The state of near-native grammar: a study of aspect in L2 Polish

Martyna Kozlowska-Macgregor

Department of Linguistics

McGill University, Montréal

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Abstract

Sorace (1993) suggests that competence at the final stage of non-native acquisition falls into qualitatively distinct categories: 1/ *incomplete* grammar, which lacks a representation for a part of the target system; 2/ *divergent* grammar, which has the target distinctions with non-target instantiations. She captures the general nature of the two systems but leaves their contents undefined. This study adopts her proposal and investigates non-native grammars with respect to acquisition of the Polish aspects: completive, pofective and perfective, in an attempt to define the properties of incomplete or divergent knowledge in the domain of aspect.

According to the account of the aspectual system of Polish proposed in this thesis, acquisition of this system requires knowledge of the following semantic and morpho-syntactic properties: 1/ aspectual interpretations, which depend on the semantic features of a VP; 2/ the semantic features carried by the aspects; 3/ the distinct feature context required for each aspectual interpretation; 4/ restriction on feature composition with respect to the syntactic domain of derivation, namely l(exical)-syntax vs. s(syntactic)-syntax. The learners' competence, therefore, must contain information about which feature context yields which interpretation, which interpretations are unrealizable in these contexts, and which aspectual structures are allowed by virtue of their syntactic vs. lexical feature character. The Polish aspectual system involves many elements of knowledge that must be acquired for the L2 end-state to be *complete*. It also provides a wide range of properties whose nontarget status would lead to a *divergent* grammar.

Experimental data were elicited from two groups of English speakers who were advanced or near-native learners of Polish in a series of tests (grammaticality judgments, semantic and end-state compatibility tasks, and picture selection) each addressing separate sets of restrictions governing the system. Results were compared to native speaker adult and child controls.

Although the results reveal two types of competence, these cannot be categorically defined as either complete or divergent. While the near-natives' knowledge manifests a **complete** representation of the elements of the target grammar

and native-like distinctions between the aspects, it also bears some characteristics of an **incomplete** system. The advanced learners manifest a system that is both **divergent** and **incomplete**. The study shows that the classification proposed by Sorace (1993) is only appropriate with reference to individual properties of grammar, as a single system of knowledge may show the characteristics of complete, incomplete, divergent and, possibly, non-divergent competence.

Résumé

Sorace (1993) suggère que la compétence à l'état final de l'acquisition d'une langue seconde (L2) peut prendre la forme de deux grammaires distinctes: une grammaire *incomplète*, dont une représentation du système-cible est absente; ou une grammaire *divergente*, qui maintient les distinctions de la langue-cible, mais dont certaines propriétés ne sont pas natives. Sorace décrit la nature générale de ces deux systèmes sans en détailler leur contenu. La présente étude adopte sa proposition et examine la nature des grammaires non-natives du point de vue de l'acquisition des différents aspects en polonais: le complétif, le «pofectif» et le perfectif, de façon à définir les propriétés de la connaissance incomplète ou divergente dans ce domaine.

Selon l'analyse du système aspectuel polonais proposé dans cette thèse, l'acquisition de ce système requiert la compréhension des propriétés sémantiques et morphosyntaxiques suivantes: (1) les interprétations aspectuelles, qui dépendent des traits sémantiques du syntagme verbal; (2) les traits sémantiques caractéristiques des différents aspects; (3) la combinaison spécifique de traits requise pour chaque interprétation; (4) la restriction sur la composition des traits en ce qui concerne le domaine syntaxique de la dérivation, c'est-à-dire la syntaxe lexicale («l-syntax») et la syntaxe syntaxique («s-syntax»). La compétence de l'apprenant doit donc pouvoir déterminer quel contexte de traits conduit à quelle interprétation, quelles interprétations sont impossibles dans ces contextes et quelles structures aspectuelles sont permises selon leurs traits syntaxiques ou lexicaux. Le système aspectuel du polonais est composé de plusieurs éléments qui doivent être acquis pour que l'état final soit *complet*. Ce système est aussi lié à une vaste gamme de propriétés dont le statut non-natif conduirait à une grammaire *divergente*.

Des données expérimentales ont été recueillies chez deux groupes d'anglophones de niveau avancé ou presque natif en polonais et ce, par le biais d'une série de tests (jugements de grammaticalité, tâches de compatibilité sémantique et séléction d'images). Chaque test visait un ensemble distinct de restrictions gouvernant le système. Les résultats ont été comparés à la performance de locuteurs natifs adultes et enfants.

Bien que les résultats révèlent deux types de compétence, ces grammaires ne peuvent pas être catégoriquement définies comme étant complètes ou divergentes. Bien que la grammaire des apprenants très avancés contienne une représentation complète des éléments de la grammaire-cible et des distinctions entre les aspects, elle revêt également les caractéristiques d'un système incomplet. Quant au système des apprenants avancés, il est à la fois divergent et incomplet. Cette étude démontre que la classification proposée par Sorace (1993) ne peut s'appliquer qu'à des propriétés grammaticales spécifiques, puisqu'un seul système de connaissance peut manifester les propriétés d'une compétence complète, incomplète, divergente et, possiblement, non-divergente.

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For My Parents

" A maze baffles and misleads those who tread its paths. A maze is a puzzle.

It is designed to deceive the travelers who seek a promised goal"

From Carol Shields, *Larry's Party*

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CHAPTER ONE

Near-native states of L2 grammar

1.0. Introduction

Second language (L2) acquisition research of recent years has targeted the nature of the final stage of non-native acquisition. The investigation has been approached from varying points of interest. Some studies have raised a question of whether L2 near-native grammars and native grammars converge, in other words, whether linguistic behavior of near-native speakers with respect to some principle or an instantiation of a parameter of L2 is comparable to the behavior of native speakers. Most typically, convergence or divergence of the two grammars is interpreted in terms of whether or not the properties of the non-native system are sanctioned by Universal Grammar (UG), just like the properties of the target system are assumed to be. This line of research is then etiological in nature, trying to establish the means of arriving at a steady-state L2 system and to explain how certain aspects of the target language are acquired and why some are not, or at least, are not manifested through linguistic judgments or production.

Another approach, also following a UG-perspective, addresses the degree of success attainable by adult L2 learners. The crucial question is whether it is possible for L2 speakers to construct native-like mental representations of grammatical knowledge of the target language, i.e. whether non-native competence may reach the

level of 'completeness' characteristic of the native system. This line of research focuses more directly on the quality of the steady-state in terms of a natural language system, i.e. how native-like it is, and, if it is not, whether it is still constrained by the principles of UG. Sorace (1993) suggests that L2 grammar will never fully coincide with the target grammar. It is her contention that steady-state L2 systems must be perceived as systematically different from the native system, either lacking certain properties of the target system, a phenomenon typical of what she defines as *incomplete* L2 systems, or exhibiting non-target-like instantiations of properties, in her terms a *divergent* L2 system. She identifies these phenomena to be effects of L1, and as such constrained by UG, as Sorace concludes in her further research (Sorace, in press). A shortcoming of Sorace's proposal is the lack a of definition of the properties of either incomplete or divergent non-native systems.

The research presented in this thesis takes up the issues raised by Sorace and investigates the non-native steady-state grammar of L1 English speakers of Polish as a second language. The focus of the study is an inquiry into a subsystem of interactions of aspectual functional structure and aspectual interpretations in Polish, with a purpose of identifying those elements of the system that are, and those that are not, represented in the near-native L2 grammar. The ultimate goal of this research is an analysis of properties of a near-native grammar as defining the nature of the steady-state L2 competence.

In the rest of this chapter I will first outline the general nature of the system whose acquisition will be investigated, and then present in detail Sorace's proposal, which provides the starting point and a general direction of the present inquiry. The

final part of this chapter will present examples of research addressing the issue of acquisition of properties relating to the syntax-semantics interface, as this is the domain of grammar under consideration in my thesis.

1.1. Polish aspectual system and L2 acquisition

In general terms, both English and Polish have an underlying semantic distinction between perfective and imperfective aspects. Under the assumption that overlapping properties of a native grammar and a target L2 are maintained or acquirable in L2 acquisition, the fundamental distinction between perfective and imperfective should be a part of the end-state L2 grammar. However, fine interpretive possibilities and constraints of the Polish aspectual system that are not present in English are expected to reveal the limits of non-native acquisition. Two Polish aspects, *pofective* and *completive*, not represented in English, belong to a complex system of interactions within the aspectual interpretive domain of Polish grammar and will be the focus of the present investigation.

Like English, the Polish aspects are derived from a composition of morphosyntactic elements whose properties contribute to the meaning of the situation which they describe. A base verb with certain semantic characteristics describes a situation as achievement/accomplishment, activity or state. The semantic classification of the situation is dependent not only on the verb itself but also on the properties of its object. The verb and the object combine to establish the contour of the situation, i.e. whether it has a natural end point, whether it has temporal bounds,

whether it is a one-time or a plural eventuality (Vendler 1967, Verkuyl 1987, Depraetere 1995) . Unlike in English, in Polish this eventuality (VP) may be further modified by aspectual morphology in the form of prefixes on the verb. These preverbs carry semantic features and select for features of the VP. A satisfied feature selection and feature composition determines a new shape of the eventuality, i.e. its aspect (Kozlowska-Macgregor 1999).

From the point of acquisition we have two systems which ultimately serve the same purpose, aspectual interpretation, but do so to varying levels of complexity. The Polish system generates morphosyntactic computations whose interpretive options include those of the English system, i.e. a basic perfective vs. imperfective contrast, and computations which go beyond the possibilities of English, i.e. pofective and completive. A potential acquisition issue involves the extent to which, if at all, non-native acquisition involves the computational mechanism of the L1, in particular, to what extent the L1 interpretive system constitutes the subarchitecture of the L2 system. Natural language computational principles ensure a particular map from a surface configuration to a conceptual-structure representation. A language learner must be able to execute the mapping of a highly specific and idiosyncratic surface configuration, absent in his/her L1, to an equally unique interpretation of L2. The question is, which parts of the mapping are to be acquired and how much is already there.

1.2. Sorace (1993): near-native systems as *divergent* or *incomplete*

It has been extensively demonstrated that despite a 'logical problem' of language acquisition, identified for both L1 and L2, and despite properties of the L2 not being instantiated in the learner's L1 nor explicitly taught through language instruction, a vast range of L2 properties are successfully acquired, the grammar forming a natural language system, i.e. constrained according to UG principles. However, these cases cannot be claimed to add up to a system which is in its entirety native-like. Such is the contention of Sorace (1993) who points out that the term 'near-native' contains an implicit statement about noncoincidence of native and non-native grammars: "the near-native grammar is almost the same as the native grammar, but falls short of it" (Sorace 1993, p.23). Rather, the term conceals a further, often ignored but crucial, distinction between two types of steady state grammars. She suggests that final grammars in non-native acquisition fall into one of two categories: an *incomplete* grammar, which lacks a representation for a part of the target system, and generates indeterminate judgments of grammaticality of L2 structures, or a *divergent* grammar, which has the target distinctions with non-target instantiations, and produces determinate but non-native-like judgments. These two phenomena, being two different states of grammatical competence, correspond to qualitatively distinct categories of ultimate attainment.

In her study of English and French near-native speakers of L2 Italian, Sorace investigates steady state knowledge of a set of Italian constructions related to unaccusativity. Italian contrasts with French with respect to the choice of auxiliary

verbs co-occurring with unaccusative verbs. In Italian all unaccusative verbs take the auxiliary *essere* 'to be' to form the perfective, but unergative and transitive verbs require *avere* 'to have' (cf. Burzio 1986) as shown in (1) - (3).

(1) Paolo è andato a casa (unaccusative)
Paolo is gone home

(2) Mia sorella ha viaggiato in treno (unergative)
My sister has travelled by train

(3) Maria ha mangiato una mela (transitive)
Maria has eaten an apple

In restructuring contexts of Italian (biclausal sentences involving a modal or aspectual verb, such as *volere* 'want', *cominciare* 'begin', in the higher clause) if the lower verb is unaccusative and the higher verb is a modal, normally requiring *avere*, the choice of auxiliary with the modal is optional. Optionality in the choice of an auxiliary also occurs in Italian clitic climbing constructions. While in sentences where the clitic stays attached to the lower verb, the choice of an auxiliary is optional, clitic climbing requires an obligatory auxiliary *essere*. Examples of the restructuring constructions are given in (4) - (5).

(4) Mario è/ha dovuto andare a casa (optional auxiliary change)
Mario is/has had to go home

(5) Mario ci è/*ha dovuto andare (a casa) (optional clitic climbing)
Mario there is/has had to go

(6) Mario è/ha dovuto andarci (no clitic movement)
Mario is/has had to go-there

French has the same class of unaccusative verbs as Italian but differs in a system of auxiliary selection. In French auxiliaries *être* 'to be' and *avoir* 'to have' are lexically selected by unaccusative verbs (a subset of which take *être* while the majority take *avoir*), hence there is no optionality of auxiliary selection with modal or aspectual verbs. Biclausal sentences involving a higher modal verb and a lower unaccusative in French always require auxiliary *avoir*, and there is no clitic climbing. In English all verbs form perfective with the auxiliary *have*, and there is no clitic climbing or restructuring constructions. In addition to the syntactic generalizations about auxiliary selection in Italian and French, Sorace introduces a lexical-semantic element into the original account. She demonstrates that semantic classes of unaccusative verbs interact with the syntactic configurations for *essere/être* assignment in both French and Italian. In sum, while French and Italian have overlapping instantiations of the properties under investigation in Italian, both semantically and syntactically, English has only a semantically distinct class of unaccusative verbs but does not instantiate any of the syntactic properties of Italian.

The results of her study showed that 1/ the intuitions of the near-native speakers differed from those of the native speakers (although they did manifest trends in the same direction); 2/ both French and English near-natives showed native-like sensitivity to the semantic categories of the unaccusative verbs in Italian; 3/ the

judgments of the two near-native groups differed from the native judgments with respect to the syntax of unaccusativity in Italian in different ways. French judgments showed a preference for auxiliary *avere* in both restructuring constructions and sentences without clitic climbing (consistent with an analysis of Italian based on French), while in clitic climbing constructions (non-existent in French) the subjects favor *essere* (as do native Italian speakers). English speakers do not distinguish between the two auxiliaries in any of the tested constructions, rating them equally with scores in the middle range on the scale of acceptability.[1] Sorace describes the French near-natives' behavior as determinate, and English near-natives' as indeterminate, and characterizes these distinct kinds of competence as *divergent* for the French and *incomplete* for the English subjects. In conclusion, it appears that a divergent grammar renders consistent but inappropriate judgments for the L2, while an incomplete grammar renders indeterminate judgments resulting from the learners being unable to analyze the L2 phenomena because these are lacking in the interlanguage grammar.

The English near-natives' indeterminate judgments are interpreted as inability to decisively estimate the grammaticality of structures involving either the obligatory *essere* auxiliary or the optional *essere/avere*. Sorace describes their grammar as having no representation for this part of grammatical knowledge. Yet, as pointed out in White (in press) equating uncertainty with the lack of a given representation is rather arbitrary. White suggests that the subjects' responses may as well be

[1] The task required subjects to make comparative judgments on sentences according to their own rating scale. They assign a numerical rating to the first sentence they hear and the subsequent sentences are estimated on the basis of comparative acceptance with respect to the first judgment. This procedure is known as 'magnitude estimation'.

determinate and indicate that they do not fully accept the test sentences. Sorace herself, in a later study (Sorace, in press), proposes an optimality-theoretical account of residual optionality ("a potentially permanent stage at which the target option is strongly, but not categorically, preferred, and the dispreferred non-target option is never completely expunged, but still surface in some circumstances") as a type of divergence characteristic of non-native grammars. Papp (2000) makes a similar point, illustrating that what at surface looks like a case of incompleteness, by virtue of it allowing for optionality, may, in fact, be a manifestation of divergence. The issue of how to classify optionality is not directly relevant to the present investigation, but finding more cases of divergence and incompleteness, in the sense proposed by Sorace, may contribute to finer and more explicit definitions of these competence types.

1.2.1. L2 steady-state: an L1 perspective

A divergent steady state seems to result when the L1 and the target L2 manifest a configuration for a given parameter (or parameters) whose instantiations result in an overlap in the properties of certain constructions, as was the case of Italian and French. The French near-native speakers of Italian show native-like intuitions about auxiliary selection for a range of restructuring constructions but reject cases where the choice of an auxiliary is optional. As Sorace points out, such behavior cannot be accounted for in terms of surface transfer, as the French speakers manifest these 'determinate' intuitions in structures which are present in their L1 as

well as those which are not. It still remains an important generalization that the French speakers, coming from a more restrictive system of auxiliary selection, do not allow for the optionality while the English speakers, who have no such system, are more likely to adopt it. At the same time, both languages distinguish a semantic class of unaccusative verbs and both groups show native-like sensitivity to the semantic verb categories in Italian. It would seem then that, potentially, learners coming from more restrictive systems will tend to keep the structural options limited while those coming from less specified systems will allow for more flexibility in the target structures. In her study, the semantic concepts belong to both of the L1s and seem to be maintained in the target second language.

Sorace's closing remark of the 1993 study points in a direction beyond the immediately present or absent properties in L1 systems or their manifestations in the L2 input. She suggests that a crucial question in future research is to look into the overall representation of the subsystem that a given property is a part of in the native language and how it corresponds with the equivalent subsystem in the target L2. The nature of this correspondence may give the necessary tools for an account of non-native competence.

The focus of this thesis will be on aspect. Any system of aspectual representations must involve knowledge at the syntax-semantics and/or syntax-lexicon interface, regardless of the actual interpretive options available in a given language. Different types of knowledge must be acquired for the L2 end-state to be 'complete', which poses possibilities for instantiations of L2 properties which could 'diverge' from the target system. Contrasts between native and non-native systems

may result from the types of knowledge that have to converge for a learner to develop native-like competence. Two recent studies are particularly relevant to the issue of how syntactic knowledge drives semantic interpretive options in L2.

1.3. Syntax-semantics interface in interlanguage systems

Recently there has been increased interest in interpretive competence responsible for mapping between syntactic structures and semantic representations (Dekydtspotter, Sprouse & Anderson, 1997; Dekydtspotter, Sprouse, Swanson & Thyre, 1999; Dekydtspotter, Sprouse, & Thyre, 1999/2000; Slabakova & Montrul, in press; Montrul & Slabakova, in press). Most telling are the instances of L2 grammars where the conditions at the syntax-semantics interface differ in learners' L1 and L2 and are underdetermined by the input. Native-like interpretive representations in the L2 grammar are taken as evidence that non-native developing systems are constrained in the same way as native systems, i.e. are UG-constrained.

1.3.1. Dekydtspotter et al. (1999/2000)

Dekydtspotter et al. (1999/2000) point out that the interpretive characteristics of emergent L2 systems provide a particularly sharp conceptual tool for probing the cognitive status of interlanguage systems for the following reasons: 1/ natural languages are formal systems with particular interpretive characteristics, 2/ poverty of the stimulus, as germane in L2 as it is in L1 acquisition, may only be overcome by a

formal and fully constrained system, 3/ interlanguage systems must presumably presuppose a certain kind of mental architecture with a particular syntax-semantics interface as a property of this architecture. Dekydtspotter et al. report results on an interpretive task showing that both native speakers and L2 learners of French exhibit knowledge of event-sensitivity associated with quantification at a distance (QUAD) in French. Below, examples (7) and (8) illustrate a non-QUAD and a QUAD structure, respectively (cf. Dekydtspotter et al. 1999/2000, p. 7).

(7) Il a mangé beaucoup de bonbons. (non-QUAD)
he has eaten many of sweets
'He ate many sweets'

(8) Il a beaucoup mangé de bonbons. (QUAD)
he has many eaten of sweets
'He ate many sweets'

Despite initial appearances, the two structures in (7) and (8) are not synonymous. QUAD structures (with count *de*-NPs) are dependant on the structure of events in a manner not affecting non-QUAD structures. Specifically, QUAD structures with count *de*-NPs can be true only in a multiple event context, i.e. they admit only event-related interpretations, and not the interpretations where the event is seen as a single point, while non-QUAD structures are compatible with both single and multiple events. Hence the non-QUAD sentence in (7) may have an interpretation involving single and multiple events, whereas the QUAD sentence in (8) may only be

interpreted as a multiple event.[2] Further, contrast between the two structures lies in non-QUAD structures admitting both object- and event-related interpretations, while QUAD structures admit only object induced event-related interpretation. Lastly, the multiple nature of QUAD obtains only with count nouns, while with mass nouns a sentence may describe a single uninterrupted event.

It is suggested, after Dœtjes & Honcoop (1997), that event-related interpretations arise when a monadic determiner shifts from quantification over objects to quantification over <event, object> pairs. The syntactic dependencies associated with the QUAD structures determine a particular mapping from Phonetic Form (PF) to pair quantificational representations in conceptual structure (LF). Knowledge of asymmetries associated with QUAD and non-QUAD structures must follow from innate, domain-specific knowledge of the syntax-semantics interface. In other words, the associated interpretation must exhibit event-sensitivity. Dekydtspotter et al. demonstrate that the L2 input alone does not allow for the acquisition of QUAD, i.e. knowledge that QUAD is not a word order rewrite of non-QUAD, unless the <PF, LF> mapping in L2 acquisition is constrained in such a way that the QUAD structure maps onto the LF of event-related interpretations.

[2] As reported by Dekydtspotter et al., the ambiguity of non-QUAD sentences is general although their interpretations had not been studied till Krifka (1990). Krifka points out that *3000 ships crossed the lock* can be interpreted as either (i) there were at least 3000 ships that crossed the lock (object related interpretation) or (ii) there were at least 3000 ship-crossings, but possibly fewer than 3000 distinct ships (object induced event-related interpretation).

The experimental study with intermediate level English learners of French as L2 involved pairing of QUAD and non-QUAD sentences with single and multiple events. The results suggest that the interpretive properties in question are part of the learner grammar and must be determined by the morphosyntax of the QUAD structure. Because the patterns of asymmetries in non-native judgments parallel those found in native French judgments, Dekydtspotter et al. conclude that L2 learning is constrained in such a way as to ensure that sufficient input will lead to grammatical representations with similar inherent relationships of the mental architecture as those of the target grammar, e.g. a state in which QUAD PF configuration is assigned the event-related conceptual structure interpretation in ways argued for native French.[3]

1.3.2. Montrul & Slabakova (in press)

Another study addressing the issue of semantic interpretations driven by morpho-syntactic principles is carried out by Montrul & Slabakova (in press). Their study investigates the nature of ultimate attainment with respect to aspectual interpretations in L2 Spanish of English native speakers. The subject of the study is a distinction between imperfect and preterite tenses, absent in English.

In Spanish preterite tense marks the perfective aspect and the imperfect marks the imperfective aspect, and both tenses are marked by morphology, as shown in (9) and (10).

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[3] See Dekydtspotter et al. 1999/2000 for a detailed discussion of event-related interpretations of QUAD sentences and the relation between their structure and the logical form associated with such interpretations in French.

(9) Laura construyó una casa. (preterite)

Laura build-pret a house

'Laura built a house.'

(10) Laura construía una casa. (imperfective)

Laura build-imp a house

'Laura was building a house.'

Using the theoretical account of aspect of Giorgi and Pianesi (1997) who argue for a parametric distinction between Germanic and Romance languages, Slabakova & Montrul suggest that aspect is represented by a functional category Asp. In Spanish, perfective and imperfective morphology is checked against the features [±perfect] located in AspP. English does not show the perfective/imperfective contrast by means of morphology and, therefore, has no AspP.

Their study is set in the context of the *failed functional features hypothesis* (Hawkins and Chan 1997; Smith and Tsimpli 1995), according to which the steady state L2 grammar will diverge from native speaker grammar in cases when L1 and L2 differ as to the instantiation of the features of functional categories. Aside from challenging the *failed feature hypothesis*, which, by virtue of the lack of a [±perfect] feature contrast in English, predicts inevitable failure to represent the preterite/imperfect distinction by L1 English near-native speakers of Spanish, Montrul & Slabakova set out to examine knowledge of fine interpretive consequences of this contrast, in particular, interpretation of null subjects in impersonal constructions as either generic or specific (when the verb occurs in the imperfect) or only as specific (when the verb occurs in the preterite). The possibility of the generic

interpretation is driven by the [-perfective] feature value. Examples are given in (11) and (12).

(11) Se comía bien en ese restaurante (generic/specific)
clitic eat-imp well in that restaurant
'One/we ate well in that restaurant'

(12) Se comió bien en ese restaurante (specific)
clitic eat-pret well in that restaurant
'*One/we ate well in that restaurant'

As suggested by Montrul & Slabakova, such interpretive restrictions driven by the preterite/imperfective contrast can be only acquired if the learners' interlanguage grammar contains a functional category of Aspect and a [±perfect] feature, not present in the functional system of English. The contrast is realized by checking the preterite/imperfect morphology against [± perfective] features located in AspP.

Using a truth value task, they elicited accurate judgments from the L2 near-native subjects and found no differences between them and native speakers. Montrul & Slabakova's findings illustrate, first, that subtle interpretive distinctions are available to the L2 near-native speakers and, second, strongly argue against the premise of the *failed features hypothesis*.

In sum, both studies, Dekydtspotter et al.'s and Montrul & Slabakova's, address the issue of interlanguage, at intermediate and near-native stages, respectively, in terms of the syntax-semantics interface. Both illustrate that acquisition of properties from the interface domain is possible, and, in both cases, L2

grammars do not diverge from the target grammar. These findings are even more important in the context of other research, suggesting interface levels (syntax-semantics, Sorace in press, or syntax-lexicon, Prévost & White 2000; Lardiere 1998; 2000; Haznedar & Schwartz, 1997) as loci of temporary or permanent discrepancies between non-native and target systems.

1.4. Research objectives

As outlined above, research in L2 acquisition, including the studies investigating the interpretive competence of L2 learners, have aimed at understanding *whether* attainment of the L2 grammar is possible and *how*, if at all, learners arrive at the representation of the target language. The objective of this thesis is an investigation of the content and nature of the L2 grammar that the learners achieve at the final stages of L2 acquisition. The goal, then, is not directed at answering the question of how L2 learners get to attain knowledge of the target language. The state of L2 knowledge at the final stages of acquisition is used as the window onto the *nature* of ultimate attainment. The investigation is couched within the generative approach to language acquisition and the account of the aspects in Polish is kept within the same theoretical parameters.

In the rest of this dissertation I will, in Chapter 2, present the aspectual system of Polish and offer a theoretical account of interactions between the aspects. In Chapter 3, I will describe the experimental tasks used in the present study and report on their results. In Chapter 4, I will discuss the results and, in Chapter 5, I will bring

together the information about the near-native knowledge of the aspects elicited in the study and present my conclusions on the nature of the near-native grammar of aspects in Polish.

CHAPTER TWO

The aspectual system of Polish

2.0. Introduction

Many recent linguistic investigations have focused on morphological variations among languages within both nominal and verbal domains, where the core of crosslinguistic differences are reflected. Giorgi and Pianesi (1997) suggest that, in the verbal domain, for example, languages convey different temporal and aspectual information because the morphemes expressing tense and aspect exhibit different properties. They start their investigation of Italian and English tense and aspect with the hypothesis that "the differences across languages in the temporal and aspectual interpretation are due to, and can be explained by, differences in the morphological system which is employed to express them". A morphological system provides the means to investigate interpretive properties and differences or similarities within the interpretive domain among languages. An analysis of a morphological system of a language may also lead to explanation of certain acquisition facts in both L1 and L2 contexts.

The morphological system under present investigation concerns Polish aspectual preverbs. Polish manifests very intricate interactions within the domain of aspectual morphology. The three preverbal reflexes of distinct Polish aspects that will be discussed are (i) perfective preverbs, (ii) preverbs indicating a 'pofective' aspect,

and (iii) a 'completive' aspect. Besides forming a complex set of aspectual interactions, the preverbs in Polish form a system of aspectual morphology involving multiple levels of interpretation: syntactic, semantic and lexical. *Semantic*, because the interactions of aspects within the morpho-syntactic structure depend on the semantic features of the individual aspectual morphemes as well as the semantic features of the verb classes they attach to; *syntactic*, because these features are mapped onto the syntactic structure, and *lexical* because such mapping must evidently involve not only the syntactic domain of syntax but also the lexical one (Hale and Keyser, 1993; Travis, 2000).

2.1. Aspects

Slavic preverbs have received some attention in the descriptive linguistic literature (Galton 1984, Piñón 1993, 1994, 1995, Progovac 2002). They have mostly been treated as a homogenous set of lexically selected prefixes[4] and described as implying completion of the event and, in some cases, the manner or means of execution of the event. The unifying characteristic among the aspects to be discussed is that they can all be classified as preverbs by virtue of their place in the morphological structure, i.e. immediately preceding the verb they modify. What distinguishes them from each other is their individual aspectual contribution: perfective, completive and pofective.

[4] Piñón discusses prefixes *po-* (1993) and *na-* (1995) and distinguishes them from the rest of the preverbs. However, he does so from a purely semantic lattice-theoretic approach and says nothing about the place of these distinct preverbs within phrase structure.

Another difference lies in their lexical manifestation: the perfective preverbs can be represented by any lexically selected perfective prefixes, while pofective and completive aspects are represented by a single prefix '*po-*', which is multifunctional in nature. The present account will show first, that *po-* is distinct from the rest of the preverbs, and second, that the distinct functions of *po-* are strictly conditioned by the semantic content of the VP it attaches to, and must be defined within two syntactic domains.

Before the aspectual interactions are discussed, I introduce the three aspects under consideration, their semantic contributions and their general morphological distributions.

2.1.1. Perfective Aspect

Perfective aspect in Polish is rendered by lexically selected preverbs, which encode telicity of the situation expressed by the verb. They may also indicate manner or means of execution of a situation. These preverbal functions are illustrated in (1) - (3).

(1) Ewa pi-la wino. ([√V] = imperfective)
Ewa drink-past wine
'Ewa was drinking/drank wine.'

(2) Adam wy-pi-l wino. ([perf-√V] = perfective)
Adam perf-drink-past wine
'Adam has drunk the wine.'

(3) Zofia **do**-pi-la wino. ([perf-√V] = perfective)
Zofia **perf**-drink-past wine
'Zofia has drunk up the wine.'

In terms of Vendler's (1967) classification, Polish verbs of the [perf-√V] form are either accomplishments or achievements.[5] Their internal structure, a process leading to a culmination point for accomplishments and the culmination point alone for achievements, will become an important factor in explaining the distribution of the perfective verbs with other aspects.

2.1.2. Pofective and Completive Aspects

The 'pofective' and 'completive' aspects in Polish are rendered by a prefix *po-*. The two semantic contributions of *po-* are illustrated below.

(4) Maria **po**-czyta-la ksiazke. ([po-√V])
Maria **po**-read-past book
'Maria read a book for a while.'

(5) Ewa **po**-piek-la ciasta. ([po-√V])
Ewa **po**-bake-past cakes
'Ewa has made cakes.'

[5] Slabakova (1997a) suggests that in Bulgarian achievements do not take preverbs, and the only aspectual class that consistently contains preverbs is accomplishments. She then generalizes this observation to all Slavic languages. In Polish achievements do contain preverbs quite generally: *roz-bic* 'break', *u-kluc* 'puncture/sting', *u-gryzc* 'bite', although the interpretation is more of a semelfactive character than perfective.

In (4) the prefix *po-* contributes a temporal boundary to the activity of 'reading' by delimiting its duration but not completion. In (5) the same prefix indicates that the activity of 'baking' is completed for each cake.

The two aspects rendered by the prefix *po-* have been each independently discussed in the syntactic/semantic literature. One meaning is discussed by Piñón (1993), who argues for the aspectual role of *po-* as a marker of temporal delimitation ("for a while"). He called it the 'pofective', adopting a coinage of Galton (1984) who described a similar phenomenon in Russian. The second meaning has been discussed by Siewierska (1991), who characterizes *po-* as a 'completive' prefix expressing the completion of a set ("one after another"). This differs from the perfective preverb which expresses the completion of each item in a set ("right through") perceived as a single event. In (5), the baking of each cake must be a separate event. The relevant examples from Piñón and Siewierska are given in (6) and (7) respectively.[6]

(6) Kasia po-pisze jutro swoj artykul, zanim pojdzie do pracy.
Kasia PO-write tomorrow self's article before go to work
'Kasia will write her article <u>for a while</u> before she will go to work tomorrow.'

↕

pofective

[6] The glosses of both Piñón (1993) and Siewierska (1991), the latter quoted in Cinque (1997), have been marginally adapted to make them consistent with the glosses used in this thesis but the general idea remains the same. The arrows showing the correspondence between the aspectual morphemes and the adverbial expressions of time have been added by me.

(7) Po-prze-czyt-yw-alam wszystkie jej ksiazki.
compl-perf-read-freq-past all her books
'I have read all of her books occasionally one after another and right through.
↕ ↕ ↕
completive completive perfective

I will show that the morpheme *po-* of examples (6) and (7) (as well as examples (4) and (5)) is indeed the same prefix. The multifunctionality of this prefix allows for two different aspectual contributions which, in turn, are conditioned by specific semantic/syntactic contexts and unique places of generation within two domains of phrase structure.

In the next section I introduce a feature system that formally determines the functions and possible morpho-syntactic combinations of the perfective, pofective and completive morphemes within verbal structure.

2.2. Feature system within the morphosyntax of aspect

The restrictions on the affixation of the perfective, pofective and completive morphemes derive from the morphological shape of the base but, more precisely, depend on the semantic properties of the verbs that they combine with, e.g. *plurality*, *telicity*, and *specificity*. The concept of features employed for defining these properties has been adopted from the semantic literature (Verkuyl, 1989, Kamp and Reyle, 1993). Yet, while the semantic level of the account handles the semantic facts of Polish aspects, morphological word formation rules are crucial for determining the possible morphological structures. These structures must be seen from the syntactic

perspective because it is within the phrase structure that the features of syntactic constituents like NP objects (plural vs. singular or, as will be shown presently, specific vs. nonspecific) determine the overall semantic character of the VP. The syntactic status of the features contributed by these elements is further classified as s-syntactic or l-syntactic. Predictions about attested vs. unattested aspectual structures of Polish depend on where the affixation takes place. For these reasons the present analysis must refer to syntactic, semantic and morphological components of grammar simultaneously.

2.2.1. The system

Some general intuitions about the semantic content of the aspectual morphemes have already been signaled. The following semantic feature inventory is designed to capture these intuitions formally. I proceed by discussing each aspect separately.

Because the *perfective aspect* in Polish acts as a telicity marker I propose that it carries a [+TELIC] feature. Piñón (1993) illustrated the incompatibility of the perfective aspect with durative adverbs, which confirms their telic character. This observation is also made by Kipka (1990). Slabakova (1997a) discusses both the telicity introduced by the preverbs and the non-durative character of preverb-marked eventualities in Bulgarian and suggests these properties extend to other Slavic languages.

Turning to the *pofective* and the *completive* aspectual, their semantic contributions are those of temporal delimitation and of the completion of a set, respectively. However, I propose that, in terms of semantic features, these two morphemes are identical: they both mark time limits on an eventuality, i.e. they bound it in time. This is not hard to argue for the pofective interpretation of *po-*, which contributes a sense equivalent to the English "for a while", but may be less clear in the case of the completive aspect. Observe the data below.

(8) Po-czyta-lam gazete. (pofective)
pofec-read-past newspaper
'I read a newspaper <u>for a while</u>'

(9) Po-zamyk-al okna. (completive)
compl-close-freq-past windows
'He <u>finished closing all</u> the windows'

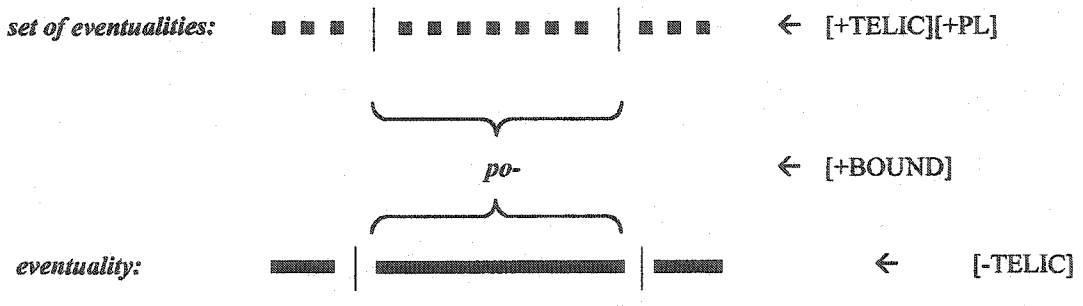
(10) Po-prze-czyt-yw-alam wszystkie jej ksiazki. (completive)
compl-perf-read-freq-past all her books
'I <u>have read all</u> of her books on several occasions'

All three sentences imply a finished activity. In (8) the activity of reading lasted for a limited time as defined by the pofective aspectual morpheme but the object 'paper' is not exhaustively affected. Sentences (9) and (10) both suggest completion: in (9) all the windows are closed as the result of the action, and in (10) all the books have been read. One could argue that (9) and (10), by implying completion of sets, mark telicity of the eventualities. I suggest, however, that this effect is rendered by the telicity of

the individual plural events subsumed under the bound imposed by the completive morpheme. In other words, what these examples express are plural telic situations which are then bounded by the completive aspect. It is in this way that a sense of completion to a number of events, proposed by Siewierska (1991) as in (7), is derived.

Depraetere (1995) argues for the necessity of distinction between *(a)telicity* and *(un)boundedness*. (A)telicity involves having reached an inherent or intended endpoint while (un)boundedness relates to whether or not the situation is described as having reached a temporal boundary (cf. Depraetere 1995 cf. Declerck 1989, p.277). Depraetere shows that in English boundedness can be obtained by means of cardinality or definiteness of the object NPs, adverbial expressions of time and direction, or, crucially for my proposal, aspectual marking (progressive vs. perfect for English)[7]. I propose that, in Polish, *po-* is an aspectual marker of temporal boundedness and carries a [+BOUND] feature. Its functions are illustrated in the diagrams in (11) below.

(11) *po* - marker of temporal boundedness for an eventuality and a set of eventualities



[7] Depraetere points out that the change in boundedness brought about by NPs, PPs or aspectual marking may coincide with the change in telicity of a situation.

It will become clear shortly that in the context of a plural telic eventuality ([+TELIC][+PL]) *po-* acquires the *completive* interpretation, while in the context of an atelic eventuality ([-TELIC]) it will acquire the *pofective* interpretation.

Overall, the semantic features of the aspectual morphemes in question are summarized in Table A:

TABLE A

Aspectual features

pofective aspect	[+BOUND]
completive aspect	[+BOUND]
perfective aspect	[+TELIC]

With respect to the semantic feature characteristics, the pofective and completive preverbs are identical. However, they differ from the perfective preverb, each morpheme contributing a unique aspectual interpretation.[8]

2.3. A multifunctional morpheme *po-*

Having defined the semantic content of the aspectual morpheme *po-* with a semantic feature, I will now present morphosyntactic and semantic rationale for

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[8] Polish, like Russian, also has a particle *po*, which functions as a distributive marker. This is illustrated below:

Julia da-la dzieciom *po* dwa nalesnik-i.
Julia give-past children *po* two pancake-pl
'Julia gave the children two pancakes each.'

This observation, which I owe to Jonathan Bobalijk, is interesting because the role of this particle is strongly related in meaning with the roles of the completive *po-* discussed here.

treating this morpheme as multifunctional. We will see that the place of generation within a phrase structure and the resulting feature context of *po-* within a VP will determine its interpretation, pofective vs. completive.

2.3.1. Double po- constructions

The syntactic evidence for the multifunctionality of the morpheme *po-* comes in the form of sentences where *po-* occurs twice in a single verbal construction, as shown in (12). In such sentences *po-* is necessarily generated at two points in the structure.

(12) Ela po-po-pij-a-la czerwonego wina (bedac we Wloszech).
Ela pofec-pofec-drink-freq-past red wine (being in Italy)
'For some time Ela would occasionally have a little red wine (when in Italy)'
↕ ↕ ↕
outer pofective frequentative inner pofective

In the English translation of (12) the adverbial 'for some time' is contributed by the outer *po-*, each drinking occasion is limited in time; 'some/a little' is contributed by the inner *po-*, and the plurality of the situation 'occasionally' is obtained by the frequentative aspect.[9] It is crucial to note that in order for the double *po-* to be allowed, the frequentative marker is obligatory.

[9] This structure is extremely rare, although not unheard of in spoken Polish.

2.3.2. Alternations in the functions of po-

In addition to the double syntactic position of *po-*, its argument selection offers another piece of evidence for treating this morpheme as marking two different aspects.

Piñón (1993) gives examples to illustrate that 'pofectivity' is not to be equated with perfectivity, and argues for the double role of the prefix *po-, pofective* or *perfective*. I agree with his line of argumentation but expand it to claim that while *po-* does have two functions neither of them is perfective. Piñón correctly suggests that pofectives, unlike perfectives, are always compatible with durative adverbials and never with time-span adverbials. Consider the data in (13) - (16) from Piñón (1993).[10]

(13) *Bozena prze-czyta-la gazet-e (przez) dwadziescia minut. [*durative]
Bozena perf-read-past newspaper-sg (for) twenty minutes
'Bozena has read a newspaper for twenty minutes.'

(14) Bozena po-czyta-la gazet-e (przez) dwadziescia minut. [durative]
Bozena po-read-past newspaper-sg (for) twenty minutes
'Bozena read a newspaper for twenty minutes.'

(15) Bozena prze-czyta-la gazet-e w dwadziescia minut. [time-span]
Bozena perf-read-past newspaper-sg in twenty minutes
'Bozena has read a newspaper in twenty minutes.'

[10] These examples are quoted from Piñón (1993). In my opinion the sentences in (13) and (14) require a preposition *przez* 'for' preceding the adverbial expression, hence I include them and mark with parentheses.

(16) *Bozena po-czyta-la gazet-e w dwadziescia minut. [*time-span]
Bozena po-read-past newspaper-sg in twenty minutes
'Bozena read a newspaper in twenty minutes.'

The perfective preverb in (13) is incompatible with the durative adverbial 'for twenty minutes' but is fine with the time-span adverbial 'in twenty minutes' in (15), an effect expected for the perfective aspect. On the other hand *po-* classified by Piñón as pofective aspect is fine with the durative adverbial in (14) but ungrammatical with the time-span adverbial in (16), unlike perfective. He concludes that the two preverbs must be marking two different aspects, pofective in (14) and (16), and perfective in (13) and (15).

Using the same diagnostics, we can extend his observations. Note the shift in grammaticality and meaning induced by the shift in the cardinality of the object in the minimal pair, (17) - (18).[11]

(17) Bozena po-czyta-la gazet-y przez dwadziescia minut. [durative]
Bozena pofec-read-past newspaper-pl for twenty minutes
'Bozena read newspapers for twenty minutes.'

(18) Bozena po-czyta-la gazet-y w dwadziescia minut. [time-span]
Bozena compl-read-past newspaper-pl in twenty minutes
'Bozena has read the newspapers in twenty minutes.'

I suggest that the reason why the two types of adverbials are possible in (17) and (18) is because we are dealing here with two separate aspects and their different semantic

[11] Note that plurality of the object in (13) would not affect the grammaticality judgment, as discussed for other preverbs in Slabakova (1997a).

and syntactic properties.[12] The *pofective po-* contributes a sense of a *temporal bound* to the eventuality described by the verb, and therefore is compatible only with durative adverbials, as in (15) and (17). The *completive po-* adds a sense of *completion* to a set of identical eventualities and therefore is compatible with time-span adverbials, as in (18).

In fact, the distribution of the completive *po-* with respect to adverbials appears identical to that of the perfective aspect (hence Piñón's suggestion that *po-* may also be perfective). Recall, however, that it was the plural cardinality of the object that allowed for the time-span adverbial to modify the *po*-marked VP (compare (16) and (18)), yet perfective aspect in Polish (and other Slavic languages (Slabakova, 1997a)) is indifferent to the cardinality of the object NP. This suggests that we are indeed dealing with three sorts of aspects: *perfective*, compatible with the time-span adverbials and not durative adverbials, with no requirements for the cardinality of the object; *completive*, compatible with the time-span adverbials and not durative adverbials, and requiring the plurality of the object; *pofective*, compatible with the durative adverbials and not time-span adverbials, with no requirements for the cardinality of the object.[13] The requirements are summarized in Table B.

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[12] Crucially, the lack of *po-* would render (17) grammatical but (18) ungrammatical. It is the two contributions of *po-* that render the situations compatible with respect to the two time specifications. Also, the definiteness of the NP in the translation of (18) is significant. This resembles observations from Slabakova (1997), that the use of determinerless DPs with bare plurals or mass noun heads in Russian, Polish and Czech, corresponds to referential use of definite articles in telic contexts.

[13] As a matter of fact, perfective preverbs do carry certain requirements on the shape of a VP, as discussed by Kipka (1990). These requirements will be illustrated in Chapter 3, section 3.2.4.

TABLE B

Required feature contexts for preverbs

ASPECT	feature [TELIC]	feature [PLURAL]
perfective	[+] / [-]	[+] / [-]
pofective	[-]	[+] / [-]
completive	[+]	[+]

Observe that the perfective aspect has virtually no requirements for the features of the VP it will attach to, i.e. is the least specified. The pofective aspect selects for an atelic VP but is not specified with respect to plurality, and the completive aspect is the most specified for the feature context, selecting for a plural and telic VP.

2.3.3. Feature contexts and interpretations of po-

Having established the fact that *po-* is distinct from other preverbs and that its function is dependent on semantic properties of the situation it modifies, I will now present data illustrating these contexts more precisely and will discuss their effects on the aspectual interpretation.

The data will be presented in terms of verb classes. These are roughly based on Vendler's (1967) quadripartition of verb phrases into aspectual types: *accomplishments* which contain an inherent culmination point and a process leading up to it, *achievements* which contain the culmination point but the process leading to it is instantaneous (the distinction between accomplishments and achievements will not be crucial for the present analysis), *activities* which represent a continuing process

but no inherent endpoint/goal, and *states* which lack internal structure. The Vendlerian verb classes are characterized here in terms of the semantic features outlined in section 2.2.1. above; hence, his original classification, although important, is not strictly maintained.

2.3.3.1. Verbs of Group A

The verbs of Group A express single eventualities (accomplishments or achievements). They are telic because they imply a change of state of the object that undergoes the action and a natural endpoint is a part of their lexical makeup. In terms of semantic features verbs of Group A are [+TELIC] and allow for the following semantic interpretations with respect to *po-*.[14]

Group A: [+TELIC]		***pofective*** 'to V for a while'	***completive*** 'to complete V *(NPpl)'
po-gubic	'to lose'	*	✓
po-zenic	'to marry'	*	✓
po-piec	'to bake'	*?	✓
po-budzic	'to wake'	*?	✓
po-topic	'to drown'	*?	✓
po-psuc	'to break'	*?	✓

[14] Verbs of Group A all (except for *gubic* 'lose', among the given examples) belong to the class of accomplishments in terms of Vendler's classification. Accomplishments by virtue of representing a stage leading to an end point of an episode and the end point itself, contain a semantic element of duration of the preparatory stage - hence the not at all common but possible combination of *po-* with these verbs, where *po-* picks out a part of the preparatory stage. Crucially though this interpretation will have a somewhat anomalous semantic effect of a process (or rather a fragment of it by *po-*) without a final result, which is paradoxical for accomplishments.

The requirement for the plurality of the object NP is essential for the [po-√V] structure involving verbs of Group A to receive an interpretation. Once the plurality requirement is satisfied the only possible interpretation is that of the completive aspect, which yields the meaning implying completion of a number of telic events: *po-zenic* 'to marry many couples'; *po-topic* 'to drown many objects'. The requirement for plurality of the object is further illustrated in (19) - (22). [15]

(19) *Jan po-gubi-l klucz.
Jan po-lose-past key-sg
'Jan has lost a key/lost a key for a while.' *pofective/*completive

(20) Jan po-gubi-l klucze.
Jan po-lose-past key-pl
'Jan has lost many keys.' *pofective/✓completive

(21) *?Kucharz po-piek-l ciast-o.
chef po-bake-past cake-sg
'A chef has made a cake/made a cake for a while.' *?pofective/*completive

(22) Kucharz po-piek-l ciast-a.
chef po-bake-past cake-pl
'A chef has made cakes.' *??pofective/✓completive

[15] When the verbs of Group A are reflexivized and become unaccusative-like, they then require plural subjects, e.g. *po-piec sie* 'po-bake refl.' to get sunburnt (of many people); *po-gubic sie* 'po-lose refl.' to get lost (of many people); *po-topic sie* 'po-drown refl.' to drown (of many people). Otherwise, if the subject remains singular, the interpretation must imply plural eventualities involving the same subjects. This plurality effect, either by plural subjects or eventualities, must be obtained for the affixation of the prefix *po-* to be allowed.

The above examples show that for the verbs of Group A ([+TELIC]) to allow for the affixation of *po-*, i.e. for such a morphological composition to be able to receive an aspectual interpretation, the requirement for the plurality of the object NP must be satisfied. In such cases the resulting interpretation is that of the completive aspect.

2.3.3.2. Verbs of Group B

Group B, as was the case for Group A, contains accomplishments and achievements, is defined by the [+TELIC] feature, and manifests identical distribution of interpretation possibilities. The telicity of the situations described by these verbs is implied by their built-in implication about a change of state of the object undergoing the action.

Group B: [+TELIC][+PL]		***pofective*** 'to V for a while'	***completive*** 'to complete V(NPsg/pl)'
po-ciac	'to cut'	*?	✓
po-rwac	'to rip'	*?	✓
po-mylic	'to mistake'	*?	✓
po-siac	'to sow'	*?	✓
po-gnesc	'to crease'	*?	✓
po-smiecic	'to litter'	*?	✓
po-dzielic	'to divide'	*	✓

The difference between Group A and Group B lies in the cardinality requirements for the object NP. Verb roots of Group B combined with *po-* do not

require plurality of the object as shown in (23) - (24). The absence of the plurality requirement for the completive interpretation is a result of a [+PL] feature being a part of the feature definition of these verbs.

(23) Ewa po-rwa-la zdjeci-e/a.
Ewa compl-rip-past photograph-sg/pl
'Eve ripped (a) photograph(s).'

(24) Adam po-sia-l stokrotk-e/stokrotk-i.
Adam compl-sow-past daisy-sg/pl.
'Adam has sowed daisies.'

Both 'rip' and 'sow' take a singular or plural object (or a mass object as in 'to rip paper').[16] I propose that these effects are due to the semantics of the root verbs rather than violations of the selection requirements of the completive aspect. Note that all the verb roots in Group B suggest some sort of plurality effect: either by the iterative character of the root, as in sentences like "He cuts wood." or "She ripped letters." where 'cutting wood' implies many instances of cutting and 'ripping letters' implies many instances of ripping, or by the plurality effect on the object, if you *cut* or *rip* something you do it into at least two parts; *sowing* involves more than one seed; you *mistake* one thing for another; and a place is standardly not considered *littered* if there is one piece of litter on the floor. The underlying plurality of the situation described by the verb roots renders either the effect of iteration of the situation or the plurality of the end state object. Hence for the achievement/accomplishment verbs of Group B

[16] The singular object of 'sow' implies a generic meaning, as in (24).

the requirement for the plurality of the object is no longer relevant but is satisfied by the [+PL] feature of the root verb itself.[17]

To sum up, the data above illustrate that the interpretation of the aspectual morpheme *po-* is strictly dependent on the feature context of the VP elements: the telicity of the root verb plus the plurality obtained from the object complement or the root itself render the completive aspectual interpretation. We have also seen that the possibility of the shift into atelic character of the eventuality causes a likely shift into the pofective interpretation.

2.3.3.3. Verbs of Group C

Verbs of Group C are activities and as such they do not contain an inherent end point as was the case for accomplishments and achievements, i.e. they are not telic. For now I define their telicity status as unspecified [+/-TELIC] and discuss it below.

[17] The iterative character induces a pseudo-atelic interpretation. These verbs often may be compatible with durative adverbials as in *"He cut wood for two hours"* or *"She ripped letters all day"*. In such cases the pofective aspectual interpretation is marginally acceptable, hence question marks under the ***pofective*** column.

Group C: [+/-TELIC]		*pofective* 'to V for a while'	*completive* 'to complete V *(NPpl, specified)'
po-jesc	'to eat'	✓	✓
po-uczyc	'to teach'	✓	✓
po-pic	'to drink'	✓	✓
po-czytac	'to read'	✓	✓
po-pisac	'to write'	✓	✓
po-robic	'to do'	✓	✓

Po- attached to activity verbs yields both interpretations. Note, however, the requirements on the object complements for the completive interpretation to be possible: plural and specified in quantity. This is illustrated in the examples (25) - (28).

(25) Ewa po-jad-la jablk-a. [-SQA]&[+PL]
Ewa pofec-eat-past apple-pl
'Eve ate apples <u>for a while</u>.' ✓pofective/*completive

(26) Ewa po-jad-la *(wszystkie) jablk-a. [+SQA]&[+PL]
Ewa compl-eat-past *(all) apple-pl
'Eve <u>has eaten</u> all the apples.' *pofective/✓completive

(27) Adam po-czyta-l gazete. [+SQA]&[-PL]
Adam pofec-read-past paper-sg.
'Adam read a paper <u>for a while</u>.' ✓pofective/*completive

(28) Adam po-czyta-l *(wszystkie) gazet-y. [+SQA]&[+PL]
Adam compl-read-past *(all) paper-pl.
'Adam <u>has finished</u> reading all the papers.' *pofective/✓completive

What these examples show is that a *po*-marked activity verb in the context of a plural object exhaustively specified by the quantifier *wszystkie* 'all' receives an interpretation of completion. Without the quantifier the alternative pofective interpretation of 'for a while' is assigned to the VP.[18] The property of the object Noun Phrase (NP) obtained by means of quantification resembles the nominal feature [+SQA] proposed by Verkuyl (1987; 1989), where SQA stands for 'Specified Quantity of A', and where A is the interpretation of the NP. [+SQA] is formed compositionally on the basis of information contained by the Determiner and by the Noun, and pertains to the specified quantity of the object NP.

According to Depraetere (1995), a clause is telic if the situation it describes has a natural or intended endpoint which has to be reached and beyond which it cannot continue. In (29) I repeat her examples of telic activities.

(29) a. Sheila deliberately swam for two hours.
b. Susan is painting a picture.

The two situations in (29) both have intended endpoints and therefore are characterized as telic. In (29a) the intended endpoint is rendered by the context of performing the activity deliberately for a limited amount of time, in (29b) the endpoint is implied by specifying the result of the activity. Unlike for the verbs in Groups A and B, verbs of Group C do not have inherent endpoints but, in sentential contexts like (26) and (28), they describe a telic situation. In other words, the [+SQA]

[18] When instead of the quantifier 'all' other elements that typically specify quantity like quantifiers *these* or *those*, or cardinal quantifiers are used, the grammaticality of sentences in (26) and (28) seems to deteriorate. As I have no account for this, I leave it for further research.

feature on the object NP renders the situation telic [+TELIC$_{SQA}$].[19] Without this feature the eventuality remains atelic, and pofective rather than completive interpretation is obtained.[20]

2.3.3.4. Verbs of Group D: verbs of motion

Although more complex in their semantic structure, verbs of motion manifest the same interpretation distribution of the pofective and completive aspects. Verbs of motion seem like activities, yet their classification in terms of telicity is not clear-cut.

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[19] A similar effect that quantification has on (a)telicity can be illustrated on verbs of Group B, which were defined as [+TELIC][+PL]. Recall that the plurality of these verbs marginally allowed for the pofective interpretation of *po-* as is shown in (a) below.

(a)?	Po-cial [drzewo] przez trzy godziny. He cut wood for three hours (pofective)	[-TELIC] ✓ durative adverbial
(b)	Po-cial [drzewo] w trzy godziny. He cut wood in three hours (completive)	[+TELIC] ✓time-span adverbial
(c)	Po-cial [cale drzewo] *(przez trzy godziny). He cut [all the wood] *(for three hours)	[+SQA][+TELIC] *durative adverbial
(d)	Po-cial [cale drzewo] w trzy godziny He cut [all the wood] in three hours	[+SQA][+TELIC] ✓time-span adverbial

Group B verbs are telic but we can force the atelic reading by means of the [+PL] feature. However, once [+SQA] is added the situation becomes telic and only the completive interpretation is possible.

[20] The telicity of the eventuality may be rendered by means other than [+SQA] of the plural object. For example a quantifying modifier in the NP obtains a similar effect:

Adam po-czyta-l ksiazk-i z calej polki/wszystkich kanadyjskich autorow.
Adam compl-read-past book-pl from whole shelf/all Canadian authors.
'Adam has read the books from the whole shelf/of all the Canadian authors'

However, an modifier of the VP is not sufficient:

*Adam po-czyta-l ksiazk-i caly dzien/we wszystkie dni tygodnia.
Adam compl-read-past book-pl whole day/on all days week.
'Adam has read the books all day/every day of the week'

I propose that this contrast results from the VP modifiers being sentential i.e. s-syntactic, and therefore incompatible with the l-syntactic character of *po-*, in terms of the phrase structure adopted here, and the NP modifiers are l-syntactic. Such a distinction is crucial for the analysis (as will become clear shortly) and also explains the present contrast.

As activities, it is tempting to assign them a [+/-TELIC] feature. Yet, the impossibility of the pofective interpretation would go against the established pattern. Also, considering they are all intransitive in Polish (except for 'move'), they will not acquire a [+TELIC] feature by [+SQA] of the object NP to yield the completive interpretation, but, as shown below, this is the interpretation that we get. For now, let us take these interpretation facts as the diagnostic for the feature definition of these verbs, and refer to them as telic [+TELIC].

Group D: [+TELIC]		***pofective*** 'to V for a while'	***completive*** 'to complete V'
po-jsc	'to go'	*	✓
po-ruszyc	'to move'	*	✓
po-leciec	'to fly'	*	✓
po-jechac	'to drive'	*	✓
po-biec	'to run'	*	✓

The distribution of interpretation follows the pattern for achievement and accomplishment verbs.[21] This, in turn, suggests that indeed these verbs must be telic, if telicity is a requirement for the completive interpretation and the pofective 'for a while' interpretation is impossible. In fact, as given in the examples below, these verbs manifest exactly such a property.

[21] Note that the requirement for the plurality of the object or iterativity of the eventuality is irrelevant. Also, even though I retained the translation of the completive aspect as 'to complete V', the interpretation of *po-* with this group is closer to inchoative.

(30) Magda idzie szybko *(do parku).
Magda go quickly to park
'Magda is going quickly to the park.'

(31) Bogdan leci *(do Montrealu).
Bogdan fly to Montreal
'Bogdan is flying (to Montreal)'

The VPs in (30) and (31) contain intended endpoints reflected in the obligatory PPs of destination, as is often a case for verbs of motion. Such eventualities must realize their endpoints through PP complementation, otherwise the sentences become ungrammatical.[22] The motion verbs are indeed telic and in combination with *po-* they receive the completive interpretation as expected.[23]

A distinctive property of the verbs of motion in Polish and other Slavic languages are their habitual counterparts rendered by means of the frequentative aspect, as shown in Group D'.

[22] The effect the PP has on telicity of the eventuality resembles that described by Depraetere (1995), who demonstrates a change from atelic to telic brought about by the addition of a directional PP.
[23] There arises a slight problem with the durative adverbial test. A sentence *Lecialam do Montrealu (przez) osiem godzin* 'I flew to Montreal (for) eight hours' is possible in Polish, even though the situation of 'flying to Montreal' has an inherent and fixed start and an endpoint. Unless these two points are part of a situation (unlike in this sentence), such a situation is no longer telic. In other words when modified by the duration adverb 'flying to Montreal' is not an accomplishment. There was a similar problem with the Group A verbs, which, in Polish can be followed by duration adverbs. This is most likely an effect of bare verb forms having an imperfective reading comparable to the English progressive.

Group D': [-TELIC][+PL]			*pofective* 'to V for a while'	*completive* 'to complete V'
po-chodzic	(go.freq)	'to walk (hab)'	✓	✓
po-ruszac	(move.freq)	'to move (hab)'	✓	✓
po-latac	(fly.freq)	'to fly (hab)'	✓	✓
po-jezdzic	(drive.freq)	'to drive (hab)'	✓	✓
po-biegac	(run.freq)	'to run (hab)'	✓	✓

The frequentative aspect renders plurality of a situation, i.e. carries a [+PL] feature, and obtains an atelic eventuality, hence a [-TELIC] feature. A shift in telicity rendered by the plurality of the event is discussed by Depraetere (1995) for English, who illustrates this by the following examples:

(32) a. John left at eight o'clock. (telic bounded)
b. John leaves at eight o'clock. (atelic unbounded)

Depraetere points out that the use of the present tense in (32b) induces a repetitive reading; although the separate cases when John leaves are in themselves telic, the habit as such is not.[24]

The habitual verbs of motion (just like the activity verbs) allow for both interpretations, pofective and completive, and they do so in very similar contexts, behaving like atelic verbs on the one hand and as plural telic verbs on the other. Note, in the examples below, that in the habitual structure these verbs do not require the end point in the form of a PP of destination.

[24] Sentence (32b) has another meaning, a scheduled departure which is future, telic and bounded. (I thank Jonathan Bobalijk for pointing this out to me.)

(33) Magda chodzi szybko (do parku).
Magda go.freq quickly (to park)
'Magda walks quickly (to the park).'

(34) Bogdan lata (do Montrealu).
Bogdan fly.freq (to Montreal)
'Bogdan flies (to Montreal)'

Importantly, when used, the PPs following [√V.freq] structures in (33) and (34) only render telicity on the individual sub-events. The frequentative aspect renders plurality of telic situations. This parallels the effects discussed by Depraetere (1995) and illustrated by the example in (32b). However, despite the atelicity of the frequentative eventualities of (33) and (34) the completive interpretation is possible, which implies that these VPs are in fact telic. Observe the data in (35) and (36).

(35) Maria po-chodzi-la do domow. [-SQA]: pofective
Maria pofec-go.freq-past to houses.
'Maria for some time has visited houses.'

(36) Maria po-chodzi-la do wszystkich domow. [+SQA]: completive
Maria compl-go.freq-past to all houses.
'Maria has been to all the houses.'

The contrast between (35) and (36) resembles the behavior of the activity verbs of Group C, which were telic by virtue of the [+SQA] feature of the object NP. The same effect is possible for the VPs involving the habitual motion verbs followed by

PPs with quantified NPs. The quantification yields a similar telicity effect [+TELIC$_{SQA}$].[25]

Without the [+SQA] feature inside the PP, the habitual motion verbs remain atelic and obtain the pofective interpretation when modified by *po-*, as was shown in (35) and also illustrated by (37) and (38).

(37) Ania chodzi-la na boso.
Ania go.freq-past on barefoot
'Ania used to walk barefoot.'

(38) Ania po-chodzi-la na boso.
Ania pofec-go.freq-past on barefoot
'Ania walked barefoot for some time.'

The activity of 'walking barefoot' is identical in (37) and (38), the only difference being in their time span delimited by *po-* in (38).

[25] The expression 'for some time' rendered by *po* in example (35), has scope over the whole eventuality described by [√V.freq]. This effect is interesting because if the frequentative meaning of the motion verbs is really part of the root, its [+PL] feature is more like a lexical property of the √V, and has a low scope i.e. not over the pofective aspect. This is different for the other verb groups for which the frequentative takes scope over the *po-* or the preverb. The second way in which the frequentative of the motion verbs differs from that of the other groups is that generally frequentative changes a future tense of a [perf-√V] (reading yielded by the preverb) into present. In Group D' the same structure retains the future tense reading. This further suggests that the frequentative of motion verbs is within the scope of the preverb and has a lexical rather than syntactic character. Also, assuming that the quantifier 'all' is lexical and takes scope over the frequentative in (36) then the frequentative of the motion verbs must be lexical too.

2.3.3.5. Verbs of Group E

Finally, the distribution of aspectual interpretations for the group of stative verbs follows directly the patterns established for the other groups. States are generally agreed not to have an internal temporal structure. They have been described as 'indefinite temporal entities' (Vendler, 1967), or 'process of no change' (Verkuyl, 1989). They contain no start or endpoint and any part of a state will be equivalent to the stste itself. In terms of the semantic criteria used here, they are defined by a [-TELIC] feature. The interpretations are unambiguously distributed as one would predict.

Group E: [-TELIC]		***pofective*** 'to V for a while'	***completive*** 'to complete V'
po-mieszkac	'to inhabit'	✓	*
po-zyc	'to live'	✓	*
po-bolec	'to ache'	✓	*
po-spac	'to sleep'	✓	*

2.3.4. Summary

From the data above, it becomes clear that a given aspectual interpretation yielded by the prefix *po-* is determined by the telicity status of the VP it modifies. The verb classes have been defined in terms of aspectual features in the following way: accomplishments/achievements [+TELIC], activities [+/-TELIC], and states [-

TELIC]. On the basis of the distribution of the pofective and completive interpretations with respect to the verb classes and their aspectual feature content, it is possible to define the exact feature environments for each of the interpretations: the preverb *po-* yields the *pofective* aspect 'for a while' in the context of atelic [-TELIC] verbs (VPs), and the *completive* aspect 'finish one after another' in the context of plural telic [+TELIC][+PL] verbs (VPs). The overall interpretive and selectional characteristics of *po-* are summarized in Table C.

TABLE C

Feature context and the aspectual alternation

	pofective po-	***completive po-***
semantic features	[+BOUND]: specify time limits on an eventuality	
VP feature context	[-TELIC]	[+TELIC] [+PL]
interpretation	'for X time'	'complete one after another'

2.3.5. Features

As shown so far, the telicity status of a VP which combines with a *po-*marked aspectual structure depends primarily on the aspectual verb class. It was also observed that the features of VPs can be derived from the features of NP objects, PPs or other aspectual properties of a VP, like the frequentative aspectual marking, as was the case of the habitual motion verbs. Below I illustrate the effect of the frequentative for other verb groups.

(39) Agata po-z-jad-ala czekolad-e/y (activity: [perf-√V-freq]+NPsg/pl)
Agata po-perf-eat-freq chocolate-sg/pl
'Agata has finished a chocolate bar on many occasions/chocolate bars'

(40) Zofia po-na-pis-ywala list/y. (activity: [perf-√V-freq]+NPsg/pl)
Zofia po-perf-write-freq letter-sg/pl
'Zofia has finished writing the letter on many occasions/letters'

(41) Marek po-za-syp-ial na zajeciach. (state: [perf-√V-freq]+NPsg/pl)
Marek po-perf-sleep-freq on classes
a. 'Marek fell asleep in classes'
b. 'There was a period when Marek would fall asleep in classes.'

As before, the frequentative marker contributes plurality [+PL] of the situations in (39) - (41) and the perfective marker contributes telicity [+TELIC]. Yet two new observations must be made. First, the interpretation is now not unambiguously completive or pofective. Sentences (39) and (40) mean completion of multiple events (completive) while in (41) it may imply either a set of events (again, completive) or multiple events occurring within certain time period (more pofective-like). The second observation is that the cardinality of the object NP is in these structures irrelevant. While the first observation is hard to explain at this point, the cardinality effect is quite easily accounted for in terms of the plurality effect introduced by the frequentative. In fact, the introduction of plurality of events marked with *po-* and a perfective preverb is only possible by means of the frequentative aspect , as shown by examples (42) and (43) containing the same verbs as were used in examples (39) and (40).

(42) *Agata po-z-je czekolad-e/ki. (*[perf-√V]+NPsg/pl)
Agata po-perf-eat chocolate-sg/pl

(43) *Zofia po-na-pisze list/y. (*[perf-√V]+NPsg/pl)
Zofia po-perf-write letter-sg/pl

The lack of the frequentative marker in (42) and (43) renders the sentences ungrammatical and, importantly, the plurality of the object NPs does not rescue the structures - the object's cardinality is irrelevant (as was the case for examples (39) and (40)). In principle, however, according to the established feature requirements, the [+TELIC] of the perfective and [+PL] of the object NP is expected to provide the necessary context for the intended derivation, which would result in interpretations as in (39) and (40), the feature set being the same.[26] This was, after all, the originally established requirement for *po-* to be interpretable as the completive aspect.

The explanation for this apparent inconsistency in how the features contribute to the derivations lies in their place of origin. Note the contrast in the source of the features entering derivations: in all the data discussed in section 2.3.3., features [+TELIC] [+PL] were supplied by lexical items (verb roots and NPs, PPs). In derivations in (42) and (43), on the other hand, while the potential [+PL] feature comes from a lexical item, the [+TELIC] feature comes from aspectual morphology (the perfective preverb). Such derivations are impossible. Observe a similar case of feature incompatibility in (44) and (45).

[26] Structures in (42) and (43) with both plural and singular NPs are grammatical without *po-* and both imply a finished situation.

(44) Agata po-jad-ala (*wszystkie) czekolad-y (activity: [√V-freq]+NPpl*[+SQA])
Agata pofec-eat-freq (*all) chocolate-pl
'Agata occasionally ate chocolate bars.'

(45) Zofia po-pis-ywal (*wszystkie) list-y (activity: [√V-freq]+NPpl*[+SQA])
Zofia pofec-write-freq (*all) letter-pl
'Zofia occasionally wrote some letters.'

Structures in (44) and (45) contain activity verbs (Group C) marked by a frequentative aspect [-TELIC][+PL] and followed by objects of specified quantity [+SQA], which in turn provides the VP with a [+TELIC$_{SQA}$] feature. After the affixation of the frequentative aspect, feature composition would result in a [+PL] and [-TELIC] feature combination. Observe, however, that this potential feature combination is disallowed for sentences (44) and (45), as the quantification by 'all' is ungrammatical. The telicity cannot be obtained by means of specificity of the object and, consequently, the only possible interpretation for structures [po-√V-freq]+NPpl is that of the pofective and not the completive aspect. As was the case for sentences in (26) and (28) of Group C in section 2.3.3.3., the same verbs may be followed by objects specified in quantity yielding a legitimate feature composition [+PL][+TELIC$_{SQA}$] for the resulting VP, which, in turn, is interpreted as completive after *po*-affixation. Therefore, the conflict must stem from the frequentative aspect present in (44) and (45) but not in (26) and (28). The conflict lies between the [-TELIC] frequentative feature and the [+TELIC$_{SQA}$] of the VP. The [-TELIC] feature is provided by a frequentative morphological affix, while the [+TELIC$_{SQA}$] derived

from the object is provided by a lexical item. The same conflict, a [+TELIC] contributed by a morphologically marked perfective and [+PL] of the object in structures (42) and (43), indicates that the combination of a lexical feature and the morpho-syntactic feature is disallowed.[27]

The last set of data illustrates further that the distinction among the features must take into account their lexical versus morpho-syntactic character.

(46) Magda po-chodzi na basen. (motion verb.hab: [√V.freq])
Magda pofec-go.freq on pool
'Magda will attend a swim-pool for some time'

(47) Rafal po-czyt-uje poezje. (activity: [√V-freq])
Rafal pofec-read-freq poetry
'Rafal occasionally reads poetry'

(48) Adam po-mieszk-uje tu i tam. (state: [√V-freq])
Adam pofec-inhabit-freq here and there
'Adam lives for some time here and some time there'

All three examples represent the pofective interpretation but the scope of the temporal bound is different in (46) compared to (47) and (48). In (46) the pofective aspect (the

[27] It cannot be the value or the content of the features that are at conflict. After all, the [-TELIC] of the frequentative affix simply blocks the [+TELIC] feature of the perfective affix in [perf-√V-freq] structures and yields atelic situations, as the reverse is possible for the [+/-TELIC] group C verbs becoming telic situations by means of the specified quantity of the object ([+TELIC$_{SQA}$]). So it is not the incompatibility of the [+] and [-] telic value or the feature content that are at conflict, it is the feature type. The frequentative-perfective verbs involved the aspectual features of one type - supplied by the morphological aspect markers, and the features involved in the Group C derivations were of another type - supplied by the lexical items not morphology. In examples (44) and (45) we encounter the incompatibility of the lexical feature [+SQA], yielding a lexical [+TELIC$_{SQA}$], with a morpho-syntactic feature [-TELIC].

'for a while' interpretation) takes scope over the habitual activity of 'attending the pool', while in (47) and (48) it is the frequentative aspect that takes the wider scope and we get the plural effect over pofective situations. This indicates that, indeed, the habitual motion verbs are not formed by morphosyntactic affixation of the frequentative but are a separate class of roots with frequentative as a part of their semantic content, i.e. the frequentative is an integral part of the lexical verb itself.[28] The second implication of the scope effects, crucial for the shape of the aspectual phrase structure of Polish to be discussed shortly, is that when the frequentative is added as a morphological affix it must be generated above *po-*.

The data above provide some interesting observations. First, features required for the aspectual affixation of *po-* can be obtained from lexical items like verb roots, object NPs, PPs or from aspectual morphology. Second, lexical features are not compatible with the morphosyntactic features when used in a single derivation. Because the aspectual morpheme *po-* can be used with either type of features it suggests that there are two types of *po-*, lexical and syntactic. In the reminder of this chapter I adopt the syntactic architecture with two domains proposed by Travis (2000) and show that these domains define and constrain the derivations in question. Before discussing the details of the aspectual structure in Polish, I will first outline the morphosyntactic composition mechanism for building the morphological structures.

[28] A similar observation has been made by Kipka (1990).

2.4. Morphosyntactic composition mechanism

Two processes are employed in aspectual verb formation in Polish: 1/ head movement of the morphological units, deriving the morphological structure, and 2/ semantic feature percolation akin to Lieber's approach (1980), resulting in semantic composition interpreted at the level of maximal projections. These two give a combination of morphemes confined by and resulting from feature selection and whose semantics is reflected in the order of affixation of the aspects. The order of morpheme affixation is dictated by the phrase structure of the aspectual projections. These involve the aspects in question: perfective, pofective, completive and frequentative.

2.4.1. Frequentative and Perfective Aspects

Recall from examples (2) and (3), repeated below as (49) and (50), that perfective aspect in Polish is rendered exclusively by means of affixation (more precisely prefixation). Frequentative aspect, on the other hand, is obtained by means of either affixation (suffixation) or suppletion, as shown in (51) and (52).

(49) Adam wy-pi-l wino. ([perf-√V] = perfective)
Adam perf-drink-past wine
'Adam has drunk the wine.'

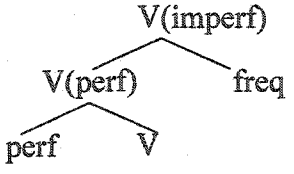
(50) Zofia do-pi-la wino. ([perf-√V] = perfective)
Zofia perf-drink-past wine
'Zofia has drunk the remainings of wine.'

(51) Jan czyt-yw-al gazety. ([√V-freq])
Jan read-freq-past papers.
'Jan occasionally read papers.'

(52) Kasia jada mieso. ([√V-freq])
Kasia eat.freq meat
'Kasia occasionally eats meat.'

The order of affixation of the perfective and frequentative morphological markers cannot be established on the basis of the overt morphological structure because the perfective prefix and frequentative suffix will appear immediately before (perfective) and after (frequentative) the root verb. Traditionally it has been assumed that the frequentative marker acts as an imperfectivizing suffix on perfective verbs (Damova, 1993 for Bulgarian; Piñón, 1995 for Polish) giving frequentative > perfective affixation order, as in (53).

(53) za-pis-yw-ac
perf-write-freq-inf
'to write down regularly'



There are two reasons for the analysis given in (53). First is the scope interpretation of the frequentative aspect illustrated in (54) - (56).

(54)	grac	(55)	czytac	(56)	jesc
	'to play'		'to read'		'to eat'
	wy-grac		prze-czytac		z-jesc
	perf-play		perf-read		perf-eat
	'to win'		to have read'		'to eat up'
	wy-gr-yw-ac		prze-czyt-yw-ac		z-jad-ac
	perf-play-freq		perf-read-freq		perf-eat.freq
	'to often win'		'to often have read'		'to often eat up'

The Mirror Principle proposed by Baker (1985) states that the scope of the inner affixes is narrower than the scope of the outer affixes. In (54) - (56) if the perfective preverb was attached after the frequentative the resulting interpretation would need to be of completion of the frequentative eventuality. Yet, the interpretation is the reverse. The frequentative aspect takes scope over perfective, and expresses a frequentative of completions and is indeed captured by the structure in (53).

The second reason to assume the frequentative > perfective order of affixation is the temporal effects rendered by the perfective and the frequentative aspects. Perfective preverbs attached to a present tense verb give a future tense interpretation, as shown in (57) and (58).

(57) Maria pisze wiersze. ([√V])
Maria write (present) poems
'Maria is writing a book.'

(58) Maria prze-pisze wiersze. ([perf-√V] = future)
Maria perf-write (present) poems
'Maria will copy poems.'

The perfective preverb triggers a temporal shift from present in (57) to future in (58). This suggests that, for the purpose of tense marking, the frequentative must have scope over the perfective aspect nearest to the root verb.[29] [30]

As is shown in (59), the frequentative aspect is generated as the head of Frequentative Aspect Phrase (FreqAP) above the Perfective Aspect Phrase (PerfAP)

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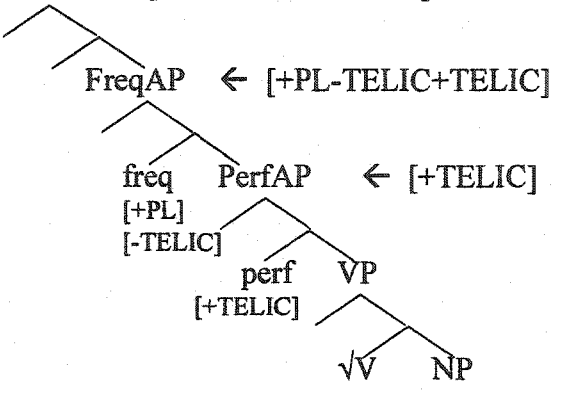
[29] A third reason for the traditionally suggested frequentative > perfective order is manifested by a group of verbs for which the frequentative surfaces only when perfective is overtly marked by the preverb (see footnotes 33 and 36).

[30] The rationale for the frequentative > perfective order of affixation being recognized, this approach still leaves two major problems. The first is the incompatibility of this analysis with the suppletive frequentative forms. It is generally agreed that features within the root, like those within the suppletive roots, must be closest to it and must be checked first (this is the premise of Cinque's 1997, ff. 52, functional hierarchy). This also falls out from the process of fusion within the framework of Distributed Morphology (Halle&Marantz, 1993). As characterized by Bobalijk (1997) if a vocabulary item expresses features of more than one node in syntax, these nodes must be fused in order for the vocabulary insertion to take place. For fusion to be possible these nodes must be sister terminal nodes under a single category nodes. The second problem is the possibility of the frequentative having a semantic scope, (i.e. non-tense marking) higher than over the root-adjacent preverb - a phenomenon of a Bracketing Paradox widely discussed in literature (Sproat 1984, 1985; Williams 1981; Pesetsky 1985; Lieber 1993). One of many accounts of such structures is that proposed by Pesetsky (1985) who suggests different structures at different levels of representations (S-structure and LF). He proposes a movement rule operating between the two levels to reconcile the discrepancy between a morphophonological grouping and its semantic output. Another account proposed by Booij and Lieber (1989) argues that morphological structure and prosodic structure are built simultaneously but do not need to result in identical morphological groupings. Although, it doesn't seem that either of these approaches can account for the Polish data (a single QR-type movement would not be sufficient to generate structures where frequentative may operate more than once, as it seems to do, and a prosodic structure does not seem to matter for the morphological structure building in Polish) they do provide useful mechanisms for these derivations. Both accounts evoke the necessity of dual or multiple representations, which could also be necessary for the analysis of the frequentative aspect in Polish. This is not of the immediate importance for the present analysis but should be addressed in future research.

immediately above the root verb. I adopt the terminology from Travis (1994) and assume the interpretation of the aspectual composition takes place in the head of EP (Event Phrase). Progovac (2001, 2002) gives further evidence from Serbian for treating EP as the place where the eventuality is defined.[31]

(59) EP ← [+PL-TELIC+TELIC]



In PerfAP of (59) the verb obtains a [+TELIC] feature contributed by the perfective aspect. In FreqAP the [perf-√V-freq] obtains [+PL] and [-TELIC] features from the frequentative marker. The structure's final morphological shape of [perf-√V-freq] is defined and interpreted in EP.[32]

[31] Slabakova (2001) puts Slavic preverbs in the head of PerfAspP (below the higher VP projection of a VP shell) where not only telicity but also inchoative, causative and manner information is encoded. In my view only the telicity of the preverbs has syntactic character (hence [+TELIC] will be treated as an s-feature) as it is uniform across all preverbs. The other properties (manner, causation) are specific to individual preverbs and are therefore lexical.

[32] We will see that, unlike in Lieber's account, it is important that the perfective and frequentative features do not block each other but all percolate to be interpreted in EP.

2.4.2. S-syntax vs. l-syntax

Hale and Keyser (1993) propose a distinction between two types of syntax: s(yntactic)-syntax and l(exical)-syntax. Their argument for such a distinction comes from denominal verbs and their paraphrases such as illustrated in (60).

(60) (a) The librarian shelved the books.
(b) The librarian put the books on the shelves.

They argue that because the derivations of structures (60a) and (60b) are sensitive to the Head Movement Constraint (Travis, 1984), both forms must be derived syntactically. They differ in that the denominal verb in (60a) is derived within l-syntax (i.e. the lexicon) but by means of a syntactic process, while (60b) is derived in s-syntax i.e. 'syntax proper'. Harley (1995) and Marantz (1997) and Travis (2000) develop this idea. Travis maintains the distinction between l- and s-syntax but shows that l-syntax is a domain of syntax rather than lexicon and has a phrase structure boundary in the head of E(vent) P(hrase), which sets it off from the domain of s-syntax. On evidence from causativization processes in Malagasy and Tagalog she illustrates that the division is principled. She shows that the distinction between lexical and productive causatives is determined not by choice of morphemes, as these languages use one morpheme for both constructions, but is due to different positions of this morpheme in a tree: below EP in l-syntax or above EP in s-syntax.

2.4.2.1. s-features vs. l-features

The present investigation of the Polish aspects manifests a very similar phenomenon to causitivation structures in Malagasy. Throughout the data so far we have seen a single morpheme *po-* contributing two distinct yet related semantic interpretations to verbs: a pofective and a completive aspect. These were conditioned essentially by the semantic feature context of the VP that *po-* modified. This context was established either by features of lexical items within the VP or by morpho-syntactic morphological aspectual markers on the verb base. A principled distinction between these types of features is maintained when we view them through the prism of a syntactic structure with two domains: s-syntactic and l-syntactic, separated by a boundary in EP, as proposed by Travis (2000). The data suggest that the features coming from lexical items i.e. object NPs carrying [+PL] or [+SQA] features, directional PPs implying telicity of motion verbs, or the frequentative aspect marked inside the root motion verbs, are of a lexical character and belong to the domain of l-syntax, and therefore form a class of l-features. The morphologically realized aspectual markers, perfective and frequentative, seem more productive in the derivation processes, operate within the domain of s-syntax and carry s-features. What allows for the morpheme *po-* to be sensitive to both types of features is that it may operate from two places of generation within a phrase structure: one below EP (an l-syntactic position) and one above EP (an s-syntactic position).

2.4.2.2. Two positions for po-

Starting with the l-syntactic position, I suggest that *po-* must be generated here in the head position of the PerfAP. The prime reason to believe that it shares a position with the perfective aspect is the lack of co-occurrence of any two of the aspects: perfective, pofective or completive, within an l-syntactic derivation, i.e. for structures not involving the frequentative aspect, *po-* may not appear with the perfective aspect, as shown below.

(61) Agata po-z-jad-ala czekolad-e/y [perf-√V-freq]
Agata po-perf-eat-freq chocolate-sg/pl
'Agata has finished a chocolate bar on many occasions/chocolate bars'

(62) *Agata po-z-je czekolad-e/y. *[perf-√V]
Agata po-perf-eat chocolate-sg/pl

(63) Agata po-jad-ala (*wszystkie) czekolad-y [√V-freq]
Agata pofec-eat-freq (*all) chocolate-pl
'Agata occasionally ate chocolate bars.'

Note that the only structure where *po-* may co-occur with the perfective aspect is that containing the frequentative aspect (61). Assuming that both perfective and frequentative aspects are a part of the s-syntactic derivation, the *po-* that combines with [perf-√V-freq] must be s-syntactic itself, hence the position it will operate from for sentences like (61) must be an s-syntactic position (above EP). Further, structures with both perfective aspect and *po-* (but no frequentative marker) are unattested in

Polish (as shown in (62)) but those with the frequentative aspect and *po-* (and no perfective preverb) are formed as in (63). This implies that perfective and *po-* will not co-occur unless a verb also carries the frequentative aspect and *po-* takes the s-syntactic position above EP. Finally, when *po-* co-occurs with the frequentative it is sensitive to the lexical features of the VP and the scope effects are exactly like those for the perfective preverbs i.e. the frequentative takes scope over the *po-*, as in (63). This suggests that the l-syntactic position (below EP) for *po-*, from which *po-* interprets the lexical features of VPs, is the PerfAspP.[33]

The s-syntactic position above the projection of EP is in the head of a provisionally labeled po-AspP. This position, besides the aspectual scope effects, is also supported by the tense scope effects, as illustrated in (64) - (67).

(64) Maria pisze wiersze. ([√V] = present)
Maria write poems
'Maria copies/is copying poems.'

(65) Maria prze-pisze wiersze. ([perf-√V] = future)
Maria perf-write poems
'Maria will copy poems.'

[33] Two other pieces of data support the present analysis. The first is the idiosyncratic interpretation of *po-* for structures [po-√V-freq] of Group B: *po-rywac* 'po-rip.freq' (to kidnap), *po-mylac* 'po-mistake.freq' (to err), *po-dzielac* 'po-divide.freq' (to share) or the inchoative rather than purely completive interpretation of the *po-* for the habitual verbs of motion. Another suggestive piece of evidence comes from the preverb-like behaviour with respect to the frequentative aspect affixation patterns. For certain verbs frequentative may not attach unless there is a perfective preverb on the verb. This observation holds for the perfective preverbs and *po-* alike (see footnote 36 for more detail).

(66) Maria prze-pis-uje wiersze. ([perf-√V-freq] = present)
Maria perf-write-freq poems
'Maria often/as a rule copies poems.'

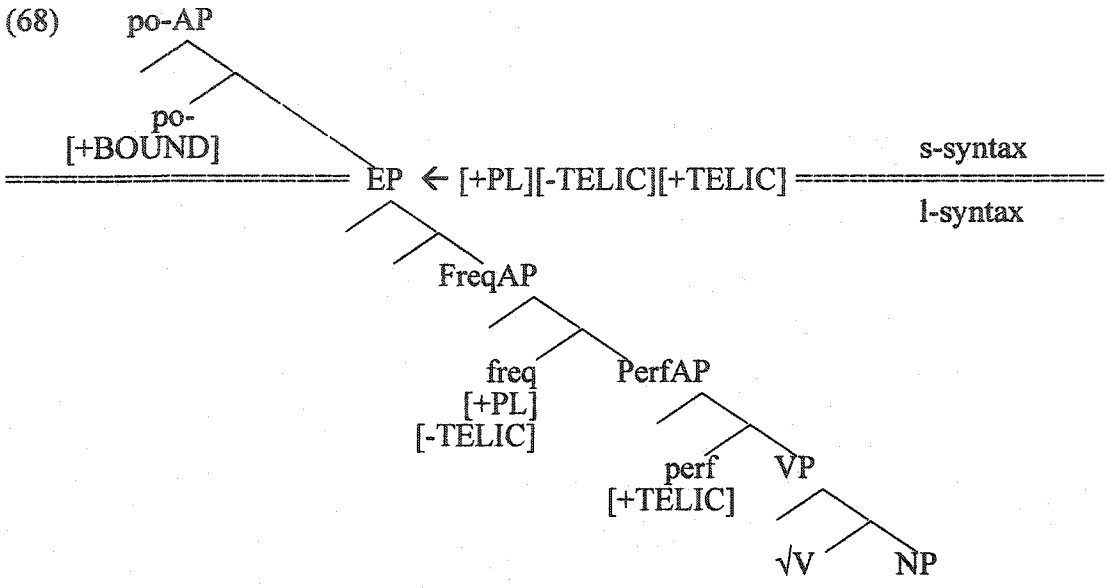
(67) Maria po-prze-pis-uje wiersze. ([po-perf-√V-freq] = future)
Maria po-perf-write-freq poems
'Maria will copy many poems.'

The frequentative of (66) takes scope over the perfective preverb shifting the tense from future to present. In (67) the morpheme *po-* must be generated outside of the PerfAP, because PerfAsp is occupied by the preverb, but it also must be generated above the FreqAP to be able to take scope over the frequentative and shift the tense from present (yielded by frequentative) into future.

To summarize, the distinction between the two domains of syntax, l-syntax and s-syntax, is maintained between the type of features involved in the morphosyntactic derivations. In Polish, this distinction must hold for the aspectual structure formation involving pofective, completive, perfective and frequentative aspects. These aspects are introduced by means of morphological marking and contribute the s-features. The perfective and frequentative aspects are not sensitive to the l-syntactic features of the root verbs or other lexical VP elements, i.e. they cannot use the information provided by these features. The pofective and completive aspects are introduced by a single morpheme *po-*, which has two domains of generation, l-syntactic and s-syntactic. The l-syntactic *po-* is sensitive to the l-features and the s-syntactic *po-* is sensitive to the s-features. Importantly, from both positions, *po-*, being an aspectual morphological marker, contributes s-features and is visible to other

aspects. Below I present a phrase structure and the distribution of the aspectual projections of Polish.

(68)



Note that the 'vagueness' of *po-* operating from the s-syntactic position, signaled in section 2.3.5. and illustrated in examples (39) - (41), is now less puzzling. Both requirements, atelicity for the pofective interpretation as well as the telicity and plurality for the completive interpretation are supplied. All these features are s-syntactic features. *Po-* bounds a given situation, as it has done in the examples so far. The interpretation now depends strictly on the feature choice for this particular derivation, which, in turn, is probably driven by the pragmatics of the resulting semantic effects.[34] Note, however that in structures like [po-po-√V-freq] (possible for

[34] For example, achievements like *umrzec* 'to die' when combined with a perfective preverb and a frequentative aspect *po-umireac* 'po-die-freq' (to die (of many people)), and *po-aresztowac* 'po-arrest-freq' (to arrest many people), combined with a prefix *po-* may only mean completion of plural events, i.e. have the completive interpretation. This must be for pragmatic reasons - you cannot die or arrest for some time. On the other hand an activity verb *po-prze-czyt-ywac* 'po-perf-read-freq' may mean either "to occasionally finish all the readings" or "to finish all the readings within a certain time limit".

verbs of Group C) the outer *po-* can only contribute the pofective meaning, i.e. it can bound in time an atelic situation, but not a plural telic situation e.g. [po-po-eat-freq] means 'to, for some time, do eatings' or [po-po-drink-freq] 'to sip for some time'. What it indicates is that [+TELIC] is not among the features available for the derivation, hence the completive interpretation is not available either. This makes sense when you recall that the way to introduce telicity into derivations with the verbs of Group C was by the [+SQA] feature. This feature is not available for an s-syntactic derivation, above EP, as there is no perfective preverb to contribute it. The resulting interpretation of *po-* at this level for such structures is only pofective.[35]

2.4.2.3. Morphosyntactic derivations within the two domains

With all the facts in place, we can now structurally illustrate the derivations of (39), (42) and (44) repeated below as (69), (70) and (71).

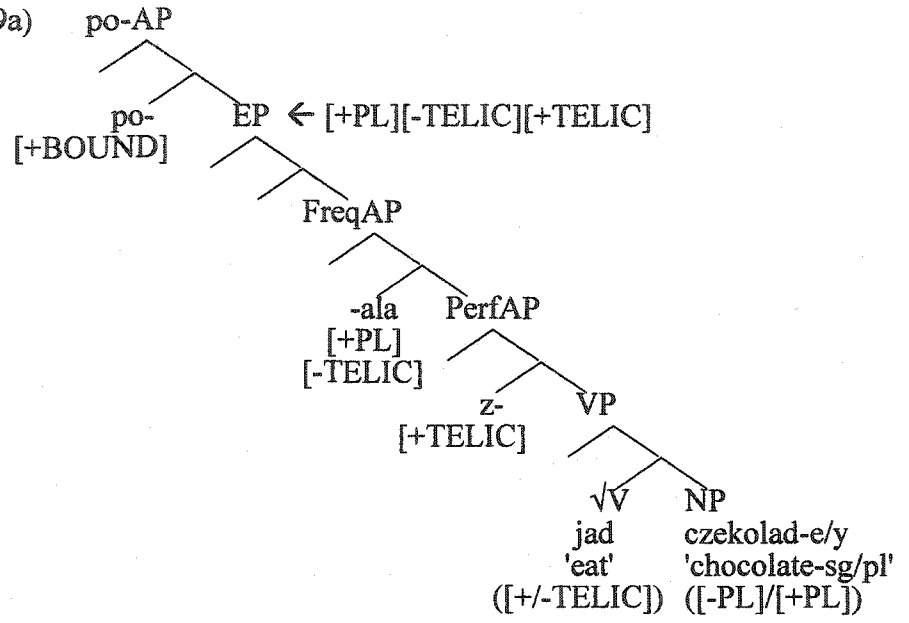
[35]Note that a structure with a double *po-* and a root verb is impossible for related reasons.

*Agata	po-po-je	czekolad-e/ki.	*[po-po-√V]
Agata	po-po-eat	chocolate-sg/pl	

Even though the inner *po-* may attach (as long as the feature selection is satisfied within l-syntax) the outer *po-* must be s-syntactic and requires s-syntactic features. These can be only contributed by other aspectual markers.

(69) Agata po-z-jad-ala czekolad-e/y [perf-√V-freq]
Agata po-perf-eat-freq chocolate-sg/pl
'Agata has finished a chocolate bar on many occasions/chocolate bars'

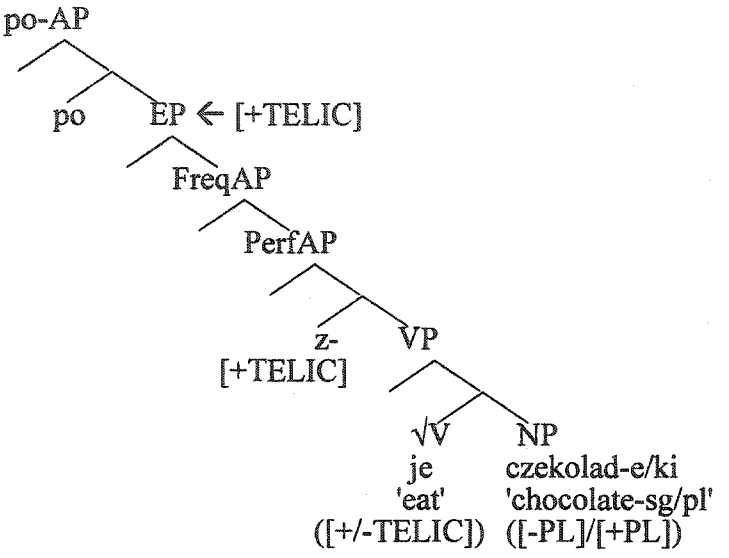
(69a)



Structure (69a) shows how the s-syntactic features combine to form the final structure, while neither the features of the root verb or the object NP (in parentheses) are relevant for such an s-syntactic derivation. The atelic verb base 'eat' combines with the object NP, and receives [+TELIC] s-feature after the perfective preverb affixation. This structure acquires a [-TELIC] s-feature after the frequentative affixation. In EP, this eventuality is determined as a plural (atelic) sequence of telic events, which are then bounded by a preverb *po-*.

(70) *Agata po-z-je czekolad-e/y. *[po-perf-√V]
Agata po-perf-eat chocolate-sg/pl

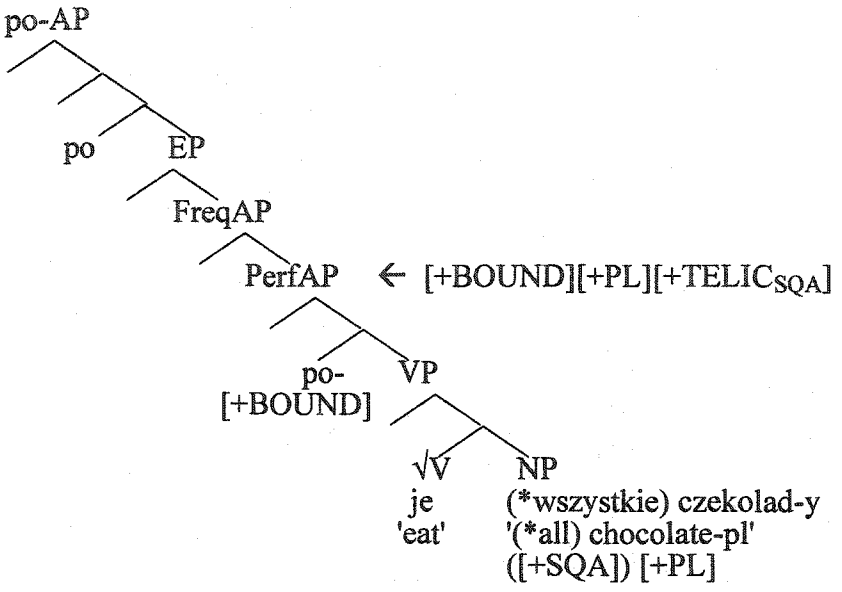
(70a)



As suggested before, sentence (70) must be ruled out for structural reasons. The derivation is impossible within the domain of l-syntax, because the place of generation of *po-* is taken by the perfective preverb. It is also impossible in s-syntax because the features that the s-syntactic *po-* selects for are not available: [-TELIC] is not supplied, and the [+PL] is l-syntactic.

(71) Agata po-jad-ala (*wszystkie) czekolady [po-√V-freq]
Agata pofec-eat-freq (*all) chocolate-pl
'Agata occasionally ate chocolate bars.'

(71a)



The sentence in (71) is grammatical provided that the object NP is not exhaustively quantified. The reason for this requirement is the incompatibility of features. Note that the derivation of [po-√V]+[NPpl]$_{[+SQA]}$ is possible, with a resulting completive interpretation. But the features that such a structure has are NP l-syntactic features ([+PL][+TELIC$_{+SQA}$]) and the syntactic [+BOUND] feature of the l-syntax *po-*. Attaching the frequentative aspect means combining the l-syntactic feature [+TELIC$_{SQA}$] with an s-syntactic one [-TELIC] of the frequentative. This is disallowed and the derivation is impossible. However, the derivation is saved by not including the quantifier, i.e. not supplying the [+TELIC$_{SQA}$] feature. Attaching the

frequentative and yielding atelicity is a feature changing rather than a feature adding process. If *po-* were projected above EP in s-syntax (which is hard to tell but not crucial for the interpretation), the feature selection (an s-syntax [-TELIC] feature of the frequentative) is satisfied, *po-* may attach and receives the pofective reading.[36]

2.5. Conclusions

In conclusion, taking as a starting point the distinction between the pofective and completive aspects in Polish (Piñón, 1993 and Siewierska, 1991), I have presented some further evidence that the prefix *po-* must be analyzed as a separate aspectual marker rather than as a perfective preverb. Unlike the perfective preverbs, *po-* manifests very precise selectional and structural properties which lead to it contributing two distinct semantic interpretations: pofective or completive. The interpretations result from the combination of the semantic feature [+BOUND] of the morpheme *po-* and the features of the VPs that enter a given derivation, [+PL][+TELIC] with the resulting completive aspect, or [-TELIC], with the resulting

[36]Although the impossibility of feature adding between s- and l-syntactic features seems rather speculative, there are reasons to support it. Adding a frequentative aspect to Polish activity verbs (Group C) is very productive. However, interestingly, with groups A, B, and E, whose verb roots are "+" or "-" telic, adding the frequentative is only possible after the verbs have been perfectivized by a preverb, i.e. have acquired the s-syntactic telicity. It appears, that the l-syntactic (a)telicity cannot be blocked with the s-syntactic (a)telicity. Once the telicity is added as an s-syntactic property the [-TELIC] feature of the frequentative can block it. Also note that for Groups A, B and D the perfective telic feature does not block/change the telicity of the base verbs, which are inherently (l-syntactically) telic. This would seem to be in line with the feature adding vs. feature changing distinction, where affixation of the preverb to these verbs is a feature adding process. For the atelic states of Group E the only preverb that can be added is an inchoative *za* . Whether the inchoative carries an s- or l-syntactic feature is not clear (I would like to say that it introduces s-syntactic telicity and l-syntactic inchoation, which then allow for the s-syntactic feature of the frequentative, leading to the required feature condition for *po-* to attach and bound these plural events). This is an interesting issue, and could give some deeper insight into the feature system that I have attempted to establish. I leave this for further research.

pofective aspect. The multifunctionality of *po-* is further distributed within the two domains of syntax, s-syntax and l-syntax as defined by Travis (2000), where *po-* has two possible places of generation, one in each domain. This is because *po-* is capable of entering (from the PerfAP) the purely l-syntactic derivations which involve only l-features as well as the s-syntactic derivations (from po-AP), which involve s-features. At the l-syntactic level *po-* functions distinctly either as a marker of the completive aspect or the pofective aspect, with certain exceptions of idiosyncratic interpretation (e.g. inchoative). When operating from above EP, in s-syntax, its interpretation becomes vague but still constrained within the interpretive options for *po-*

The twofold nature of the prefix *po-* results in a number of implications for the analysis of the aspectual system of Polish. It shows that the aspects - pofective, completive, perfective and frequentative - come into very strictly constrained interactions and these interactions must be defined in terms of the domains of syntax. The aspects contribute the interpretation to the VP by means of the semantic features they carry. Being morpho-syntactic items, aspects carry semantic features of the s-syntactic type. These features are only sensitive to the features of the same type, i.e. aspects may only interact within the domain of s-syntax. L-syntactic features are carried by lexical items, like NP objects, directional PPs or quantifiers, and will not be visible/relevant for the derivations above EP, in s-syntax. *Po-* has the property of being involved in both types of derivations l-syntactic, when generated within l-syntax and s-syntactic when generated in s-syntax.

In the next chapter, I will present an experimental study and its results in which the knowledge of the properties of the Polish aspects just described is tested among native speakers of English.

CHAPTER 3

L2 acquisition of the Polish aspects - the study

3.0. Introduction

In this chapter I will report on an experimental study on acquisition of the aspectual system of Polish, described in Chapter 2, by a group of advanced and a group of near-native speakers whose L1 is English. The goal of the study is to identify which parts of the system are acquired by L2 speakers and which parts are not. The purpose of this investigation is to define the content and the nature of the near-native grammar at the steady-state of acquisition as well as examine it in the context of the preceeding, advanced, state.

The study consists of four tasks. In the following sections I will present each of the tasks and the obtained results. First, however, I will describe the elements of the system which need to be acquired in order to constitute knowledge comparable to native knowledge.

3.1. Acquisition of the Polish aspectual system

3.1.1. Aspectual distinctions

The three aspects that are considered in this study are perfective, completive and pofective. They are all morphologically realized as preverbs, where pofective and completive are represented by a single morpheme *po-*, but all three are characterized by distinct selectional, structural and interpretive properties. In my theoretical account of the aspectual distinctions among preverbs in Chapter 2, I have presented further evidence (with respect to proposals from Piñón, 1993 and Siewierska, 1991) that the prefix *po-* must be analyzed as a separate aspectual marker rather than as one of the perfective preverbs. Its multifunctional character manifests itself in interpretive (completive vs. pofective) and morpho-syntactic properties (place of generation within the phrase structure and distinct selectional requirements). I have proposed the following distinctions in terms of semantic content of the three aspects: the *perfective aspect* carries a [+TELIC] semantic feature, i.e. it marks an eventuality as telic, while both *pofective* and *completive aspects* carry a [+BOUND] feature, i.e. they bound eventualities in time but differ in the interpretive properties dependent on the semantic and morpho-syntactic contexts in which they occur. The completive aspect is the most specified for the feature context, selecting for a plural [+PL] and telic [+TELIC] VP; the pofective aspect selects for an atelic VP [-TELIC] but is not specified with respect to plurality; the perfective aspect shows no requirements for the features of the VP it will attach to. The distinct interpretations of the morpheme *po-*

result from the combinations of its semantic feature [+BOUND] and the features of the VPs that enter a given derivation. The [+PL][+TELIC] VP yields a completive aspect while a [-TELIC] VP yields a pofective aspect. The multifunctionality of *po-* is further expressed within the two domains of syntax, s-syntax and l-syntax, where *po-* may be a part of either an l-syntactic derivation involving only l-syntactic features or an s-syntactic derivation involving only s-syntactic features.

3.1.2. Knowledge of the Polish aspects

Because the aspectual system in Polish represents a clear case of two types of linguistic interfaces - syntax-semantics and syntax-lexicon - it exemplifies a broad range of the type of knowledge to be acquired (or the sources of knowledge to be accessed) for the L2 end-state to be complete. The investigation will aim to find out whether there are gaps (and, if so, will address their character) in the non-native system - i.e. the aim is to examine the nature of 'incompleteness'/'divergence' of the end-state grammar.

For the end-state grammar to be complete with respect to the aspectual system of Polish, L2 speakers must manifest the distinctions between all three aspects. This, in turn, implies underlying knowledge of, first, the selectional requirements, second, the semantic properties in terms of features carried by the aspectual morphology, as well as by the verb classes involved in the aspectual composition, and, third, the feature system and restrictions falling out of its distribution within the two domains of syntax.

The claim that knowledge of the interpretive distinctions must imply knowledge of the underlying semantic and morpho-syntactic properties of the entire system is motivated by the fact that it is the restrictions and the requirements of the system that drive the resulting interpretations. Hence, each aspect assumes a different interpretation depending on the features, [-TELIC] vs. [+TELIC][+PL], supplied by the VP. Further, all three aspects, despite their apparent uniformity - they are all preverbs - are themselves defined by semantic features, perfective [+TELIC] and pofective and completive [+BOUND], and differ in levels of specification for the required feature context, from the least (perfective) to the most exhaustively specified aspect (completive). Finally, the combination of the aspectual features with the features of the VPs, which yields an interpretation, may take place only within a single domain of syntax and not across domains, otherwise a derivation is illicit and a potential interpretation which would result from composition of given features is impossible. The learners' competence must, therefore, contain information not only about which feature context yields which interpretation and which interpretations are unrealizable in these contexts (the syntax-semantics level of analysis) but also which aspectual structures are allowed by virtue of their syntactic vs. lexical feature components (the syntax-lexicon interface).

3.1.3. Aspectual distinctions in the input

In order for a learner to attain a grammar that will represent all the above information, a number of potential drawbacks with the input must be overcome. The

generally available linguistic data may lead to interpretive overgeneralizations. For example, a completive verb may be analyzed as a perfective verb, i.e. a verb prefixed with a perfective preverb. Its distinct yet also telic aspectual interpretation, as well as a set of unique selectional requirements with respect to object NPs, may go undetected and lead to serious impoverishment of the learners' competence. This is not an unlikely scenario. Firstly, the perfective aspect, next to its counterpart frequentative aspect (atelicity marker), is the most prominent aspectual modification in the input. Secondly, the completive interpretation falls under the umbrella of the telicity-marking perfective aspect, where perfective implies completion, while completive implies 'completion to a set one after another'. The pofective verbs, which compositionally also appear identical to the perfective structures, may also be misanalyzed as perfective. Recall, however, that pofective verbs carry no implication of telicity whatsoever and are characterized by a selectional requirement with respect to semantic verb classes (atelicity). This type of overgeneralization, again, would misrepresent the complexity of the Polish aspectual system by failing to recognize a distinct aspectual interpretation and the underlying semantic and syntactic subtleties of the system. These two potential shortcomings in acquisition of the Polish aspects would have far reaching consequences for the overall state of grammatical competence among L2 learners. Without knowledge of the completive and pofective interpretations of the preverb-marked verbs, the whole aspectual system narrows down to an entirely lexicon-based morphological rule of attaching a preverb (lexically selected) to a verb base. For the purpose of aspectual contrast between perfective and imperfective aspects, the syntax-semantic interface of the system as well as syntax-

lexicon interface may remain unacquired, provided some type of prescriptive knowledge of preverbs as perfective aspect markers is maintained. Furthermore, this kind of knowledge would suffice for the majority of aspectual interpretations in Polish.[37]

All the above considerations raise a question of acquirability of Polish aspect system as a system rather than as a set of lexicon-generated combinatory options for preverbs and verbs, which would suffice for the learning of the perfective vs. imperfective contrast in Polish. There are three sources of data that may serve as triggers for recognizing the interpretive distinctions. First are the structures where the use of *po-* results unambiguously in only one of the interpretations regardless of the properties of the other elements within the VP. This is the case of derivations with Group E state verbs. *Po*-state combinations permit only the pofective interpretation, signaling that a preverb may mark boundedness without implying completion/telicity. A conclusion like this would be substantiated by a restriction on an adverbial context for such structures, where only durative but not time-span adverbials, compatible with all other preverbs, are compatible with *po*+Group E verbs.[38] A second type of evidence should be available through the verbs of Group A (accomplishments/achievements) and their selectional requirements on the object NP. Recall, that these verbs standardly obtain a completive interpretation (with a marginally possible but much less plausible pofective interpretation for accomplishments) but the structure itself is only grammatical in the context of a

[37] Recall, that for the purpose of the present analysis the perfective aspect is analyzed as having no specifications with respect to the feature context. However, as was signaled in footnote 13 of Chapter 2, perfective preverbs do carry certain requirements on the shape of the VP.

plural NP object. This requirement distinguishes *po-* from other preverbs in a new way - the meaning now is completive, akin to the perfective preverbs, but the additional cardinality requirement sets it apart from the rest of the preverbs, which show no requirements for the content of VPs they modify. Finally, the third piece of evidence for the distinct interpretations comes with the verbs of Group C (activities). *Po-* combined with activities may yield either of the interpretations, depending on the semantic features of the object (plurality and exhaustively specified quantity). Again, the alternation in meaning is indicated by the restrictions on adverbial modification.[39]

In sum, despite the input being rather obscure, there exists some evidence that may potentially guide learners to make a distinction between *po-* and other preverbs, as well as the distinction between the completive and the pofective contributions of *po-*. However, this evidence is neither robust nor explicit, nor sufficient. The acquisition of the entire aspectual system seems unlikely if the input is the sole source of information. While an observation that a preverb is not always a marker of a finished situation is in itself not an easy one to make, particularly in face of abundance of preverbs whose prime role is to do just that, to deduce the exact context in which *po-* marks completion and when it does not would involve detecting an array of factors which determine the role of *po-*. A learner needs to establish the relevance of verb class, cardinality and exhaustively specified quantity of an object, and the interaction of the perfective and frequentative aspects within a VP. All these factors

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[38] Because of the inchoative nature of Group D the time-span adverbials are not compatible with these verbs.

[39] In principle, similar evidence could be obtained from Group D' verbs (atelic motion verbs) which shows alternation in interpretation dependant on complementation. However, these verbs are more complex and such evidence may be even less transparent.

are, or are not, relevant for the function of *po-* depending on the syntactic domain of composition. The complexity of the task of formulating this type of knowledge constitutes a case of poverty of the stimulus, since much of what has to be learned is what interpretations are not possible.

For native speakers much of the knowledge to be acquired must be provided by UG in form of features and computational principles and restrictions on combinations and interpretations. In the case of L2 learners, one could suggest that the evidence from the naturalistic input may be reinforced by explicit instruction and negative evidence, i.e. information about which interpretations are possible in which contexts and which are not.[40] However, to my knowledge, the instruction regarding Polish aspects available in the classroom is limited mostly to the perfective/imperfective distinction, where learners are presented with possible preverbs and their meanings. Such grammar instruction does not include properties of verbs and objects, which determine interpretation. Knowledge of the interpretive options of the Polish aspects must, therefore, depend on other sources of knowledge, namely UG.

3.1.4. L1 acquisition of aspect

The majority of research on L1 acquisition of aspect has been from the perspective of developmental relations between tense and aspect. This relation has been investigated in French by Bronckart & Sinclair (1973), in English and Italian, by

[40] Actually, the role of negative evidence in the development of linguistic competence is a matter of debate (White 1991, Schwartz 1993, Schwartz and Gubala-Ryzak 1992).

Antinucci & Miller (1976), English (Andersen & Shirai 1996), and German by Behrens (1993), to name a few. This research lead to a formulation of the *primacy of aspect hypothesis* (POA), following Jackobson's (1957) *aspect before tense hypothesis*. The POA claims that acquisition of tense/aspect morphology is guided by lexical aspectual classes (or telicity), whereby perfective morphology appears initially on telic predicates, while imperfective morphology appears first on states and only later spreads to activities.

The only study relating to acquisition of aspect in Polish has been carried out by Weist et al. (1984). The focus of their investigation is how tense and aspect interact in the development of the child tense system. They set their research questions against the *defective tense hypothesis* (DTH), a term they propose instead of POA. DTH states that, due to the lack of the abstract concept of time, early child grammar only encodes past situations if these result in present state, i.e. early utterances express aspectual not deictic relations. Weist et al. (1984) investigate Polish child data with respect to the predictions of DTH, which they summarize as follows: 1/ only telic verbs will receive past tense inflections, 2/ tense distinctions will be redundant and accompany only aspectual distinctions, 3/ only references to the immediate past will be made.

The investigation consisted of two studies. The longitudinal study involved six children (three in the 2;2-2;0 and three in 1;9-1;7 age groups) observed and recorded during four sessions over a two- to four-month period. The cross-sectional study involved nine children (age ranging from 2;4 to 2;8 and 3;4 to 3;11) who were tested by means of elicitation tasks providing obligatory contexts for the use of past

tense (activity and telic verbs) in imperfective aspect and future tense in perfective aspect.

The longitudinal study showed that (i) imperfective past activity verb phrases were found in early tensed language; (ii) imperfective verbs in past tense referred to actual situations; (iii) the imperfective and perfective forms of the same verbs were contrasted; (iv) telic verb phrases were used without observable resulting states; (v) sporadically, and later in the development, future deictic references were made. In general, it was concluded that early tensed utterances express deictic relationship, i.e. tense is not defective. The general findings of the cross-sectional study suggested that tense morphology was used independently from aspect morphology.

The conclusions of particular relevance for this thesis are those suggesting that the aspectual distinction between perfective and imperfective aspect (which the authors describe as 'primitive' in Polish, unlike the durative vs. non-durative contrast) are represented in child grammar as early as 2 years old.

3.1.5. Acquisition of L2 aspect

Except for the research carried out by Slabakova (1997b) and Slabakova & Montrul (in press), presented in Chapter 1, section 1.3.2., the vast majority of investigations of aspect in L2 acquisition has focused on temporal-aspectual systems in interlanguage. As summarized by Bardovi-Harlig (1999), within this research two main trends of inquiry are most apparent: one is the investigation of how semantic concepts are expressed through different linguistic devices (e.g. Klein & Perude 1992,

Dietrich, Klein, & Noyau 1995) and the second is the analysis of the distribution of verbal morphology as a reflection of the underlying semantic system, centralizing on the *primacy of aspect hypothesis* for L2 (e.g. Andersen 1991, Andersen and Shirai 1994, 1996, Bardovi-Harlig 1992, 1997). The conclusions of the L2 aspect research are mostly based on accuracy rates in suppliance of perfective/imperfective morphological markers on the various lexical classes, without any empirical evidence as to whether the learners are aware of the actual meaning of the aspectual morphology they use (see Slabakova 1997b, 2001 for a detailed critique of this research). Furthermore, most of the existing research is based exclusively on elicited or spontaneous production data. Moreover, there has been no study, as far as I know, addressing the issue of the acquisition of aspect in Polish as a second language. In the next section I will describe the present experimental study of Polish L2 aspects.

3.2. The experiment

To test the state of L2 knowledge with respect to the aspectual properties of Polish, four tasks were devised: a semantic compatibility task, an end-state compatibility task, a grammaticality judgment task, and a picture selection task. Each task aimed at revealing information about the subjects' competence with respect to a separate set of restrictions governing the system: distinct interpretations, selection of feature context, and grammaticality of derivations dependant on the syntactic domain of structure building. In the following sections, I will present the participants of the

experiment and then will describe the tasks. Each task description will be followed by a presentation of the results.

3.2.1. Subjects & procedure

The study involved two groups of native speakers, adults and children, one group of advanced adult L2 speakers and one group of adult near-native speakers of Polish.

The adult native group consisted of 27 speakers, of whom only 16 participated in the *picture selection* task, while all of them completed the other three tasks. Some of the subjects were tested in Montreal, Canada, and some in Poland. Their average age was 34 years old, ranging from 22 to 62. All of the native subjects had higher education, most of them had also completed some level of university or were still studying, either in Poland or Montreal. The child subjects took only the *picture selection* task. The group consisted of 16 children, who were all pupils in a kindergarten class of the same elementary school in Poland. Their ages ranged from 5 to 6 years old.

The L2 speakers were classified into two groups, advanced and near-native, on both impressionistic grounds and on the basis of a proficiency test which they completed before the experimental tasks. The proficiency test was adapted from the Polish Proficiency Test (PPT) developed by the Division of Foreign Language Education and Testing at the Center for Applied Linguistics (CAL) in Washington, DC. The original test comprised three sections, listening comprehension, reading

comprehension and structure. For reasons of time I decided to limit the test to the structure section. A preliminary interview with each subject allowed me, to some extent, to judge his or her listening and spoken skills. The total possible score on the proficiency test was 35. Subjects who scored 30 and above, and were judged as near-native after the interview, were classified as near-native and those who scored between 20 and 30 or whose Polish did not meet the near-native impressionistic criteria of the interview, regardless of their score on the test, were classified as advanced.

The advanced group consisted of 15 subjects, all of whom took part in all the experimental tests. Their mean age was 29, ranging from 22 to 42. They all started learning Polish as adults, where the age of the first exposure to Polish varied from 19 to 30, and the length of exposure from 1 to 12 years. 5 of the subjects had taken formal instruction in Polish during their university education in Poland, while the others' instruction lasted from 2 months to 3 years. All of them lived in Poland, either temporarily or permanently, and were fully integrated within the Polish society.[41]

The near-native group consisted of 14 subjects, 3 of whom took part only in the *picture selection* task. Their mean age was 30, ranging from 21 to 46. They all started learning Polish as adults, where the age of the first exposure to Polish varied from 19 to 25, and the length of exposure from 5 to 30 years. Three of the subjects had taken formal instruction in Polish during their university education in Poland, while the others' instruction lasted from 1 to 2 years. All of them lived in Poland,

[41] Three of the subjects whose formal instruction was two months prior to coming to Poland were religious missionaries, whose integration was of a different nature then the rest and their stay was the shortest (between 14 months and two years).

temporarily or permanently, and were fully integrated within the Polish society. Most of this group of subjects had settled in Poland and worked as English language instructors or university professors. Three subjects in this group were native speakers of German, Dutch and French.

All the subjects were tested individually. In most cases, testing of the adults, learners and controls proceeded in identical order, starting with the proficiency tests, followed by the *semantic compatibility* task, *end-state compatibility* through the *grammaticality judgment* task. Although, at times for practical reasons, this order could not always be strictly maintained, it was ensured that the *picture selection* task was always administered last.

3.2.2. Semantic compatibility task

This task was designed to test the subjects' competence with respect to the distinctions in meaning among the three aspects, pofective, completive and perfective. The contrasts that the subjects were presented with were of two types: one between the perfective and pofective aspects, and the other between perfective and completive aspects. These contrasts were devised to elicit knowledge that both pofective and completive aspects differ in interpretation from the perfective aspect.

The task was composed of 20 test and 10 filler items. Each item consisted of 2 pairs of sentences. For the test items, the first pair contained one sentence with a *po-* marked verb and one with the same verb but marked with an appropriate perfective preverb. The second pair contained sentences which were continuations of the

sentences in the first pair. Examples are given below, where (1) is a filler, (2) tests for the distinction between completive and perfective aspects and (3) tests for the distinction between pofective and perfective aspects.[42] In each case, sentence a. was a natural/logical continuation of one of the sentences 1 and 2, while sentence b. was a natural/logical continuation of the other. The subjects' task was to pair up sentences 1 and 2 with sentences a. or b. on the basis of semantic compatibility. In the filler items 1 and 2 involved an identical verb but marked with different preverbs modifying the manner or means of execution of the eventuality in two distinct ways implied in sentences a. and b.

In example (1), the verb in both sentences 1 and 2 is marked by a perfective preverb. The interpretation of these sentences differs due to the meaning contributed by these preverbs. The two meanings require that sentence 1 is matched with sentence a. and sentence 2 is matched with sentence b.

(1) 1. Malarz namalowal dom.
A painter perf-paint a house
'A painter painted a picture of a house'

2. Malarz odmalowal dom.
A painter perf-paint a house
'A painter repainted a house'

a. Obraz jest gotowy na sprzedaz.
The painting is ready for sale.
b. Dom wyglada teraz duzo lepiej.
The house looks much better now.

Example (2) contains a perfective preverb-marked verb in 1 and the same verb marked with *po-* in 2, which has a completive interpretation.

[42] The italicized gloss and translations were not given on the actual tests.

(2) 1. O-budzilam dzieci.
(I) perf-woke children
I woke up the children

2. Pobudzilam dzieci.
(I) compl-woke children
I woke up the children one by one

a. Kazdy wstal o innej porze.
Each got up at a different time
b. Wszyscy wstali jednoczesnie.
They all got up together

The only difference between sentences 1 and 2 of the examples in (2) is the distributive character of the situation in 2 contributed by the completive aspectual interpretation of *po-*. Therefore, the preferred matching is 1-b and 2-a. Even though, in principle, the meaning of the perfective sentence 1 does not exclude either of the situations described in a. and b.[43], the completive sentence 2 is only truly compatible with sentence a.

Finally, in (3) we have sentences containing a perfective preverb-marked verb in *1* and the same verb marked with *po-* in 2, which results in a pofective interpretation.

(3) 1. Zabolal mnie zab.
perf(inchoat)-hurt me tooth
I got a toothache

2. Pobolal mnie zab.
pofec-hurt me tooth
I had a toothache for a while

a. Poszlam wiec do dentysty.
So, I went to the dentist's

[43] A plural object of a perfective verb does not imply a number of achievements but a single achievement on a number of objects collectively. This result does not rule out, however, that the objects are affected on different occasions.

b. W koncu poszlam do dentysty.
In the end I went to the dentist's

The interpretive distinction between sentences 1 and 2 is more categorical, the preverb-marked verb in 1 implies perfective aspect/telicity while sentence 2 with *po-* obtains the 'for a while'/atelic reading yielded by the pofective aspect. Hence, the expected matching is 1-a and 2-b. Note that in this case, again, both 1 and 2 could logically be followed by either a. or b. However, it is the durative character of the situation in 2 that makes it most compatible with the implication of that duration in b.

As can be seen in the given examples, the subjects' responses are dependent on rather subtle judgments which probe their competence and assess the richness of the aspectual system they have integrated into their L2 grammar. The verbs used for this task were verbs of Group A (achievements/accomplishments) and verbs of Group E (states). Each verb group was represented in 10 test items. The rationale behind choosing these two groups was that, apart from the rather problematic motion verbs of Group D, the interpretation of *po-* with these verbs is unambiguous. Structure [po-V(Group E)] can only be pofective and mean 'for a while', while structure [po-V(Group A)+NPpl] can only be completive and mean 'finish one after another'.[44] The remaining 10 filler items contained randomly selected verbs. The filler items were devised with the intention of diverting the subjects' attention from the *po-* marked verbs and to see whether the lexical meaning distinctions among the perfective preverbs are part of their grammar. The lack thereof could become one way

[44] The marginally possible pofective effect with Group A verbs, where *po-* bounds the process part of an achievement, is irrelevant in this task. The test items where *1* and *2* are perfective and completive was to be matched with telic and bound situations in a. and b. sentences. In other words, matching a *po-*V situation in *1* or *2* with an atelic bound (pofective) situation in a. or b. was not an option.

of explaining a failure to perceive further distinctions among the other aspects because they, too, are contributed by preverbs.

3.2.2.1. Semantic compatibility task - results

The *semantic compatibility* task was designed to test knowledge of distinct interpretations of the pofective and completive aspects contra the perfective aspect. Specifically, the task targeted the following contrasts in meaning for achievement/accomplishment and state verbs: 1/ pofective vs. perfective for states (Group E) and 2/ completive vs. perfective for achievement/accomplishments (Group A). The filler items contained verbs marked only with perfective preverbs where the contrast resulted from two distinct preverbs expressing different means or manners of execution.

Table A presents results for all three subject groups: advanced, near-native, and native controls. The results are given as percentages of accurate matchings, i.e. correct interpretations for a targeted aspect (indicated in bold in the ***'tested contrast'*** column, where the three contrasts are given as A - **pofective** vs. perfective, B - **completive** vs. perfective, and C. perfective vs. perfective). For example, where a contrast was between pofective and perfective aspects (contrast A), the targeted structure was the pofective one. In the case of filler items there was no single target within a contrast but a response was classified as either correct or incorrect. The non-target column under each of the subject groups presents the percentage of incorrectly

matched sentences.[45] Univariate ANOVA comparisons were made between the numbers of correct responses for the targeted aspects in contrasts A, B or C. Detailed statistical information is given in Appendix I, Tables 1 and 2.

TABLE A

Accuracy scores in the semantic compatibility task

tested contrast	advanced		near-native		control	
	target	*non target*	*target*	*non target*	*target*	*non target*
A. **pofective** vs. perfective	**60.5%**	39.5%	**74.7%**	25.3%	**92.2%**	7.8%
B. **completive** vs. perfective	**69.1%**	30.4%	**83.2%**	16.7%	**91.7%**	8.3%
C. perfective vs. perfective	**80.7%**	19.3%	**96.4%**	3.6%	**98.9%**	1.1%

The advanced group exhibits a weak distinction between the pofective and the perfective aspects (contrast A), a stronger distinction between the completive and the perfective aspects (contrast B), and high accuracy in distinguishing between perfective meanings (contrast C). Planned comparisons of the rates of correct responses on the three conditions (A vs. C, B vs. C, and A vs. B) shows that the advanced group behaves differently on the pofective aspect with respect to perfective [$F(1,24)=10.81$, $p=0.003$] but not to the completive aspect with respect to perfective [$F(1,24)=3.35$, $p=0.08$], and there is no difference in behavior on the pofective and completive conditions [$F(1,24)=1.75$, $p=0.198$].

The behavior of the near-native group on all the contrasts is much more

[45] Two sentences, (7) and (12), testing for the completive vs. perfective contrast, as well as one sentence, (30), testing for the pofective vs. perfective contrast were excluded due to a very low accuracy scores among the controls, who rated below 70% correct for these items.

systematic than the advanced group. They identify the pofective aspect more regularly (contrast A), being almost 75% of the time accurate in matching this aspect with situations that are bounded but not telic and over 80% of the time choosing the correct distributive situation to match the completive aspect (contrast B) rather than the perfective one. Their responses for the perfective condition (contrast C) are highly accurate (96.4%). While their responses on the completive and pofective conditions are not statistically different (A vs. B comparison, [$F(1,24)=1.64$, $p=0.212$]) the rates of correct responses on these contrasts both differ from the responses in the perfective condition (B vs. C comparison [$F(1,24)=4.22$, $p=0.051$] and A vs. C comparison [$F(1,24)=12.08$, $p=0.002$]). This suggests that for the near-native speakers the status of both the pofective and completive aspects is distinct from that of the perfective aspect.

So far we have observed that both advanced and the near-natives identify the shades of meaning for the perfective aspect, and show no contrast in behavior on the completive and pofective conditions. The same observation characterizes the results from the control group. While they distinguish aspects in all contrasts, the pofective and completive aspects are not treated significantly differently (A vs. B comparison [$F(1,24)=0.02$, $p=0.883$], and the scores on both these conditions are significantly lower than the scores on the perfective condition (A vs. C comparison [$F(1,24)=4.19$, $p=0.051$] and B vs. C comparison [$F(1,24)=4.56$, $p=0.043$]).

A comparison of the results between the three groups of subjects indicates that the advanced group performs differently to the near-natives and controls on all

conditions, while the near-natives differ in their responses from the controls only on the pofective condition (see Appendix I, Table 2).

The general goal of this task was to test the aspectual interpretations of Polish. However, it did not concern the interpretations ruled out on the basis of unfulfilled semantic feature selection requirements. This type of knowledge was targeted in the *end-state compatibility* task which tested the restrictions on interpretation resulting from the cardinality of the object NP.

3.2.3. End-state compatibility task

The *end-state compatibility* task was a multiple choice task in which the subjects were presented with a situation described by a verb marked with *po-* (in test items) or perfective preverb (in the filler items) and were required to select an appropriate end-state result that followed from that situation. The logical result of a given situation depended on the pofective, completive or perfective character of the VP, which had to be determined on the basis of cardinality of the object NP. The test consisted of 14 test items, 7 involving *po-* in its pofective interpretation, 7 involving *po-* in its completive interpretation, and 14 filler sentences involving verbs marked with perfective aspect preverbs. The test items contained verbs of Group C (activities). These verbs allowed for *po-* to yield both interpretations in appropriate

cardinality and specificity of the object NP contexts.[46] Each verb was used in both a completive context (where an object NP is [+PL][+SQA]) and a pofective context. The constructions tested [po-V + NPsg], meaning 'to V NP for a while' and not 'to finish one after another', and [po-V + NPpl], meaning 'to finish one after another' and not 'to V NP for a while'. The perfective filler items used a random selection of verbs across all semantic groups and differed in the cardinality of the object NPs. It was important that the number of filler items was high enough to counterbalance the double occurrence of the each verb among the test items. Below I present three examples. The first two are test items and involve the same verb *pisac* 'write' but differ in the interpretation due to the properties of the object NP, plural and exhaustively specified quantity in (4), and singular in (5). Example (6) is a filler item.

(4) Zblizaja sie swieta. Maria popisala kartki do calej rodziny.
Christmas is coming up. Maria ***compl****-wrote cards to the whole family.*

☛ a. Maria napisala wszystkie kartki.
Maria has finished writing all the cards

b. Maria nie skonczyla jeszcze pisac wszystkich kartek.
Maria hasn't finished writing all of the cards yet.

c. (a) & (b)

d. nie wiem
don't know

[46] The following are the reasons why other verb groups were not used for this task: (i) even though completive is the primary interpretation of [*po*-V] structures for both Groups A and B, pofective is marginally plausible irrespective of the properties of the object, this may cloud the subjects' intuitions about a *logically* possible end-state result; (ii) motion verbs of Groups D and D' were excluded because of their overall precarious nature; (ii) verbs of Group E are states which rules out the manipulation of the aspectual interpretation by means of the object NP.

The four options include: (a) a result logically associated with a completive aspect, here the correct answer; (b) a result logically associated with the pofective aspect; (c) a situation where both results are logically possible, and (d) 'don't know' answer. For the situation in (4) the selection of the correct answer, namely (a), indicates that [po-V+NPpl] must mean completion. Note that this test does not elicit direct evidence that the subjects distinguish the completive aspect from the perfective, which also implies completion. The selection of the (b) answer implies the lack of sensitivity to the cardinality of the object NP with respect to how it affects the aspectual result. This option may give some further insight into the state of the subjects' internalized L2 grammar. A systematic selection of the pofective result for either pofective or completive situations would suggest determinate judgments which are characteristic of 'divergent' L2 competence, borrowing from the terminology proposed by Sorace (1993). An unsystematic selection of either pofective or completive results for both sorts of situations would, in her terms, indicate indeterminate judgments, and possibly an 'incomplete' state of L2 grammar. Answer (c) shows that the subject makes no distinction, not only between the two aspects but also no distinction between the two mutually exclusive end-states. A 'don't know' answer was included in case the subjects were unable to provide a required judgement.[47]

Example (5) contains a pofective eventuality with a singular NP object.

(5) Nadszedl wieczor. Maria popisala wiersz.
It's evening. Maria pofec-wrote a poem.

[47] In designing the test I made sure that the correct answer is not always first or second, and that the end-state result would alternate between a. and b. Answer c. was invariably (a) & (b) and answer d. 'don't know'.

a. Maria skonczyla caly wiersz.
Maria has finished the whole poem.

☛ b. Maria napisala tylko czesc wiersza.
Maria has written only a part of the poem.

c. (a) & (b)

d. nie wiem
don't know

The correct answer for the example in (5) is the unfinished end-state result in (b), suggesting knowledge of a distinction between the perfective and the pofective aspect. The choice of answer (a) would indicate no distinction between the pofective and the perfective aspect. Items like (5) do not elicit the distinction between pofective and completive, because the end-result contrast here is between a telic situation (which would also correspond with a perfective situation) vs. an atelic and bound situation (exclusively pofective result). The results from this task must be aggregated to show the full picture. If a subject correctly chooses answer (a) for (4) as well as answer (b) for (5) they show knowledge of the two-way contrast: pofective vs. completive (or, in the least, perfective) and pofective vs. perfective, dependent on the cardinality and specificity of the object NP. The combination of these results still does not show the completive vs. perfective distinction, but this was one of the targets of the *semantic compatibility* task, described in section 3.2.2.

The filler items, as is illustrated in (6) below, contain perfective aspectual verb structures, marked with a perfective preverb. These items serve as distractors and target the subjects' knowledge of the perfective aspect contributed by the preverbs.

The end-result for perfective verbs implies a finished situation and the NP object being totally affected.

(6) Milosz jest znanym pisarzem. Zofia przeczytala jego ostatnia ksiazke.
Milosz is a known writer. Zofia perf-read his last book.

☛ a. Zofia skonczyla cala ksiazke.
Zofia has read the whole book.
b. Zofia przeczytala tylko czesc ksiazki.
Zofia has read only a part of the book.
c. (a) & (b)
d. nie wiem
don't know

Any of the answers that do not express a completed situation for the filler items, in example (6) these are answers (b) and (c), indicate that the subject has not mastered the meaning of a perfective aspect in Polish.

3.2.3.1. End-state compatibility task - results

The *end-state compatibility* task served as a further means of investigating aspectual meaning distinctions. This time the distinctions tested were not dependent on the verb type, state vs. accomplishment/achievement, but on the other features that determine the character of the VP. All the test items contained verbs of Group C, activities, which are unspecified for telicity, but whose telicity is established by means of context. The context required for the completive interpretation of *po-* is a

plural and exhaustively specified object NP, otherwise a *po*-marked verb receives a pofective interpretation. This property of activity verbs (i.e. being able to acquire a distinct aspectual interpretation determined on the basis of a syntactic context) allows one to directly tap into the subjects' knowledge of the interpretative contrast driven exclusively by the properties of a VP.

Table B presents results for the three subject groups: advanced, near-native, and native controls. Once again, the results are given as percentages of accurate responses, i.e. correct association between the targeted aspect (indicated in bold in the ***'tested contrast'*** column) and the end-state result. For example, a '**completive** vs. pofective' contrast (B) requires an end-state implying a completion of plural sub-events, rather than an unfinished result. In the case of filler items the accuracy scores are, again, given in bold for the correct answers.[48] (Statistical results from univariate ANOVA for the comparisons between the numbers of correct responses for the targeted aspects in conditions A, B and C are given in Table 3 in Appendix I).

TABLE B

Accuracy scores for the end-state compatibility task

tested contrast	advanced		near-native		control	
	target	*non target*	*target*	*non target*	*target*	*non target*
A. **pofective** vs. completive	**21.2%**	72.1%	**48.9%**	49.9%	**94.5%**	3.9%
B. **completive** vs. pofective	**87.1%**	9.6%	**74.2%**	25.8%	**91.1%**	7.6%
C. perfective vs. perfective	**74.1%**	20.7%	**92.3%**	6.7%	**98.6%**	0.8%

[48] Items, (4) and (28) targeting the pofective interpretation, item (20) targeting the completive interpretation, a filler, (27), were excluded from the results due to a low accuracy scores among the controls, which rated below 70% correct for these items.

The advanced group is systematically wrong with respect to the pofective vs. completive aspectual contrast A. Their low (21.2%) accuracy score for this condition indicates that they consistently and incorrectly associate a pofective situation with a finished result and an entirely affected object. This strongly supports the conclusions from the previous task that they do not distinguish between pofective and perfective, and the 'for a while' interpretation brought about by the pofective is not yet a part of their knowledge. Their performance on the completive (87.1%), contrast B, conditions is significantly different to the accuracy on the pofective condition (21.2%), contrast A, and the perfective (74%), contrast C (A vs. B comparison [$F(1,21)=68.65$, $p=0.0001$], A vs. C comparison [$F(1,21)=58.52$, $p=0.0001$]). Interestingly, their scores on the completive and perfective conditions are only marginally different, B vs. C comparison [$F(1,21)=4.04$, $p=0.576$]. The question is whether this is a result of their knowledge of these two aspects or whether it suggests misinterpretation of the completive aspect as perfective in the completive condition. Note that, if the subjects treated completive as perfective, i.e. assign a wrong interpretation, their responses on the completive condition B would be still interpreted as correct leading to a high score comparable to the score on the perfective condition C.

Although the near-native group appears better in assigning the appropriate end-state to the pofective situations (contrast A), their responses are clearly random. The 48.9% accuracy score for this condition might suggest that they do not recognize that a [po-V+NPsg] structure must mean 'to V NP for a while' and not 'to finish NP',

but we return to the implications of this result in Chapter 4, section 4.2.2. Their score on the completive aspect (contrast B) is significantly higher (74.2%; A vs. B comparison [$F(1,21)=6.11$, $p=0.022$]), and, curiously, lower than for the advanced group (this effect has no statistical significance, see Table 4 in Appendix I for group comparisons). Their responses are highly accurate on the perfective condition (92.3%), which, unlike for the advanced group, significantly differs from the completive score (B vs. C comparison [$F(1,21)=23.73$, $p=0.0001$]. It seems clear that, unlike the advanced learners, they do distinguish between the completive and perfective aspects.

The control group performs as expected. Their scores on all conditions suggest that the distinctions in meaning are indeed identifiable on the basis of feature context, where a singular object for a *po*-marked activity verb yields a pofective interpretation (94.5%), while a plural and exhaustively specified in quantity object of the same verb yields a completive (or at least telic) interpretation (91.1%).

A comparison of the results from the *end-state compatibility* task between groups shows no clear parallels between L2 subjects and controls (see Table 4 in Appendix I for group comparisons). While the controls are consistent in their responses (all above 90%), the learner groups vary in their accuracy scores. The advanced group performs differently from the controls on the pofective and perfective conditions but not the completive condition. The near-natives differ in their responses from the controls on both test conditions (pofective and completive) but not on the perfective condition.

In the two tasks described so far, the *semantic compatibility* task and the *end-state compatibility* task, the focus was on the structures of verbs and their combinations with one of the preverbs: perfective, completive and pofective. By associating the situations expressed through the use of one of these aspects with their logical semantic equivalents, either in the form of another situation or the end-result, subjects' competence in distinguishing these aspects and knowledge of impossible interpretations driven by the properties of the aspectually modified VPs was elicited. The verb groups targeted in these tests belonged to Group A (achievements/accomplishments) and Group E (states) for the *semantic compatibility* task, and to Group C (activities) for the *end-state compatibility* task. The third *grammaticality judgment* task addresses the issue of morphological composition and is designed to test the learners' knowledge of possible and impossible aspectual morphological structures.

3.2.4. Grammaticality judgment task

Morphological composition of aspects in Polish is constrained in two ways: by feature selection requirements and by syntactic domains. The completive aspect is the most specified for the feature context, selecting for a plural [+PL] and telic [+TELIC] VP; the pofective aspect selects for an atelic [-TELIC] VP but is not specified with respect to plurality; the perfective aspect shows no requirements for the features of the VP. The features may be provided either by lexical items or by morphology. The source of features defines their l-syntactic vs. s-syntactic character.

If an aspectual derivation takes place within the domain of l-syntax it may only be sensitive and make use of the l-syntactic features; similarly, an s-syntactic derivation can be carried out only by means of the s-syntactic features. Derivations across domains i.e. involving both l- and s-syntactic features are ungrammatical.

The *grammaticality judgment* task was designed to tap the speakers' intuitions with respect to the structural restrictions described above. The grammaticality/ungrammaticality of the test items was dependent on whether these requirements were satisfied or not. The test sentences were of two types: those in which violation resulted from unsatisfied feature selection (I will refer to this type as violation 1) and those in which the features provided were of the desired content but the grammatical vs. ungrammatical contrast resulted from compatibility vs. incompatibility of the class of features used for a tested aspectual structure (refered to as violation 2).

The judgments were elicited according to an acceptability scale ranging from 1 to 5, where 1 stands for unacceptable/impossible and 5 for a perfectly normal and grammatical Polish sentence. The subjects also had an option of 'don't know' answer in the event of not being able to give a definite judgment. To ensure an intuitive character of the responses and to control for a possible variation in the subjects' reading skills which could have affected the responses[49] the test was carried out as an audio task. The subjects heard a recording of the instructions, both in Polish and in English, followed by an example and 4 practice sentences, all these were fillers, and then 81 test sentences.[50] After each sentence there was a five-second pause followed

[49] A problem which arose during a pilot run of the test among highly competent L2 Polish speakers.
[50] Written instruction also appeared on the front page of the answer sheet.

by a 'beep' sound indicating the time to write down a response on an answer sheet. By controling the pace of the test and making it impossible for the subjects to go back and reconsider their original judgments, the procedure was intended to elicit intuitive answers.

Violation 1 sentences involved composition of verbs with *po-*, where the resulting interpretation was that of the pofective aspect.[51] This interpretation was possible for Groups C, D', and E but impossible for Groups A, B, and D.[52] Recall that accomplishments/achievements (Groups A and B) marginally allowed for the pofective interpretation. Because contexts in which verbs like 'bake' where *po-bake* could mean 'to bake for a while without reaching the final state' cannot be ruled out, these structures may potentially be judged as passable. For this reason the judgments were elicited according to an acceptability scale rather than grammaticality. The expected judgments were 'unacceptable/low acceptability' for Group A & B verbs, and 'high' for Groups C & E.

Test items of violation 1 consisted of 12 sentences, three in each tested verb group, where *po-* with group A and B verbs combinations was ungrammatical, and

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[51] Feature selection (i.e. NPpl or freq marking on V) for a completive aspect was not tested. This interpretation can be obtained with all verb groups (except states of Group E) provided the feature selection is met. In such cases, i.e. either if the V root is not telic (by V root's semantics [-TELIC] or by [-SQA] on the object) or if the root V or the object is not plural, the structure is not ungrammatical but receives a pofective interpretation. Again, as was the case above, for accomplishments of groups A and B this is not standard but plausible. The only source of ungrammaticality would be inappropriate adverbial modification with "time-span" adverbials (compatible with completive) vs. "duration" adverbials (compatible with pofective). However, judgments of these cases would indicate whether the learners know that a pofective VP is atelic and the completive one is telic but not necessarily their knowledge of feature selection.

[52] Because of the more complex properties of the motion verbs (groups D and D'), which could potentially obscure subjects' judgments, these were not included in the task.

po- with Group C and E verbs was grammatical.[53] Group A and B sentences contained a singular, rather than a required plural, NP object and duration adverbs of 'for a while'/'a little' type. The adverbial modification made Group A sentences even harder to accept (the ungrammaticality independently resulting from a singular cardinality of the object), but in case of Group B sentences, such modification was necessary to force the ungrammatical pofective interpretation (verbs of this group being inherently plural did not place a cardinality requirement on the object). Below I provide an example of violation 1 from each tested verb group.

(7) Agata poplacila przez chwile rachunek
Agata po-payed a bill for a while.

In (7) a *po*-V (Group A) combination is unacceptable when followed by a singular NP object, which is only compatible with a pofective aspect interpretation, and by an adverbial expression *przez chwile* 'for a while'. Importantly, the adverb is fully compatible with the pofective aspect but the pofective aspect is incompatible with the [+TELIC] feature of the base verb. This is the source of ungrammaticality targeted in the violation 1 test items.

(8) Dzieci posmiecily przez chwile swoj pokoj.
Children po-littered their room for a while.

[53] The verbs used in this task were the same that were used in the other tasks for potential cross-reference of the subjects' responses across the tests.

In (8), the ungrammaticality results from the combination of *po-* with a Group B verb as a marker of the pofective aspect. Group B verbs are inherently [+PL] and [+TELIC], hence the only interpretation possible is completive. The adverbial modification compatible with only the pofective aspect is expected to lead the subjects to recognize the unacceptibility of such an interpretation for this structure.

(9) Janek popil czerwonego wina.
Janek po-drank some red wine.

(10) Po kolacji pobolal mnie troche brzuch.
After supper I had a stomach ache for a while/a little.

Both sentences (9) and (10) are grammatical. The Group C activity verb in (9) is followed by a singular NP object, which does not render the VP telic, and the Group E verb in (10) is a state. Both verbs combined with *po-* obtain pofective interpretation and form fully acceptable Polish sentences.

The remaining test items targeted violation 2, i.e. deriving an aspectual structure across syntactic domains. This type of derivation produces forms like [po-perf-√V]+$NP_{[+PL]}$ which are ungrammatical even though the feature combination ([+TELIC] of the perfective and [+PL] of the object) would, in principle, yield a completive interpretation. The ungrammaticality results from the incompatibility of the l-feature of the NP with the s-syntactic feature of the perfective preverb.[54] The

[54] Similarly, forms like [po-√V-freq]+$NP_{[+SQA]}$ are illicit because of the incompatibility of the s-syntactic frequentative [-TELIC] with the lexical [+SQA] feature of the NP. However, this structure is not tested because only verbs of group C allow for [√V-freq]. For reasons why [√V-freq] are impossible, see Chapter 2, section 2.4.2.3. and footnote 36 of the same chapter.

structure [po-perf-√V]+$NP_{[+PL]}$ was tested for Groups A, B, and C. Again, Group D verbs were excluded due to their more complex properties, and Group E verbs are states, hence unattested with a completive interpretation, unless used in frequentative constructions. The (un)grammaticality contrast was a two-way contrast between an ungrammatical structure derived by means of s-syntactic and l-syntactic features *[po-perf-√V]+$NP_{[+PL]}$ vs. a grammatical s-syntactic composition of [po-perf-√V-freq], and a grammatical l-syntactic composition of [po-√V]+$NP_{[+PL][+SQA]}$ (the [+SQA] feature is required for Group C only). These contrasts elicit the knowledge that the l-features ($NP_{[+PL][+SQA]}$ and V[+TELIC]) are only visible in an l-syntactic derivation and that s-features (frequentative [+PL] and perfective [+TELIC]) are only visible in an s-syntactic derivation.

Violation 2 test items consisted of 27 sentences, 9 for each tested verb group A, B, and C. Each group was represented by three verbs. Each verb was used in three structures: one ungrammatical and two grammatical. Verbs used for violation 2 sentences were the same as the ones used for violation 1 items, as were the sentence contexts. Below I show an example of a Group A verb in all three tested structures. The verb used in these examples is *placic* 'pay', as in the example (7) for violation 1.

(11) Stopniowo Agata pozaplacala rachunki za mieszkanie.
Gradually Agata po-perf-payed-freq the apartment bills.

In (11) the verb structure [po-perf-V-freq] is an s-syntactic composition with a completive interpretation. The features are supplied by the s-syntactic markers,

perfective [+TELIC] and frequentative [+PL] morphemes, hence the sentence is fully grammatical.[55]

(12) Agata poplacila rachunki za mieszkanie.
Agata po-payed the apartment bills.

In (12) the verb structure [po-V]+NPpl is an l-syntactic composition with a completive interpretation. The l-features are supplied by the verb root [+TELIC] and the object NP [+PL], and the sentence is fully grammatical. The last example (14) contains an ungrammatical aspectual structure.

(14) Stopniowo Agata pozaplacila rachunki za mieszkanie.
Gradually Agata po-perf-payed the apartment bills.

Hypothetically, the verb of a [po-perf-V]+NPpl form as in (14) would, too, obtain a completive meaning. However, because of the incompatibility of the s-syntactic [+TELIC] feature and the l-syntactic [+PL] feature, the sentence is ruled out.

Altogether, the task consisted of 39 test items plus 42 filler items. This large number of fillers was crucial because of the four-time repetition of a single verb for the test condition (one in violation 1 and three in violation 2).[56] The filler sentences

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[55] Even though the [+PL] feature is s-syntactically provided by the frequentative marker, I decided to use plural objects for reasons of semantic plausibility. A singular object would mean that the same thing was affected each time the situation occurred, i.e. the same bill would be paid on a number of occasions, the same ship sunk etc.

[56] For the same reason the task was administered as a listening task. In the instructions the subjects were warned that some of the sentences may seem similar but they were asked to judge each sentence independently of the previous answers. The subjects were also encouraged to concentrate on their intuitions as language users (speaker and listener) and think of the sentences as sentences in spoken Polish and judge them accordingly.

were designed to mimic the test sentences in such a way that their structure was apparently identical, i.e. [perf-V] as a counterpart of a [po-V] test structure and [perf-perf-V] as a counterpart of [po-perf-V] or [po-perf-V-freq] structures. There were 22 fillers of the [perf-V] form and 20 of the [perf-perf-V] form, half of each were ungrammatical. The ungrammaticality for the [perf-V] structures resulted in violation of certain compositional or interpretive requirements on the perfective composition in Polish. Some of the requirements and examples are listed below:

(a) a locative alternation is blocked when a preverb singles out one of the objects over the other (Kipka, 1990)

(15) *We-pchnal torbe ksiazkami.
He perf-crammed the bag with books.

(b) infinitival complements of verbs like *przestac* 'to stop' or *zaczac* 'to start' must be imperfective (Kipka, 1990)

(16) *Przestalem z-jesc czekolade.
I stopped perf-eating chocolate.

(c) preverb *na-* requires a plural NP object (Piñon, 1993)

(17) *Przed obiadem na-obieram ziemniak.
Before dinner I will perf-peel a potato.

(d) preverbs are lexically selected by verb roots (e.g. you can say *od-nowie* '*od*-new' to mean 'refurbish' but not *od-starze* '*od*-old' to mean 'achieve an old look', although you can say *po-starzec* '*po*-old' meaning either 'to make something look old' or 'to get old')

(18) *Od-starze stol zeby ciekawie wygladal.
perf-olden table that (it) looks interestingly
I will make the table look older to make it look interesting.

The ungrammaticality for the [perf-perf-V] structures was due to the wrong order of the preverbs. Polish has a restriction concerning preverb doubling. In fact, apart from *po-*, only one other preverb, accumulative *na-*, allows for such doubling (Kipka, 1990). This is important with respect to the test items of violation 2. The rejection of the ungrammatical [po-perf-$\sqrt{V}$]+NP_{pl} structures could be driven by a hypothesis of no multiple prefixation in Polish. The results for this set of fillers should either confirm or discount such a possibility. The filler sentences of this type included [na-perf-V] structures. The ungrammatical items had the order of the preverbs switched as is shown in the examples below.[57]

(19) Ojciec na-przy-wozil dzieciom wiele prezentow.
Father accum-perf-brought many presents for children.

(20) *Przy-na-wozil dzieciom wiele prezentow.
(He) perf-accum-brought many presents for children.

[57] Because *po-*, the only other morpheme that allows for preverb doubling, appears in each of the test items I decided to use only prefix *na-* for these filler items.

Although the filler items were included in the task mainly as distractors, as was the case for the other tasks, here, too, they are expected to give a further insight into the subjects' competence with respect to the constraints on the perfective aspect composition in Polish. While some of them are of strictly lexical nature like restrictions described in (b) and (d) above, the others resemble the restrictions for the pofective and completive aspects, like the preverb doubling condition and the morphosyntactic restriction in (a), or the semantic feature selection in (c).

3.2.4.1. Grammaticality judgment task - results

The *grammaticality judgment* task was designed to tap the speakers' competence with respect to the structural restrictions governing the composition of the aspectual verbs in Polish. Their morphological shape is constrained in two ways: by feature selection requirements and by syntactic domains. Hence, the knowledge of these constraints was tested by presenting the subjects with two sorts of violation: violation 1, unsatisfied feature selection, and violation 2, incompatibility of feature classes.

Before addressing results on violation 1 and 2 sentences separately, it is important to point out that all three groups of subjects exhibited an overall distinction between grammatical and ungrammatical sentences across all sentence types, including test as well as filler sentences (see significance levels in Table 5, Appendix I). Although this is not a reflection of the subjects' performance on the individual

violation or filler conditions, to be discussed presently, it validates the grammaticality contrasts that the present task was designed to test. Furthermore there was no significant difference in the subjects' responses between test and filler items (Table 6, Appendix I). This suggests that all sentence types were approached by the subjects in a uniform fashion and there was no confounding factors or bias in the judgments.

3.2.4.1.1. Violation 1 results

Violation 1 sentences involved *po-* structures with verbs of Groups C and E (activities and states) and Groups A and B (achievements/accomplishments). The only legitimate interpretation was of the pofective aspect, which selects an atelic VP [-TELIC]. The ungrammaticality of sentences with achievements and accomplishments resulted from an unsatisfied feature selection for verbs of Group A, [+PL] of the object NP, as only with this feature can these verbs acquire an aspectual interpretation when containing *po-*. Such an interpretation may only be completive due to the [+TELIC] feature of the base verb. In the test sentences, the [+PL] feature is not supplied, the object being singular. For Group B sentences, whose verbs are inherently [+TELIC] and [+PL], the only possible interpretation is the completive aspect. The adverbial expressions of duration, incompatible with such interpretation, rendered these sentences ungrammatical. On the other hand, activity verbs of Group C followed by a singular NP object and state verbs of Group E combined with *po-* result in a pofective interpretation and form fully acceptable Polish sentences. Failure

to recognize conflicts in feature composition, or satisfaction thereof, would imply that the subjects do not perceive semantic features as determining a possible aspect.

The judgments were elicited on an acceptability scale ranging from a minimum 1 to a maximum 5. The expected judgments were 'unacceptable/low acceptability' for Group A & B verbs, and 'high' for Groups C & E. Table C, below, presents results from the violation 1 condition. The scores represent mean ratings (out of 5). The contrasts between the ratings for the acceptable and unacceptable sentences are statistically significant for all subject groups (this is presented in Table 7, Appendix I, in which combined rates for unacceptable Group A and Group B sentences are compared with the grammatical Group C and E sentences).

TABLE C

Mean acceptability values for violation 1

verb group	advanced	near-native	control
*Group A	3	2	1.6
*Group B	2.8	2.4	1.8
mean unacceptable	***2.9***	***2.2***	***1.7***
Group C	3.8	3.4	2.7
Group E	3.4	3.3	4
mean acceptable	***3.6***	***3.4***	***3.4***

Although the advanced group shows contrast between acceptable (average value = 3.6) vs. unacceptable (average value =2.9) sentences, [F(1,64)=4.63, p=0.035], their scores for both converge around the mid value. This suggests that while the subjects permit the unacceptable sentences to a lesser degree than the

acceptable ones they do not conclusively reject them either. The results from the near-native group show a stronger contrast between acceptable (average value =3.4) and unacceptable sentences (average value =2.2),[$F(1,64)=13.44$, $p<0.001$]. The control subjects manifest a clear-cut distinction between the acceptable and unacceptable sentences [$F(1,64)=17.43$, $p<0.0001$]. However the low rating (=2.7) for the acceptable sentences containing verbs of Group C (activities), of unspecified telicity, which for the pofective interpretation required that the object NP be of singular cardinality, suggests that these items were more problematic than the sentences containing states (Group E). The reason for this low score will be addressed below, as we will see that Group C verbs turn out to be problematic in violation 2 as well.

A comparison of the judgements for the acceptable and the unacceptable sentences across the three subject groups (the statistics are given in Table 8, Appendix I), indicates that while there is no significant difference among the L2 groups and the controls in the values assigned to the acceptable (Groups C and E) sentences (advanced vs. near-native [$F(1,50)=0.7$, $p=0.4073$], advanced vs. control [$F(1,50)=1.80$, $p=0.186$], near-native vs. control [$F(1,50)=0.08$, $p=0.7806$]), for the unacceptable sentences the learner groups differ from each other [$F(1,50)=7.69$, $p=0.0078$], the advanced subjects differ in their responses from the native speakers [$F(1,50)=31$, $p< 0.0001$], and the near-natives are only marginally less accurate than the controls [$F(1,50)=4.06$, $p=0.0492$].

3.2.4.1.2. Violation 2 results

Violation 2, i.e. deriving an aspectual structure across syntactic domains, was tested on the [po-perf-√V]+$NP_{[+PL]}$ structure for Groups A, B and C. Knowledge of two grammaticality contrasts was examined, one between an ungrammatical structure derived by means of a combination of s-syntactic and l-syntactic features *[po-perf-√V]+$NP_{[+PL]}$ and a grammatical s-syntactic composition of [po-perf-√V-freq], and the second between the same ungrammatical *[po-perf-√V]+$NP_{[+PL]}$ structure and a grammatical l-syntactic composition of [po-√V]+$NP_{[+PL][+SQA]}$. The grammaticality judgments required the knowledge that derivations across domains, i.e. involving both l- and s-features, are disallowed. Hence, even though the feature combination ([+TELIC] of the perfective and [+PL] of the object) of [po-perf-√V]+$NP_{[+PL]}$ would, in principle, yield a completive interpretation, the structure is ungrammatical because the l-feature of the $NP_{[+PL]}$ is only visible in an l-syntactic derivation and the s-features of the frequentative [+PL] and the perfective [+TELIC] are only visible in an s-syntactic derivation.

In general, as presented in Table 9, Appendix I, overall results for the sentences containing ungrammatical structures versus the grammatical sentences show that only advanced speakers did not make a significant distinction, [$F(1,64)=3.27$, $p=0.0752$], while both near-natives and controls differentiate between the two conditions (near-native group [$F(1,64)=6.19$, $p=0.015$]; control group [$F(1,64)=94.52$, $p=0.0001$]). However, as described below, scores for two contrasts,

s-syntactic and l-syntactic vs. ungrammatical structures, reveal varying levels of accuracy dependant on the domain of derivation.

Table D presents results from the violation 2 sentences involving the contrast between the ungrammatical sentences with the *[po-perf-V]+NPpl structures and the grammatical s-syntactically derived [po-perf-V-freq] structures.

TABLE D

Mean ratings for violation 2 ungrammatical vs. grammatical s-syntactic structures

(*[po-perf-V]+NPpl vs. [po-perf-V-freq])

verb group	advanced		near-native		control	
	ungrammatical	*grammatical s-syntactic*	*ungrammatical*	*grammatical s-syntactic*	*ungrammatical*	*grammatical s-syntactic*
A	2.8	3.1	2.6	2.9	1.2	4.3
B	3.6	4	3.7	3.7	1.3	4.3
C	3.1	2.8	2.5	2.8	1.3	3.8

Neither of the learner groups show a distinction between the grammaticality status of the two structures, the *[po-perf-V]+NPpl derived across-domains and the s-syntactically derived [po-perf-V-freq], for any of the three verb groups (see Table 10, Appendix I), and the acceptance rates fall around the mid values. The controls clearly discriminate between the grammatical and ungrammatical structures, showing significant contrasts in all three verb groups (Table 11, Appendix I). The values assigned by the L2 groups are very similar on both conditions (there is no significant difference between learner groups for A and B verbs in the ungrammatical condition, as shown in Table 11, Appendix I, and no significant difference in the grammatical

condition, as shown in Table 12, Appendix I). Both L2 groups perform differently from the controls on all verb groups in both conditions, grammatical and ungrammatical (no statistical difference between the advanced group's and the controls' ratings for grammatical sentences involving verbs of Group B must result from the advanced learners generally accepting all sentences (Table 12, Appendix I)).

Table E presents results from the violation 2 type sentences involving the grammaticality contrast between the ungrammatical sentences with the *[po-perf-V]+NPpl structures, and the grammatical l-syntactically derived [po-V]+NPpl structures.

TABLE E

Mean ratings for violation 2 ungrammatical vs. grammatical l-syntactic structures

(*[po-perf-V]+NPpl vs. [po-V]+NPpl)

verb group	advanced		near-native		control	
	ungrammatical	*grammatical l-syntactic*	*ungrammatical*	*grammatical l-syntactic*	*ungrammatical*	*grammatical l-syntactic*
A	2.8	4.1	2.6	3.9	1.2	4.8
B	3.6	3.7	3.7	3.9	1.3	4
C	3.1	4	2.5	3.6	1.3	2.6

Generally speaking, these scores differ from the results for the previous contrast. The L2 groups show significant distinctions between the grammatical l-syntactic and ungrammatical structures in Group A and Group C sentences (see Table 13, Appendix I, for statistical results). However, similarly to the results on the grammatical s-syntactic structures, here too, there is no significant difference in

performance within Group B verb sentences.[58] Even though the rates are higher for the grammatical l-structures than for the grammatical s-structures, the groups are significantly different when compared to the controls, but both performed similarly with respect to each other (see Table 14, Appendix I for subject group comparisons). The controls make the expected distinction in (un)grammaticality, although, again they give low ratings to the grammatical sentences with verbs of Group C. This suggests that the grammatical sentences involving structures with the verbs of Group C were problematic altogether and the results for this group of verbs may not be fully reliable for any conclusive assessment of L2 subjects' grammar

The low results for the controls in the *grammaticality judgements* task on structures involving verbs of Group C deserve an explanation. The grammatical completive l-syntactic structures received a rating of 2.6 (out of 5) on the acceptibility scale, and the grammatical s-structures received 3.8. The grammatical structures in violation 1, also involving the l-structures but with a pofective interpretation received a rating of 2.7. First, a point to bear in mind is that verbs of Groups C were truly ambiguous between the pofective and completive interpretations without the necessary disambiguating contexts. Second, among the violation 1 sentences for the pofective interpretation, one of the sentences (59) is, admittedly, a very awkward sentence in which the duration of eating is incompatible with the object of eating. This sentence received a rating of 1.1 from the native speakers but was not excluded from the results. If we were to remove this sentence from total calculations we get a

[58] The problem seems to lie in the inability of the subjects to detect ungrammaticality rather than accept grammatical sentences. This suggests that there is some property of Group B (like plurality) verbs that encourages higher values on the acceptability scale among the learners.

much higher rating of 3.4 for these sentences. The situation now is the following: the l-syntactic completive sentences are lower on the acceptibility scale than the l-syntactic pofective (3.4) or s-syntactic structures (3.8). What is involved in determing the completive l-syntactic structures interpretations is the feature of the verb base and the plurality of the object. Because activities are not specified for telicity, which is required of the verb base, telic context can be yielded by specificity of the object. Only under these circumstances, i.e. [+PL] and [+SQA] NP, will the verb of Group C be disambiguated and receive the completive aspect. For the pofective interpretation what is needed is a verb that is not telic, hence as long as the object does not contribute the [+SQA] feature, all else is irrelevant, and the computation of the pofective aspect is straightforward. With the s-syntactic structures, as was suggested in Chapter 2 sections 2.3.5. and 2.4.2.2., the interpretive effects of *po-* may vary for the derivations in the s-syntactic domain, however, the interpretation is guaranteed and the structure is always grammatical as long as both aspects, perfective and frequentative are present on the verb, regardless of the verb group. The ease of composition or mapping from the morphosyntactic structure to interpretation varies with the context and and the ease of judgments seems to vary proportionately.

On the other hand, results from learner subjects on sentences with verbs of Group C are high (between 3.4 and 4, Table) in both l- and s-syntactic structures ($p < 0.0001$ and $p = 0.0095$ for the comparison of the controls with advanced and near-natives respectively). It seems that in their case the ambiguous nature of Group C verbs makes them easier to accept as both interpretations, pofective and completive, are available. Note that near-natives did show difficulty with Group C verbs on the

end-state compatibility task involving Group C both in the pofective and completive interpretations but not in the *semantic compatibility* task involving Group E verbs for pofective and Group C for completive interpretations. In this task, disambiguating the interpretation was crucial. Possibly, Group C involves the most demanding type of feature composition. When the verb is in a completive structure, the subjects must consider the completive aspect, which is most exhaustively specified for feature context, and when in a pofective structure, they need to consider a more complicated set of restrictions on what object may not complement a Group C verb in order to avoid a completive interpretation.

3.2.5. Summary

In sum, the three tasks altogether were designed to investigate the grammar of the advanced/near-native L2 speakers of Polish with respect to aspectual distinctions. In all tests, the control condition was the perfective aspect, which was assumed to be acquirable, it being accessed from the perspective of the entire aspectual system of Polish or by a purely lexicon-based morphological rule of attaching a preverb (lexically selected) to a verb base. The assumption of the perfective as an integral part of the learners' L2 grammar, and hence a point of reference for the assessment of their knowledge of the remaining aspects, comes from the fact that English (the L1 of the majority of the subjects) manifests the fundamental semantic distinction between

perfective and imperfective aspects. Therefore, the contrast needs not be newly acquired.[59]

However, if command of the perfective aspect is to be native-like, it must become a part of the larger aspectual system involving the other aspects. The system can be defined in terms of three components: interpretation (distinction in aspectual meanings), feature selection (semantic properties of elements of the system), and feature composition (the operation of the features in two domains of syntax). These three components were the object of the overall investigation. The *semantic compatibility* task targeted the meaning distinctions between the perfective and pofective aspects, and between perfective and completive aspects, as both pofective and completive differ in interpretation from the perfective. The question was whether the speakers are sensitive to the semantic contexts which determine distinct aspectual meanings. It did not address the issue of the interpretations ruled out on the basis of insufficient or inadequate contexts. The knowledge of this component of the system was targeted in the *end-state compatibility* task which tested the restrictions on interpretation resulting from the cardinality and/or specificity of the object NP. By selecting a unique end-state result that logically followed from an aspectually modified situation, subject had to know which of the two aspects was involved. The only grounds for such a decision were the semantic features of the object NP. Therefore, this task indirectly elicited the knowledge of feature selection which dictates the contrast between pofective vs. completive aspects. Both, the *semantic*

[59] However, this assumption is purely theoretical, considering that perfective aspect is in general known to be particularly problematic for learners, and, as noted before, involves much more subtle knowledge of selective requirements than considered here. This issue will be addressed in the concluding Chapter 5.

compatibility task and the *end-state compatibility* task were intended to examine the syntax-semantics interface level of analysis. The third task, the *grammaticality judgment* task, addressed the issue of morphological composition and was designed to test the learners' knowledge of possible vs. impossible aspectual structures. This area of syntax-lexicon interface encompasses grammaticality contrasts driven by feature selection and by the distinction between the domains of syntax from which the features are attained and within which the compositions are confined.

3.2.6. Picture selection task

The last task was a *picture selection* task, permitting a comparison between interpretations of Polish aspectual sentences by the L1 speakers of Polish, this time involving both adult and child controls, and by adult learners. The idea behind this comparison was that, according to literature on the acquisition of aspect, reported above in section 3.1.4., as claimed by POA hypothesis, children acquire or use the aspectual distinction of perfective vs. imperfective before they acquire tense properties of a given language or, as reported by Weist et al. (1984), it may be the case that, for Polish children, both tense and aspect develop early on and simultaneously. In Weist et al.'s study the aspectual distinction between perfective and imperfective aspects was observed as early as at 2 years of age. However, the question is whether child aspectual interpretations will be restricted to the (im)perfective distinction or whether child grammar will manifest the whole range of Polish aspects, as is expected of the adult subjects. Regardless of what the outcome of

the task is, it should provide us with a new insight into the properties of native speaker linguistic competence with respect to the Polish aspectual system at two stages of its development and therefore provide a better point of reference in defining the non-native systems.

The task involved 42 sentences, out of which half were test items and half were fillers. In all, 14 verbs were used in the task, seven verbs of Group C (activities) and seven verbs of Group A (accomplishments/achievements). All verbs were used in three contexts. Each verb of Group C, which can assume either a pofective or a completive interpretation when prefixed by *po-*, was used in the following three contexts:

1/ [po-V] followed by a singular object, yielding a pofective interpretation
2/ [po-V] followed by a plural object, yielding a completive interpretation
3/ a verb with no preverb, which retains the imperfective aspect

Each verb of Group A, for which *po-* can introduce only a completive interpretation, was used in the following three contexts:

1/ [po-V] followed by a plural object, yielding a completive interpretation
2/ [perf-V] regardless of the object's cardinality, always has a perfective interpretation
3/ a verb with no preverb, which retains the imperfective aspect[60]

[60] The perfective sentences involved only plural objects and imperfective both plural and singular objects.

Contexts 1/ and 2/ for Group C verbs and context 1/ for Group A verbs were considered test items while the remaining three contexts (3/ for Group C and 2/ and 3/ for Group A) were distractors. Each verb was used in three sentences, hence 21 sentences involved the preverb *po-*. It was inevitable that the subjects' attention would be drawn to the preverbs, but, crucially, they had to be distracted from focusing on the prefix *po-*. This is why the number of distractors, 7 sentences with perfective preverbs and 14 with imperfective (prefixless) verbs, equaled the number of test items.[61] Aside from serving as distractors, these sentences were also expected to elicit information about knowledge of aspects. Potentially, the responses to the distractors could reveal whether the subjects rely only on the properties of the root verbs, i.e. (a)telicity, or on syntactic contexts to determine interpretations in the test items. The activity verb roots of Group C are all unmarked for telicity, hence structures in which they combine could be interpreted as atelic, regardless of the rest of the aspectual elements. Using the same verbs in a perfective context, in a pofective context and in a completive (also telic) context, it is possible to detect a potential verb class bias. Similarly, Group A telic structures could be associated with telic situations purely on the basis of the root verb itself, accomplishment/achievement. Using them in the three contexts, completive, perfective and imperfective, should answer the same queries.

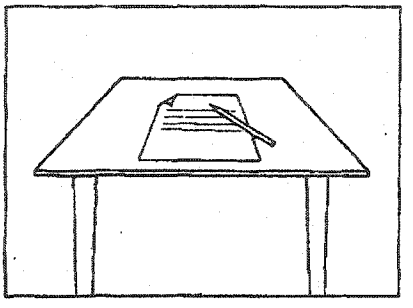
The subjects heard a sentence after which they were given two pictures. The pictures represented contrasting outcomes of the situation described in the sentence. One of the pictures illustrated an outcome which appropriately represented the aspect

[61] Verbs of Group A were used as distractors with and without a perfective preverb because these verbs were used with the prefix *po-* only in one, completive, context in the test condition. Verbs of Group C were used with *po-* twice, in the pofective and completive contexts, in the test condition, hence, as distractors they were given only in an imperfective context (without a preverb).

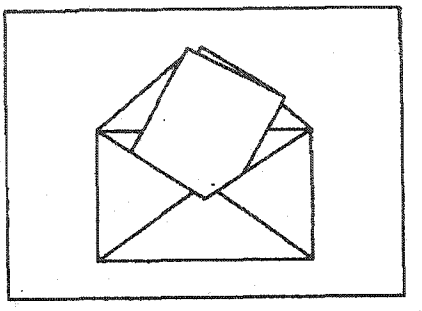
used in the sentence, while the other picture was an illustration of an outcome of the same situation but under an incorrect aspectual interpretation. The contrast between pictures following a sentence with a Group C [po-V] structure with a singular object (pofective) was in the object being totally affected (finished) on one picture and the same object being partially affected (unfinished) on the other picture; for Group C and Group A [po-V] structures with a plural object (both completive) the contrast was between all the objects being totally affected (all finished) and only some of the same objects being totally affected (only some of them finished)[62]; for Group C and Group A perfective/imperfective structures (with or without a perfective preverb) the contrast was between the objects being totally affected (finished) or not. The subjects were asked to select the picture which, according to them, represented the situation described in the sentence they had just heard. In (21) - (23) below I give examples of two test items and one filler, all of which use the same verb of Group C *pisac* 'to write'.

[62] The Group C completive sentences are rather ambiguous without the [+SQA] specification. Conceivably they can be interpreted as pofective but involving a plural object (an unusual interpretation, but, marginally plausible). However, by supplying an exhaustively specified quantity of the objects in a sentence the picture selection would become trivial, i.e. choose 'all' vs. 'not all'. Therefore the specification was often given in an underlying context. Still, even if this was to affect the subjects' responses, we would expect a difference in accuracy between pofective and completive sentences. The pofective items would be more accurately assessed than completive for Group C. The accuracy on the completive items of Group A whose VPs do not require [+SQA] feature, should not be affected.

(21) Mama po-pisala list.
Mother pof-wrote letter-sg
'Mother wrote a letter for a while'

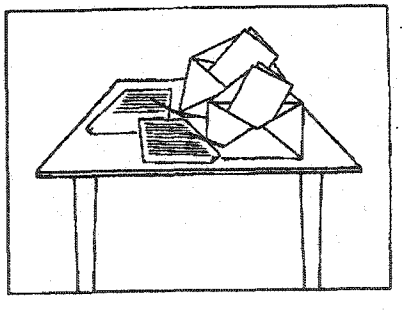


picture A

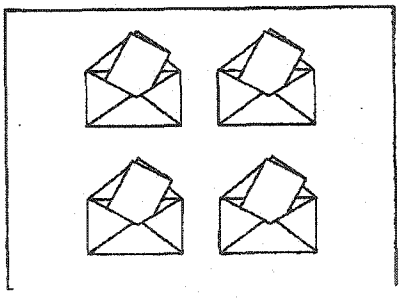


picture B

(22) Mama po-pisala listy do calej rodziny.
Mother compl-wrote letter-pl to whole family
'Mother has written letters to the whole family.'



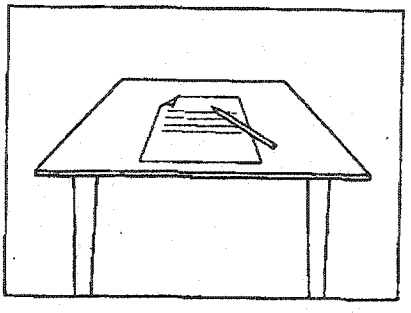
picture A



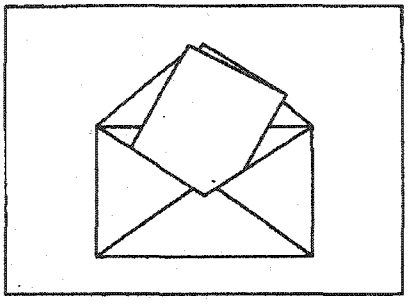
picture B

Sentences (21) and (22) differ in the cardinality of the object. The singular object in (21) yields a pofective situation, and is represented by picture A, while the plural object yields a completive situation in (22) and is represented by picture B.[63]

(23) Ewa pisala list do kolezanki z obozu.
Ewa wrote letter to friend from camp
'Ewa was writing a letter to a friend from a summer camp.'



picture A



picture B

In (23) the same verb carries no preverb and the cardinality of the object has no bearing on the aspectual interpretation. The sentence has an imperfective aspect and is illustrated on picture A.

Importantly, none of the pictures portrayed an agent. This was to eliminate a possibility of subjects choosing an ongoing or an unfinished situation if the agent was shown to still be involved in the action, or choosing a finished situation, if the agent was shown not be involved in it. To give the sentences a more tangible context for the children, they were presented with a set of pictures of family members and were told

[63] In (22) we have an example of an underlying context for an exhaustively affected plural object ('to the whole family' implying that a predetermined set of cards was all written), suggesting a [+SQA] property of the VP.

their names prior to the actual test. These characters were the agents in the tested sentences.

In general, this task was a version of the *end-state compatibility* task geared towards child subjects. As in the *end-state* test, the responses were expected to show the use of the properties of a verb and its object, as well as the type of a preverb, in interpreting the aspectual nature of a sentence. Nevertheless, the *picture selection* task was administered to all the adult subject groups participating in the previous tasks, for the purpose of comparison of the results between the tasks and, more interestingly, with the child responses.

3.2.6.1. Picture selection task - results

The *picture selection* task served as a comparison between interpretations of Polish aspectual sentences by the adult and child speakers of Polish as a mother tongue vs. the interpretations by L2 speakers of Polish. The test was expected to elicit the use of the properties of verb, objects, and preverbs in interpreting aspects. The task consisted of sentences involving verbs of Group C (activities) and verbs of Group A (accomplishments/achievements). Each verb of Group C was used in a completive, pofective and imperfective contexts, while each verb of Group A was used in a completive, perfective and imperfective contexts.

Table F presents the results from all four subject groups in all the conditions, divided between two verb Groups A and C (although there is no verb group effect for

either the completive or the imperfective conditions for any of the subject groups, Table 15, Appendix I).[64]

TABLE F

Picture selection task : percentages of accurate responses in %

aspect/verb group	children	advanced	near-native	adults
pofective/C	46.3%	45.3%	64.3%	80%
completive/A	77.6%	76.2%	70.4%	87.5%
completive/C	63.8%	86.7%	65.7%	87.5%
perfective/A	83.8%	89.3%	91.4%	98.8%
imperfective/A	49%	63.3%	82.2%	91.7%
imperfective/C	51%	72.2%	79.8%	82.3%

The relevant comparisons of accuracy rates between the four aspectual conditions are the following: (1) pofective vs. completive - both aspects being marked with the same preverb *po-*; (2) pofective vs. perfective - both carry different preverbs and contrast in telicity; (3) pofective vs. imperfective - differ in presence of a preverb but both are atelic; (4) completive vs. perfective - both carry different preverbs and both are telic; (5) perfective vs. imperfective - differ in presence of a preverb and telicity.[65]

Starting with the children, in the pofective condition they incorrectly select a

[64] Sentences 12, 17 (completive aspect), 19, 32 (pofective aspect), 35 (imperfective aspect) and 13, 29 (perfective aspect) were excluded from the results due to a lower than 60% score obtained from the adult control group.

[65] The number labels by each contrast are also used in the statistics Table 16 in Appendix I. Also, for the purposes of this analysis the completive and imperfective conditions were collapsed for A and C verb Groups.

finished situation over 50% of the time to represent a situation which is not finished. They seem to be treating a pofective *po-* as a perfective preverb half the time, and half the time they treat it as a marker of an imperfective or a pofective aspect. The results on the imperfective sentences are also random, as an unfinished situation is matched with either a finished or an unfinished result. In fact there is no statistical difference in their responses to the pofective and imperfective conditions (Table 16, contrast (3)). Children are significantly more accurate on the completive and perfective aspects, correctly matching a finished result with perfective (approx. 84%) and completive situations (approx. 70%) (Table 16, contrasts (1), (2) and (5)), there being no significant difference between the responses on these two conditions (Table 16, contrast (4)).

The advanced learners are also choosing randomly between finished and unfinished situations for the pofective sentences. Their responses to the imperfective sentences have an accuracy rate of above 65%, which is significantly higher than for the pofective sentences (contrast (3)) but lower than on the perfective condition (contrast (5)). They show a marked preference for the finished results in association with the completive aspect and the perfective aspect, which are most accurately interpreted among the four aspects (there being no significant difference in accuracy for these two conditions, Table 16, contrast (4)). The advanced learners are significantly better on perfective than the pofective (contrasts (2)) and completive than pofective aspects (contrast (1)).

The near-natives are choosing the unfinished result for the majority of the pofective sentences (64.3%). Their scores in the completive condition are

approximately at the same level of accuracy as in the pofective condition (there being no significant difference for this contast (1), Table 16). Finally, they are highly accurate on the perfective and imperfective sentences, with no difference between them (contrast (5)), but both being significantly higher in accuracy of responses in comparison to the pofective (contrasts (2) and (3)) and completive conditions (contrast (4)).

The controls are consistent across all the sentence types in choosing the finished vs. unfinished results. The pofective sentences get incorrectly associated with a finished situation 20% of the time and the imperfective sentences, involving verbs of Group C, receive a similar number of matchings with a finished situation. Essentially, however, there are no significant differences between any of the conditions, with the exception of marginal contrast between the perfective aspect and the others (contrasts (2), (4) and (5)), which is due to the near-ceiling score on the perfective condition.[66]

Comparisons between subject groups reveal the following contrasts and similarities. The two native groups perform differently on all aspectual conditions (Table 18). The children's highest scores on the completive and perfective aspects being roughly 20% lower than those from the adults'. Their scores on the remaining aspects, pofective and imperfective, are random, compared to the highly consistent answers from the adult controls.

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[66] For none of the groups did the lack of the overt implication of the exhaustively specified quantity of the object, the [+SQA] feature seem to have an effect. No significant difference between pofective and completive Group C items, where the pofective judgments would be more accurate, is found. The difference between the Group C items for the advanced learners results from the completive judgments being more accurate then the pofective. This is a reverse outcome to what would have been expected if the absent [+SQA] feature was crucial.

The learner groups performed differently with respect to each other on two conditions, pofective and imperfective; in both conditions the advanced group performed with lower accuracy than the near-natives (Table 19). This parallels the contrast between the L1 child group when compared with the adults, the children's scores on pofective and imperfective being also the lowest, around 50%. As a matter of fact, compared with the children's performance, the advanced learners perform with no significant difference on the pofective, the completive or the perfective conditions, scoring higher than the children only on the imperfective sentences (Table 20). The advanced learners respond differently to the adult controls on all the aspects, the completive and perfective conditions being marginally different (Table 21). The near-native learners perform differently from the adult controls only with respect to the completive aspect (Table 21). Compared with the child results the near-natives score significantly higher on the pofective and imperfective conditions but show no difference on the completive or perfective conditions (Table 20). The lack of difference on the perfective condition is an outcome of the high scores for both near-natives and children. As a matter of fact, perfective sentences received most consistent and accurate responses from all the subjects. However, the near-natives' low score on the completive is the lowest among all subject groups.

3.3. Summing up

In this chapter the results from several experimental tasks have been reported. In certain respects the learners behave consistently accross the tasks, while some of

the results revealed apparent inconsistencies in the subjects' performance or even contradictions. These findings are discussed in more detail in the next chapter where I attempt to define the grammar behind the subjects' manifested knowledge.

CHAPTER FOUR

Discussion of the results

4.0. Introduction

In this chapter I discuss the results of the study presented in Chapter 3. The results from each experimental task will be analyzed as indicators of those properties of the Polish aspects that have been acquired and those that have not been acquired by the learners, i.e. distinct interpretations, semantic features, morphosyntactic composition and its constraints.

Each task involved a different facet of knowledge of the Polish aspectual system. For certain tasks, however, the tested properties overlapped in a complementary fashion between the tasks (e.g. the *semantic compatibility* task and the *end-state compatibility* task) or did not differ but were elicited by another procedure (e.g. the *end-state compatibility* task and the *picture selection* task). In the following discussion I will attempt to aggregate the information from these tasks to some degree, although the results will be discussed mostly within the context of each task separately. The final assembly of properties of the learner knowledge as a system will be presented in the concluding chapter.

4.1. Semantic compatibility task

4.1.1. Brief task description

Recall that in this task subjects were asked to match semantically compatible sentence pairs. The expected matching followed from the implications of aspectual modification. Thus, a sentence marked with a pofective prefix *po-* needed to be matched with a sentence implying duration of the described situation (reflecting the bounding [+BOUND] and atelic character of pofective) rather than a sentence implying completion/onset of a situation (characteristic of a perfective preverb[67]); a sentence marked with a completive *po-* needs to be matched with a sentence implying completion of a number of events (reflecting the bounding [+BOUND] character of completive as well as the plurality [+PL] and telicity [+TELIC] of the context which warrants the completive interpretation) rather than a sentence without the implication of plurality (characteristic of perfective preverbs).[68] The perfective fillers had to be matched with their counterparts without preverbs which expressed the shades of meaning of these preverbs.

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[67] Because states cannot be perfective the only preverb that is possible with these verbs is a preverb *za-* implying the onset of a situation. The contrast for the pofective vs. another preverb, with state verbs, is really a contrast between a pofective and an inchoative aspect, still showing a telic vs. atelic (durative) opposition.

[68] Recall that a perfective verb implies a single achievement/accomplishment even when it consists of plural sub-events. This contrasts with completive which is distributive in character and implies a sequence of achievements or accomplishments.

4.1.2. Discussion of the results

The results from the *semantic compatibility* task are presented in Figure 1, in which the accuracy scores are given as percentages of correct responses, and are grouped according to test conditions.

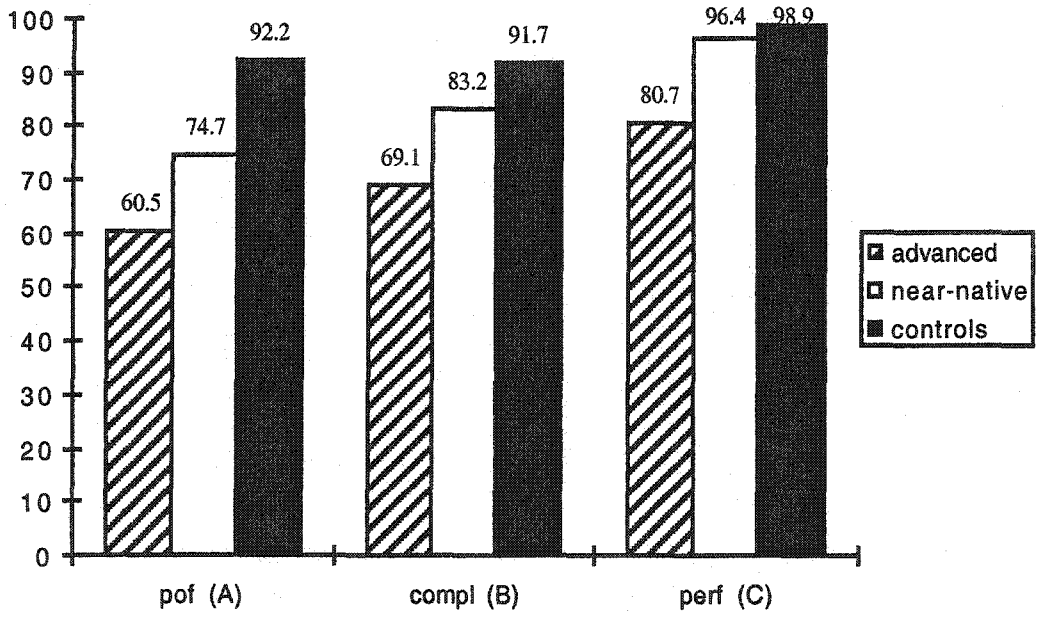

Figure 1. % of accuracy rates in the semantic compatibility task

For the advanced group the low accuracy on the distinction between pofective and perfective aspects (60.5%) may suggest that they do not recognize pofective as an atelic and bounding aspect. However, the reverse of this observation would imply that they do not interpret preverbs altogether as necessarily telic. Matching the perfective sentence with a sentence that would naturally follow a pofective situation (non-telic

and bounded) almost 40% of the time, indicates that they do not distinguish between boundedness and telicity. They do, noticeably (almost 70% of their responses being correct), seem to recognize the contrast between the completive and the perfective sentences, i.e. they less often treat perfective as completive than as pofective, which is interesting because the completive vs. perfective contrast is less marked than the pofective vs. perfective contrast. Both completive and perfective aspects mean completion (both are telic), with the only overt cue for a distinction between them being the distributive character of the completive aspect, rendered by the plurality of the object NP (so, again, telicity is not instrumental in making the distinction). Putting this result in terms of semantic properties, the advanced learners seem to be sensitive to the plurality requirement of the completive aspectual VP, even if they are not fully settled on the use of this feature, but the telicity vs. boundedness contrast appears to be nonexistent in their grammar system.

Results from both pofective and completive conditions suggest that the advanced speakers of Polish know little about preverbs as a whole. While telicity, in their grammar, is the most likely property of the perfective aspect, it is regularly confused with boundedness, hence an atelic bounded (pofective) situation is sometimes correctly associated with the pofective interpretation. However, in the telic conditions, where telicity is not a discriminating property (completive vs. perfective and perfective vs. perfective contrasts), they are more attentive to the properties of the preverbs, like the distributive character of the completive and the other individual properties of the perfective preverbs. Overall, they seem to treat preverbs as a homogenous set of morphemes, but are aware of their individual flavors. They seem

to assume one perfective aspect with some internal interpretive options. Such a state of grammar is not native-like and leads to judgments which are significantly different from the native judgments. Furthermore, there being no significant difference between the advanced subjects' responses to the completive sentences in contrast B and the responses to the perfective sentences in contrast C (i.e. their level of accuracy for these two aspects is similar), and no such difference between the responses to the completive sentences of contrast B and the pofective sentences in contrast A, a conclusion can be drawn that all these aspects are treated alike, where completive and pofective are some extra properties of perfective preverbs (probably just like manner or means of execution are).

The near-native group is much more systematic than the advanced group on all the contrasts. While their responses on the completive (B) and pofective (A) conditions are not statistically different from each other, the rates of correct responses on these contrasts both differ from the responses in the perfective condition (C). In other words, they correctly match pofective sentences with situations that are bounded but not telic, completive sentences with distributive telic situations, but in their grammar the status of both the pofective and the completive aspects is distinct from that of the perfective aspect. Therefore, they seem to be sensitive, to different extents, to telicity, boundedness and plurality of the completive aspectual VP and lexical meanings of the perfective preverbs. This suggests that, in the near-native grammar, Polish preverbs are not a homogenous group but yield distinct meanings not merely in a sense of manner/means of execution of the situation, as the perfective preverbs do. Their grammar appears much more like the grammar of native speakers

with respect to the aspectual distinctions, which is reflected in the close correspondence between their judgments and the judgments of the control group.

In fact, the contrasts in performance on pofective vs. perfective conditions (A vs.C) as well as on completive vs. perfective conditions (B vs. C) mirror the results of the controls who were also more consistent in determining the meanings of the perfective preverbs than pofective or completive ones. The immediate implication of such parallelism is that, putting aside the rates for the individual conditions for both subject groups, i.e. the *extent* of their knowledge of the aspectual interpretations of the Polish preverbs taken separately, the status of these aspects in the competence for both groups of speakers looks strikingly alike: the status of the completive and pofective preverbs/aspects was distinct from that of a perfective preverb/aspect. This observation is very important in the context of investigation of the L2 competence with respect to its state of completeness/incompleteness, where the issue can be only addressed by finding those facets of the system that are common to native and non-native speakers and those that diverge, in determinate or indeterminate ways. This contrast does not hold for the advanced learners, who behave alike on the completive (B) and perfective (C) conditions and seem to be treating preverbs as one class. Indeed, a comparison of the results between the three groups of subjects indicates that the advanced group performs differently to the near-natives and controls on all conditions, while the near-natives differ in their responses from the controls only on the pofective condition. The only speculation possible under such circumstances is that for the advanced learners *po-* has a distinct status within a homogenous group of preverbs .

4.2. End-state compatibility task

4.2.1. Brief task descriptions

In this task the subjects were required to match a logical end-state effect resulting from a situation described with either a pofective or a completive aspectual verb. The only grounds for matching were the features of the object NP. The situations which were completive in nature contained verbs of the [po-V+NP$_{[+PL][+SQA]}$] structure, which differed from the pofective situations only in the properties of the NP object, [po-V+NPsg]. Subjects had to make a selection between an end-state result with a totally affected plural object of a finished situation (the end-state of a completive situation) and an end-state result with the same but only partially affected object (an unfinished end-state typical for a pofective situation).

There is, unfortunately, a major drawback in the test design. In both test conditions, pofective A and completive B, the response was not a direct indication of the intended contrast between the pofective and completive aspects, but, more precisely, between a finished and unfinished end-state. This means that the results will not necessarily reflect the subjects' knowledge of completive or pofective, but will show whether they know which interpretations are not plausible in particular contexts, i.e. that a [po-V+NPpl] structure means "to finish NP" and not "to V NP for a while" (the distributive character of the completive structure is not relevant for this choice), and that a [po-V+NPsg] structure means "to V NP for a while" and not "to

finish NP". No conclusion can be reached about the subjects' recognition or use of aspectual contrast when choosing between an unfinished or finished end-state. The results can be interpreted only in terms of knowledge that a *po*-marked activity verb (Group C, the only group used in this test) followed by an exhaustively specified plural object yields a telic VP and followed by a singular object does not. The knowledge, then, that the task demonstrates is of the end-state interpretation that a combination of features determines (as was intended by the test design), but this interpretation may, minimally, result from a contrast in (a)telicity rather than in pofective vs. completive aspect distinction. Also, it is only a singular NP that is a key feature because a plural NP with *po-* will be telic as with any other preverb. However, a level of feature computation is necessary for the distinction between possible end-states.

4.2.2. Discussion of the results

The results from the *end-state compatibility* task were much more diverse within subject groups and between them. The difference in the distribution of the responses was most likely a result of the nature of the task. The results from the *end-state compatibility* task are presented in Figure 2., in which the accuracy scores are given as percentages of correct responses, again grouped according to test conditions.

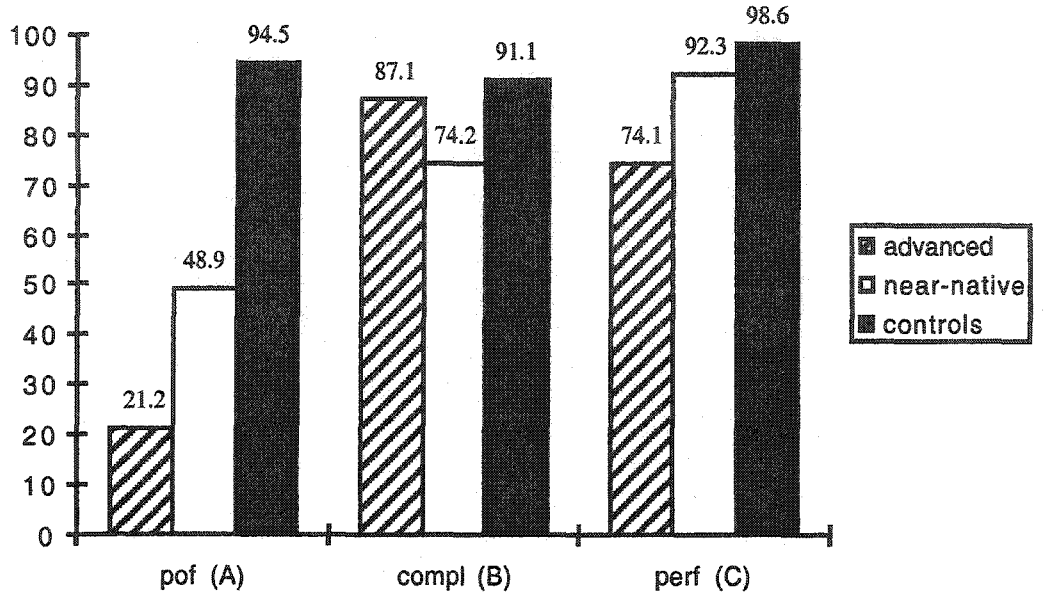

Figure 2. % of accuracy rates in the end-state compatibility task

Knowledge of the semantic properties represented by the test scores from the *end-state compatibility* task requires some consideration in the face of the results from the *semantic compatibility* task. The question is how to account for the apparent discrepancy between the accuracy levels for both L2 groups on the pofective condition in these two tasks. The advanced group is 60% of the time correct on the pofective in the *semantic compatibility* task but only 21% of the time in the *end-state* task. The near-native group scores 48.9% on the *end-state* task and 74.7% on the *semantic compatibility* task in the pofective aspect. Similarly, the controls are also less accurate on the *end-state* task. Part of the answer may lie in the tasks themselves.

The *semantic compatibility* task required a matching between pofective, completive and perfective sentences with corresponding follow-up sentences. In

neither of the possible pairings, whether combined correctly or not, were the sentences mutually exclusive. Hence, performing at a chance level was not equivalent to being wrong 50% of the time but rather not paying attention to the fine details of the expressed situation, particularly for the pofective vs. perfective contrast, which used stative verbs. As mentioned before, the true contrast for this condition was between pofective and inchoative rather than perfective, i.e. the choice of a matching was between a situation that lasted for a while (pofective) and a situation that began at some point (perfective/inchoative). If a sentence refers to an onset of some situation, it may logically also refer to duration of a situation (i.e. a sentence that is designed to follow a perfective/inchoative situation may logically be compatible with a pofective sentence). Similarly, if a sentence refers to duration of a situation, it may logically also refer to its beginning (i.e. a sentence that is designed to follow a pofective sentence may logically be compatible with a perfective/inchoative situation). Hence the choice the subjects made reflected more their preference for what made logically more sense rather than true sensitivity to the grammatical markers of aspect. A response required acute sensitivity to very subtle information on whether a preverb-marked verb expresses a duration of a situation or only the beginning of it. Similar arbitrariness of responses characterized the completive vs. perfective condition of that task, where the choice of the follow-up sentence was between objects being affected one by one or within a single event. Again, without necessary attention to details, even the 'incorrect' response was generally true. In contrast, the choice in the *end-state* task was 'undebatable', the response being either

right or wrong both semantically and pragmatically.[69] The choice must have been of a different nature and could have affected the subjects' answers.[70]

For now, however, it should suffice to point out that the results from the *end-state compatibility* task for the advanced learners clearly indicate that the fundamental function that a preverb has in the learner grammar is to mark a finished situation and is not determined on the basis of the properties of the object NP. This explains the low score on the pofective condition where the cardinality of the object NP was crucial in determining the VP as atelic, an interpretation which they failed to make, and their high scores on the condition where the target is the completive aspect (87.1%), interpreted by the advanced subjects as perfective. Note that for the completive aspect, a subject does not necessarily have to pay any attention to its distributive nature, as the contrast between the correct and incorrect response lies in the in/completion of the final result, which is completed for both perfective and completive aspect. Under such an assumption, the results on the *end-state* task from the advanced group are consistent with their scores on the *semantic compatibility* task. They generally analyze preverbs as markers of finished events and are sensitive to their individual meanings like manner and means, hence also being perceptive to the plural property of the completive preverb, as in the *semantic compatibility* task.

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[69] In fact, in the light of these considerations, the results from the *semantic compatibility* task bring new evidence. Because the advanced perform above chance on the *semantic compatibility* task, an outcome, which, as has been pointed out, would still result from logically plausible responses, the learners show sensitivity to very subtle, and not at all crucial, semantic information brought about by *po-*. They discern the extra properties of preverbs, like means and manner, but are less sensitive to the aspectual properties of telicity, boundedness and inchoativity, cues crucial in the *end-state* task.

[70] A similar discrepancy of the results from the two tasks will be observed for the near-natives. However, because these two groups seem to manifest different types of linguistic knowledge I will propose that the reasons behind this discrepancy is different for the two groups. As for the native controls, I will consider a possibility of verb group, rather than task type, as a factor in the contrast between the results for the near-natives.

They do not, however, have the command of how semantic notions like telicity or boundedness are realized in L2 Polish. This type of knowledge leads their performance to be significantly worse than the near-natives' and controls' on the pofective sentences but the same on the completive.

A similar discrepancy shows up when the scores on the pofective aspect from the *end-state* task are compared with those from the *semantic compatibility* task for the near-native subjects. Keeping in mind the possible task effects described above, two other possible accounts of such an outcome should be discussed: either they do not see the contrast between the end-states as determinable on the basis of the given situation (are not sensitive to the features of NP objects, like the advanced learners) or they know that the end-state for a preverb-marked verb may alternate between finished and unfinished, but are not set on what context determines it (are aware that features determine the interpretations but do not yet know how). The first explanation cannot be correct because not only did they recognize the role of cardinality in the *semantic compatibility* task, but they did so significantly better than the advanced group, hence it would seem incorrect to equate the type of knowledge of the two groups. The latter explanation implies that they allow for the [po-V] to signify an unfinished situation, which confirms that in their grammar preverbs are not a homogenous set marking only a perfective aspect.[71] While for the advanced subjects cardinality was just a bonus meaning of the perfective aspect for the near-natives it is

[71] Their score on the completive condition in the *end-state* task is also an indication of their sensitivity to the cardinality of the object. Although it has been acknowledged that this property was not crucial for the accuracy of responses on this condition, hence the advanced, who treat all preverbs as perfective, score high, the near-natives distinguish among preverbs. It would not be unfounded, then, to assume that they make use of the distributive property of the completive aspect in their responses.

a distinctive aspectual feature.

Another confounding factor which may have obscured the near-native's performance on this condition compared to their high scores on a similar contrast in the previous task is the property of the verbs used in these two tasks. The pofective vs. perfective contrast in the *semantic compatibility* task was expressed with state verbs which do not allow for the completive interpretation. The activity verbs used in the *end-state compatibility* task are truly ambiguous without the crucial context and the context required, either a [+PL][+SQA] object or a singular object, seems more obscure for the interpretive purposes.[72]

This speculation about the near-natives allowing for the atelic interpretation of a preverb-marked verb (pofective aspect) is supported by their results in the completive condition whose high accuracy level must be analyzed differently than it was for the advanced group. The advanced group hardly allowed for the preverb to yield an unfinished situation (typical of the pofective *po-*), suggesting that *po-* in their grammar is just another of the perfective preverbs. Such an assumption on their part led them to score high on the completive target items, the choice being between the finished and an unfinished end-state. Compared to the advanced group, the near-natives score lower on this condition because their working hypothesis is more complex: they recognize that *po-* may allow for the unfinished result (48.9% of the time on the pofective condition) suggesting that in their grammar telicity is not a sole property of preverbs; they show a distinction between boundedness and telicity determined by verb group (states vs. accomplishments/achievements) in the *semantic*

[72] These speculations are only valid in case near-natives indeed use these features as distinctive aspectual features.

compatibility task's pofective condition (74.7%); they also know that a preverb allows for the finished interpretation (92.3% accurate on the perfective filler items[73]); and are sensitive to the plural property of the *po*-marked VPs, as was indicated in the *semantic compatibility* test. Their score on the completive condition reflects knowledge combining all this information, which is not yet sufficiently systematized.

It is important to note that the performance of the control group on the completive aspect in the *end-state compatibility* task (91.1% accuracy) confirms the complexity of this condition with respect to the interpretation of *po*-. The rate of misinterpretation or inability to make a judgment (close to 10% overall) is exceptionally high in comparison with the rest of their responses. The controls cannot be suspected of treating completive as perfective, the two separate aspects being part of the native grammar. Their 94.5% score on the pofective interpretation and nearly 98.6% on the perfective aspect suggest that the completive, which requires the most specified context, is the hardest to establish (see Table B in Chapter 2, section 2.3.2.).[74]

4.3. Grammaticality judgment task

The *grammaticality judgment* task was intended to tap into the subjects'

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[73] Although the end-state contrasts for the perfective filler items did not always reflect telicity vs. atelicity contrast, for those sentences that did (6 out of the 13) the near-natives scored at a 95.5% accuracy level (the advanced group scored 77.4% accurate and controls 98.8%).

[74] However, taking into account that the scores on the completive interpretation were higher than the pofective interpretation when contrasted with the perfective aspect in the *semantic compatibility* task, the low score in the present task must be related to the completive vs. pofective distinction and not completive vs. perfective contrast.

unconscious knowledge of ungrammaticalities. The knowledge of constraints on morphological shape of *po*-marked verbs was tested in two conditions. Violation 1 sentences tested the knowledge of (un)satisfied feature selection and violation 2 sentences tested the knowledge of (in)compatibility of feature classes. The judgments were elicited on an acceptability scale ranging from the minimum 1 to the maximum 5.

4.3.1. Violation 1

Violation 1 sentences involved verbs of Groups C and E (activities and states) and Groups A and B (achievements/accomplishments). The adverbial context of these sentences was compatible with only pofective situations. *Po*-marked Group A and Group B VPs require a [+PL], feature and yield a completive aspect. The violation resulted from Group A verbs being followed a by a singular object, the [+PL] feature is not supplied, and from Group B verbs (which are inherently plural, and therefore receive only completive interpretation) being in a conflict with the modifying adverbial 'for a while', compatible with only the pofective aspect. In the grammatical condition Group C activities were followed by a singular object, yielding the pofective aspect, and Group E states received only the pofective interpretation. Sentences with these verb types are both compatible with the 'for a while' adverbial. Figure 3 presents mean ratings on grammatical and ungrammatical sentences within each verb group.

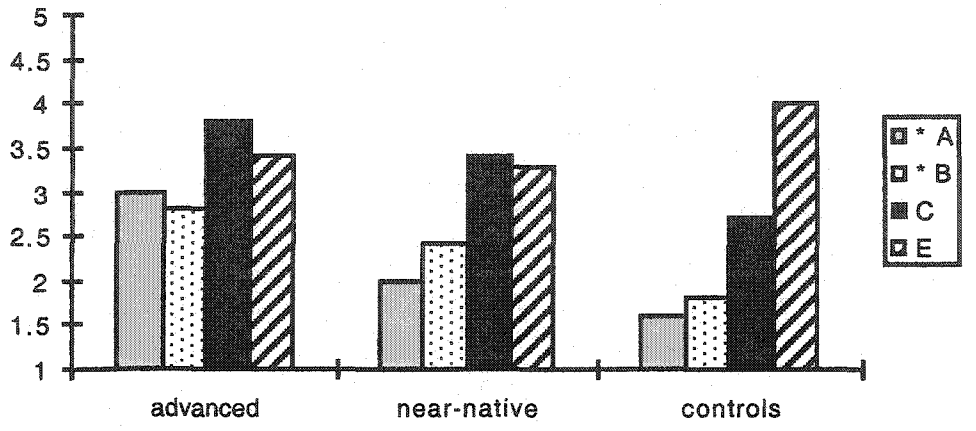

Figure 3. Mean ratings on violation 1 sentences.

Even though the advanced learners show a weak contrast in levels of acceptibility of the ungrammatical sentences and grammatical ones there is no indication that they detect the ungrammaticality, the scores being higher than the mid 2.5 value. The unsatisfied plural feature with verbs of Group A and the conflicting duration adverbial with the completive structures seem to make the sentences less acceptible but not bad for the advanced learners.

The values given by the near-natives are somewhat more polarized. They select lower acceptability scores for the ungrammatical items and above-medium acceptability scores for the grammatical sentences. These results indicate that near-natives identify the violation resulting from a conflict of semantic features within a VP and therefore, must be sensitive to the roles these features play in establishing potential aspectual interpretations. Interestingly, the judgments for the ungrammatical sentences are closer to the low end of the acceptability scale than the judgments for the grammatical sentences are to the high end. This may suggest that the near-native

intuitions are more definite with respect to the ungrammaticality of the [po-V] structures (ungrammaticality resulted from the composition of features for Group A and adverbial modification for Group B) than to grammaticality. This behavior is consistent with their results on the *end-state compatibility* task, in which they manifested knowledge of the aspectual features and possible aspectual interpretations, but were not systematic in determining possible interpretations. This would explain the relatively low level of acceptability of the grammatical items in the *grammaticality judgment* task. They accept them as grammatical, i.e. accept a composition of features, but are not sure of the actual interpretations.

This situation differs for the advanced group. Their assignment of significantly higher values to the ungrammatical items than do the near-natives and controls, gives a new perspective on the lack of significant difference between the advanced and the other two subject groups for the grammatical sentences. This effect most likely results not from the advanced learners' knowledge of possible interpretations but from the lack of knowledge of the impossible ones. No difference in performance on the grammatical items for near-natives and controls, on the other hand, must be accounted for in terms of similar types of competence.

4.3.2. Violation 2

Violation 2 sentences involved deriving an aspectual structure across syntactic domains. It was tested for verb Groups A, B and C on the completive interpretation. Knowledge of two grammaticality contrasts was examined, one between an

ungrammatical structure derived through a combination of s-syntactic and l-syntactic features and a grammatical s-syntactic composition, and the second between the same ungrammatical structure and a grammatical l-syntactic composition. The grammaticality judgments required the knowledge that derivations across domains, i.e. involving both l- and s-features, are disallowed.

4.3.2.1. Comparison of cross-syntactic and s-syntactic structures

Figure 4 presents mean ratings on grammatical s-syntactic and ungrammatical cross-syntactic sentences within each verb group.

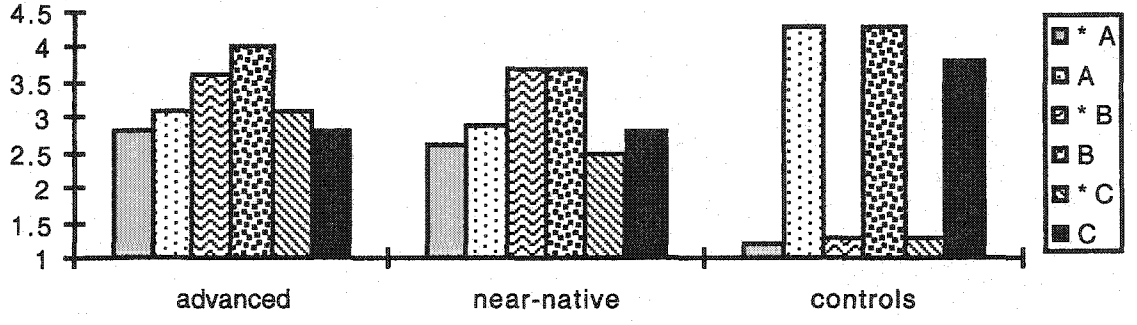

Figure 4. Mean ratings in violation 2: grammatical s-syntactic and ungrammatical cross-syntactic sentences.

In general the L2 subjects are performing uniformly in both conditions, grammatical s-syntactic and ungrammatical, and differently from the controls. The only differences lie between scores for the ungrammatical sentences containing verbs of Group C, where near-natives assign lower values than do the advanced, and for the

grammatical sentences in Group B, which the advanced subjects judge similarly to the controls. Group B, in fact has the highest scores among the verb groups for all subjects.

Within the subject groups we observe that while the controls make a sharp distinction between the grammatical and ungrammatical sentences for each verb group, the learners do not. Aside from the Group B sentences, the scores for ungrammatical sentences fall in mid-range of the acceptability scale, for grammatical and ungrammatical sentences alike for both subject groups, suggesting that the learners do not detect the ungrammaticality resulting from an across-syntactic derivation, i.e. they do not perceive the s-syntactic and cross-syntactic structures as different, but also they do not view either of the sentence categories as 'normal'.[75]

4.3.2.2. Comparison of cross-syntactic and l-syntactic structures

Figure 5 presents mean ratings on grammatical l-syntactic and ungrammatical cross-syntactic sentences within each verb group.

[75] Whether a sentence seemed like a 'normal Polish sentence' was one of the criteria for the assessment of the sentences' acceptability.

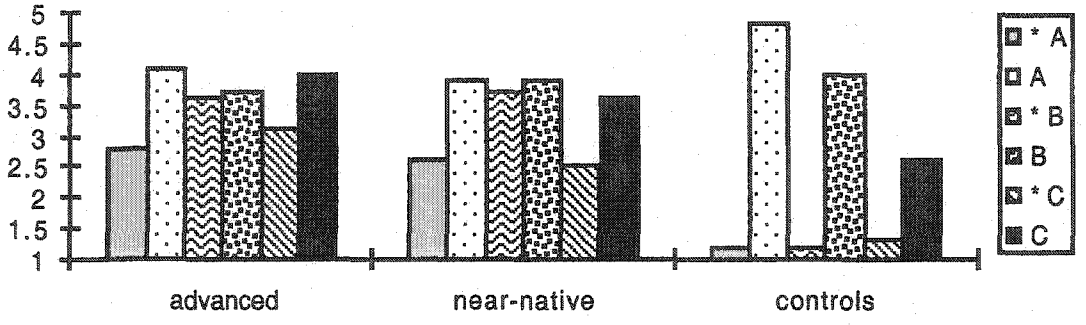

Figure 5. Mean ratings in violation 2: grammatical l-syntactic and ungrammatical cross-syntactic sentences.

Except for verb Group B, both L2 groups make a distinction between the ungrammatical structures derived across domains and the grammatical ones derived in l-syntax. This suggests that they detect the grammaticality, which must imply that in their grammar the l-structures have a different status to the cross-syntactic and s-syntactic structures. This may further imply a contrast between the l- and s- features. In the context of the above observations, it appears that while the contrast between the s-syntactic and l-syntactic domains of derivations is part of learner competence, there is a problem in judging the grammaticality status for the grammatical s-structures and cross-syntactic structures. A comparison of mean values for the grammatical l- and s-structures was made, and is presented in Table A below.

TABLE A

Mean values for violation 2: grammatical s-syntactic vs. l-syntactic structures

[po-perf-V-freq] vs. [po-V] + NPpl

verb group	*advanced*		*near-native*		*control*	
	grammatical s-syntactic	*grammatical l-syntactic*	*grammatical s-syntactic*	*grammatical l-syntactic*	*grammatical s-syntactic*	*grammatical l-syntactic*
Group A	3.1	4.1	2.9	3.9	4.3	4.8
Group B	4	3.7	3.7	3.9	4.3	4
Group C	2.8	4	2.8	3.6	3.8	2.6

Except for the Group B verbs, which was in general anomalously high on ungrammatical and grammatical structures, the comparison of the scores indicates that, indeed, the L2 subjects are treating the grammatical l-syntactic and s-syntactic structures differently, where the latter are somewhat less accepted as grammatical (advanced group [$F(64,1)=5.64, p=0.02$]; near-native group [$F(64,1)=6.78, p=0.01$] as shown in Table 22, Appendix I). For the native speakers there is no such contrast (with the exception of Group C condition, which is again the lowest) [$F(64,1)= 1.04, p=0.31$]. Importantly, this lack of contrast for the controls was expected because, in principle, the s-syntactic and l-syntactic derivations are the same operations carried out in syntax by means of the same mechanism.

No significant difference between s-syntactic grammatical structures and the ungrammatical structures, as well as a significant difference between the grammatical l- and s-syntactic structures, where the l-syntactic structures are more likely to be accepted, suggest that the l-syntactic structures were more accurately judged than the s-syntactic ones. In fact, it is the l-syntactic structures that bring about the significance in the overall grammatical vs. ungrammatical contrast for the learner

groups in violation 2 (as was shown in Table 9, Appendix I). Furthermore, recall that all subject groups did make the expected grammaticality distinctions in the violation 1 condition. These involved sentences with only l-syntactic structures [po-V], which either satisfied feature selection for the pofective aspect by virtue of the properties of the base verb or not. This observation, firstly, confirms my earlier inference about a particular status of the l-syntactic structures compared to the s-syntactic ones, and, secondly, suggests that the type of violation may have significantly affected the accuracy of responses. To see whether the status of the two types of violations differs, the values for ungrammatical sentences were compared between the two violation types.[76] The scores are presented in Table B, and statistical significance levels for the comparisons between violations 1 and 2 ungrammatical sentences are given in Table 23, Appendix I.

TABLE B

Mean values for ungrammatical violation 1 vs. violation 2 sentences (Groups A & B)

	advanced		**near-native**		**control**	
	violation 1	*violation 2*	*violation 1*	*violation 2*	*violation 1*	*violation 2*
ungrammatical Group A & B	2.9	3.2	2.2	3.1	1.7	1.3

The results from the near-natives do confirm the speculation about violation 1 structures' acceptability being more accurately estimated than violation 2 structures. The near-native group is significantly more accurate [F(64,1)=8.5, p=0.005] at

[76] The comparison may be only made between ungrammatical structures because violation 1 did not contain grammatical counterparts of the Group A and B structures. Also, the comparison is impossible for Group C structures as this verb group was not tested in violation 1 in the ungrammatical condition.

rejecting the ungrammatical l-structures of violation 1 (resulting from unfulfilled feature selection or incompatible adverbial expressions for the pofective aspectual interpretation) than the structures involving the same verbs which were supplied with the required feature content but involving both an s-syntactic perfective prefix and an l-syntactic plural feature of the object NP (violation 2). In other words, violation 2 sentences, grammatical and ungrammatical, involved more complex structures containing two prefixes, *po-* and a perfective preverb, which was, most likely, the source of greater difficulty, as implied by the near-native's results. Neither advanced group nor controls show significant difference in the judgments between violation 1 and 2. The advanced learners give both types of ungrammatical structures scores around the mid-value [$F(64,1)=1.02$, $p=0.3161$], a result consistent with their general tendency to accept all sentences, while the controls reject these structures at par. As a matter of fact, in Polish the violation 2 ungrammatical structures, derived across domains, are worse than the ungrammatical structures of violation 1, which is reflected in the controls' scores (Table B, above), although this contrast is not statistically significant.

4.3.2.3. Filler sentences

The possibility of a scenario where the prefix doubling of violation 2 would influence the accuracy rates for the learners had been predicted in the test design. A set of filler sentences with verbs containing two perfective prefixes, was included to

examine the status of double prefixation in the learners' grammar, outside of the issue of aspectual interpretation associated with *po-*.

The filler sentences, as in the other two tasks, involved verbal structures with perfective preverbs. Although they were included in the task mainly as distractors, they were also expected to give a further insight into the subjects' knowledge of the constraints on the perfective aspect composition in Polish. While some of the restrictions are of strictly lexical nature, some resemble the restrictions for the pofective and completive aspects, like the preverb doubling condition and morphosyntactic restrictions or lexical selection. The filler verbs [perf-V] and [perf-perf-V] were structurally identical to the test verbs [po-perf-V] or [po-perf-V-freq]. The ungrammaticality of [perf-V] (referred to as FI type) resulted in violation of compositional or interpretive requirements on the perfective composition in Polish (examples are given in (15) - (18) described in Chapter 3, section 3.2.4.); the ungrammaticality of [perf-perf-V] (FII type) was due to violation of a restriction on preverb doubling in Polish, whereby preverb *na-* is required to structurally precede any other perfective affix (examples of grammatical and ungrammatical structures are given in (19) and (20) of Chapter 3, section 3.2.4.). Table C presents mean scores on the grammatical and ungrammatical filler sentences collapsed for both violation types, FI and FII.

TABLE C

Mean values on filler irammatical and ungrammatical sentences collapsed for violations FI and FII

[perf-V] and [na-perf-V] vs. *[perf-V] and *[perf-na-V]

	advanced		near-native		control	
grammatical vs. ungrammatical	***FI+II***	****FI+II***	***FI+II***	****FI+II***	***FI+II***	****FI+FII***
	3.8	3.0	3.8	2.6	4.2	1.3

The grammaticality contrast is perceived by all three subject groups (the significance levels are given in Table 24, Appendix I) but it is clear that the contrast is more defined for the higher proficiency speakers. The advanced subjects are pretty accurate at estimating the grammatical sentences but seem rather undecided when detecting ungrammaticality, with the scores for the unacceptable sentences converging at around the mid-value. The near-natives manifest a more categorical distinction in the grammaticality status of the perfective structures, their scores for the grammatical sentences being higher and those for the ungrammatical structures lower. The non-native groups differ from the native speakers on both grammatical and ungrammatical sentences, and the advanced group is, as on test sentences involving other aspects, less accurate than the near-natives on the ungrammatical sentences, assigning higher values to them (group comparisons are presented in Table 25, Appendix I).

Having confirmed that subjects do make a distinction between the grammatical and ungrammatical perfective structures, it is important to see whether either of the two ungrammaticality types was more problematic than the other. This is reflected by the scores in Table D which contrasts the structure types: grammatical vs.

ungrammatical for [perf-V] (FI type) and grammatical vs. ungrammatical for [na-perf-V] vs. *[perf-na-V] (FII type).

TABLE D

Mean values on grammatical and ungrammatical filler sentences within violations

advanced		near-native		control	
FI	****FI***	***FI***	****FI***	***FI***	****FI***
4.3	3.3	4.7	2.8	5	1.4
FII	****FII***	***FII***	****FII***	***FII***	****FII***
3.2	2.7	2.9	2.5	3.4	1.3

The grammaticality contrast within the FI condition is significant for all three subject groups (see Table 26, Appendix I for comparisons between grammatical and ungrammatical filler sentences). The advanced group shows a preference for the grammatical sentences, but the mid-range scores on the ungrammatical perfective structures confirm that their intuitions about the unacceptability of these structures is not clearly defined. They treat these structures differently to the grammatical ones but do not reject them. The near-native group shows a sharper contrast between the grammatical and ungrammatical FI structures, the grammatical ones being assigned values approaching the maximum on the acceptability scale, as in the control group. This suggests not only that they perceive a grammaticality contrast but also that the ungrammatical structures are indeed truly of lower acceptability for these subjects.

The grammaticality contrast within the FII condition is rather intriguing. The advanced group gives different scores for the grammatical and ungrammatical

sentences of this type [F(64,1)=4.66, p = 0.0347], the near-natives make no significant distinction between the two [F(64,1)=2.10, p = 0.1518], while the controls do make the expected distinction, they accept the grammatical structures with double prefixation at a lower rate [F(64,1)=54.39, p < 0.0001].[77] A comparison between subject groups (see Table 27, Appendix I for group comparisons) shows difference among the three groups for the FI type sentences, both grammatical and ungrammatical. However, the three groups perform similarly (although statistically different), assigning low values, to the grammatical sentences with doubly prefixed verbs. The near-natives are only marginally different from the controls, confirming the predicted particular status of these structures in the subjects' grammars. Importantly, as shown in Table E, below, all three groups score significantly higher on FI type than FII type grammatical sentences (see Table 28, Appendix I for comparisons between the FI and FII grammatical senetences). This parallels the configuration of scores between violation 1 (po-√V) structures vs. violation 2 (po-perf-√V-freq) structures (Table A, above), suggesting that the double prefixation was indeed problematic for the L2 learners, as well as controls[78], and negatively biased the results on the test items.

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[77] In the context of the advanced subjects making no distinction between violation 1 and 2, suggesting that they do not operate with s-syntactic vs l-syntactic features, the contrast between FII and *FII structures must be attributed to the complexity of the doubly prefixed verbs, but cannot be interpreted as a confirmation of their results from violation 1 or 2.

[78] Note that for derivation types, i.e. l- vs. s-syntactic, the controls showed no contrast (Table A and Table 22, Appendix I), while they do so for the fillers with one- vs. double-preverb structures (Table E and Table 28, Appendix I). This is consistent with the analysis that the former contrast was between two structures of the same status in native grammar, while the latter contrast was between two grammatical structures whose acceptibility status is different.

TABLE E

Mean values on grammatical type FI vs. grammatical type FII filler sentences

advanced			near-native			control		
FI	*vs.*	*FII*	*FI*	*vs.*	*FII*	*FI*	*vs.*	*FII*
4.3		3.2	4.7		2.9	5		3.4

In total, the observations made above, particularly for the near-native subjects lead to the following conjecture. On the one hand, the learners do not distinguish between s-syntactic and cross-syntactic structures or between the ungrammatical and grammatical double (perfective) prefixation type structures. All of these structures involve, according to the analysis presented in Chapter 2, s-features, which further suggests that they do not distinguish among s-structures. On the other hand, they do show a contrast between l-syntactic and s-syntactic structures. What may be the case at hand is that near-native competence includes both s- and l-features, and a contrast between them, but does not have the constraint on cross-syntactic derivations, i.e. involving both feature classes, or the constraints on the combinations of s-features, i.e. involving double-prefixation cases. However, as was in fact implied by the results from controls for the structures contrasting in domains of derivation, l- and s-syntactic, and in constraints on perfective affixation (see footnote 78), the latter may be a reflection of another type of knowledge than that required for the mapping of aspectual interpretations.

4.4. Picture selection task

4.4.1. Brief task description

In this task the subjects had to select one of two pictures which best reflected the aspect of a sentence they had just heard. The contrast between pictures was in the object, singular for the pofective and imperfective but plural for the completive and im/perfective sentences, being totally or partially affected (finished or unfinished). In essence, the aspect of a sentence was determined by a preverb. A perfective preverb would always imply a finished event (perfective aspect), a lack of a preverb an unfinished event (imperfective aspect), and a preverb *po-*, when accompanied by a plural object, a finished event (a completive aspect, which would involve both verb Groups A and C), and when accompanied by a singular object, an unfinished event (a pofective aspect, involving only Group C verbs).

4.4.2. Discussion of the results

The focus of this test was the distinction between two aspectual interpretations of the *po*-marked structures, i.e. the knowledge that 1/ a *po*-marked verb of Group C could mean either a finished or an unfinished situation, depending on the cardinality of the object (pofective vs. completive aspects); 2/ that a *po*-marked verb of Group A means completion (completive aspect); 3/ that the result of a pofective structure does not differ from an imperfective result (unfinished) and that the result of a completive

structure does not differ from a perfective result (finished). The manifestation of these distinctions in the subjects' responses would imply that the cardinality of the object, the type of a verb and the type of preverb, and its presence or absence, are means of distinguishing between the pofective and completive aspects.

The following three scenarios are predicted in case only one of the three means of determining aspectual interpretation is used by the subjects. First, if cardinality of the object is the only criterion for interpretation, and plurality is associated with telicity (a potential hypothesis based on the plural objects of all perfective verbs in the test) then we would expect all telic sentences (perf-V, po-Group A and po-Group C (both completive with plural objects)) to be correctly assigned 'finished' illustrations, atelic sentences with po-Group C verbs (pofective with singular objects) to be correctly assigned 'unfinished' illustrations, and imperfective sentences, involving both plural and singular objects, to be random (five out of fourteen imperfective sentences have singular objects). The second scenario assumes a preverb as the sole determinant of responses. If the subjects use preverbs as telicity markers, all verbs with preverbs must be associated with 'finished' results. The responses to the completive, perfective and imperfective sentences should, in such a case, be all correct, but the pofective sentences incorrect. Under the third scenario, if the subjects use the verb class alone as the factor determining the interpretation, the following two possible response patterns should obtain. If verbs of Group A are associated with telicity (and such an association is likely, considering Group A verbs are achievements and accomplishments) then only completive Group A and pofective sentences should be correctly associated with the 'finished' and 'unfinished' type

pictures, respectively, while the completive Group C structures should be incorrectly associated with the 'unfinished' type pictures. The imperfective sentences should vary in the accuracy of the responses. If, for some reason, verbs of Group C are associated with telicity then only completive Group C sentences should be correctly associated with the 'finished', while the pofective Group C structures, the completive Group A and perfective structures should be incorrectly associated with the 'unfinished' pictures. The imperfective sentences should vary in the accuracy of the responses. It is evident that for a successful completion of this task subjects must take into account all three elements of aspectual composition, verb type, object's cardinality of the object and presence/absence of a preverb.

Figure 6, below, presents collapsed scores (Group A and Group C verbs combined) for the completive and imperfective aspects, and shows percentages of correct responses on the four aspectual conditions.

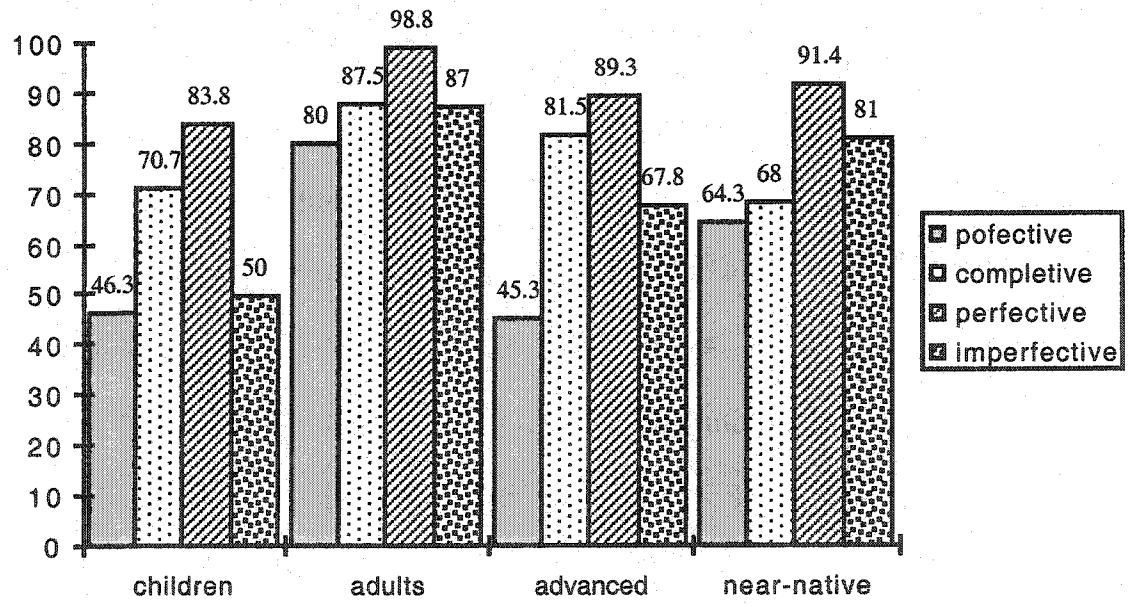

Figure 6. Mean acccuracy scores on the picture selection task

4.4.2.1. L1 children

A new element of this task is an addition of child speakers of Polish, who serve as a second control group. Under an assumption that a child grammar, although different in the way its content may be manifested in use, must be still a natural language system, the child responses may serve as a source of reference as to what the interpretive possibilities among L1 speakers are and how the L2 judgments compare to them. Even though these are only results from a single task, which, as has been pointed out, is rather limited and requires a lot of improvement to be maximally informative, they unquestionably illustrate a contrast between the interpretations assigned by the two native groups. Whether this should be taken to imply that the systems of the two native groups are different or that mapping from a single system may give diverse outcomes is hard to tell. However, what the results do ostensibly suggest is that the interpretive capacities are different for the adult and child speakers of Polish.

Children's accuracy in the telic conditions, involving perfective and completive aspects, is highest. In the atelic conditions, pofective and imperfective aspects, the children behave randomly. Note that this outcome is not predicted by any of the three strategies that were contemplated above. The split in accuracy levels cannot be associated with the cardinality of the object, presence/absence of the preverb or a particular verb group. Clearly, the split is between telic and atelic

situations. What is even more suggestive is the contrast between the completive and pofective conditions, both of which use the same preverb *po-* but differ only in the cardinality of the object. Yet, cardinality cannot account for these results, as the singular objects do not get associated with solely unfinished results for the pofective aspect (around 54% of the selected pictures illustrate finished situations).

I see two possible accounts of the children's responses. The first is that children perceive the atelicity of these situations, and in their interpretive system atelicity is analogous to unspecified telicity, which, in turn, is equated with optional telicity. The second explanation allows for the possibility that the children simply do not know how to interpret these sentences. In either case it is important that the children do make an initial assessment of what the interpretive possibilities are, i.e. that their system computes semantic compositions of given constructions which then are either interpretable, like perfective and completive, or not, like pofective and imperfective. Crucially, for the purpose of these computations the pofective *po-*, the completive *po-*, and the perfective preverbs are not treated alike. In fact, although this speculation may be a little far fetched, note that there is no statistical difference between the scores for the pofective ([po-GroupC]+singular object) and the completive ([po-GroupC]+plural object) sentences (Table 17, Appendix I, comparison (1)), confirming that the cardinality of the object alone is not a deciding factor. On the other hand, there is a difference between pofective sentences and completive sentences with collapsed Group C and Group A verbs (Table 16, Appendix I, comparison (1)), suggesting that the subjects are using information about

the verb group and the object's cardinality in tandem to compute the interpretation of the verb phrase.

4.4.2.2. L1 adults

The adult controls' responses are assumed to be a reflection of a fully developed interpretive capacity, and, as such, they satisfy the expected level of consistency across all sentence types. The aspect that receives the lowest score is the pofective and the highest score is the perfective. Interestingly, imperfective and pofective sentences, involving verbs of Group C, receive a fair amount of incorrect matchings (around 20%) with the finished situations, while Group A of the imperfective condition are judged correctly over 90% of the time. This is the reverse of what should be expected if telicity of the base verbs was to lead to a choice of a 'finished' result. In such circumstances the activities (Group C) would be correctly associated with unfinished situations, accomplishments or achievements (Group A) should be associated, incorrectly, with finished situations. I have no account of this phenomenon except that either it is the Group C effect discussed for the *grammaticality judgment* task results in Chapter 3, section 3.2.4.1.2., or some elements of the pictures must have confused the subjects. In sum, the two native groups behave differently from each other. Both seem to make use of a compositional mechanism to compute interpretations, but their capacity for assignment of interpretations to different aspectual structures varies. The telic VPs are systematically and uniformly interpreted by both groups. The atelic VPs are either

ambiguous or uninterpretable for children, while the adults interpret these structures without much variability.

4.4.2.3. Advanced learners

The advanced learners are behaving differently than either of the control groups. Their responses are random with respect to the pofective sentences, highly accurate in both telic conditions, perfective and completive, scoring similarly to the children, yet, they are more accurate than the children on the imperfective sentences, but less so than the native adults. Again, none of the possible response strategies alone accounts for these results, although the pattern of their responses does seem to be influenced by the occurrence of the preverbs. It could be suggested that the perfective and completive sentences are successfully interpreted as telic on the basis of the preverb, the pofective sentences [po-V] being also interpreted 55% of the time as telic, although incorrectly, and the imperfective sentences are judged as atelic, due to the lack of a preverb. This account would be in accord with what had been suggested for the previous tests: the advanced learners treat preverbs as a homogenous set of perfective markers, and the aspectual contrast they operate with distinguishes between the perfective and imperfective aspects only. In the context of the results from the *end-state* task, where the advanced subjects almost 80% of the time associated the pofective situation with a finished result (recall, that the same verbs were used for the pofective sentences in both *end-state* and *picture selection* tasks) such an interpretation of the present results seems quite plausible. However, a

question remains: if the advanced subjects treat *po-* as a perfective preverb, why then, in the *picture selection* task, do they assign an unfinished result to these pofective sentences at all (45% of the time)? Also, if the presence/absence of a preverb is a determining factor in their interpretive system, and the perfective vs. imperfective is the only aspectual opposition, then their results on the imperfective sentences are equally puzzling, around 1/3 of the answers implying a finished result. There is a possibility that for the aspectual compositions that are not transparent enough for them, either due to too little or not sufficiently discernible aspectual information, the advanced learners rely on the nonlinguistic means of deduction, world knowledge or pragmatic considerations to decide on the interpretation of a phrase, which may be more available with a task like picture selection.

4.4.2.4. L2 near-native

The other L2 group of subjects, the near-natives, do not reflect the trend that was observed in the *end-state compatibility* task, in which their responses to the pofective condition were averaging around 49% and the completive condition around 74% (lower than the advanced subjects). In the *picture selection* task they are approximately 65% accurate on both conditions, which is significantly higher than the advanced on the pofective but lower, although not significantly, on the completive sentences. It was suggested that the scores on both conditions in the *end-state* task were a result of the complexity of their knowledge rather than a lack thereof, and that the comparison of the completive scores with the scores from the advanced group

pointed to the near-natives' awareness that there is more than just a telic interpretation for verbs with preverbs. Overall, they seem to be more accurate on the *picture selection* task, but, just like in the previous test, not set on the precise aspectual components that determine interpretations. Where the interpretation is a matter of the presence or absence of the preverb, as is the case of the perfective and imperfective aspects, their judgments are highly consistent and accurate. It is important to note that both perfective and imperfective are significantly higher in accuracy compared to the pofective and completive conditions. This implies that either these aspects or the preverb *po-* itself has a different status to the other aspects/preverbs.

4.5. Summing up

Overall, the results from the experimental tests show that the knowledge of the aspectual interpretations of Polish differs for all four groups of subjects. While the advanced learners do not distinguish among the preverbs but treat them as markers of finished situations, the near-natives manifest knowledge of preverbs as varying in function and meaning. The group of children shows behavior which is different to the adult controls and but also not comparable to either of the learner groups.

In the next and last chapter, I will bring together the information provided by the results discussed here, and will attempt to define the knowledge represented by each of the subject groups. I will conclude with remarks on the near-native state of competence with respect to the aspectual system of Polish.

CHAPTER FIVE

Conclusions

5.0. Introduction

The crux of the observations made in Sorace's 1993 study involving two near-native groups of L2 speakers of Italian was that the intuitions of the near-native speakers were different from those of the native speakers and that the judgments of the two L2 groups differed from the native judgments in two different ways. Sorace's investigation was triggered by empirical findings and intuitive observations, which, to her, suggested that reaching native-like L2 competence with respect to the whole of L2 grammar is an impossibility for adult learners. Her point of contention was, and this is what her study demonstrates, that a steady state L2 grammar may be of two types: incomplete or divergent. These two different states of grammatical competence correspond to qualitatively distinct categories of ultimate attainment.

The present study takes up Sorace's conclusions and investigates the types of grammar which emerge at the final (or near-final) stage of language acquisition, as well as at a prior, advanced stage. Sorace's account views competence as a system of knowledge whose content can be assessed by means of judgments assigned to structures of the target language. Assuming the native grammar to be a complete system of knowledge that allows for categorical assessment of linguistic data, she proposes that an incomplete grammar lacks a representation for a part of target

grammatical knowledge, and is manifested by indeterminate judgments of grammaticality of the target structures. A divergent grammar, on the other hand, being a grammar that has the target properties but with non-target instantiations, will result in determinate judgments which differ from the native judgments. Sorace accounts for such a distinction between final states of L2 acquisition in terms of the learners' L1 grammar systems.

Operating with Sorace's terminology and means of defining interlanguage grammars, the present research investigates systems represented by two groups of L2 speakers, who share the same L1, but differ in competence levels in Polish as a second language. In the previous chapter I presented and discussed the aspectual properties of Polish that have or have not been acquired by L2 learners. In this chapter I will define the systems of aspectual knowledge that these properties add up to in terms of divergence/convergence and in/completeness with respect to the target Polish grammar. To make such a comparison possible, I will first describe the knowledge manifested by the native speakers.

5.1. Native speakers' knowledge of Polish aspects

5.1.1. Adult system

The system manifested by the native Polish-speaking adults reflects fully developed knowledge of aspectual interactions, resulting in fixed and determinate interpretations. The system operates with a set of lexical and syntactic formal features

contributed by means of elements introduced in the computation of the individual aspects. These aspects, however, seem to have a different status within the system, as the perfective and imperfective aspects stand in contrast to the pofective and completive aspects. This dichotomy is most likely a result of two factors. The first factor is the level of complexity involved in generating interpretations, where the perfective/imperfective require just one element to be aspectually defined, while the pofective/completive aspects involve computation of a number of elements. The second factor is how categorical the choice between possible interpretations is. The perfective vs. imperfective opposition is unequivocally determined by presence vs. absence of a perfective preverb, while the pofective and completive aspects both provide potential interpretations for the same verb or the same preverb or the same object type. It is the aggregation of these components that determines an ultimate outcome.[79] This effect of a kind of a hierarchical architecture of interpretations is very interesting because the system seems like a rigid base of points of reference such as verbs, preverbs, objects, syntactic domains, which through their internal properties and requirements give interpretive options. These options are determinable to varied degrees depending on how many of the points of reference are involved in a derivation.

This in fact is not really surprising. Recall that one of the differences between the pofective/completive and the perfective preverbs is the degree to which these preverbs require the VP they attach to to be specified. Perfective aspect has virtually

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[79] Recall that pofective and completive were lower in accuracy level in the *semantic compatibility* task, completive was the lowest in the *end-state* task, pofective in *picture selection*, and the pofective structures with Group C activity verbs in the *grammaticality judgment* task received variable judgments.

no requirements and can attach to a verb of any aspectual class complemented by an NP of nonspecific cardinality.[80] What is more, these perfective structures always imply one type of event, always single and finished, regardless of the verb classes and objects. In consequence the sole requirement of the perfective VPs is compatibility with time-span rather than durative adverbials. The pofective/completive preverb *po-* is different. When functioning as a pofective aspectual marker, it requires the VP to be atelic but shows no requirement with respect to the object. As a completive aspectual marker, on the other hand, it requires a telic VP and a plural object. This hierarchy of specification of the context in which the three aspects may be yielded reflects the hierarchy of availability of these interpretations among the native speakers. Such convergence of the experimental test results and the proposed theoretical account (see Chapter 2, section 2.3.4.) validates the theory of aspectual interactions in Polish, since it proves adequate in predicting possible interpretive patterns which result from the suggested mental representations.

The implications of the native subjects' responses for validity of the theoretical account go further. *Po-* was analyzed as a multifunctional element. Although not all the properties of *po-* as a multifunctional prefix were tested in this study[81], those that were provide sufficient evidence to uphold its proposed multifunctional character. The two aspectual interpretations that are possible for the preverb *po-* are conditioned by required context in which these aspects may be yielded. Knowledge of these contexts and the resulting aspects, achieved through the

[80] This concerns the perfective aspectual interpretation. As was noted above, lexical selection resulting in different meanings within the perfective aspect is quite complex.
[81] This refers to the 'double *po*-constructions' described in Chapter 2, section 2.3.1., which are controversial among native speakers and therefore were not tested among learners.

properties of the verb and the object (summarized in Table C of Chapter 2, section 2.3.4.), was elicited in three of the tests. Furthermore, knowledge of impossibility of aspectual interpretation of pofective/completive due to unfulfilled selectional requirements and knowledge of its multifunctional nature (it being able to attach to both l-syntactic and s-syntactic derivations) were tested in the *grammaticality judgment* task. Furthermore, this last property also required that the learners detect ungrammaticality of the structures that were illicitly derived across syntactic domains of s- and l-syntax, i.e. structures whose composition involved both l- and s-features. The native speakers gave responses confirming this distinction, accepting the l-structures and s-structures but rejecting the cross-syntactic structures.[82]

In my opinion, these results validate the account in two ways. First, they confirm that such a distinction exists, i.e. that certain compositions are possible others are not, despite the fact that logically and conceptually both types of structures carry equivalent potential for interpretations. Second, the native speakers accept the grammatical l-structures and s-structures at the same rate, in other words, there is no difference between the classes of derivation in the mental representation for these structures.[83] Under the current assumption that these structures are indeed results of composition within two separate domains of syntax, l-syntax and s-syntax, and that these derivations must belong in either one domain or the other but not in both, what we expect from experimental results is a contrast between one-domain vs. two-

[82] Recall, that all the structures, grammatical and ungrammatical, involved appropriate combinations of feature values. Ungrammaticality was a result of an inappropriate feature class.

[83] There is a contrast for Group C verbs for both l- and s-syntactic constructions discussed in Chapter 3, section 3.2.4.1.2 . But it is worth pointing out here that the contrast is not dependent on the class of derivation but on the verb group.

domain constructions but no contrast between grammatical one-domain constructions, even if the domain is not the same. Both l-structures and s-structures are derivations of syntax, therefore they should have the same status in the grammar. The judgments of native speakers confirm these predictions, and hence, they constitute indirect evidence for the original assumption that the source of the grammaticality contrast between one-domain and two-domain forms lies in the suggested contrast between the syntactic vs. lexical class of features involved in the derivations.[84]

Overall, the adult control group's behavior suggests that all the tested properties of aspects are represented in the native grammar of Polish.

5.1.2. Child system

When addressing the aspectual system manifested by the children in the *picture selection* task, two circumstances have to be kept in mind. First, these observations are made on the grounds of a very limited study. However, the results do reveal certain behaviors than can be safely characterized as properties of the children's grammar. Second, these are speculations about properties of a native but immature system.

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[84] My enthusiasm about the experimental data confirming the theoretical account and its predictions may seem somewhat unwarranted. After all, (un)grammaticality is a fact of language not a hypothesis. However, I need to point out that the particular constructions investigated here, aside from involving interpretive properties, usually most prone to variability among speakers, were approached by the native speakers with a great deal of apprehension, and were claimed to be either non-existent in "their speech" or in Polish generally. My intuitions and language experience was different. While, I admit, some of the structures are infrequent or unusual, they are certainly attested, yet some of the structures abound in spoken Polish.

The L1 aspectual interpretive system of children seems to operate with a single aspectual property of telicity. Telic eventualities receive an unequivocal interpretation, this being true of both perfective and completive situations, while the atelic cases seem either uninterpretable or open to various interpretations, the children hesitating between telic and atelic association. Whatever the reason for this contrast, its presence is an important discovery. The system that allows for such a contrast in interpretation must use some properties of the completive or perfective VPs to result in such determinate judgments. We cannot really say for certain whether children are using formal semantic features, yet they are surely not using strictly lexical properties of elements like verb type, preverb type or cardinality of the object in their responses, and, most likely, it is not any single property that results in the interpretation, but a combination of properties.[85] They seem to be making their judgments on the basis of properties which are not surface properties of individual lexical elements of a VP. Rather, their responses seem to be driven by the product of the composition of these elements and their properties which are brought into computation of the aspectual meaning. The difference between the child and adult L1 systems lies not in the content but in what interpretations are available for the mapping of the existing representations. In the children's case it is either a determined interpretation (telic/finished) vs. indeterminate possibilities.

[85] Recall that neither object cardinality, nor the preverb nor the verb class alone could account for their responses. Also, there is no one element that appears in the successfully interpreted telic conditions and not in the uninterpreted atelic conditions.

5.2. Near-native system

The responses from the near-native group reveal not a stable system of knowledge but a system which nevertheless appears as complex as the native one. Overall, all preverbs are represented in the near-native grammar and define internal temporal constituency of a situation i.e. are markers of distinct aspects. Crucially, preverbs are not a homogenous group, and, consequently, the preverb *po-* has a status distinct from the rest of the preverbs. Preverbs contribute different syntactic and lexical properties and not only idiosyncratic lexical meanings, like means or manner typical of perfective preverbs. They are components of structure-building and their contribution depends on and is restricted by other required elements of aspectual composition. While for the advanced speakers cardinality of objects or (un)boundedness are merely auxiliary meanings of the perfective aspect, in the system of the near-natives these constitute distinctive aspectual features. Telicity is a property of the perfective aspect, as are all the lexical shades of meaning related to perfective preverbs, boundedness of the pofective, plurality of the completive, etc. All these properties, along with other elements of VPs, determine the final aspectual interpretations, and all the tested interpretations are part of the system.

As was observed for the native speakers, also within the near-native system the aspects seem to be hierarchically ordered with respect to how transparent their interpretations are, reflecting feature context requirements for each aspect. The perfective aspect (as well as the imperfective in the *picture selection* task) is easily determined, while the pofective and completive aspects seem more taxing. In fact, it was originally hypothesized that perfective vs. imperfective distinction being

represented in the learners' L1 should be also available in the target L2 grammar. It is therefore impossible to decide whether this hierarchy is of the same nature as was proposed for the native speakers, i.e. whether it results from the properties of L2 aspects, like in the native system, or whether it is a product of representations being available from L1, on the one hand, and representations that had to be acquired, on the other hand. However, even if the latter is the basis of the hierarchy in the near-native system, the accuracy of aspectual interpretations was not simply a reflection of perfective/imperfective vs. pofective/completive split. The near-natives' performance on the non-L1 target interpretations showed native-like traits. Recall, for example, that when determining aspectual interpretation which involved the most complex of possible compositions of features, i. e. completive aspect with Group C verbs, the near-natives' responses were negatively affected, as were the native speakers', while for structures involving achievements or states with pofective interpretations the rate of accuracy ranged from random to native-like.

In the previous chapter it was suggested that variability in the results of both native and near-native speakers may have resulted from: (i) verb classes used in the structures, (ii) the complexities of the structures themselves, or (iii) the task procedures and type of decisions that the subjects had to make. Importantly, however, the results reflected the near-natives' use of the elements of aspectual computations and were accounted for in terms of interpretive operations of native grammar. The near-native grammar seemed to suffer at the level of mapping from aspectual composition to meanings, which was not categorical and resulted in varying levels of success in determining the final aspectual interpretations. Going back to the question

of the nature of the native and near-native aspect hierarchies, it is impossible to establish whether this nature is the same for both, but, clearly both systems lead to linguistic behavior of similar nature but different efficiency.

Another point that needs to be addressed in the context of the different rates of accuracy mentioned above is how they should be interpreted with respect to the overall near-native competence. Assuming that determinacy of responses is a major criterion in choosing between complete or divergent grammar, the near-natives' variability of behavior would suggest their system of knowledge to be incomplete. However, it has been demonstrated that on certain tasks the subjects' performance is not just determinate but also native-like, suggesting that the required mental representations are available. None of the interpretive elements appears to be missing from the system. Rather, the problem seems to lie in the mapping from the computations that these elements are part of to their interpretations.

As a matter of fact, a phenomenon described as a "mapping problem" has been observed in L2 acquisition research in other domains of language. Cases of variability in suppliance of verbal or nominal inflectional morphology by learners who, at the same time, demonstrate knowledge of abstract syntactic properties like case requirements on subjects or verb placement, have been accounted for in theories like the *missing (surface) inflection hypothesis* (MSIH) (Haznedar & Schwartz, 1997; Lardiere 1998; Prévost & White 2000; Haznedar 2001; Ionin & Wexler, to appear) or the *failed functional feature hypothesis* (FFH) (Hawkins & Chan 1997, Hawkins 2000, Liszka 2000). Specifically, MSIH proposes that variability in use of inflectional morphology, or its absence, is not a reflection of grammatical competence but rather a

result of a breakdown in the relationship between the unimpaired abstract functional domain and its incomplete representation in inflectional morphology. Lardiere (1998) proposes that what undermines the surface system in non-native acquisition is the part of competence responsible for transformation of the abstract grammatical information into its surface representation. Lardiere, as well as many others (Lardiere & Schwartz 1997; Haznedar & Schwartz 1997; Prévost & White 2000), sees mapping as the source of nonconvergence between, apparently, fully specified abstract morphosyntactic features and their morpho-phonological reflexes. Without going into details of the featural properties which, according to various accounts, drive syntactic structure via feature checking computations, the essence of the mapping problem lies in the types of mappings required in the post-syntactic component of grammar (mapping from syntax to morphology to spell-out (Phonetic Form PF)). Lardiere (2000) illustrates the procedure of mapping from feature to form that the learner needs to go through once computational feature checking has been done, with an example of Genitive case assignment (based on Beard's 1995 original proposal of the *separation hypothesis*, which treats the abstract morphosyntactic features and forms that reflect them as separate). The first level of mapping is from syntax to the morphological entity Genitive, which does not categorically predict the correct spell-out but leads to another level of mapping from the morphological category "Genitive" to PF conditioned by gender and number (in English this implies selection out of "his", "her", "its", but may be more complex for other languages). She suggests that even when the first layer of mapping may be executed flawlessly, variability in

surface morphology may occur.[86]

Prévost & White (2000) in their French and German L2 studies report morphological variability between predominantly correct finite and nonfinite verb forms as well as an expected contingency between the verb form and its raised vs. non raised position. Their results also show that such variability is not random, suggesting that the effects of some type of mapping failure are systematic and should be accounted for in terms of a formal breakdown in the procedure of accessing the morphological marking rather than an overall breakdown in the system. Typically, when agreement morphology is present it shows up as appropriate, rather than faulty, inflection. Furthermore, examples of substitutions are also observed but these are of specific and limited type. For example finite forms are substituted by nonfinite forms and not vice versa. Prévost & White suggest that the source of the variability is in lexical underspecification in terms of the fundamental principles of Distributed Morphology (Halle & Marantz 1993). In particular, vocabulary items may be underspecified in the interlanguage lexicon and may function as defaults whose featural content does not need to be fully specified. Provided there is no "clash" of features, these defaults may be inserted into the appropriate syntactic nodes. While for native adult speakers lexical items which are fully and appropriately specified are inserted, in L2 the access to those items is sometimes blocked.

Hawkins & Chan (1997) suggest an alternative account of variability in the manifestation of morphology in L2 acquisition. The claim of the *failed features*

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[86] This is Lardiere's account of the system manifested in the naturalistic data from Patty, a native Chinese speaker who acquired English as an adult, and whose variability in suppliance of morphological marking on English verbs and nouns seemed to contradict robust evidence for her grammatical knowledge implicating the presence of functional categories.

hypothesis is that the problem that learners face is not of the computational nature, as is assumed within the MSIH, but is a result of missing representations in the interlanguage grammars. According to the FFH, unless an instantiation of parameterized formal features is selected before the critical period, they will not be available in later language learning. In the context of L2 acquisition this implies that for learners whose L1 and L2 do not converge on feature inventory or feature values, successful acquisition of these features and their morpho-phonological reflexes is impossible.

The nature of the insufficiencies manifested by the near-natives acquiring the Polish aspects seems to be best described as a "mapping problem", i.e. a problem within the computational domain, rather than a problem of unavailable representations. In the spirit of the MSIH, absence of consistently correct interpretations (or surface manifestations) is not taken as evidence for the absence of knowledge of the elements that build these interpretations. In other words, I believe that drawing conclusions uniquely from learners' linguistic performance would underrepresent their linguistic competence. I will expand on this issue shortly, and will illustrate how drawing conclusions about an entire non-native grammar system on the grounds of the properties of the surface efficiency or accuracy, which constitute only a part of the target system, may be misleading and wrong.

However, as much as it seems appropriate not to equate variability in linguistic behavior with the lack of underlying knowledge when there is evidence of this knowledge in surface manifestations, the conclusions must be different in cases when the linguistic behavior is ambiguous, i.e. provides evidence neither for nor

against the existence of underlying knowledge. In Sorace's account such behavior implies an incomplete grammar, which, by lacking a property is unable to assess target structures in a determinate fashion. The near-natives' performance on the *grammaticality judgment* task with respect to the Polish s-syntactic grammatical and ungrammatical aspectual structures was of this type. Their responses on these constructions must be interpreted in the context of the entire system.

In the theoretical account of the preverb *po-* in Chapter 2, I suggested that it is a multifunctional prefix, its multifunctionality being manifested in its two aspectual interpretations, its l- and s-syntactic character and two places of generation in the phrase structure, below and above EP. Knowledge of the multifunctionality of *po-*, and associated constraints of aspectual composition driven by a distinction between two domains of syntax, was required in order to make appropriate assessment of sentences of the *grammaticality judgment* task. For this task it was not enough to have (i) the representations of features involved in the aspectual composition but it was also crucial to have (ii) the distinction between the l- and s-features and the requirement that the pofective and completive aspects select for either s-syntactic or l-syntactic feature composition but not a cross-syntactic one. While the near-native subjects are capable of distinguishing between grammatical and ungrammatical l-syntactic structures and reject the ungrammatical ones resulting from feature incompatibility (i.e. they manifest knowledge in (i) above), it is difficult to decide whether they distinguish between the classes of features. Even though there was a contrast between their acceptability rates for the l- vs. s-syntactic grammatical structures, the subjects were unable to distinguish between the grammatical s-

structures and the ungrammatical cross-syntactic structures. The contrast between the l- and s-structures could simply be a contrast between interpretable structures (l-structures) and those that they were unable to interpret. It appears that in their analysis the interpretable structures were those whose eventuality was determined in the Event Phrase (EP) but not higher. Hence all the l-structures, those involving *po-* and perfective preverbs (of the FI type filler sentences), were interpreted and correctly assessed, but those that involved the s-syntactic positions and s-syntactic computations seem to have no representation in their grammar. If this is the case, then one is forced to conclude that the grammar of near-natives does not provide the means of aspectual composition/interpretation above EP, i.e. it is incomplete. This claim would only be substantiated if the subjects were tested for their ability not only to judge the acceptability but, crucially, to assign interpretations to s-structures (this knowledge could be elicited in tests like semantic compatibility, end-state compatibility or picture selection tasks).

I see a potentially milder version of the above claim. It could be suggested that the subjects may have the distinction between s-syntactic and cross-syntactic structures but that the experimental design failed to elicit this knowledge. The grammatical s-syntactic structures, (as was indicated in Chapter 2, sections 2.3.5. and 2.4.2.2.) tend to have 'vague' interpretations, i.e. boundedness of *po-* may have wide scope over the entire eventuality, or scope over the individual plural situations rendered by the frequentative aspect, or may have an interpretation which is ambiguous between the two. These interpretive options depend on the feature choice for a given derivation (both [+TELIC] and [-TELIC] s-features are available for

composition), a choice most probably driven by pragmatics (see footnote 34 of Chapter 2 for some examples). This 'vagueness' may have resulted in the subjects' responses averaging at around mid-value. In contrast, the mid-values for the ungrammatical cross-syntactic sentences could have been synonymous with a response 'uninterpretable'.[87] These questions, I think, could be answered only with new tests teasing apart interpretation of the structures and the estimation of their acceptability.

However, as the evidence available from this study suggests that there is some kind of breakdown in interpretation resulting from computations above the projection of EP, the most that can be concluded is that the near-natives' interpretive competence with respect to aspects is native-like in the l-syntactic domain but not within the s-syntactic one. Consequently, if *po-* is a multifunctional element, generated within both domains of syntax, then the near-native grammar has either an incomplete representation of this prefix or an incomplete representation of the phrase structure in which *po-* would be generated for s-syntactic composition. Given the evidence from the double perfective preverb test sentences in the *grammaticality judgment* task, which the near-natives were unable to assess, it appears that the problem of interpretation is more structural than lexical or semantic. Aspectual interpretations beyond the boundary between the l- and s-syntax, EP, are unavailable. On the other, hand, all the facets of multifunctionality of *po-* seem to have been acquired by the near-natives, i.e. interpretive distinctions, selectional requirements and its semantic character.

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[87] The mid-values on grammaticality judgment tasks, in acquisition research in general, pose a problem of interpretation.

If the nature of the incompleteness of the near-native system is indeed structural, a reliable theory of aspectual composition in the s-syntactic domain of Polish would be crucial, in order to establish what elements of the structure need to be acquired. Such a theory, to my knowledge, is still unavailable.

5.3. Advanced system

The advanced learners' behavior reflects a very underdeveloped system which generates responses on the basis of a binary aspectual contrast between perfective vs. imperfective disitnction. This opposition is marked by presence vs. absence of preverbs. Preverbs constitute a homogenous set of perfective aspectual markers which define finished eventualities and carry individual meanings. Some imply manner or means of execution of situations, and some, like preverb *po-*, plurality or boundedness. It appears that (a)telicity is the only semantically salient property in their aspectual system, while notions like (un)boundedness, cardinality, specified quantity of the object etc., are lexical meanings of verb phrases. Pofective and completive interpretations seem to be yet two other interpretive options of the perfective aspect. Compared to the target grammar, this learner system differs in terms of its content and the level of analysis for the purposes of interpretation, the content being two contrasting results (finished vs. unfinished) and the level of analysis being confined between them, i.e. variations in meaning within the bounds of perfective and imperfective results. This rather unrefined system does not show formal restrictions in terms of which of the preverb properties may combine and yield

grammatical/acceptable aspectual structures in the manner that was tested in this study, i.e. by feature selection.[88] The composition of an interpretation reflects the sum of a perfective preverb and its meaning. Such an interpretive system does not distinguish on the grounds of features, which generate grammatically distinct structures, but on the grounds of the sum of lexical information (recall, that although the scores were statistically different for the grammatical and ungrammatical l-structures in the *grammaticality judgment* task, Table C, Chapter 3, section 3.1.4.1.1., values assigned to the ungrammatical sentences averaged above mid-value at 2.9). Therefore, it is the lexical distinctions rather than syntactic-semantic ones that are involved in deriving meanings of perfective preverbs in the advanced grammar.

Such a grammar generates a series of mostly determinate responses in all conditions. The perfective and completive aspects receive the most uniform and systematic responses on all the tasks, while, clearly, the completive is treated as a perfective marker. Their scores on the imperfective condition of the *picture selection* task are not as high as the perfective or completive but attain an average of 67%. Their scores on the pofective interpretation fluctuate with task requirements, and overall show either no interpretation or only a telic interpretations of the prefix *po-*. Such behavior is generally determinate, suggesting a grammar that is divergent from the target system. It will be suggested, however, that this divergence is characteristic of the part of the system and not its entirety.

Since the system operates with lexical terms, it is capable of assigning interpretations to the grammatical l-syntactic structures but offers no criteria to assess

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[88] In the next section 5.4. I will propose that there must be some level of computation involved in the advanced grammar.

the s-syntactic and the illicit across-domain structures involving semantic features of both l- and s-syntactic types. However, although their inability to make judgments about s-syntactic constructions may resemble the state of grammar of near-native speakers, I think the basis for the lack of s-syntactic distinctions for the advanced group is different. Their behavior on all the tasks suggests that they operate with a different sort of system, not a system of features and structural constraints of composition but a system of combinations of meaning. This looks more like purely lexical and not even l-syntactic knowledge. It would seem wrong to interpret their competence in terms of the distinction between l- and s-syntactic domains.

In Sorace's terminology, the advanced speakers' knowledge of aspects in Polish must be looked upon as a separate and divergent system of knowledge. Moreover, this system is not just divergent but also it is severely impoverished, i.e. incomplete. As it is not clear whether the classification she proposes allows for these two definitions applied to a single system, I will return to this issue in the next section and suggest why defining a single grammar as either incomplete or divergent but not both is inadequate.

5.4. Divergent vs. incomplete domains of knowledge

From the above discussion there emerges a certain configuration of the types of knowledge within the system of aspects, i.e. knowledge of the lexical, semantic and morpho-syntactic domains. The competence in these domains differs between the learner groups and it differs for each learner group between the domains.

At the **lexical level**, involving meanings, both advanced and near-native speakers manifest a complete range of lexical information carried by the Polish preverbs, i.e. both groups allow for different meanings to be contributed by individual preverbs. What differs between these learners is the character of this contribution of meaning. While for the near-natives the meaning of a preverb appears to be one part in a composition of meaning of a situation, i.e. a preverb is one of the elements in the computation of meaning, for the advanced learners preverbs seem to be elements defining a situation. They demarcate a point, the onset or the end, of a situation as well as a manner in which this point is achieved within the situation, i.e. they mark an end of a *plural* situation, mark an end of a *process*, pick an *interval*, etc. In this sense, in the advanced grammar, preverbs change meaning rather than contribute meaning, as they do in the native and, in fact, near-native grammars. While in the target grammar the lexical level is the domain where the initial phase of the computation takes place. i.e. computation of meaning, the advanced grammar carries out some kind of computation in the lexical domain that involves meaning and certain of the aspectual properties (most probably telicity). The advanced learners have knowledge of preverbs which is divergent from native knowledge, as the role of preverbs in this grammar does not exactly correspond to the role of preverbs in the target system. Overall, while the near-native system has complete native-like representation of preverbs in meaning and function, the advanced grammar is a complete system of lexical meanings of preverbs with divergent functions.

At the **semantic level** the meanings described above are encoded and contributed by features. The computations of aspectual interpretations are carried out

by means of feature composition. The near-native speakers seem to operate with a complete inventory of structurally relevant semantic features, as the aspectual composition in their grammar is restricted by feature selection and feature composition.[89] The advanced learners, on the other hand, seem to operate with one property of preverbs, telicity. Properties like plurality and boundedness are just extra meanings, and do not seem to impose any restrictions or requirements on the ultimate computations of meanings, and therefore are not structurally relevant in the sense that semantic features are. Even the feature status of telicity itself is rather dubious considering that the [-TELIC] feature of states or activities does not seem relevant in the subjects' interpretation of eventualities (all that matters for them are the perfective preverbs). I will go further and suggest that the advanced grammar cannot be qualitatively compared to the native system. The interpretations elicited in the present study must have been yielded by means other than posited for the aspectual composition system of Polish. In particular, the advanced system yields meanings but not grammatical aspects. Recall that in the discussion of the lexical level, above, it was suggested that the advanced learners manifest a complete range of meanings associated with Polish preverbs, including the pofective and completive meanings of *po-*. The way this statement must be understood is that they allow for a preverb to mark two points in an eventuality/select an interval, i.e. allow for 'pofective' meaning, or mark end point on plural eventualities, i.e. allow for 'completive' meaning, but this is not equivalent to distinguishing between the pofective and completive aspects. These aspectual interpretations could only be possible as a result

[89] By semantic features that are syntactically relevant I consider those that not only contribute meaning but define and constrain internal structure of events.

of feature composition, but the means for such composition do not seem to be available in the advanced grammar. In fact, I believe this is where a possible characterization of the advanced learner grammar in terms of completeness or divergence stops being applicable. Because of the divergence in the initial component of the system, the lexical domain, the rest of the system will necessarily be different, regardless of what interpretations the subjects allow or disallow, and regardless of the nature of their behavior, determinate or not.

The last domain of knowledge of the aspectual system, the **morpho-syntactic** realization of the semantic and lexical components, is, in a sense, entailed by the knowledge of the two components. The composition of syntactic elements like preverbs, verbs and objects is a composition of the semantic and lexical properties, i.e. features. However, while the near-native knowledge of lexical-semantic interface seems in place, it is not the case that the syntactic computations or the syntax-semantics interface are complete. The mapping from feature composition, in essence, morpho-syntactic composition, in the near-native system is not entirely determined. In terms of Sorace's classification, indeterminate judgments are indicative of incomplete grammar, yet, the near-native judgments, paradoxically, arise from within a complete system. As I suggested above in section 5.3., I do not take this failure to imply breakdown in the system but some partial insufficiency of the computational capacity.

However, a much more severe breakdown in the near-native system surfaces in the domain of syntax. The near-natives' inability to interpret compositions involving structure above the boundary between l-syntax and s-syntax, EP, suggests a

state of grammar with no interpretive resources, i.e. necessary structure, within s-syntax. The syntax-semantics level of aspectual analysis points to elements missing in the near-native grammar, implicating an incomplete type of competence at the structural level.

In sum, the above distinctions among the three domains of knowledge strongly suggest that each of them must be considered separately when defining competence. While divergence or incompleteness at the lowest levels of analysis may most likely affect knowledge at the higher levels, the opposite is not necessarily the case. Hence, for a reliable and most representative description and classification of non-native grammar, one must, if possible, access all relevant levels of competence. In turn, absence of knowledge in one domain must be accounted for from the perspective of the entire system. Recall, that when addressing the knowledge of the advanced learners, the present investigation remained limited to those preverbs which behave in a canonical 'perfective' manner. Their system would have to be classified as "incomplete" at worst, even when allowing for some likely computational shortcomings. However, their grammar, as has been demonstrated, is so far removed from the target system that calling it incomplete is a significant understatement. It is only the lexical domain of knowledge of preverb meanings that bears characteristics of completeness, and even then it diverges qualitatively with respect to the function of preverbs. Conversely, viewing their competence entirely from the higher level of analysis would suggest a failure in acquisition of a system, implying that the advanced grammar encodes a purely binary distinction between perfective and imperfective aspects. This would not be an accurate description of their competence

either. Note that even at the lowest lexical level of interpretation a very intricate computational mechanism must be already in place. This is because many of the preverbs or possible meanings they contribute are restricted with respect to the verb and object properties. Recall that most of the filler items of all the tests, involving perfective preverbs, did not only elicit knowledge of telicity yielded by these preverbs but required knowledge of their lexical meanings which must be combined with the properties of the verbs and sometimes NP objects.[90] The advanced group's accuracy on these items was high, suggesting that this level of computation of meaning is represented in the advanced grammar.

This last observation leads to a more general issue of acquirability of preverbs and aspects. Acquisition of Slavic aspect has always been known for being extremely problematic for L2 learners. Slabakova (2002) takes up this fact in an attempt to reveal reasons behind this problem. She examines the knowledge of the perfective preverbs among English speakers acquiring Russian (a language of similar complexity with respect to aspectual interpretations as Polish). She suggests that the source of difficulty in acquiring the Russian aspect lies in the nature of the preverbs, which are both inflectional and derivational, i.e. they carry grammatical information in form of telicity and contribute new meanings. While the grammatical property of preverbs is the same for all, the lexical meanings differ. Thus, she concludes, "...each prefix-root combination has to be learned on a one-by-one basis". While this observation adequately describes the problem, it seems to me that the present analysis of the acquisition of the Polish aspects identifies another level of complexity of the

[90] Kipka (1998) gives a very thorough review of the types of combinations of these properties in Polish.

acquisition task, which perhaps, extends to other Slavic languages.[91] In consideration of the analysis of advanced and near-native states of competence, it appears that there are three major thresholds in the acquisition sequence of the aspectual system. The first is the lexical domain, where mapping from morphological form to interpretation is highly idiosyncratic, and, therefore, must be approached on a "one-by-one basis", as suggested by Slabakova, although some computational generalizable mechanism must already be in place. The second is the domain of semantic composition of features, which entails knowledge of grammatical aspects, like the Polish pofective, completive and perfective. The third, is the combination of the aspects themselves, where the level of analysis expands beyond the lexical domain of syntactic structure. The mapping from morphological form to interpretation is most likely uniform at all levels but the complexity of the information carried by the elements of the composition increases, while the nature of the constraints on the composition becomes more regular and productive.

It has been shown in this study that progression from one level of complexity to another is possible. Because the near-native system is in most respects like the target system, the necessary changes in the grammar of the advanced speakers must presumably follow. In fact, in my opinion, a number of signs of change can already be observed. Firstly, semantic properties like boundedness, plurality and specificity, used as idiosyncratic properties of preverbs, are already a part of the interpretive system. It appears that these properties will evolve into semantic features which will compute new aspectual contrasts, like pofective and completive, for example. The use

[91] I am aware that the Polish system shares many but not all aspectual properties with other Slavic systems.

of these properties in determining meaning was already observable in the *semantic compatibility* task, in which the boundedness of the pofective and the plurality of the completive aspects guided the subjects' responses. Also, in the *picture selection* task, the responses to the pofective condition were rather intriguing. Some property of the verb phrases, either the object or the verb, yielded judgments that were hard to account for, unless some level of computation of interpretation is allowed, and, importantly, a level beyond plain absence or presence of a preverb. The results from the pofective condition were random, despite the preverb, while the completive condition sentences, involving the same verbs and the same preverb, consistently received a correct response. The big question remains, with respect to the grammar of the near-natives of the present study, namely, if their system is structurally incomplete at the s-syntactic level providing no resources for compositions among the aspects, is one to conclude that this level of interpretation may never be represented in the learner grammar? There is no possible way to answer this question at present, but a thorough investigation aimed at these properties might reveal some clues. Research of this kind would have to work with a very strong theory of aspectual structure above EP and test this knowledge among speakers whose native-like quality of Polish would have to be very diligently ascertained.

5.4. Summing up and concluding remarks

The present study has investigated the nature of near-native competence in terms of its completeness or divergence with respect to the target grammar. The

object of the investigation was the system of aspectual interactions in Polish as the target language. The idea behind looking at a system rather than some single property, was to achieve an approximation of complexity of language as a whole, where individual elements of the system can be addressed separately but must be analyzed with respect to the other elements and, ultimately, with respect to the entire system. This approach has turned out particularly useful in the final attempt to define the two non-native systems of grammar. The elements of these systems, representing distinct types of knowledge, showed different characteristics with respect to divergence and completeness. It has been suggested that the terminology proposed by Sorace is effective when applied a given sub-domain, and should not be generalized over the entire grammar.

I believe, that this thesis has provided some further evidence for a view of the structure of aspect as a composition of lexical, semantic and syntactic information, and has shown that the projection of Polish aspectual structure onto the the two domains of syntax, l-syntax and s-syntax, accounts for the descriptive language facts, predicts linguistic behavior of native speakers, and allows one to identify the domains of knowledge in which certain learnability problems may arise for L2 learners. However, for a more informative and reliable identification of the loci of these problems and a better insight into their nature, a more elaborate and formalized account of the aspectual system is crucial. In particular, one needs a theory of the lowest level (lexical within l-syntax) of composition and the properties of its components, i.e. the preverbs, as well as a theory of the highest level (s-syntactic), i.e. a theory of aspectual structure and interpretation above EP.

Overall, even though the present research raises more questions than it provides answers, pointing to issues that need to be addressed in future research (the nature of experimental test design, appropriately elaborate theoretical account of properties to be investigated, etc.), I believe that this research has laid some necessary groundwork for future investigations of both the theory of the Slavic aspect and of the acquisitional issues in the domain of aspectual interpretations.

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APPENDIX I

Statistics tables

TABLE 1

Semantic compatibitlity task

Comparisons between conditions A, B, and C

univariate ANOVA, error 24, DF 1

conditions	F	advance	F	near-native	F	control
pofective A vs. completive B	1.75	$p = 0.1981$	1.64	$p = 0.2119$	0.2	$p = 0.8829$
pofective A vs. perfective C	10.81	$p = 0.0031$	12.08	$p = 0.0020$	4.19	$p = 0.0517$
completive B vs. perfective C	3.35	$p = 0.0798$	4.22	$p = 0.0511$	4.56	$p = 0.0431$

TABLE 2

Semantic compatibitlity task

Comparisons of accuracy rates between subject groups

univariate ANOVA, error 50, DF 1

condition	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
pofective A	5.62	$p = 0.0216$	40.67	$p < 0.0001$	9.67	$p = 0.0031$
completive B	4.82	$p = 0.0329$	17.58	$p < 0.0001$	1.79	$p = 0.1864$
perfective C	24.95	$p < 0.0001$	53.20	$p < 0.0001$	1.05	$p = 0.3114$

TABLE 3

End-state comapatibility task

Comparisons between conditions A, B, and C

univariate ANOVA, error 21, DF 1

conditions	F	advance	F	near-native	F	control
pofective A vs. completive B	68.65	$p < 0.0001$	6.11	$p = 0.0221$	1.09	$p = 0.3076$
pofective A vs. perfective C	58.52	$p < 0.0001$	23.73	$p < 0.0001$	1.92	$p = 0.1802$
completive B vs. perfective C	4.04	$p = 0.0576$	4.68	$p = 0.0423$	7.62	$p = 0.0117$

TABLE 4

End-state compatibitlity task

Comparisons of accuracy rates between subject groups

univariate ANOVA, error 50, DF 1

condition	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
pofective A	12.25	$p = 0.0010$	139.4	$p < 0.0001$	45.49	$p < 0.0001$
completive B	3.62	$p = 0.0628$	0.39	$p = 0.5338$	7.16	$p = 0.0100$
perfective C	14.49	$p = 0.0004$	40.56	$p < 0.0001$	2.28	$p = 0.1374$

TABLE 5

Grammaticality judgment task

Comparison of rates for ungrammatical vs. grammatical sentences in violations 1, 2, and fillers collapsed

univariate ANOVA, error 64, DF 1

contrast	F	advance	F	near-native	F	control
ungrammatical vs. grammatical	8.16	$p = 0.0058$	20.16	$p < 0.0001$	112.6	$p < 0.0001$

TABLE 6

Grammaticality judgment task

Comparison of rates for test vs. filler sentences

univariate ANOVA, error 64, DF 1

contrast	F	advance	F	near-native	F	control
test items vs. filler items	0.08	$p = 0.7724$	0.48	$p = 0.4899$	0.71	$p = 0.4024$

TABLE 7

Grammaticality judgment task: violation 1

Comparison of rates for ungrammatical vs. grammatical sentences

univariate ANOVA, error 64, DF 1

contrast	F	advance	F	near-native	F	control
ungrammatical vs. grammatical (*A+*B vs. C+E)	4.63	$p = 0.0351$	13.44	$p = 0.0005$	17.43	$p < 0.0001$

TABLE 8

Grammaticality judgment task: violation 1

*Group comparisons of rates for ungrammatical *A+*B and grammatical C+E sentences*

univariate ANOVA, error 50, DF 1

verb groups	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
*A+*B	7.69	$p = 0.0078$	31	$p < 0.0001$	4.06	$p = 0.0492$
C+E	0.70	$p = 0.4073$	1.80	$p = 0.1860$	0.08	$p = 0.7806$

TABLE 9

Grammaticality judgment task: violation 2

Comparison of rates for ungrammatical vs. grammatical sentences (s-syntactic & l-syntactic colapsed)

univariate ANOVA, error 64, DF 1

contrast	F	advance	F	near-native	F	control
ungrammatical vs. grammatical	3.27	$p = 0.0752$	6.19	$p = 0.0155$	94.52	$p < 0.0001$

TABLE 10

Grammaticality judgment task: violation 2

Comparison of rates for ungrammatical vs. grammatical s-syntactic sentences

univariate ANOVA, error 64, DF 1

verb group	F	advance	F	near-native	F	control
***A vs. A**	0.28	$p = 0.5989$	0.42	$p = 0.5173$	30.26	$p < 0.0001$
***B vs. B**	0.65	$p = 0.4232$	0.00	$p = 0.9792$	29.53	$p < 0.0001$
***C vs. C**	0.44	$p = 0.5092$	0.6	$p = 0.4420$	20.41	$p < 0.0001$

TABLE 11

Grammaticality judgment task: violation 2

Group comparisons of rates for ungrammatical sentences

univariate ANOVA, error 50, DF 1

verb group	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
*As	0.21	$p = 0.6455$	26.69	$p < 0.0001$	17.12	$p < 0.0001$
*Bs	0.00	$p = 0.9804$	78.57	$p < 0.0001$	63.25	$p < 0.0001$
*Cs	4.96	$p = 0.0305$	62.4	$p < 0.0001$	21.54	$p < 0.0001$

TABLE 12

Grammaticality judgment task: violation 2

Group comparisons of rates for grammatical s-syntactic sentences

univariate ANOVA, error 50, DF 1

verb group	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
A	0.16	$p = 0.6928$	9.08	$p = 0.0040$	9.95	$p = 0.0027$
B	1.56	$p = 0.2177$	1.41	$p = 0.2411$	6.02	$p = 0.0177$
C	0.01	$p = 0.9184$	9.0	$p = 0.0042$	7.93	$p = 0.0069$

TABLE 13

Grammaticality judgment task: violation 2

Comparison of rates for ungrammatical vs. grammatical l-syntactic sentences

univariate ANOVA, error 64, DF 1

verb group	F	advance	F	near-native	F	control
***A vs. A**	7.32	$p = 0.0087$	8.55	$p = 0.0048$	40.62	$p < 0.0001$
***B vs. B**	0.00	$p = 0.9623$	0.24	$p = 0.6293$	24.87	$p < 0.0001$
***C vs. C**	3.97	$p = 0.0507$	6.47	$p = 0.0134$	5.62	$p = 0.0208$

TABLE 14

Grammaticality judgment task: violation 2

Group comparisons of rates for grammatical l-syntactic sentences

univariate ANOVA, error 50, DF 1

verb group	F	advance vs. n-native	F	advance vs. control	F	n-native vs.control
A	0.37	$p = 0.5449$	11.15	$p = 0.0016$	13.56	$p = 0.0006$
B	0.76	$p = 0.3873$	2.55	$p = 0.1165$	0.22	$p = 0.6402$
C	1.37	$p = 0.2466$	25.54	$p < 0.0001$	10.56	$p = 0.0021$

TABLE 15

Picture selection task

Comparison of accuracy rates within conditions (verb groups A & C)

univariate ANOVA, error 28, DF 1

conditions	F	children	F	advanced	F	near-native	F	adults
completive A vs. C	1.81	$p = 0.1898$	0.03	$p = 0.8580$	0.47	$p = 0.4979$	0.00	$p = 1.0000$
imperfective A vs. C	0.04	$p = 0.8399$	1.14	$p = 0.2945$	0.12	$p = 0.7265$	2.02	$p = 0.1667$

TABLE 16

Picture selection task

Comparison of accuracy rates between conditions

univariate ANOVA, error 28, DF 1

conditions	F	children	F	advanced	F	near-native	F	adults
(1) pofective vs. completive	6.69	$p = 0.0152$	15.26	$p = 0.0005$	0.37	$p = 0.5500$	1.51	$p = 0.2301$
(2) pofective vs. perfective	11.22	$p = 0.0023$	20.30	$p < 0.0001$	13.52	$p = 0.0010$	6.72	$p = 0.0150$
(3) pofective vs. imperfective	0.20	$p = 0.6583$	9.49	$p = 0.0046$	7.19	$p = 0.0121$	1.31	$p = 0.2613$
(4) completive vs. perfective	1.90	$p = 0.1792$	3.26	$p = 0.0818$	14.02	$p = 0.0008$	3.39	$p = 0.0764$
(5) perfective vs. imperfective	12.83	$p = 0.0013$	7.90	$p = 0.0089$	2.84	$p = 0.1029$	3.74	$p = 0.0633$

TABLE 17

Picture selection task

Comparison of accuracy rates between conditions within verb groups

univariate ANOVA, error 28, DF 1

conditions	F	children	F	advanced	F	near-native	F	adults
(1) pofective C vs. completive C	2.44	$p = 0.1292$	10.36	$p = 0.0033$	0.04	$p = 0.8480$	1.08	$p = 0.3087$
(3) pofective C vs. imperfective C	0.20	$p = 0.6936$	9.49	$p = 0.0046$	3.95	$p = 0.0568$	0.11	$p = 0.7432$
(4) completive A vs. perfective A	0.36	$p = 0.5627$	2.43	$p = 0.1306$	9.46	$p = 0.0047$	2.82	$p = 0.1041$
(5) perfective A vs. imperfective A	10.54	$p = 0.0030$	8.88	$p = 0.0059$	1.73	$p = 0.1996$	1.05	$p = 0.3152$

TABLE 18

Picture selection task

Group comparison of accuracy rates

univariate ANOVA, error 57, DF 1

L1 groups	F	pofective	F	completive	F	perfective	F	imperfective
adults vs. child	14.0	$p = 0.0004$	6.44	$p = 0.0139$	8.40	$p = 0.0053$	42.65	$p < 0.0001$

TABLE 19

Picture selection task

Group comparison of accuracy rates

univariate ANOVA, error 57, DF 1

L2 groups	F	pofective	F	completive	F	perfective	F	imperfective
advanced vs. n-native	4.0	$p = 0.0504$	1.20	$p = 0.2771$	0.15	$p = 0.7016$	4.90	$p = 0.0309$

TABLE 20

Picture selection task

Group comparison of accuracy rates

univariate ANOVA, error 57, DF 1

L2 groups vs. L1 children	F	pofective	F	completive	F	perfective	F	imperfective
advanced vs. children	0.01	$p = 0.9207$	0.35	$p = 0.5589$	1.13	$p = 0.2931$	9.54	$p = 0.0031$
n-native vs. children	3.73	$p = 0.0583$	0.29	$p = 0.5934$	2.05	$p = 0.1572$	27.89	$p < 0.0001$

TABLE 21

Picture selection task

Group comparison of accuracy rates

univariate ANOVA, error 57, DF 1

L2 groups vs. L1 adults	F	pofective	F	completive	F	perfective	F	imperfective
advanced vs. adults	14.30	$p = 0.0004$	3.64	$p = 0.0614$	3.20	$p = 0.0788$	11.13	$p = 0.0015$
n-native vs. adults	2.83	$p = 0.0978$	8.93	$p = 0.0041$	1.87	$p = 0.1771$	1.06	$p = 0.3082$

TABLE 22

Grammaticality judgment task: violation 2

Comparison of rates for grammatical s-syntactic vs. l-syntactic sentences collapsed across all verb groups

univariate ANOVA, error 64, DF 1

verb group	F	advance	F	near-native	F	control
l-syntactic vs. s-syntactic	5.64	$p = 0.0206$	6.78	$p = 0.0115$	1.04	$p = 0.3109$

TABLE 23

Grammaticality judgment task

Comparison of rates between ungrammatical senetnces of violation1 and violation2; A & B verb groups collapsed

univariate ANOVA, error 64, DF 1

contrast			F	advanced	F	near-native	F	control
ungrammatical violation 1 l-syntactic	**vs.**	**ungrammatical violation 2 cross-syntactic**	1.02	$p = 0.3161$	8.50	$p = 0.0049$	1.12	$p = 0.2934$

TABLE 24

Grammaticality judgment task: fillers

Comparison of rates for grammatical and ungrammatical filler senetnces collapsed across violations FI & FII

[perf-V] and [na-perf-V] vs. *[perf-V] and *[perf-na-V]

univariate ANOVA, error 64, DF 1

			F	advanced	F	near-native	F	control
grammatical	**ungrammatical**							
FI+II	**vs.**	***FI+II**	17.63	$p < 0.0001$	42.94	$p < 0.0001$	189	$p < 0.0001$

TABLE 25

Grammaticality judgment task: fillers

Group comparison of rates for grammatical and ungrammatical filler senetnces

FI+FII: [perf-V] and [na-perf-V] and *FI+*FII: *[perf-V] and *[perf-na-V]

univariate ANOVA, error 50, DF 1

	F	advance vs. n-native	F	advance vs. control	F	n-native vs. control
FI+II	0.19	$p = 0.6650$	11.01	$p = 0.0017$	6.27	$p = 0.0156$
***FI+II**	4.14	$p = 0.0473$	145.76	$p < 0.0001$	74.17	$p < 0.0001$

TABLE 26

Grammaticality judgment task: fillers

Comparison of rates for grammatical and ungrammatical filler senetnces within violations

univariate ANOVA, error 64, DF 1

grammatical	vs. ungrammatical	F	advanced	F	near-native	F	control
FI	**vs. *FI**	14.29	$p = 0.0003$	61.1	$p < 0.0001$	146.85	$p < 0.0001$
FII	**vs. *FII**	4.66	$p = 0.0347$	2.10	$p = 0.1518$	54.39	$p < 0.0001$

TABLE 27

Grammaticality judgment task: fillers

Group comparison of rates for grammatical and ungrammatical filler senetnces within violations

univariate ANOVA, error 50, DF 1

	F	advance vs. n-native	F	advance vs. control	F	n-native vs. control
FI	10.37	$p = 0.0022$	40.66	$p < 0.0001$	4.69	$p = 0.0351$
***FI**	8.64	$p = 0.0050$	169.94	$p < 0.0001$	71.83	$p < 0.0001$
FII	1.02	$p = 0.3172$	1.05	$p = 0.3100$	4.18	$p = 0.0462$
***FII**	0.56	$p = 0.4567$	68.7	$p < 0.0001$	43.95	$p < 0.0001$

TABLE 28

Grammaticality judgment task: fillers

Comparison of rates for grammatical filler senetnces between violations

univariate ANOVA, error 64, DF 1

comparison	F	advanced	F	near-native	F	control
FI vs. FII	17.69	$p < 0.0001$	54.06	$p < 0.0001$	26.29	$p < 0.0001$

APPENDIX II

Tests used in the experimental study

TEST 1

Semantic compatibility task

INSTRUKCJA:
Test sklada sie z 30 par zdan oznaczonych cyframi (1) i (2). Ponizej kazdej pary znajduja sie zdania oznaczone literami (a) i (b). Zdanie (a) jest naturalnym/logicznym rozwinieciem jednego ze zdan (1) lub (2), a zdanie (b) jest rozwinieciem pozostalego zdania. Panstwa zadaniem jest dobranie tych zdan w taki sposob aby stanowily one tego rodzaju logiczna calosc. Ponizej przedstawiony jest przyklad:

INSTRUCTIONS:
In this task you will find 30 pairs of sentences, 1 and 2. Below each pair are two sentences marked (a) and (b). Sentence (a) is a natural/logical continuation of one out of the sentences (1) and (2) while sentence (b) is a natural/logical continuation of the other. In each case decide which sentence goes with which. An example is given below:

1. Matka napiekla chleba. ❑
   Mother accum-baked bread

2. Matka upiekla chleb. ❑
   Mother baked bread

   a. Caly bochenek zjedlismy w jeden wieczor.
      We ate the whole loaf in one evening
   b. Wszystkie bochenki byly wysmienite.
      All the loaves were delicious

(Mimo to, ze w zasadzie moznaby powiedziec (1) 'Matka napiekla chleba.' (a) 'Caly bochenek zjedlismy w jeden wieczor.' i (2) 'Matka upiekla chleb.' (b) 'Wszystkie bochenki byly wysmienite.' to bardziej naturalnym i dokladnym polaczeniem zdan jest polaczenie odwrotne: (1) 'Matka napiekla chleba.' (b) 'Wszystkie bochenki byly wysmienite.' i (2) 'Matka upiekla chleb.' (a) 'Caly bochenek zjedlismy w jeden wieczor.')

(Even though, in principle, one could say powiedziec (1) 'Matka napiekla chleba.' (a) 'Caly bochenek zjedlismy w jeden wieczor.' and (2) 'Matka upiekla chleb.' (b)

'Wszystkie bochenki byly wysmienite.' the more logical and precise matching would be (1) 'Matka napiekla chleba.' (b) 'Wszystkie bochenki byly wysmienite.' and (2) 'Matka upiekla chleb.' (a) 'Caly bochenek zjedlismy w jeden wieczor.')

(1) 1. Zgubilam klucz.
I lost a key

2. Pogubilam klucz.
I compl-lost a key

a. Ale potem go znalazlam.
But then I found it
b. Ale za kazdym razem go znalazlam.
But each time I found it

(2) 1. Malarz namalowal dom..
A painter painted a picture of a house

2. Malarz odmalowal dom.
A painter repainted a house

a. Obraz jest gotowy na sprzedaz.
The painting is ready for sale
b. Dom wyglada teraz duzo lepiej.
The house looks much better now.

(3) 1. Mariusz potesknil za domem.
Mariusz pofec-missed home

2. Marek zatesknil za domem.
Marek started missing home

a. Rodzice musieli zabrac go z obozu.
His parents had to take him home from the camp.
b. Po tygodniu calkiem o tym zapomnial.
After a week he completely forgot about it.

(4) 1. Upieke jablecznik dla sasiadow.
I will bake apple pie for neighbours

2. Popieke jablecznika dla sasiadow
I com-bake apple pie for neighbors.

a. Kazdy go sprobuje.
Everybody will try it
b. Kazdy dostanie jeden placek.
Everybody will get one pie each

(5) 1. Kucharka przesolila zupe.
The chef oversalted the soup

2. Kucharka dosolila zupe.
The chef added salt to the soup

a. Zupa jest za slona.
The soup is too salty.
b. Zupa jest bardzo smaczna.
The soup is very tasty.

(6) 1. Stefan pochorowal na grype.
Stefan pofec-was sick with a flue

2. Stefan zachorowal na grype.
Stefan fell sick with a flue

a. Juz od tygodnia lezy w lozku.
He's been in bed for a week.
b. Caly tydzien lezal w lozku.
He was in bed for the whole week

(7) 1. Splacilam dlug.
I payed the debt

2. Poplacilam dlug.
I compl-payed the debt

a. Teraz musze oszczedzac.
Now I must save.
b. Dzisiaj byla ostatnia rata.
Today was the last instalment

(8) 1. Elektryk wykrecil zarowke.
An electician turn out a bulb

2. Elektryk wkrecil zarowke.
An electician turn in a bulb

a. Lampa teraz nie swieci.
The lamp is not working now
b. Lampa znowu swieci.
The lamp works again.

(9) 1. Lubie sie w kims pokochac.
I like to pofec-love someone

2. Lubie sie w kims zakochac.
I like to fall in love with someone

a. Zwykle po miesiacu potrzebuje samotnosci.
Usually after a month I need to be alone
b. Zwykle po miesiacu mysle o weselu.
Usually after a month I think of the wedding

(10) 1. Obudzilam dzieci.
I woke up the children

2. Pobudzilam dzieci.
I compl-woke the children

a. Kazdy wstal o innej porze.
Each got up at a different time
b. Wszyscy wstali jednoczesnie.
They all got up at the same time.

(11) 1. Stach przegral majatek.
Stach lost a fortune.

2. Stach wygral majatek.
Stach won a fortune

a. Zostal bogaczem.
He became a rich man.
b. Zostal biedakiem.
He became poor.

(12) 1. Tomek poniszczyl kolejke.
Tomek compl-damaged a train

2. Tomek zniszczyl kolejke.
Tomek damaged a train

a. Zgniotl kolo w ostatnim wagonie.
He crashed the wheel in the last car
b. Wyrwal drzwi z kazdego wagonu.
He pulled the door out of each car.

(13) 1. Jan wybudowal papierowe miasto.
Jan built a paper town

2. Jan pobudowal papierowe miasto
Jan compl-built a paper town

a. Kazdy dom zajal mu sporo czasu.
Each house took him some time
b. Zajelo mu to sporo czasu.
It took him some time

(14) 1. Statek odplynal z portu.
A ship sailed off from the harbour.

2. Statek doplynal do portu.
A ship sailed into the port

a. Pasazerowie wyszli na brzeg.
The passengers came out to the shore
b. Pasazerowie patrzyli na brzeg.
The passengers looked at the shore

(15) 1. Zabolal mnie zab.
I got a toothache.

2. Pobolal mnie zab.
I pofec-had a toothache

a. Poszlam wiec do dentysty.
So, I went to the dentist's
b. W koncu poszlam do dentysty
In the end I went to the dentist's

(16) 1. Ewa chce miec 10 warkoczykow.
Ewa wants to have 10 braids

2. Ewa chce miec dlugi warkocz.
Ewa wants to have a long braid

a. Mama poplecie Ewie wlosy.
Mother will compl-braid Ewa's hair
b. Mama zaplecue ewie wlosy.
Mother will braid Ewa's hair

(17) 1. Zbigniew wyszedl od lekarza.
Zbigniew left the doctor's office

2. Zbigniew poszedl do lekarza.
Zbigniew went to the doctor's

a. Potem pojdzie do apteki.
After he will go to the pharmacy
b. Teraz idzie do apteki.
Now he is going to the pharmacy

(18) 1. Zamieszkalam w Londynie.
I moved to London

2. Pomieszkalam w Londynie.
I pofec-lived in London

a. Musze sie przyzwyczaic do angielskiej pogody.
I have to get used to the English weather.
b. Przez caly moj pobyt padal deszcz.
It was raining all my stay there.

(19) 1. Potopili cala flote.
They compl-sank the whole fleet

2. Zatopili cala flote.
They sank the whole fleet

a. Wygrana byla natychmiastowa.
The victory was sudden/immediate
b. Statek po statku osiagneli wygrana.
Ship after ship they achieved victory

(20) 1. Mama nalala mleka.
Mother poured in the milk

2. Mama wylala mleko.
Mother poured out the milk

a. Kubek jest teraz pelny.
The cup is now full
b. Kubek jest teraz pusty.
The cup is now empty.

(21) 1. Gwiazdy zablyszczaly na niebie.
Stars started glittering in the sky

2. Gwiazdy poblyszczaly na niebie.
Stars pofec-glittered in the sky

a. Szkoda ze zaraz nadeszly chmury.
It's a shame that soon came the clouds.
b. Niebo wyglada przepieknie.
The sky looks beautiful.

(22) 1. Wojsko poburzylo miasto.
The army compl-destroyed the city

2. Wojsko zburzylo miasto.
The army destroyed the city

a. Miasto zostalo cale w ruinach.
The city was left all in ruins
b. Kazda dzielnice zostawili w ruinach.
They left each district in ruins.

(23) 1. Uczen zapisal zadanie domowe.
A student wrote down the homework.

2. Uczen odpisal zadanie domowe.
A student copied the homework

a. Nie odrobil go w domu.
He didn't do it at home.
b. Odrobi je w domu.
He will do it at home.

(24) 1. Ania pointeresowala sie historia Polski.
Ania pofec-was interested in the history of Poland

2. Ania zainteresowala sie historia Polski.
Ania got interested in the history of Poland

a. Przeczytala wtedy wiele ksiazek na ten temat.
She read many books on this topic then.
b. Przeczytala na ten temat wiele ksiazek.
She read many books on this topic

25) 1. Jan ucieszyl sie nowym. komputerem.
Jan was happy about his new computer.

2. Jan pocieszyl sie nowym komputerem
Jan pofec-enjoyed his new comp.

a. Zawsze o takim marzyl.
He always dreamt of one like that
b. Wkrotce zaczal marzyc o nowym.
Soon, he started dreaming of another one.

(26) 1. Maria pokaleczyla kolano.
Maria compl-cut her knee

2. Maria skaleczyla kolano.
Maria cut her knee

a. Rana bardzo krwawila.
The cut bled a lot.
b. Krew leciala z kazdej rany.
Each cut was bleeding.

(27) 1. Magda wybrala lalke.
Magda chose a doll

2. Magda przebrala lalke.
Magda changed the doll's clothes

a. Ta lalka podobala jej sie najbardziej.
She liked this doll the most
b. Lalka miala teraz nowa sukienke.
The doll had a new dress on now

(28) 1. Pomarzylam o nowym aucie.
I pofec-dreamt of a new car.

2. Zamarzylam o nowym aucie.
I started dreaming a new car

a. Trwalo to tylko chwile.
It lasted only a moment.
b. Od tej pory skladam pieniadze.
From then on I've been saving money.

(29) 1. Leszek zapytal Marie.
Leszek asked Maria

2. Leszek przepytal Marie.
Leszek questioned Maria

a. Maria znala caly wyklad.
Maria knew the whole lecture.
b. Maria odpowiedziala na pytanie.
Maria answered the question

(30) 1. Wyspie sie po poludniu.
I will get enough sleep in the afternoon

2. Pospie sobie po poludniu.
I will pofec-sleep in the afternoo.

a. Bede spala godzine.
I will sleep for an hour
b. Bede spala wystarczajaco dlugo.
I will sleep long enough

TEST 2

End-state compatibility task

INSTRUKCJA:
Ponizej znajduja sie zdania opisujace rozne sytuacje. Po kazdej sytuacji nastepuja 4 mozliwosci. Prosze o wybranie tej mozliwosci, ktora jest najbardziej logiczna i naturalna. Ponizej przedstawiony jest przyklad:

INSTRUCTIONS:
Below you will find sentences describing various situations. Each situation is followed by 4 possible choices. Please, circle the one that is most logical and natural. Here is an example:

Przyklad/Example: Adam jest rozwodnikiem.W tym roku znowu sie rozwiodl.
Adam is a divorcee. This year he got divorced again.

a. Adam rozwiodl sie tylko raz.
   Adam has been divorced only once.
b. Adam rozwiodl sie przynajmniej dwa razy.
   Adam has been divorced at least twice.
c. (a) & (b)
d. nie wiem
   I don't know

Prosze o nie powracanie i nie zmienianie odpowiedzi/Please, do not change your answers.

1) Kazdej niedzieli lubie robic cos artystycznego. W zeszlym tygodniu porzezbilam figurke z wosku.
   Each Sunday I like to do something artistic. Last week I pofec-carved a wax statuette

   a. Skonczylam wtedy cala figurke.
      That time I finished the whole statuette
   b. Figurka nie jest jeszcze skonczona.
      The statuette isn't finished yet
   c. (a) & (b)
   d. nie wiem

2) Anna codzienne gotuje obiad. Wczoraj przesolila zupe.
Anna cooks dinner every day. Yesterday, she perf-salt the soup

a. Anna wsypala wystarczajaca ilosc soli.
Anna added the right amount of salt
b. Anna wsypala za duzo soli.
Anna added too much salt
c. (a) & (b)
d. nie wiem

3) Na ulicy uslyszano strzal. Zamachowiec zastrzelil prezydenta.
A shot was heard in the street. An assasin perf-shot the president

a. Rana okazala sie smiertelna.
The wound was fatal
b. Rana szybko sie wyleczyla.
The wound healed fast
c. (a) & (b)
d. nie wiem

4) Stach zajmuje sie odnawianiem mebli. W tym tygodniu podekorowal stara szafe.
Stach refurbishes furniture. This week he pofec-decorated an old wardrobe

a. Stach skonczyl dekorowac szafe.
Stach has finished decorating the wardrobe
b. Stach nie skonczyl jeszcze dekorowac szafy.
Stach hasn't finished decorating the wardrobe yet
c. (a) & (b)
d. nie wiem

5) Maria zawsze sama robi upominki swiateczne. Tym razem dla swych wnukow porobila skarpetki na drutach.
Maria always makes Christmas presents herself. This year she compl-made socks for her grandchildren

a. Maria skonczyla wszystkie skarpetki.
Maria has finished knitting all the socks
b. Maria jeszcze nie skonczyla wszyskich skarpetek.
Maria hasn't finished all of the socks yet
c. (a) & (b)
d. nie wiem

6) Przed wyjsciem do pracy, Marian doczytal artykul.
Before leaving for work, Marian perf-read the article

a. Marian nie skonczyl jeszcze artykulu.
Marian hasn't finished the article yet
b. Marian przeczytal caly artykul.
Marian has finished the whole article
c. (a) & (b)
d. nie wiem

7) Zblizaja sie swieta. Maria popisala kartki do calej rodziny.
Christmas is coming up. Maria compl-wrote cards to the whole family

a. Maria napisala wszystkie kartki.
Maria has finished writing all the cards
b. Maria nie skonczyla jeszcze pisac wszystkich kartek.
Maria hasn't finished writing all of cards yet
c. (a) & (b)
d. nie wiem

8) Bartek postanowil odnowic mieszkanie. Przemaluje sciany na bialo.
Bartek decided to renew his appartment. He will perf-paint the walls white.

a. Sciany beda nowego koloru.
The walls will be a new colour
b. Sciany beda biale tak jak zwykle.
The walls will be white colour as usual
c. (a) & (b)
d. nie wiem

9) Agnieszka codziennie pija napoje ziolowe. Dzisiaj popila napoj mietowy.
Agnieszka drinks herb drinks every day. Today she pofec-drank the mint drink.

a. Agnieszka wypila tylko troche napoju.
Agnieszka had only some of the drink.
b. Agnieszka skonczyla caly napoj.
Agnieszka has finished the drink
c. (a) & (b)
d. nie wiem

10) Wszyscy ogladali mecz pilki noznej. Druzyna Polski przegrala z Anglia.
Everybody was watching the football game. The Polish team perf-played (lost) to England

a. Wynik meczu jest nie znany.
The score is unknown
b. Wynik meczu jest znany.
The score is known
c. (a) & (b)
d. nie wiem

11) Na wiosne wszyscy robia porzadki. Stas poczyscil swoje szuflady.
In spring everyone does cleaning up. Stas compl-cleaned his drawers.

a. Stas jeszcze nie skonczyl czyscic szuflad.
Stas hasn't finished cleaning the drawers yet
b. Stas wyczyscil wszystkie szuflady.
Stas has cleaned all the drawers
c. (a) & (b)
d. nie wiem

12) Rafal pija alkohol bez umiaru. W zeszlym roku przepil swoj majatek.
Rafal drinks alcohol with no limits. Last year he perf-drank (lost) his wealth

a. Nie zostalo mu nic z majatku.
He had nothing left of his wealth
b. Pozostala mu jeszcze czesc majatku.
He had a part of his wealth still left
c. (a) & (b)
d. nie wiem

13) Monika w wolnych chwilach lubi robic na drutach. Wczoraj porobila koc na zime.
Monika likes to knit in her free time. Yesterday she pof-made a blanket for winter

a. Monika skonczyla caly koc.
Monika has finished the whole blanket.
b. Monika nie skonczyla jeszcze koca.
Monika has not finished the blanket yet.
c. (a) & (b)
d. nie wiem

14) Maz Krystyny zwykle robi dla niej kawe. Krystyna zawsze ja dosladza.
Krystyna's husband usually makes her coffee. Krystyna always perf-sweetens it

a. Maz Krystyny slodzi kawe ale nie wystarczajaco.
Her husband sweetens the coffee but insufficiently
b. Maz Krystyny wogole nie slodzi kawy.
Her husband doesn't sweeten the coffee at all
c. (a) & (b)
d. nie wiem

15) Jurek dostal nowa plyte na urodziny. Natychmiast ja przesluchal.
Jurek got a new record for his birthday. Immediately, he perf-listened to it

a. Jurek wysluchal tylko czesc plyty.
Jurek listened to only part of the record
b. Jurek wysluchal calej plyty.
Jurek listened to the whole record
c. (a) & (b)
d. nie wiem

16) Zbyszek dba o swoja kolekcje antykow. Dzisiaj poczyscil stary zegar z brazu.
Zbyszek takes special care of his antique collection. Today he pofec-cleaned the old bronze clock.

a. Zbyszek nie skonczyl czyscic jeszcze zegaru.
Zbyszek hasn't finished cleaning the clock yet
b. Zbyszek wyczyscil caly zegar.
Zbyszek has finished cleaning the whole clock
c. (a) & (b)
d. nie wiem

17) Maria poszla do lasu. W lesie nazbierala koszyk orzechow.
Maria went to the woods. In the woods she perf-collected a basket of nuts

a. Koszyk byl prawie lub zupelnie pelny.
The basket was almost or completely full
b. Na dnie koszyka bylo pare orzechow.
There were some nuts at the bottom of the basket
c. (a) & (b)
d. nie wiem

18) Beata trzyma wino w piwnicy. Pewnego wieczoru popila cale zapasy.
Beata keeps wine in her cellar. One evening she compl-drank the whole reserve.

a. Beata wypila wszystkie butelki.
Beata has finished all the bottles
b. Beata wypila tylko czesc butelek.
Beata has finished only some of the bottles
c. (a) & (b)
d. nie wiem

19) Milosz jest znanym pisarzem. Zofia przeczytala jego ostatnia ksiazke.
Milosz is a known writer. Zofia perf-read his last book.

a. Zofia skonczyla cala ksiazke.
Zofia has read the whole book.
b. Zofia przeczytala tylko czesc ksiazki.
Zofia has read only a part of the book.
c. (a) & (b)
d. nie wiem

20) Dzieci dostaly po torebce cukierkow. Ewa pojadla swoje cukierki zanim wrocila do domu.
Children got a bag of sweets each. Ewa compl-ate her sweets before she came back home

a. Zostalo Ewie jeszcze pare cukierkow.
Ewa has some sweets still left
b. Ewa skonczyla wszystkie cukierki z torebki.
Ewa finished all the sweets from the bag
c. (a) & (b)
d. nie wiem

21) Przed wizyta rodzicow, Piotr sprzata mieszkanie. Rano wymyje podloge w kuchni.
Before the parents' visit Piotr cleans his apartment. In the morning he will perf-clean the floor

a. Piotr wymyje cala podloge.
   Piotr will clean the whole floor
b. Piotr juz wymyl podloge.
   Piotr has already cleaned the floor
c. (a) & (b)
d. nie wiem

22) Adam jest stolarzem. Ostatnio porzezbil krzesla do kompletu mebli kuchennych.
Adam is a carpenter. Recently he compl-carved chairs for the kitchen set

a. Adam nie skonczyl jeszcze wszystkich krzesel.
   Adam hasn't finished all the chairs yet
b. Adam skonczyl wszystkie krzesla.
   Adam finished all the chairs
c. (a) & (b)
d. nie wiem

23) Wieczorem Zofia byla bardzo zajeta. Dlatego jej corka Hanna zmyla naczynia.
In the evening Zofia was very busy. This is why her daughter Hanna perf-washed the dishes

a. Hanna skonczyla myc naczynia.
   Hanna finished washing the dishes
b. Hanna tylko oplukala naczynia.
   Hanna only rinsed the dishes
c. (a) & (b)
d. nie wiem

24) Nadszedl wieczor. Maria popisala wiersz.
It was evening. Maria pofec-wrote a poem

a. Maria skonczyla caly wiersz.
   Maria has finished the whole poem
b. Maria napisala tylko czesc wiersza.
   Maria wrote only a part of the poem.
c. (a) & (b)
d. nie wiem

25) Agacie bardzo spodobala sie ta niebieska sukienka. Chcialaby ja odkupic.
Agata really liked the blue dress. She would like to perf-buy it (second-hand).

a. Sukienka bedzie calkiem nowa.
   The dress will be completely new
b. Sukienka bedzie uzywana.
   The dress will be used
c. (a) & (b)
d. nie wiem

26) Na Wielkanoc maluje sie jajka. Barabara podekorowala caly tuzin.
On Easter people paint eggs. Barabara compl-decorated the whole dozen.

a. Barbara nie skonczyla jeszcze dekorowac wszystkich jajek.
   Barbara hasn't finished decorating all of them yet
b. Barbara skonczyla dekorowac wszystkie jajka.
   Barbara has finished decorating all the eggs.
c. (a) & (b)
d. nie wiem

27) Kasia nie jest pewna swojej decyzji. Bedzie miala tydzien aby sie rozmyslic.
Kasia is not sure of her decission. She will have a week to perf-change her mind.

a. Kasia bedzie miala czas na zmiane decyzji.
   Kasia will have time to change her mind
b. Kasia bedzie miala wiecej czasu do namyslu.
   Kasia will have more time to think
c. (a) & (b)
d. nie wiem

28) W drodze z pracy Adam bardzo zglodnial. W domu odrazu pojadl makaronu.
On his way from work Adam got very hungry. At home he immediately pofec-ate pasta

a. Janek zjadl tylko troche makaronu.
   Janek ate only some of the pasta.
b. Janek skonczyl caly makaron.
   Janek has finished all the pasta
c. (a) & (b)
d. nie wiem

TEST 3

Grammaticality judgment task

This was an audio task. Below is the transcription of the recorded instructions and test sentences. To clarify the test design, all the sentences of are provided with English translations and are coded for the type of structure that is being tested, where A, B, C, E indicate verb groups; 1, 2 violation tyoes for test items; F indicates filler items; I and II type of filler structure, and '*' indicates ungrammatical items.

INSTRUKCJA:

Prosze o wysluchanie kazdego z nastepujacych zdan i zadecydowanie, ktore ze zdan wedlug Panstwa sa przyjetymi zdaniami potocznej/mowionej polszczyzny a ktore sa nie do przyjecia. Prosze o dokonanie tej oceny za pomoca skali od 1 do 5, gdzie 1 oznacza zdania calkiem nie do przyjecia a 5 oznacza ze zdanie jest calkowicie naturalnym polskim zdaniem. W wypadkach gdzie nie jestescie Panswto w stanie zadecydowac co do stopnia przyjmowalnosci zdania, prosze zaznaczyc odpowiedz "nie wiem". Niektore ze zdan moga wydawac sie znajome. Prosze aby oceniali Panstwo kazde zdanie osobno, i aby kazda ocena byla niezalezna od poprzednich. Wypelniajac ten test prosze Panstwa o skoncentrowaniu sie na Panstwa intuicji jezykowej i ocenianiu tych zdan jako zdan mowionego jezyka polskiego.
Jako pierwszy, podany bedzie przyklad a po nim nastapia cztery zdania probne. Po zdaniach probnych rozpocznie sie test.

INSTRUCTIONS:

Please, listen to the sentences below and decide whether each sentence is, in your opinion, a possible and acceptable sentence of spoken Polish. Make your judgments by rating each sentence on a scale from 1 to 5, where 1 means unacceptable or impossible and 5 means a perfectly normal and grammatical Polish sentence. If you feel you are unable to judge a sentence, please check the box next to 'I don't know' answer. Some of the sentences may seem similar but, please, judge each sentence independently of your previous judgments. During this task concentrate on your intuitions as a language user (speaker and listener). Think of the sentences as sentences in spoken Polish and judge them accordingly.
The following is one example and four practice sentences. After that the test begins.

Przyklad/Example

a) Maria rozpisac list do corki. *FI: [perf-V]
Maria perf-write a letter to her daughter

① 2 3 4 5 ❑ nie wiem

Zdania probne/ Practice sentences

b) Dzieci znowu roznarabialy na podworku. *FII: [perf-perf-V]
The children made trouble in the yard.

c) Po pracy musze zaniesc ksiazki do biblioteki. FI: [perf-V]
After work I must take the books to the library.

d) Wepchnal torbe ksiazkami. *FI: locat alter [perf-V]
He crammed the bag with books

e) Myszy wygryzly dzuire w podlodze. FI: [perf-V]
The mice bit through a whole in the floor.

Test

1) Przed obiadem naobieram ziemniak. *FI: na-NP [perf-V]
Before dinner I will peel a potato.

2) Agata poplacila przez chwile rachunek. A1: [pofec-V]
Agata po-payed a bill for a while.

3) Sylwia pozjadla wszystkie ogorki ze sloika. *C2: [compl-perf-V]+NPpl
Sylwia po-perf-eat (past) all pickles from the jar.

4) Naukowcy wynalezli lekarstwo na grype. FI: [perf-V]
The scientists discovered flue medicine.

5) Kasia poprzecinala swoje stare rysunki na pol. B2: [compl-perf-V-freq]
Kasia po-perf-cut -freq (past) her old pictures into halves.

6) Uczen nie odrobil zdania domowego. FI: [perf-V]
A pupil did not do his homework.

7) Dzieci znowu roznarabialy na podworku. *FII: [perf-perf-V]
The children made trouble in the yard.

8) Wojtek potopil troche papierowy okret. *A1: [pofec-V]
Wojtek po-sunk a paper ship for a while.

9) Grzegorz nazapraszal wiele gosci na swe urodziny. FII: [perf-perf-V]
Grzegorz accum-perf-invited many guests to his birthday.

10) Janek powypil butelki wina z piwnicy. *C2: [compl-perf-V]+NPpl
Janek po-perf-drank wine bottles from the cellar.

11) Zanim kupie plyte musze ja przesluchac. FI: [perf-V]
Before I buy a record I must listen to it first.

12) Zbyszek porozrywal swoje nowe spodnie. B2: [compl-perf-V-freq]
Zbyszek po-perf-ripped-freq his new pants.

13) Przestalem zjesc czekolade. *FI: stop/start [perf-V]
I stopped eating chocolate.

14) Zlodziej pokradl troche komputer. *A1: [pofec-V]
A thief po-stole a computer for some time.

15) Ojciec naprzywozil dzieciom wiele prezentow. FII: [perf-perf-V]
Father accum-perf-brought many presents for children.

16) Adam ponapisal kartki do wszystkich przyjaciol. *C2: [compl-perf-V]+NPpl
Adam po-perf-wrte cards to all his friends.

17) Po pracy musze zaniesc ksiazki do biblioteki. FI: [perf-V]
After work I must take the books to the library.

18) Dzieci pozasmiecaly pokoje w calym domu. B2: [compl-perf-V-freq]
Children po-perf-littered-freq rooms in the whole house.

19) Kelner roznalewal wino po calym stole. *FII: [perf-perf-V]
The waiter spilled wine on the entire table.

20) Na wakacjach Marek potesknil troche za domem. E1: [pofec-V]
On holidays Marek missed his home for some time/a little.

21) Przed obiadem onabieram ziemniakow. *FII: [perf-perf-V]
Befor dinner (I) will perf-accum-peel patatos.

22) Wojtek pozatapial papierowe okrety w stawie. A2: [compl-perf-V-freq]
Wojtek po-perf-sunk-freq paper ships in the pond.

23) Student nie potrafil wypowiedziec na pytanie. *FI: lexical [perf-V]
A student could not answer a question.

24) Dzieci posmiecily przez chwile swoj pokoj. *B1: [pofec-V]
Children po-littered their room for a while.

25) W lesie napozbieramy jagod. *FII: [perf-perf-V]
In the woods we will accum-compl-pick berries.

26) Janek popil butelki wina z piwnicy. C2: [compl-V]+NPpl
Janek po-drank all the wine bottles from the cellar.

27) Ludzie narozwieszali flagi na ulicach. FII: [perf-perf-V]
People accum-perf-hanged flags in the streets

28) Zlodziej powykradal komputery ze szkoly. A2: [compl-perf-V-freq]
A thief po-perf-stole-freq computers from a school.

29) Odstarze stol zeby ciekawie wygladal. *FI: lexical [perf-V]
I will make the table look older to make it look interesting.

30) Zbyszek porwal przez chwile swoje nowe spodnie. *B1: [pofec-V]
Zbyszek po-ripped his new pants for a while.

31) Wieczorem napowymyslalam bajek dla dzieci. FII: [perf-perf-V]
In the evening (I) accum-perf-invented stories for the kids.

32) Sylwia pojadla wszystkie ogorki ze sloika. C2: [compl-V]+NPpl
Sylwia po-ate (past) all the pickles from the jar.

33) Wepchnal torbe ksiazkami. *FI: locative alter [perf-V]
He crammed the bag with books

34) Stopniowo Agata pozaplacala rachunki za mieszkanie. A2: [compl-perf-V-freq]
Agata po-perf-payed-freq the apartment bills.

35) Wczoraj sasiedzi naprzenosili sporo mebli. FII: [perf-perf-V]
Yesterday the neighbours accum-perf-carry a lot of furniture.

36) Kasia pociela przez chwile swoj stary rysunek. *B1: [pofec-V]
Kasia po-cut (past) her old picture for a while.

37) Piotr i Anna rozstali sie na przystanku. FI: [perf-V]
Piotr and Anna parted at a bus stop.

38) Adam popisal kartki do wszystkich przyjaciol. C2: [compl-V]+NPpl
Adam po-wrote cards to all his friends.

39) Po burzy ogronik musial onabcinac sporo galezi. *FII: [perf-perf-V]
After the storm the gardener had to cut many branches

40) Po kolacji pobolal mnie troche brzuch. E1: [pofec-V]
After supper I had a stomach ache for a while/a little.

41) Za tydzien Zbyszek wyjezdza nad morze. FI: [perf-V]
In a week Zbyszek leaves for the seaside.

42) Zofia naluskala orzech do deseru. *FI: na-NP [perf-V]
Zofia has shelled-accum nut for the dessert.

43) Zlodziej pokradal komputery ze szkoly. A2: [compl-V]+NPpl
A thief po-stole computers from a school.

44) Wieczorem wynamyslalam bajek dla dzieci. *FII: [perf-perf-V]
In the evening (I) perf-accum-invented stories for the kids.

45) Kasia poprzeciela swoje stare rysunki na pol. *B2: [compl-perf-V]+NPpl
Kasia po-perf-cut (past) her old pictures into halfs.

46) Nie udalo mi sie dogonic Agnieszki. FI: [perf-V]
I didn't manage to catch up with Agnieszka.

47) Wojtek potopil papierowe okrety w stawie. A2: [compl-V]+NPpl
Wojtek po-sunk paper ships in the pond.

48) Ludzie roznawieszali flagi na ulicach. *FII: [perf-perf-V]
People perf-accum-hanged flags in the streets

49) Janek popil czerwonego wina. C1: [pofec-V]
Janek po-drank some red wine.

50) Myszy wygryzly dziure w podlodze. FI: [perf-V]
The mice bit through a whole in the floor.

51) Dzieci pozasmiecily pokoje w calym domu. *B2: [compl-perf-V] + NPpl
Children po-perf-littered rooms in the whole house.

52) Po burzy ogronik musial naobcinac sporo galezi. FII: [perf-perf-V]
After the storm the gardener had to cut many branches.

53) Adam popisal list do przyjaciela. C1: [pofec-V]
Adam po-wrote a letter to his friend.

54) Wladowalem samochod walizkami. *FI: locative alter [perf-V]
I loaded the car with the suitcases

55) Agata poplacila rachunki za mieszkanie. A2: [compl-V]+NP pl
Agata po-payed the apartment bills.

56) Przed obiadem naobieram ziemniakow. FII: [perf-perf-V]
Befor dinner (I) will accum-perf-peel patatos.

57) Zbyszek porozerwal swoje nowe spodnie. *B2: [compl-perf-V]+NPpl
Zbyszek po-perf-ripped his new pants.

58) Wczoraj sasiedzi przenanosili sporo mebli. *FII: [perf-perf-V]
Yesterday the neighbours perf-accum-carry a lot of furniture.

59) Sylwia pojadla ogorek ze sloika. C1: [pofec-V]
Sylwia po-ate (past) a pickle from a jar.

60) W lesie ponazbieramy jagod. FII: [perf-perf-V]
In the woods we will accum-compl-pick berries.

61) John pomieszkal w Warszawie przez pol roku. E1: [pofec-V]
John po-lived in Warsaw for half a year.

62) Po pracy przewiedze kolezanke. *FI: lexical [perf-V]
After work I will visit a friend.

63) Adam ponapisywal kartki do wszystkich przyjaciol. C2: [compl-perf-V-freq]
Adam po-perf-wrte-freq cards to all his friends.

64) Maria doslodzila herbate. FI: [perf-V]
Maria put more sugar in her tea.

65) Grzegorz zanapraszal wiele gosci na swe urodziny. *FII: [perf-perf-V]
Grzegorz perf-accum-invited many guests to his birthday.

66) Stopniowo Agata pozaplacila rachunki za mieszkanie.*A2: [copl-perf-V]+NPpl
Agata po-perf-payed the apartment bills.

67) Kasia pociela swoj stary rysunek. B2: [compl-V] + NP sg
Kasia po-cut (past) her old picture.

68) Dzieci znowu narozrabialy w szkole. FII: [perf-perf-V]
The children got into trouble at school.

69) Janek powypijal butelki wina z piwnicy. C2: [compl-perf-V-freq]
Janek po-perf-drank-freq wine bottles from the cellar.

70) Po pracy musze zaniesc ksiazki do biblioteki. FI: [perf-V]
After work I must take the books to the library.

71) Rozslucham nowej piosenki Agaty. *FI: lexical [perf-V]
I will listen to Agata's new song.

72) Wojtek pozatopil papierowe okrety w stawie. *A2: [compl-perf-V]+NPpl
Wojtek po-perf-sunk paper ships in the pond.

73) Zbyszek porwal swoja nowa koszule. B2: [compl-V]+NP sg
Zbyszek po-ripped his new shirt.

74) Kelner narozlewal wino po calym stole. FII: [perf-perf-V]
The waiter spilled wine on the entire table.

75) Kucharz dosolil zupe. FI: [perf-V]
The chef put more salt in the soup.

76) Zlodziej powykradl komputery ze szkoly. *A2: [compl-perf-V]+NPpl
A thief po-perf-stole computers from a school.

77) Wczytalam ksiazke w jedno popoludnie. FI: lexical [perf-V]
I read a book in one afternoon.

78) Dzieci posmiecily swoj pokoj. B2: [compl-V]+NP sg
Children po-littered their room.

79) Marek zaczal zapalic papierosy. *FI: stop/start [perf-V]
Marek started smoking cigarettes.

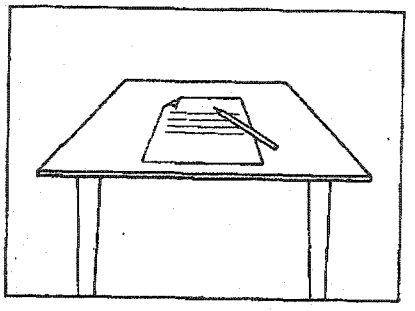
80) Sylwia pozjadala wszystkie ogorki ze sloikow. C2: [coml-perf-V-freq]
Sylwia po-perf-eat-freq (past) all pickles from the jars.

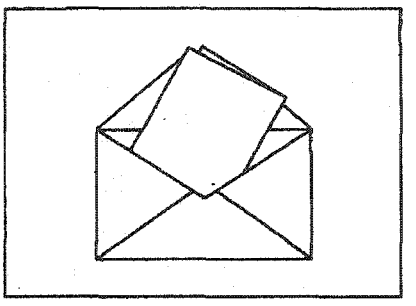
81) Przynawozil dzieciom wiele prezentow. *FII: [perf-perf-V]
He perf-accum-brought many presents for children.

TEST 4

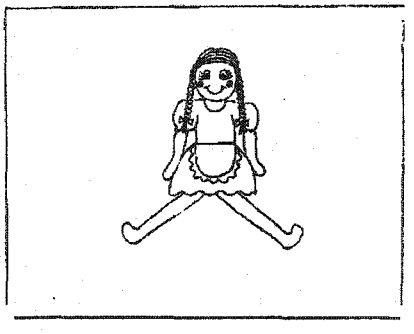
Picture identification task

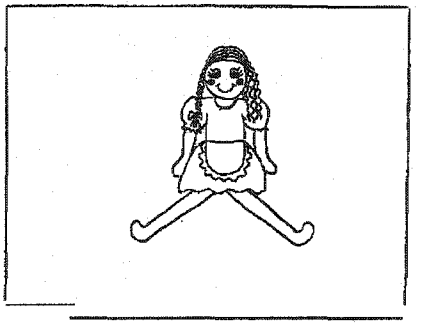
1) Mama popisala list.
Mother wrote a letter for a while [C: pofective]



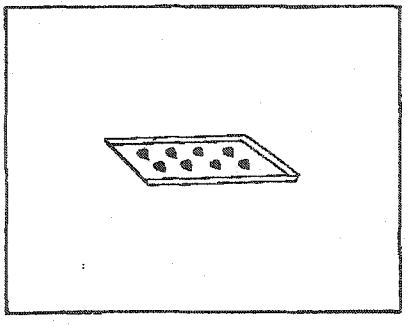


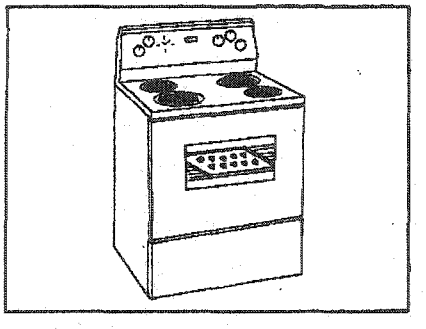
2) Ewa zaplotla lalce wlosy zeby ladniej wygladala.
Ewa braided the doll's hair to make her look nicer [A: perfective]



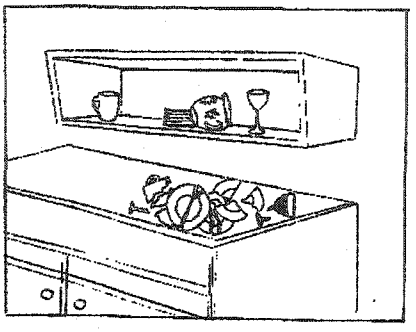


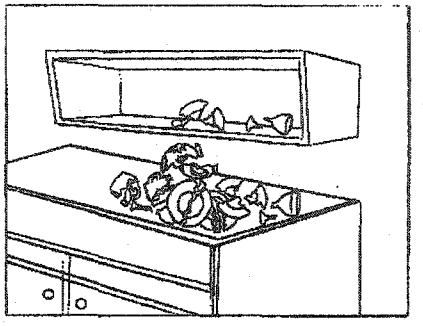
3) Mama popiekla pierniczki.
Mother made gingerbread cookies [A: completive]



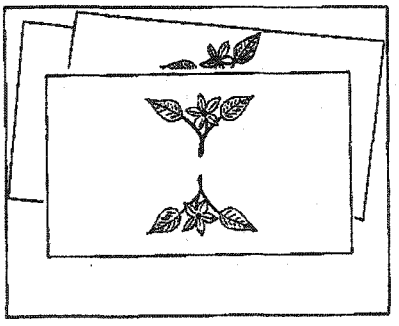


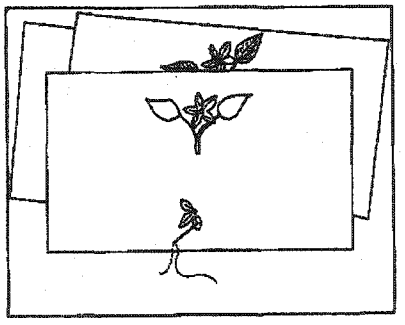
4) Ewa tlokla naczynia kiedy byla zla.
Ewa would break dishes when she was angry. [A: imperfective]



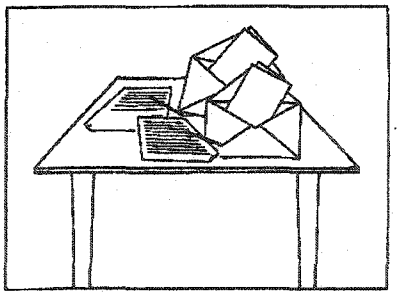


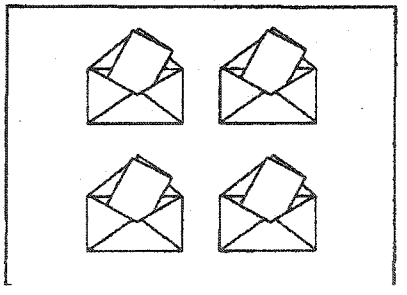
5) Mama dekoruje obrosy kazdego popoludna.
Mother decorates tablecloths each afternoon. [C: imperfective]



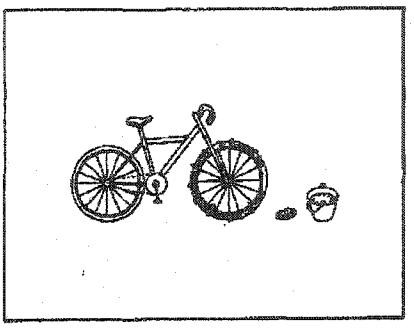


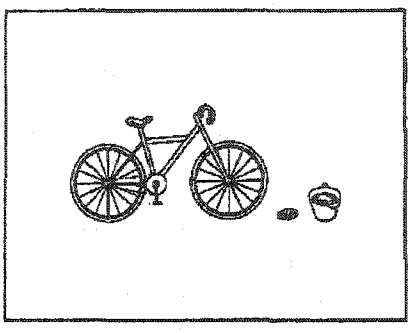
6) Maria popisala listy do calej rodziny.
Mother has written letters to the whole family. [C: completive]



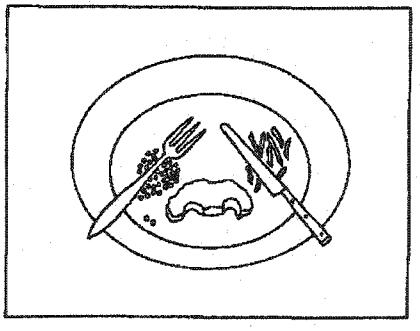


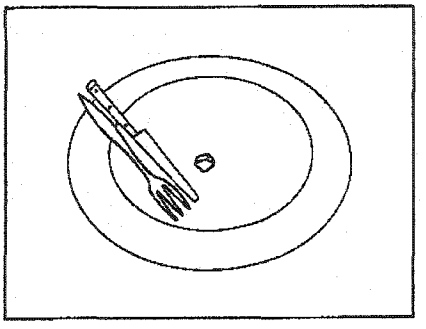
7) Ewa czyscila swoj rower w piatek po poludniu imperfective
Ewa was cleaning her bicycleon Friday afternoon. . [C: imperfective]



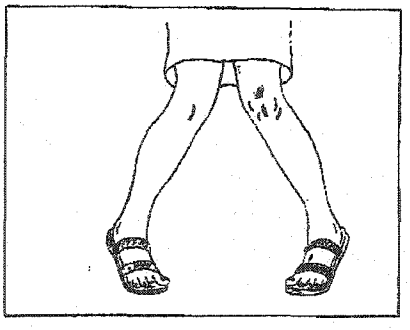


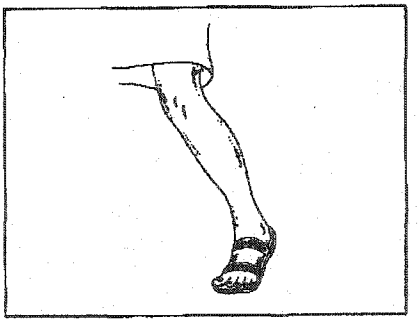
8) Tato pojadl obiad.
Father ate his dinner for a while. [C: pofective]



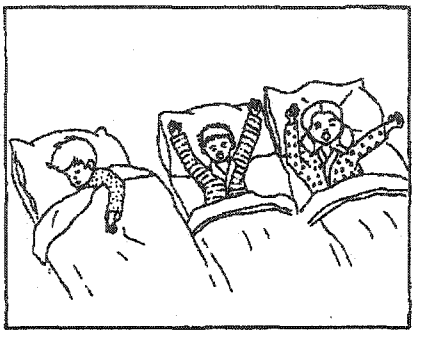


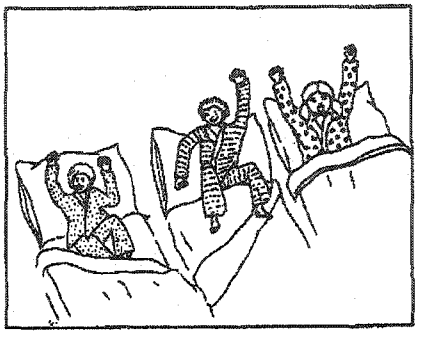
9) Mama kaleczyla kolana kiedy byla dzieckiem.
Mother hurt her knees when she was a child. [A: imperfective]



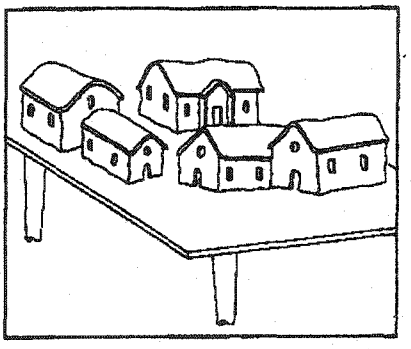


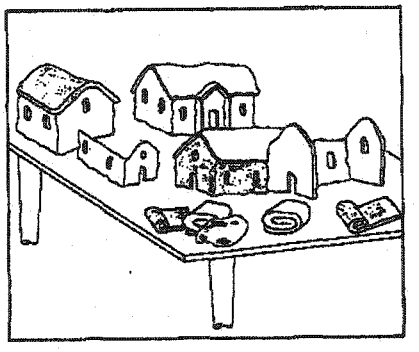
10) Mama pobudzila dzieci.
Mother woke up the children one by one [A: completive]



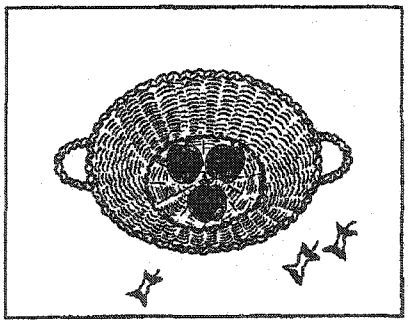


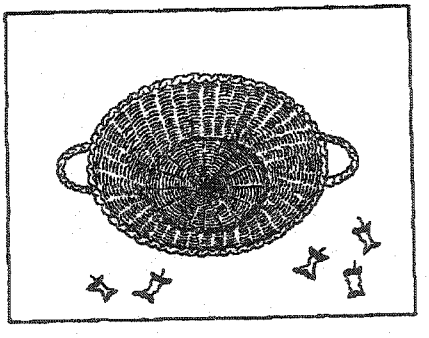
11) W niedziele Adas ulepil domki z plasteliny dla Ewy.
Last Sunday Adas made plastecine houses for Ewy. [A: perfective]



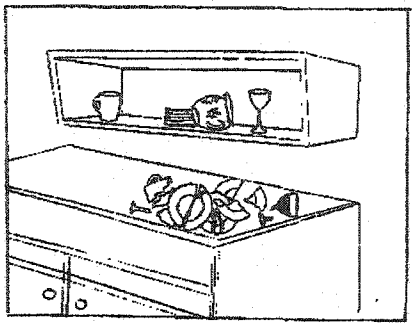


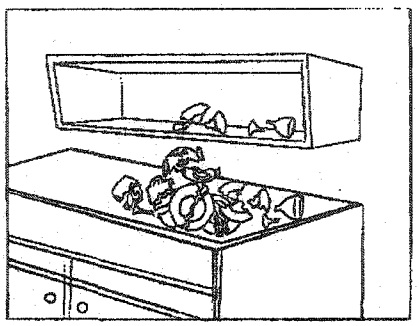
12) Adas pojadl jablka z koszyka.
Adas eat the apples from the basket. [C: completive]



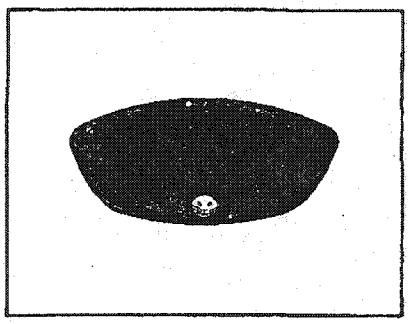


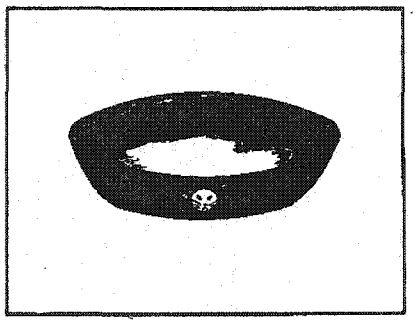
13) Ewa stlokla naczynia kiedy ukladala je na polke.
Ewa broke the dishes when she was putting them on the shelf. [A: perfective]



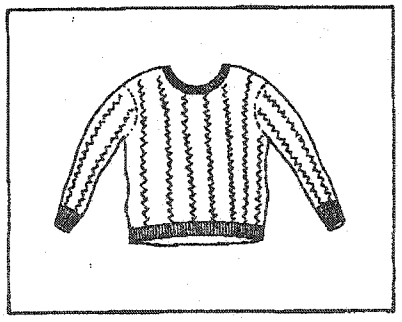


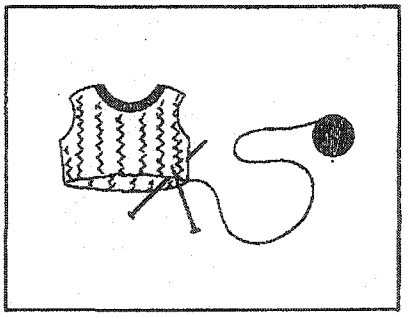
14) Kot popil mleko z miski
A cat had some milk from a bowl. [. C: pofective]



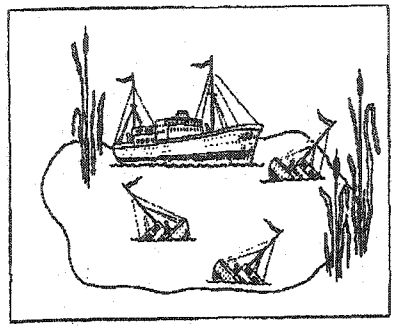


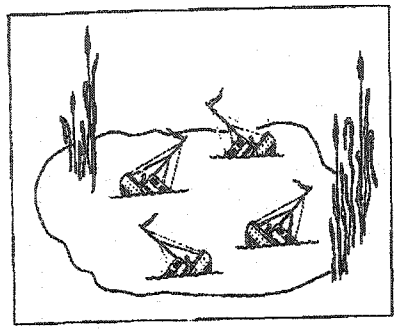
15) Mama robila sweter dla Ewy na urodziny.
Mother was knitting a sweater for Ewa for her birthday [C: imperfective]



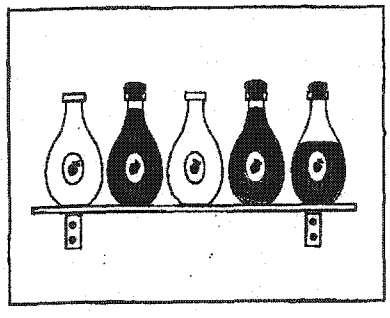


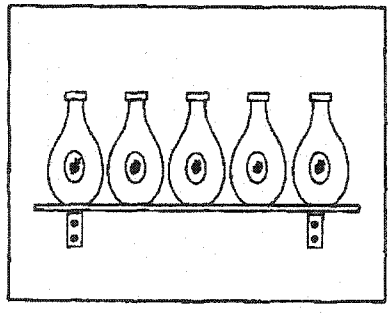
16) Dzieci potopily plastikowe okrety.
Children sunk the plastic ships one by one [A: completive]



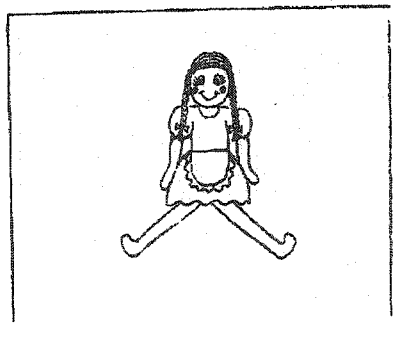


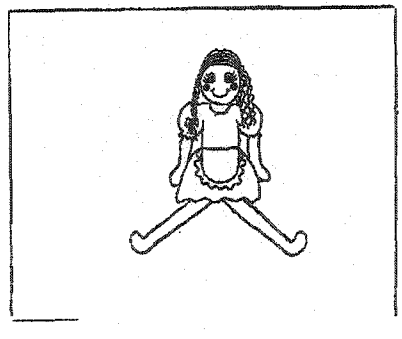
17) Ewa popila zapasy soku truskawkowego
Ewa drank the reserve of strabery juice. . [C: completive]



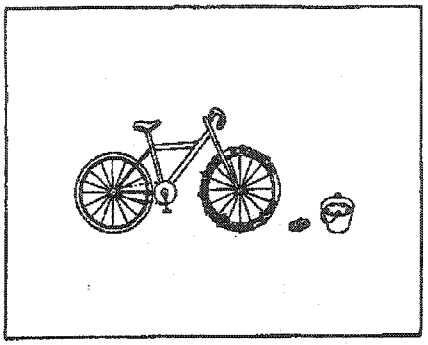


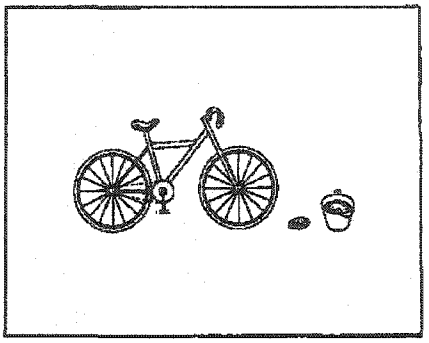
18) Ewa plotla lalce wlosy .
Ewa was braiding the doll's hair [C: imperfective]



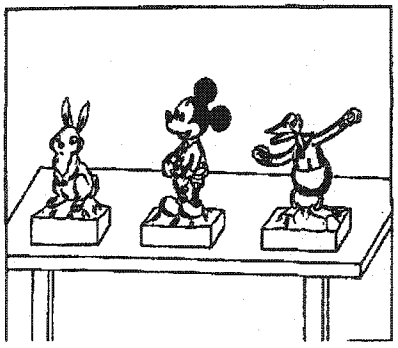


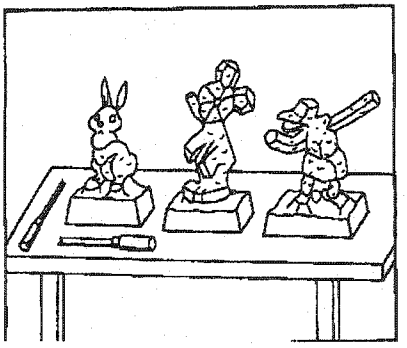
19) Po przyjsciu ze szkoly Ewa poczyscila swoj rower.
After school Ewa cleaned her bicycle for a while. [C: pofective]



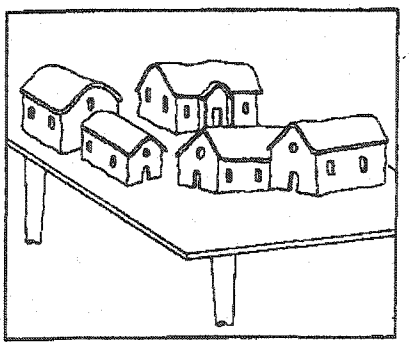


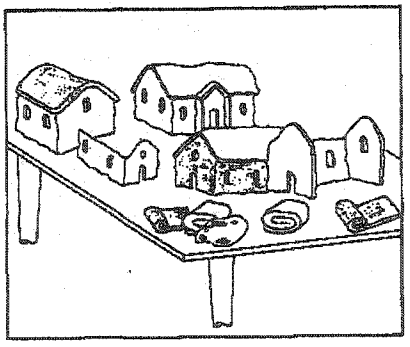
20) Adas rzezbil postaci z bajek do zabawy.
Adas was carving out fairytale characters to play with. [A: imperfective]



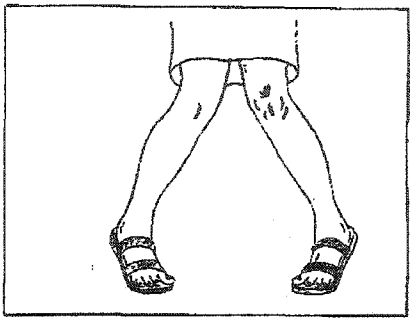


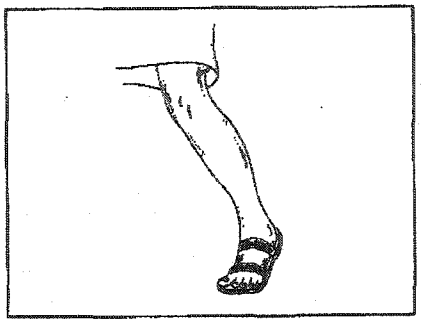
21) Adas polepil plastelinowe miasteczko.
Adas has made a plastecine city [C: completive]



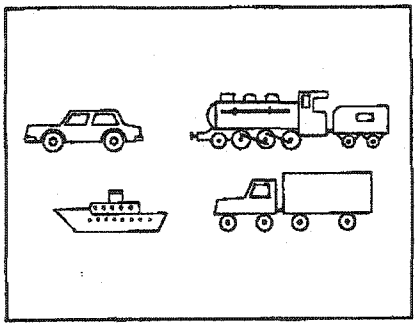


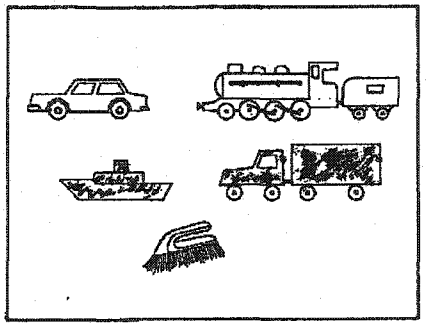
22) Ewa skaleczyla kolana w parku.
Ewa hurt her knees in the park [A: perfective]



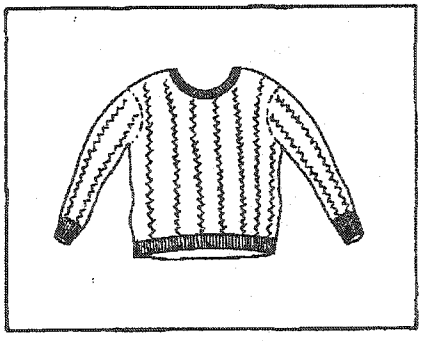


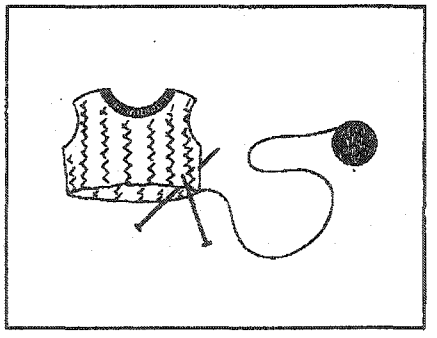
23) Adas poczyscil zabawki.
Adas finished cleaning the toys [C: completive]



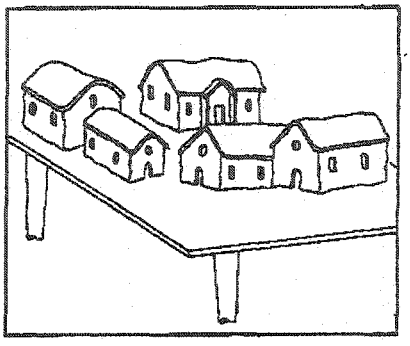


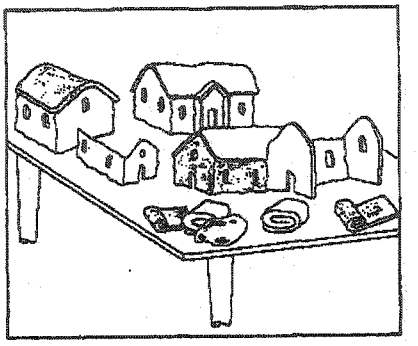
24) Mama porobila sweter dla Adasia.
Mother knitted a sweater for Adas for a while [C: pofective]



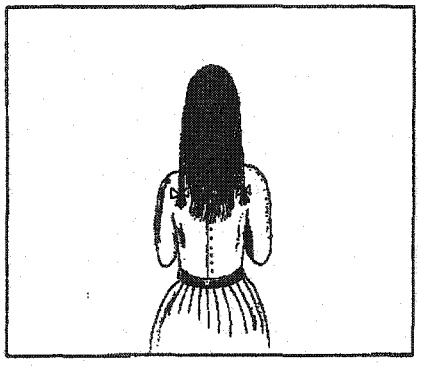


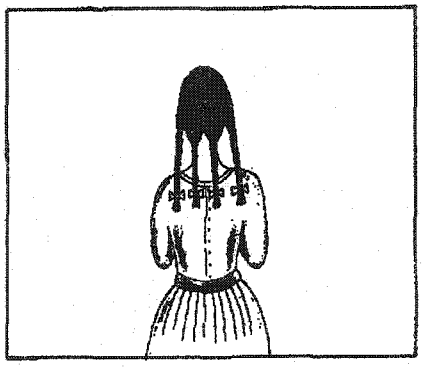
25) Adas lepil domki z plasteliny na zajeciach plastycznych.
Adas was making plastecine houses in his arts class [A: imperfective]



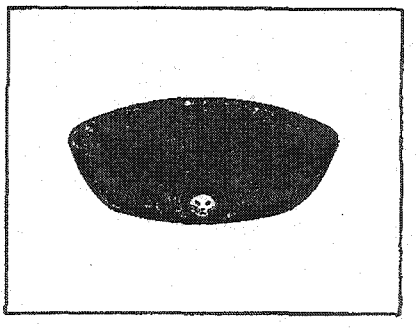


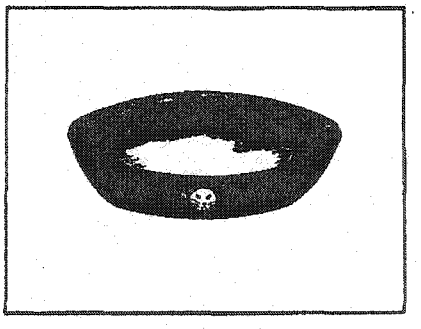
26) Mama poplotla Ewie wlosy.
Mother braided Eve's hair with many braids. [A: completive]



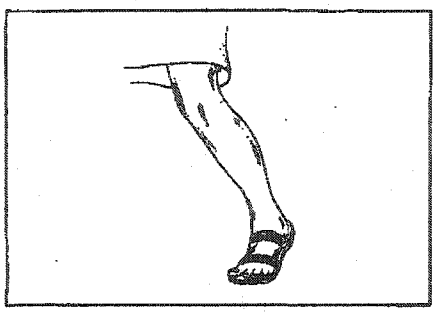


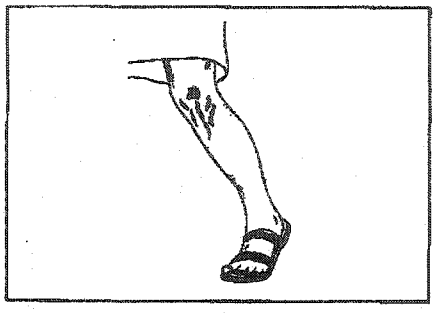
27) Ewa widziala jak kot pil mleko z miski.
Ewa saw the cat drink milk from a bowl. [C: imperfective]



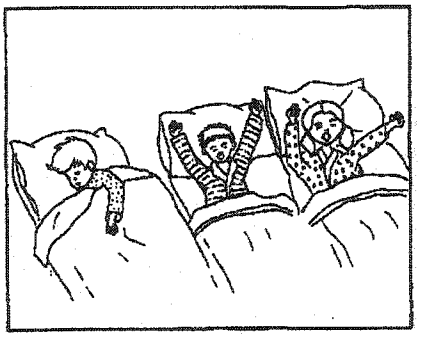


28) Ewa pokaleczyla kolano.
Ewa cut her knee in many places. [A: completive]

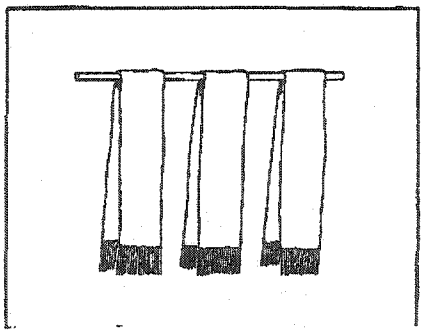


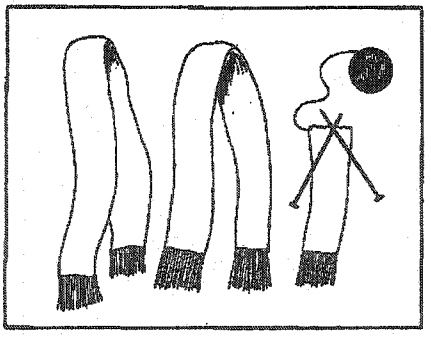


29) Zeszlej niedzieli glosna muzyka obudzila dzieci.
Last Sunday loud music woke up the children [A: perfective]

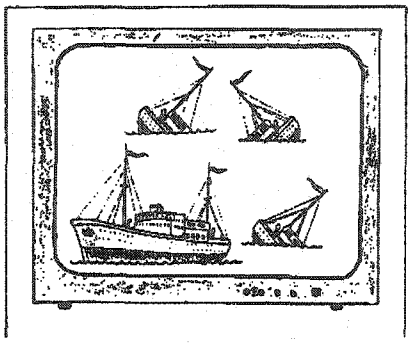


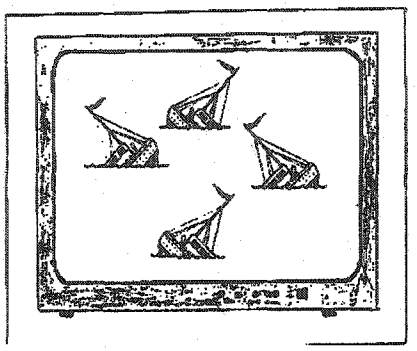
30) Mama porobila szaliki dla swojej rodziny.
Mother made scarfs for her family [C: completive]



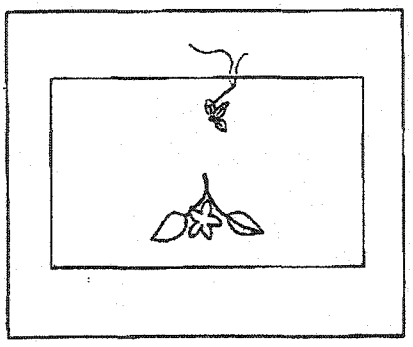


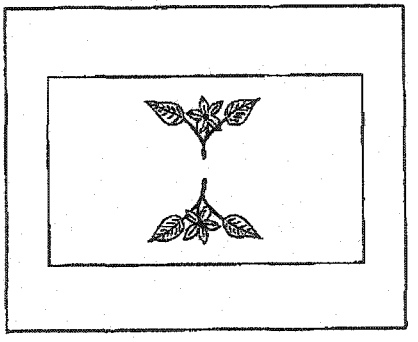
31) Na filmie Adas widzial jak zolnierze topili okrety.
In a movie Adas saw how soldiers were sinking ships [A: imperfective]



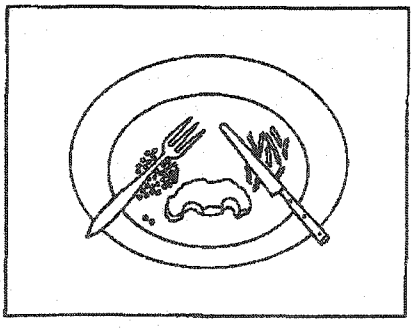


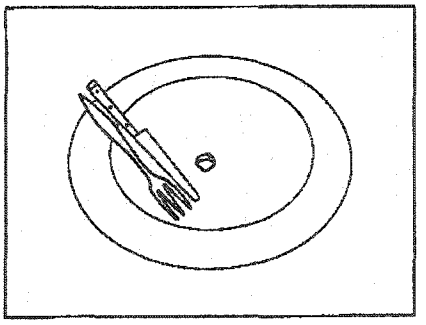
32) Mama podekorowala obros.
Mother decorated the tablecloth for a while. [C: pofective]



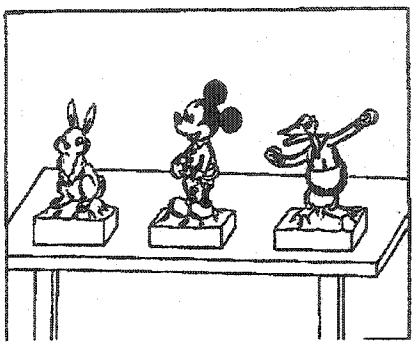


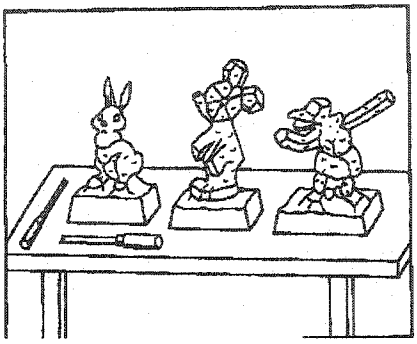
33) Adas jadl obiad z rodzicami.
Adas had dinner with his parents. [C: imperfective]



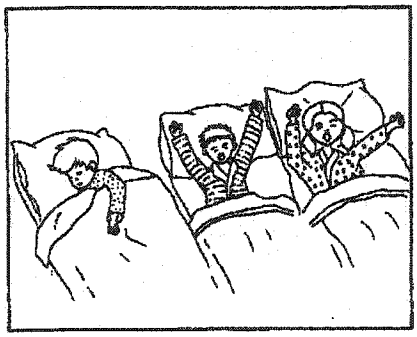


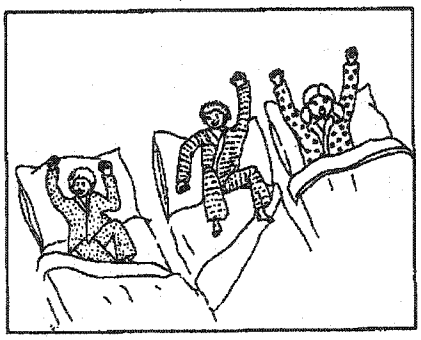
34) Adas porzezbil postaci z bajek.
Adas has carved out fairytale characters. [C: completive]



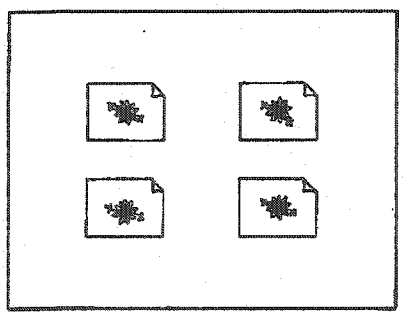


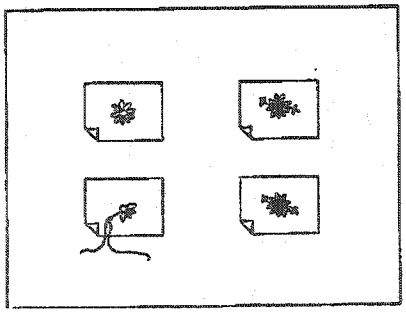
35) Glosna muzyka budzila dzieci kadej nocy.
Loud music woke the children every night [A: imperfective]



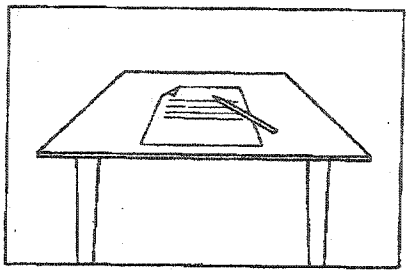


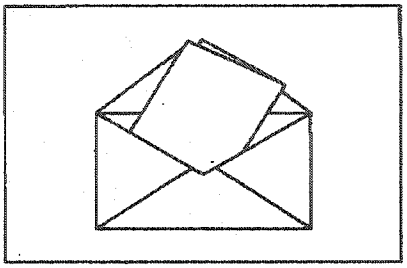
37) Ewa podekorowala serwetki.
Ewa has decorated the table napkins. [C: completive]



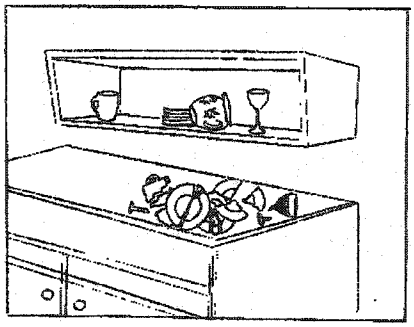


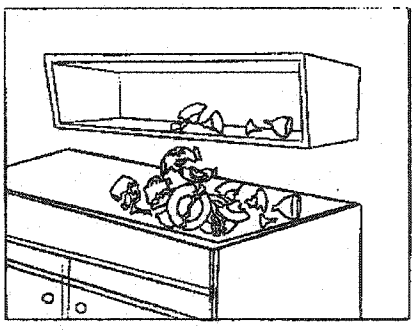
38) Ewa pisala list do kolezanki z obozu.
Ewa was writing a letter to her friend from a camp. [C: imperfective]



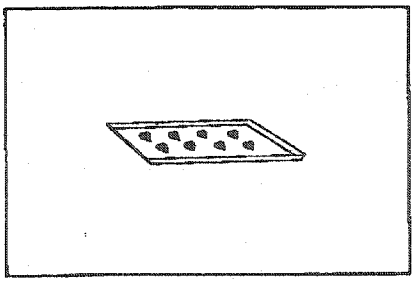


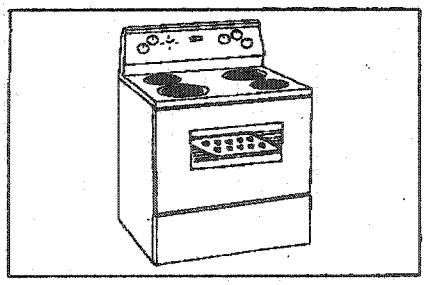
39) Kot potlokl naczynia.
The cat broke the dishes. [A: completive]



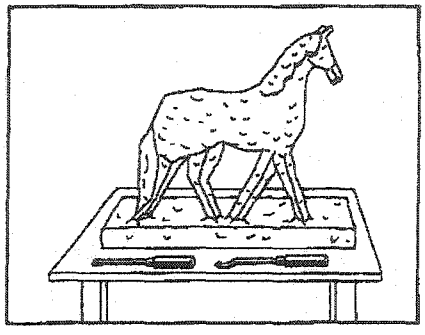


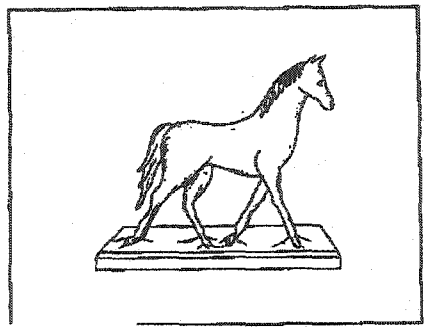
40) W sobote Ewa piekla pierniczki z mama.
On Saturday Ewa was making cookies with her mother. [A: imperfective]





41) Tato porzezbil posag.
Father carved a statue for a while. [C: pofective]





42) W parku chlopcy zatopili okrety.
In the park the boys sunk the boats. [A: perfective]