed action). This second meaning component is in Slavic languages — in contrast to the majority of Indo-European languages (compare for instance Greek or Latin) — not connected to the tense form (presens, imperfectum, perfectum, aorist, futurum, futurum exactum), but is inherent in particular verbs and can only to a very limited extent be modified by tense forms (for instance, aorist in order to express a momentaneous action, imperfectum in order to express a long lasting action). With respect to the course of the action (actio) we divide Old Church Slavonic verbs into: 1) non-completed words (imperfectiva), among which one has to distinguish words denoting a durative action (durativa) from words expressing a repetitive action (iterativa, frequentativa) and 2) completed words (perfectiva).]

Lehr-Spławiński and Bartula (1959) continue by describing which conjugational classes consisted of imperfective and which of perfective verbs. They observe that the imperfective verbs when combined with prefixes became perfective.

1.2.3 Aspect in Old Polish

In the period immediately preceding Old Polish, two important changes took place, which determined the shape of the aspectual system of contemporary Polish: first, the disappearance of the Aorist/Imperfectum distinction; second, the expansion of the Perfectum. Both processes were closely connected to each other, and they were triggered by the ongoing wordformational process of aspectual pairing.

Researchers agree that the system of the past tenses was already considerably simplified in Old Polish, when compared to Late Proto Slavic. In the Old Polish texts, the verbal forms in Aorist and Imperfectum are relics of the past: there are only 26 forms attested of which we can be sure that they really are examples of the Aorist and the Imperfectum; additionally, there are four doubtful cases. Moreover, as far as the Aorist is concerned, only the form of the Sygmatic Aorist II (that is, the late form of the Aorist) is attested. The formal and the semantic opposition between Aorist and Imperfectum (that is, the opposition between the complete and incomplete tenses) has already partly faded away in Old Polish.

Researchers argue that the reason for the disappearance of aspectual tenses was that the category of aspect had in the meantime obtained enough wordformational carriers, and had established itself as a system of aspectual pairs. However, the Perfectum did not disappear from the language — as we said, it was expanding (and indeed it established itself as the only past tense form in Polish). Nonetheless, it has lost its aspectual function of denoting an event whose results are relevant at the point of speech.

The Perfectum was used with complete and incomplete verbs, and it were the verbs that encoded aspectual meaning — the Perfectum merely located the denoted events in the past. The use of Perfectum with complete and incomplete verbs was expanding, and made the distinction between Aorist and Imperfectum more and more redundant. Finally, Perfectum pushed out the intransparent Aorist/Imperfectum distinction: Perfectum of complete verbs took over the aspectual functions of the Aorist, and Perfectum of incomplete verbs took over the aspectual functions of the Imperfectum. As Klemensiewicz et al. put it:

Ważną przyczyną ówczesnego zaniku imperfektu i aorystu był rozwój uzupełniających się wzajemnie systemów czasownika o tym samym znaczeniu realnym, a przeciwstawiających się sobie aspektem niedokonanym i dokonanym. Różnicę, wyrażoną dawniej przez opozycję imperfektu, który mówi o czynności trwającej w przeszłości, i aorystu, który mówi o czynności jednokrotnej, w przeszłości skończonej, zaczyna wyrażać jedna złożona forma czasu przeszłego, tak że imperfekt zostaje zastąpiony przez złożoną formę czasu przeszłego słów niedokonanych, aoryst zaś przez złożoną formę czasu przeszłego słów dokonanych. (Klemensiewicz et al., 1965, pages 370ff.)

[An important reason for the disappearance of the imperfect and the aorist in that time was the development of complementary verbal systems with the same real meaning, but contrasting imperfective and perfective aspect. The difference that was earlier expressed by the opposition of the imper-

fect, which talks of an action that lasts in the past, and the aorist, which talks of a single action finished in the past, now starts to be expressed by one complex form of the past tense, so that the imperfect gets replaced by the complex form of the past tense of imperfective words, and the aorist, on the other hand, by the complex past tense form of perfective words.]

Or to quote Kuraszekiewicz:

Außer dem zusammengesetzten Prät. ererbte die poln. Sprache zwei andere Tempora der Vergangenheit: den sog. Aorist, der ein perfektives Präteritaltempus zum Ausdruck brachte, und das Imperfect als imperfectives Präteritaltempus. Im Poln. wurde die Erscheinung des Verbalaspekts, d.h. die Unterscheidung eines pf. und ipf. Tätigkeitsverlaufes, später nicht mehr durch Tempora (Aorist — Imperfekt) zum Ausdruck gebracht; sie wurde vielmehr eine Kategorie des Wortes und der Wortbildung, ausgedrückt durch Wurzel, Suffixe und Präfixe. Aus diesem Grunde begannen die Formen von Aorist und Imperfekt sich frühzeitig zu vermischen und kamen allmählich aus dem Gebrauch. Es blieb und entwickelte sich nur das zusammengesetzte Prät., das sowohl von pf. wie ipf. Verben gebildet wurde. (Kuraszekiewicz, 1981, page 131)

In fact, the contemporary Polish aspecto-temporal system remains in essence unchanged from this period. That is, the contemporary past perfective verbs are actually Perfectum forms of complete verbs, and the contemporary past imperfective verbs are actually Perfectum forms of incomplete verbs. With a layman's eye this can be hard to see, since the contemporary Polish past tense forms are *contracted* forms of the original Perfectum. But the facts are clear. Until the 15th/16th century, both full and contracted versions of the auxiliary can be found. Then in the 17th and 18th century Polish the auxiliary finally became a clitic. And this synthetic form is the only past tense form of contemporary Polish (Długosz-Kurczabowa and Dubisz, 2001, page 305-310), (Klemensiewicz et al., 1965, pages 370ff.), among others.

1.2.4 Aspect in Middle and New Polish

The evolution of the aspectual system since Proto Slavic can be characterized in terms of crystallisation of aspect as an independent system of language (in particular, independent from the tense system). This process was driven by the need to clearly mark the distinction between completed and ongoing events. It expressed itself by striving to create a full system of aspectual pairs. This striving is formally reflected by the striving to uniformity of aspectual formants. The striving to uniformity of aspectual formants is connected to the process of grammaticalization of these formants. The striving to uniformity of formants is visible within the domain of suffixal and prefixal formants — but in slightly different ways. The origin of suffixal formants can be traced back to Proto Indo-European themes, but the prefixal formants are, as we said, an innovation of Proto Slavic. The process of grammaticalization of suffixes

is nowadays more advanced than the process of grammaticalization of prefixes. The grammaticalisation of prefixes encounters additional obstacles, which do not arise for suffixes. In particular, most verbal prefixes used as aspectual formants have (or had) formal counterparts among the prepositions, and can (or could) be associated with them; suffixes, on the other hand, are not associated with any independent words.

Let us now briefly describe the evolution of the most important suffixal formants used in the process of aspectual pairing in contemporary Polish. The morphological literature describes the main aspectual suffixal formants of contemporary Polish as being used for two major purposes. The first function is word-formational: they form conjugational bases — that is, the so-called themes of verbs (Polish has two: the present and the past tense theme), and some of them derive new verbs from adjectives or nouns. The second function is aspectual: they derive aspectual twins. We base the following presentation of the development of contemporary Polish suffixes on Klemensiewicz et al. (1965), but use some insights of Lehr-Splawiński and Bartula (1959), Rospond (1971), Kuraszkiewicz (1981), Długosz-Kurczabowa and Dubisz (2001), and others.

- Formant *-’a-* that developed from **-ja-*

It has a word-forming function of building a basic conjugational form, namely a past tense theme — for instance, contemporary Polish *ogłasz-a-t* ‘(he) announced-impf’, *oczyszcz-a-t* ‘(he) cleaned-impf’; Old Church Slavonic *oglaš-a-(l’)* ‘(he) announced-impf’, *očišt-a-(l’)* ‘(he) cleaned-impf’.

This formant contributes the meaning of incompleteness and iteration, if it occurs in opposition to the formant *-i-*, which occurs in verbs referring to completed and single-time events — for instance, contemporary Polish *ogłasz-a-ć* ‘to announce-impf’ vs. *ogłos-i-ć* ‘to announce-pf’, *oczyszcz-a-ć* ‘to clean-impf’ vs. *oczyśc-i-ć* ‘to clean-pf’; Old Church Slavonic *oglaš-a-ti* ‘to announce-impf’ vs. *oglas-i-ti* ‘to announce-pf’, *očišt-a-ti* ‘to clean-impf’ vs. *očist-i-ti* ‘to clean-pf’.

- Formant *-’e//’a-* that developed from **-ě-*

It has a word-forming function of building a basic conjugational form, namely a past tense theme — for instance, contemporary Polish *krzycz-a-t* ‘(he) shouted-impf’, *dźwig-a-t* ‘(he) moved/carried-impf’; Old Church Slavonic *krič-a-(l’)* ‘(he) shouted-impf’, *dvig-a-(l’)* ‘(he) moved/carried-impf’. Moreover, this formant can derive state verbs from nouns and adjectives — for instance, contemporary Polish *kamieni-a-t* ‘(he) became-impf stonelike’, *mądrz-a-t* ‘(he) became-impf wise’.

Finally, in opposition to formant *-na-*, it can emphasise incompleteness. For instance, contemporary Polish *krzycz-e-ć* ‘to shout-impf’ vs. *krzyk-na-ć* ‘to shout-pf’, *dźwig-a-ć* ‘to move/carry-impf’ vs. *dźwig-na-ć* ‘to move/carry-pf’; Old Church Slavonic *krič-a-ti* ‘to shout-impf’ vs. *krik-nq-ti* ‘to shout-pf’, *dvig-a-ti* ‘to move/carry-impf’ vs. *dvig-nq-ti* ‘to move/carry-pf’.

- Formant *-wa-* that developed from * *-va-*

Its word-forming function is forming an important conjugational basis of the present and past tense themes. For instance, *da-wa-ł* ‘(he) gave-impf’, *ukry-wa-ł* ‘(he) hid-impf’.

It emphasizes the meaning of incompleteness, and sometimes iterativity (the reader should recall, that according to some writers, this suffix was primarily used to derive iterative verbs (Lehr-Splawinski, 1951, page 174)). For instance, contemporary Polish *dać* ‘to give-pf’ vs. *dawać* ‘to give-impf’, Old Polish *dati* ‘to give-pf’ vs. *davati* ‘to give-impf’; contemporary Polish *podać* ‘to pass-pf (something to somebody)’ vs. *podawać* ‘to pass-impf (something to somebody)’, Old Church Slavonic *podati* ‘to pass-pf (something to somebody)’ vs. *podavati* ‘to pass-impf (something to somebody)’.

This formant was extremely expansive. It forms the basis of a couple of other formants that developed from it in the process of morphological perintegration and absorption.

For instance, it forms the basis for the absorptive formants *-ava-* and *-yva-*, which later collapsed with *-ova-*. Formant *-awa-* was extracted from *wygra-wa-ć* ‘to win-impf’, in which *a-* became disconnected from the root *wygr-awa-ć* ‘to win-impf’. This formant was later replaced by the absorbed *-ywa-*: *wygr-ywa-ć* ‘to win-impf’. Formant *-ywa-* established itself in Polish as the most expansive variant of *-wa-*, and we shall soon come back to it.

Formants *-ava-* and *-yva-*, two absorptive variants of *-wa-*, after collapsing with *-owa-* very often pushed out original verbs which did not have such a formant. For instance, in an old stadium, there was *grześć* ‘to dig-impf’ and *wygrześć* ‘to dig out-pf’ vs. *wygrzebać* ‘to dig out-impf’. In the new stadium, there is *grzebać* ‘to dig-impf’, and *wygrzebać* ‘to dig out-pf’ vs. *wygrzebawać/wygrzebować/wygrzebywać* ‘to dig out-impf’ (these are dialectal variants of each other).

- Formant *-ywa-/-iwa-*

This formant developed in Polish by extraction from verbs such as *ukrywać* ‘to hide-impf’, where *-y-* belonged to the root. It is thus a perfect example of morphological perintegration (*ukry-wa-ć* ‘to hide-impf’ becomes re-analysed as *ukr-ywa-ć* ‘to hide-impf’) and absorption (*-y-* belonged to the root, but is in the process of morphological perintegration absorbed by the suffix). In contemporary Polish, it occurs in past and present tense theme and expresses incompleteness and iterativity. Moreover, since the 17th century, this formant has a word-formational function of building the past tense theme of many verbs which in Middle and Old Polish contained *-ow-a-* or *-aw-a-* — for instance, the old *pokazować* ‘to show-impf’ became replaced by *pokazywać* ‘to show-impf’; (*pokazywać* ‘to show-impf’ was Mazowian variant of *pokazować* ‘to show-impf’, which still is used in dialects of South-West Poland).

- Formant *-ow-* that developed from * *-ov-*

If combined with formant *-a-*, it plays an important word-forming function of creating the past tense theme — for instance, *kup-ow-a-ł* ‘(he) bought-impf’ *mił-ow-a-ł* ‘(he) loved-impf’. At the same time, it derives verbs (very often, state verbs) from nouns or adjectives — for instance, *mił-ow-a-ł* ‘(he) loved-impf’ (derived from *miłość* ‘love’), *chor-ow-a-ł* ‘(he) was sick-impf’ (derived from *choroba* ‘sickness’).

In opposition to *-i-*, it expresses the meaning of completion.

In Old and Middle Polish, it occurred in verbs which later replaced it by *-ywa-* or *-a-*.

- Formant *-nq-/-nq-* that developed from * *-nq-*

It has a word-forming function of building a basic conjugational form, namely past tense theme — for instance, contemporary Polish *krzyk-nq-ł* ‘(he) shouted-pf’, *dźwig-nq-ł* ‘(he) moved/moved-pf’; Old Church Slavonic *krik-nq-(l’)* ‘(he) shouted-pf’, *dvig-nq-(l’)* ‘(he) moved/moved-pf’. Moreover, this formant can derive state verbs from adjectives — for instance, contemporary Polish *chud-nq-ł* ‘to become skinny-impf’ (derived from *chudy* ‘skinny’), *grub-nq-ł* ‘to become fat-impf’ (derived from *gruby* ‘fat’).

Finally, in opposition with formant *-a-*, it can have the meaning of completion—and in particular, it can emphasise momentaneity of an event or state. For instance, contemporary Polish *krzycz-e-ć* ‘to shout-impf’ vs. *krzyk-nq-ć* ‘to shout-pf’, *dźwig-a-ć* ‘to move/carry-impf’ vs. *dźwig-nq-ć* ‘to move/carry-pf’; Old Church Slavonic *krič-a-ti* ‘to shout-impf’ vs. *krik-nq-ti* ‘to shout-pf’, *dvig-a-ti* ‘to move/carry-impf’ vs. *dvig-nq-ti* ‘to move/carry-pf’.

Let us sum matters up from the perspective of the contemporary Polish system of aspectual pairing, and let us also take a brief look at the prefixes.

In the aspectology of new and contemporary Polish, researchers typically talk of ‘the imperfectivising suffix *-y/iwa-*’, and the perfectivising suffix *-nq-* (most people call it the ‘semelfactive’ suffix). But as we’ve seen, the cristallisation of *-y/iwa-* has a long history — a history whose traces are still visible in the complexity of the contemporary process of imperfectivisation, that we shall discuss in detail in Chapter 4 under the name ‘morphological change’. The term ‘morphological change’ (borrowed from Czochralski (1975)) indicates that the process of imperfectivisation in contemporary Polish is not completely uniform, and can involve morphological and phonological changes — that is, it involves imperfectivisation by the formant *-y/iwa-*, as well as the formant *-a-*, which are often accompanied by vowel changes in the root.

The formant *-y/iwa-*, as well as the formant *-awa-*, both developed in the process of morphological perintegration and absorption from *-wa-* (which developed from the Proto Slavic **-va*); the *-wa-* expressed the meaning of incompleteness and iteration, and was extremely expansive. By analogy to these two absorptive formants, the theme-suffix of a certain conjugational class, namely *-ova-*, was hijacked for the aspectual

purpose of imperfectivisation. These three formants got mixed up. Since the 17th century the formant *-y/iwa-* has been replacing its competitors.

The formant *-a-* expressed the meaning of iteration and incompleteness. It could originate from the theme-morphemes of three different conjugational classes: from a very productive Proto Slavic suffix **-ja-*, which was often accompanied by vowel changes in the root, from the Proto Slavic **-a-*, and from the Proto Slavic **-ě-*. The formant *-a-* which developed from **-ě-* made part of the theme of an imperfective counterpart of a perfective verb containing **-nq-/-nq-*, and it seems that it was not hijacked for imperfectivising purposes (rather, it is the theme suffix **-nq-/-nq-* of its perfective counterpart that was hijacked as a perfectivising formant). The formant *-a-* which developed from **-a-* or **-ja-*, was hijacked to imperfectivise perfective verbs. Recall that the Proto Slavic **-ja-*, which was part of the formant *bě-ja-x?* (that is, the Sygmatic Aorist form of the durative theme *bě-ja-*), later became a part of the theme suffix *-ax-* that derived Imperfect tense forms. In later periods, it was getting more and more independent, and in the 14th and 15th century, it was increasingly used with other verbs, by analogy (Lehr-Splawiński, 1951, page 174).

The imperfectivising formant *-a-* has been interacting with the formant *-wa-*, and its descendants. Both formants were extremely expansive, and it seems that their expansiveness still grows. The methodological practice of aspectologists might seem to suggest that the imperfectivising formant *-y/iwa-* is collapsing with the imperfectivising formant *-a-*: as we said, most researchers on aspect simply talk of imperfectivisation by the suffix *-ywa-*, and view *-a-* as a variant of *-ywa-*.⁷ Yet, matters can be much more subtle than that. In Chapter 2 we shall see that some writers (notably Isačenko (1962)) argue that very often it is simply impossible to determine the real status of the formant *-a-* on the basis of synchronical analysis — or even worse, that a synchronical analysis can make incorrect predictions about the real status of the *-a-*. To put it in a very simple way: the formant *-a-* in a contemporary verb may very well originate from the suffixal formant *-a-* (which developed from a theme-forming suffix *-ja-* or *-a-*) — but it need not.

However, the situation is different with perfectivisation by *-nq-*. This suffix has essentially the same shape as it used to have in Proto Slavic, when it primarily functioned as a theme forming suffix of a certain conjugational class. Since this suffix got hijacked for aspectual pairing, its productivity has been growing. This suffix seems to be particularly expansive in contemporary Polish, as we shall discuss in the final chapter of this thesis.

Let us now consider the prefixes. In contemporary aspectology we talk of ‘empty prefixes’ as a means of deriving perfective counterparts of imperfective verbs. We said before that hijacking prefixes for the aspectual pairing process was an innovation of

⁷Interestingly, a comparative study of imperfectivisation in different Slavic languages, as well as dialects of a given Slavic language, seems to support the intuition that might stand behind the methodological approach of the contemporary aspectologists. For example, consider the Polish verb *skupić* ‘to buy (back)/to concentrate-perf’. This verb gets imperfectivised by the suffixal formant *-owa-*: *skupować* ‘to buy (back)/to concentrate-impf’. However, *skupit’* ‘to buy plenty-perf’, the Russian (formal, though not semantical) correspondent of the Polish perfective verb, gets imperfectivised by the formant *-a-*: *skupat’* ‘to buy plenty-impf’.

Proto Slavic, and researchers write that it happened on a broad scale. Yet, as we indicated, the picture that we get of prefixal formations in Proto Slavic is quite different from the picture that we get nowadays.

Roughly, in Proto Slavic, a verb could be perfectivised by formally different prefixes, and the relation between the basic verb and the prefix was much looser than it is today; we could describe this state of affairs by saying that in Proto Slavic there were many ‘prefixal doublets’. This has been changing in the course of the evolution of aspect system. The crucial development consists in crystallisation for each verb of a specific prefix that derives a perfective twin. This prefix is called the ‘empty prefix’, since it is thought of as being emptied from its lexical meaning in the grammaticalization process. In contemporary Polish, virtually all verbs selecting for an empty prefix combine with a unique empty prefix; the few remaining prefixal doublets are exceptions. Nonetheless, no single empty prefix that would universally apply to all imperfective verbs has developed — instead, formally different prefixes can function as empty prefixes with particular verbs. Among the prefixes used as empty, one prefix is used most often: the prefix *z(a)-*. It is hard to ascribe any semantic content to this prefix, and writers do not agree on what this prefix actually means (Bogusławski, 1963, page 105).

It is interesting to speculate that Slavic could have developed in a different way — for instance, perhaps it could have developed in a way similar to its closest neighbor, the Baltic family. In Lithuanian, a semantically empty prefix developed that uniformly applies to all imperfective verbs: “In Lithuanian it is possible to derive the Perfective counterpart to any Imperfective verb by the prefix *pa-* (semantically bleached)” (Hewson and Bubenik, 1997, page 84).

1.2.5 Summary

We have studied the evolution of the Polish aspecto-temporal system, and in particular, we have investigated how the Polish system of aspectual pairs developed from the Proto Indo-European. The evolution of the aspectual system sheds light on the nature of aspectual pairs, as we encounter them in contemporary Polish. In particular, it makes it understandable from the diachronical perspective why it is that one verb of a pair is basic and the other is derived (or, to put it another way, why aspect encoded ‘lexically’ can be altered by wordformational means). Our discussion also helps to explain the mechanism of aspectual pairing. For instance, it shows how the formants that are used for the purpose of aspectual pairing in contemporary Polish established themselves in the course of the language development. In Chapter 4 we shall introduce a classification that captures the mechanism of aspectual pairing in contemporary Polish. The discussion of this section shows that the classification to be introduced in Chapter 4 has a diachronical motivation.

However, this thesis is a synchronical one, and it’s time to close the diachronical discussion, and move on. In the next section we shall present an overview of the thesis in order for the reader to see what he can expect to find in the chapters that follow.

1.3 Overview of the thesis

Our little Polish lesson completed, we are ready for a chapter-by-chapter overview of the work that follows.

Chapter 2. Aspect and Aktionsart: some History. As we have seen, Slavic aspect is a controversial topic. And as we shall learn in this chapter, this is hardly surprising: the most basic concepts (such as ‘aspect’ and ‘Aktionsart’) emerged over a lengthy period as a result of a complex interaction between the Germanic and Slavic linguistic traditions. In this chapter we sketch this story, paying particular attention to its effects on the Slavic aspectual research tradition.

Chapter 3. Parallelism-Based Approaches. One of the most influential lines of research in recent Western work on aspect are what we call parallelism-based approaches. The characteristic feature of these approaches is the heavy emphasis they place on the role of the level of verb phrase in aspectuality. In this chapter we trace the origins of the idea, and then examine their relevance to contemporary Polish.

Chapter 4. An Aspectual Classification of Polish Verbs. With our historical and critical work behind us, we turn to the main positive contribution of the thesis: an aspectual classification of Polish verbs. We introduce the four formants we shall use, define the secondary imperfectivisation test (and its mirror image, the secondary perfectivisation test), and then present the classification in two ways: as a table, and as a simple Prolog program. Following this we (informally) discuss the semantic distinctions the classification induces, and consider whether the classification can be extended.

Chapter 5. A Closer Look at the Classification. In this chapter we subject our verb classification to closer scrutiny. We map the limits of its coverage, argue that its use of empty prefixes does not constitute a reason for its rejection on theoretical grounds, and formalize the semantic distinctions it supports. We then spell out what we believe it contributes to the Western and Slavic aspectual research traditions, and sketch directions for future research.