

Syntactic and semantic analysis of phase verbs in English and Croatian

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SYNTACTIC AND SEMANTIC ANALYSIS OF PHASE VERBS IN ENGLISH AND CROATIAN: A
CORPUS-BASED STUDY

Master's Thesis

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Abstract:

This thesis presents a framework for the analysis of aspect, which consists of two basic interconnected but distinct subsystems. One subsystem concerns situation types, generally corresponding to aspectual notions such as states, activities, accomplishments etc., while the other subsystem concerns grammatical, or viewpoint, aspect. The value of the first subsystem serves as the input for the second subsystem. This framework is applied to the comparative study of syntactic and semantic characteristics of English and Croatian phase verbs, their complements and sentences containing them. The verbs analyzed are *start*, *continue* and *stop*, together with their Croatian equivalents, *početi/počinjati*, *nastaviti/nastavljati* and *prestati/prestajati*. The analysis is based on sentences containing phase verbs taken from the English Web corpus 2020 (enTenTen20) and Croatian Web corpus (hrWaC).

Key words:

aspect, viewpoint aspect, situation type, phase verbs

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1. Introduction

Studies of sentential structure and meaning tend to give the verb a central place. This treatment is well-deserved on both the syntactic and the semantic level. On the one hand, the verb is the syntactic center of the sentence: it allows and requires a certain set of sentential elements it co-occurs with and together with them outputs a well-formed sentence. On the other hand, this syntactic centrality reflects the verb's central role in the interpretation of sentential meaning. Every lexical verb denotes a certain kind of situation. Furthermore, these situations require a certain set of participants, and sentential elements connected to these participants have to be filled by corresponding phrases.

Cross-linguistically, the verb is usually the place where a range of "primary" grammatical meanings is marked. A large number of books and articles has been written dealing with temporal reference of verbs (Comrie 1976, Smith 1997, Olsen 1997). Looking closer at temporality, it can be seen that there is no single kind of temporal meaning. This fact is reflected in the theoretical separation of tense and aspect: both categories deal with time, but in rather different ways. Generally speaking, tense locates the situation denoted by the sentence in time in relation to some other moment, this moment most often being the moment of speaking. Aspect operates differently; as a rough starting point, it can be said that aspect deals with the internal temporal characteristics of a situation, without taking into account the relative position with regard to a particular point in time.

This thesis will focus on the latter kind of temporal meaning. It will do so while looking at a particular subset of verbs, phase verbs, in the English and Croatian language. Phase verbs are interesting on both the syntactic and the semantic level. In many ways, they are quite unlike regular verbs and require special sentential structures. Also, they cannot be used on their own, but rather require non-finite verbal complements which they modify. Their meaning is closely related to the aspectual notions mentioned in the preceding paragraph; they focus a certain part of the situation. This is the main reason these verbs were chosen as the object of research of the present thesis.

The discussion is divided into two parts, the theoretical part and the analysis of the corpus data. The theoretical part consists of three chapters. The first of these deals with the notion of situation type: what the basic building blocks of situation types are, how they

combine to give distinct types of situations and in what ways we can change them. The second chapter covers grammatical, or viewpoint, aspect: what viewpoint aspect is and how it is expressed in the sentence. The third chapter focuses on phase verbs in general and on the aspectual characteristics of sentences with phase verbs in particular.

The ordering of the first two chapters is meant to reflect the overall theoretical framework used in the thesis. However, these notions are tightly interconnected, so their separation is to a certain degree artificial. This means, for example, that some questions relating to situation types cannot be answered without considering the category of viewpoint aspect. Therefore, in the chapter on situation type, the notions of viewpoint aspect are used provisionally; they are defined only up to the point necessary to discuss situation types. In the part on viewpoint aspect, those notions are elaborated more fully and, where necessary, the theory of situation types is further developed to reflect the more detailed definitions of viewpoint aspect. This order of exposition is the result of the aforementioned fact that situation type and viewpoint aspect are tightly interconnected, they cannot be fully explained one without the other.

The second part of the thesis presents an analysis of corpus examples. Each subchapter covers a certain type of phase verbs: the first subchapter covers English and Croatian verbs of initiation (*start* 'početi/počinjati'), the second focuses on verbs of continuation (*continue* 'nastaviti/nastavljati') and the last one discusses verbs of cessation (*stop* 'prestati/prestajati'). These verbs constitute only a small part of the phase verb inventory in both languages, but, for considerations of space, only they are analyzed.

Finally, it should be pointed out that, much like it is difficult to give an adequate description of situation types without mentioning viewpoint aspect, it is perhaps also not possible to give a full description of aspectual notions in general without mentioning tense. This would require a discussion of the category of tense, as well as of the way it is connected to aspect. The goal of this thesis is much more modest in scope: it attempts to give a syntactic and semantic description of three phase verbs in English and Croatian with a special emphasis on aspect. Therefore, the questions which require a developed theory of tense and the tense-aspect relations will not be answered here. This in no way implies they are not worth asking.

2. Situation type

This chapter does not attempt to give a general overview of the body of theory concerning the notion of situation types, nor does it present its historical development. It mainly focuses on a relatively small number of books and articles, discusses the theoretical frameworks developed in them, compares them and points out their similarities, but also the important differences which make them incompatible. Finally, it suggests a theory of situation type used in the thesis. However, prior to that, an early seminal work is visited first.

In a chapter titled “Verbs and Times” in his book *Linguistics in Philosophy* (1967), Zeno Vendler discusses the ways the notion of time is expressed by verbs. He claims that there are a number of “time schemata presupposed by various verbs” and adds that a verb can be used in more than one time scheme (Vendler 1967: 98). He starts the discussion of time schemata by noting the difference between English verbs which can appear in the progressive form, for example *run* in *I am running*, and those verbs which cannot do so, for example *know* in **I am knowing*. From that, Vendler proceeds to subdivide each of those verb groups. In the first group, he points out an important difference between the events denoted by ‘running’ and ‘drawing a circle’, defining the difference in the following way:

while running or pushing a cart has no set terminal point, running a mile and drawing a circle do have a ‘climax’, which has to be reached if the action is to be what it is claimed to be (Vendler 1967: 100).

In other words, the act of running can go on indefinitely, but the act of drawing a circle is inherently and internally bounded; after the circle is drawn, anything following that cannot be called ‘drawing a circle’. In the second group, he singles out the difference between the verbs which are true “only for single moments of time” and those which hold for “shorter or longer periods of time” (Vendler 1967: 102). An example of the first category would be verbs such as *reach* in *At what time did you reach the top?*, where the act of reaching is seen as practically without duration, while an example of the second category would be *know* in *She knows the answer*. Vendler proposes to call the class of verbs which appear in the progressive, but have no set terminal point, ‘activities’, the class of verbs which appear in the progressive and at the same time denote an event with a set terminal point ‘accomplishments’, while in the category of non-progressive verbs he terms the verbs which hold for a single moment ‘achievements’ and those which hold for a period of time ‘states’. Since then these terms have been in regular

use in the study of aspect and are also used in this thesis, with some further modifications. The difference between activities and accomplishments is nowadays usually discussed under the notion of telicity, while the difference between states and achievements, as presented by Vendler, is seen as representing the difference between durativity and punctuality (e.g. Smith 1997, Olsen 1997).

Vendler (1967: 107) commented that

this division has an air of completeness about it. Perhaps it is more than a mere presumption to think that all verbs can be analyzed in terms of these four schemata.

As will be seen, the authors who dealt with aspect following Vendler took one of the following approaches: they (i) collapsed the number of categories down to three (Verkuyl 1993), (ii) used the original four categories (Dowty 1979), or (iii) expanded the number of categories, usually by introducing more aspectual meanings (Smith 1997). The last approach is taken here.

Bernard Comrie tackles the same general category of phenomena as Vendler in his book titled *Aspect* (1976). In it, he deals primarily with viewpoint aspect, or, more specifically, with the difference between perfective and imperfective forms in various languages, whereas Vendler is interested mostly in the available time schemata. However, Comrie (1976: 41) does discuss the “inherent aspectual (i.e. semantic aspectual) properties of various classes of lexical items”, which he organizes into three aspectual oppositions, two of which were mentioned by Vendler.

Comrie (1976: 41) starts with the punctual/durative aspectual opposition, proposing that

durativity simply refers to the fact that a given situation lasts for a certain period of time (or at least, is conceived of as lasting for a certain period of time).

For example, *The children are crossing the street* is categorized as a durative situation; there are numerous points at which this sentence holds true. In fact, the sentence is true from the moment when the children step down from the sidewalk onto the road and all the way up to the point when they step up onto the sidewalk on the opposite side of the road. Importantly,

*The children crossed the street*¹ is also a durative situation, but the viewpoint aspect used definitely influences the aspectual meaning of the whole sentence. This is dealt with more fully in the following chapter. As for punctuality, Comrie (1976: 42) simply states that it is the opposite of durativity: “the quality of a situation that does not last in time (is not conceived of as lasting in time), one that takes place momentarily”.

Moving on, Comrie turns his attention to the aspectual opposition of atelicity/telicity, which turns out to closely follow Vendler’s distinction between activities and accomplishments. Comrie (1976: 44), like Vendler, discusses the existence or non-existence of situational terminal points and proposes the following way of identifying atelic and telic situations:

if a sentence referring to this situation in a form with imperfective meaning (such as the English progressive) implies the sentence referring to the same situation in a form with the perfect meaning (such as the English perfect), then the situation is atelic; otherwise it is telic.

An example of an atelic situation would be the sentence *Alice was walking* because if it is true, so is the sentence *Alice has walked*. That is, any amount of walking would be enough to refer to the whole situation using the form with the perfective meaning. On the other hand, the sentence *Bob was reading an article* does not imply that *Bob has read an article*. The use of the form with the perfective meaning would imply that Bob read the whole article, while the form with the imperfective meaning does not imply this – if anything, it implies that Bob has read only a part of the article. Comrie (1976: 45) also makes one important point, not only in the context of (a)telicity, but also aspectual meaning in general. He states that “situations are not described by verbs alone, but rather by the verb together with its arguments (subjects and objects)” (Comrie 1976: 45). Returning to example sentences, *Alice was walking* is an atelic situation – there is no set terminal point when this situation is completely “used up”, since Alice can simply continue walking on indefinitely. However, the sentence *Alice was walking to the store* is no longer seen as atelic, since the adverbial phrase *to the store* makes the position of the terminal point of the situation known. Once Alice reaches the store, the situation of

¹ It should be kept in mind that the uses of viewpoint aspects in English and Croatian do not overlap completely. While the sentence *The children are crossing the street* is translated as *Djeca prelaze ulicu*, the sentence *The children crossed the street* can be translated as *Djeca su prelazila ulicu* and *Djeca su prešla ulicu*.

walking to the store is finished, it cannot go on any further. As can be seen, the addition of an adverbial goal phrase renders the situation telic. Comrie mentions subjects and objects as being relevant in the description of a situation, but, as this example shows, the category of relevant elements is actually broader. In any case, this general direction of locating aspectual meaning not in the individual verb but rather looking at other sentential elements as well is adopted here.

The grammatical qualities of existing sentential elements, rather than just their existence or non-existence, influence the telicity of the situation. Comrie (1976: 45) gives the following examples:

John is singing describes an atelic situation, the sentence *John is singing a song* describes a telic situation [...] *John is singing songs* is again atelic, whereas *John is singing five songs* is again telic.

As can be seen, the important quality in these examples is boundedness or definitiveness: a definite quantity of the object denotes a telic situation, while an indefinite quantity implies the opposite. The reason for this is simple: only a definite quantity makes the position of the terminal point available.

Comrie offers an interesting definition of telic situations, which, however, is not used in this thesis. He claims that “in expressions referring to telic situations it is important that there should be both a process leading up to the terminal point as well as the terminal point” (Comrie 1976: 47). This definition works well for those situations Vendler calls accomplishments. For example, the situation of building a house involves a process, the actual process of building, and this process reaches its culmination once the final brick is laid. From this, Comrie proceeds to point out that telic situations are not the same as Vendler’s achievements. Since achievements are punctual, there can by definition be no process component of the situation. Comrie (1976: 47-48) therefore suggests that

a new class of situations will have to be recognized, referring to a punctual event and the immediately preceding process in the sense that the process preceding the event is so intimately bound up with the event that once the process is under way the event cannot be prevented from occurring

and claims that achievements do not belong to the category of telic situations. However, this definition seems problematic. Comrie mentions both a punctual event and a preceding process, which are also the two main parts of accomplishments. The only difference between them seems to be that accomplishments can fail to reach their terminal points, while achievements cannot be prevented in reaching it. It could be argued that modelling achievements as punctual situations makes more sense if the goal is to make the complete occurrence of the situation obligatory, since punctual events are automatically finished when they occur.

Finally, Comrie discusses the difference between static and dynamic situations. He starts with two non-controversial cases, *know* and *run*, where *know* denotes a static situation and *run* a dynamic situation. After accounting for some more difficult cases, Comrie (1976: 49) arrives at the following definition:

with a state, unless something happens to change that state, then the state will continue: this applies equally to standing and to knowing. With a dynamic situation, on the other hand, the situation will only continue if it is continually subject to a new input of energy.

This definition can be applied to durative situations, but what about punctual situations? For those, Comrie (1976: 50) claims that “since punctual situations automatically involve a change of state, they are automatically dynamic: there can be no such thing as a punctual state”. As will be seen, most authors agree with that proposal.

Before moving on, a couple of points should be made. First, while Comrie talks about aspectual oppositions and uses terms such as ‘state’, ‘activity’ and ‘achievement’, he does not attempt to combine all the oppositions in order to arrive at a “full” aspectual description of situation types. For example, he claims that “the term ‘telic situation’ corresponds to the term ‘accomplishment’ used, for instance, by Vendler” (Comrie 1976: 44). What is of interest here is that he focuses on their telicity, without mentioning their dynamism or duration. Further, he uses some terms which will be used by other authors, for example Carlota S. Smith and Mari B. Olsen, in a rather different sense. Mainly, he writes that

we may introduce the terms ‘semelfactive’ to refer to a situation that takes place once and only once [...] and ‘iterative’ to refer to a situation that is repeated (Comrie 1976: 32).

As will be seen, the term 'semelfactive' in this thesis is reserved for a particular situation type, while the use of the term 'iterative' follows Comrie's definition more closely.

In locating aspectual meaning in sentences, Carlota S. Smith (1997: 17) follows Comrie's approach and claims that "the situation type of a sentence is conveyed by the verb and its arguments, the verb constellation". Smith uses the term 'situation type', which is used in this thesis as well. Every sentence denotes a particular situation, i.e. the term 'situation' is used as a hyperonym for states, activities, accomplishments, etc., each of which constitutes a specific situation type. The term 'verb constellation' has also proven to be important and is used here. As can be seen, situation type is a semantic notion, while verb constellations are a syntactic notion subsuming the verb and its arguments. Smith (1997: 18) further states that "verb constellations are associated with a given situation type according to temporal features", but then adds that "the relation between verb constellations and situation types is not one to one, however. Verb constellations may be associated with several situation types". It is important to point out why this is so and the answer partially rests in the scope of the term 'verb constellation'. When discussing the sentence *Mary walked by the river*, Smith (1997: 17) describes the underlying verb constellation as [Mary walk by the river]. First, the bare form of the verb should be interpreted as indicating that tense and aspect markers are not part of the verb constellation. Thus, the given verb constellation underlies sentences such as *Mary is walking by the river* or *Mary had walked by the river*. Second, elements which do not influence the situation type are not part of the verb constellation. In other words, the same verb constellation would also underly the sentence *Mary walked by the river because she was bored*, because the subordinate sentence in this example carries no inherent aspectual meanings which would affect the aspectual meaning of the sentence as a whole.

However, there are elements which are not part of the verb constellation, but do cause a change in the interpretation of the situation type. Smith (1997: 18) gives the following example: the situation type of the sentence *Bill knew the truth* is a state, but the addition of an adverb in *Suddenly Bill knew the truth* causes the interpretation of the situation type to change into an achievement. She gives more precise definitions of situation types later on, but for now it can be said that the first sentence denotes a situation which holds in time and involves no change; every moment of Bill's knowing is the same as any other moment. The second sentence denotes an altogether different situation – the focus is on the change of state

from not knowing the truth to knowing it. The adverb *suddenly* forces a punctual reading and, because states are defined as durative situations, the sentence refers not to the “durative” part of that situation, but rather to the punctual transition into the situation. For such sentences, Smith (1997: 48) introduces the term ‘derived situation type’: “I shall say that a derived situation type is formed by a situation type shift”. In regard to the example mentioned earlier, the state reading is the basic situation type and the addition of *suddenly*, an aspectually relevant element, causes a situation type shift, producing an achievement reading – the derived situation type. Smith (1997: 54) also defines the syntactic equivalent of the derived situation type: “a verb constellation (Vcon) with certain temporal features, combined with an adverbial, is interpreted as a derived constellation (DVCon) with certain temporal features”. Therefore, while *suddenly* is outside the verb constellation in the sentence *Suddenly Bill knew the truth*, it is inside the derived verb constellation. Before further discussing derived verb constellations and situation type shifts, Smith’s treatment of temporal features will be briefly presented.

Smith (1997: 19) argues that “the temporal properties of dynamism, telicity and duration distinguish the basic situation types. Stated as semantic features, the properties form three contrasting pairs”. These three contrasting pairs are similar to those used by Comrie, but they do not overlap completely. The first opposition Smith defines is the static/dynamic opposition. She suggests that “the distinction between stasis and motion is fundamental, and bifurcates situation types into the classes of states and events: states are static, events are dynamic” (Smith 1997: 19). Further, she adds that states “consist of a single, undifferentiated period” and therefore are different from events, which “consist of successive stages which occur at different moments” (Smith 1997: 19). The important thing here is that, for Smith, staticity/dynamicity is not just one of the aspectual oppositions – it is the central opposition which splits verbs into two main basic categories. As will be seen, this decision reduces the number of posited situation types. As for the telicity/atelicity opposition, Smith (1997: 19) defines telic events as those events which “have a change of state which constitutes the outcome, or goal, of the event. When the goal is reached, a change of state occurs and the event is complete” and atelic events as those which “are simply processes. They can stop at any time: there is no outcome”. It is telling that Smith (1997: 20) refers to telic and atelic events, rather than situations in general; according to her, states cannot be telic. Finally, she

does not explicitly define durative and punctual situations, but her use of the terms seems to suggest that she has in mind basically the same notions as those used by Comrie. She does stress that “this notion of instantaneous is conceptual, an idealization” (Smith 1997: 19) and it is hard to argue with this – every situation objectively has a certain duration, however small.

Smith proceeds to define five situation types using various combinations of these aspectual oppositions. She defines states as static, durative and atelic; activities as dynamic, durative and atelic; accomplishments as dynamic, durative and telic; achievements as dynamic, punctual and telic; semelfactives as dynamic, punctual, and atelic. It should be pointed out that her definition of semelfactives differs fundamentally from Comrie’s and is the one used in this thesis. In other words, semelfactives are seen as one of the basic situation types, rather than situations in general which happen or hold only once. Also, the way she defines achievements diverges from the way Comrie defines them: for Smith, achievements are telic situations – they denote a punctual change of state or reaching of a goal. One more thing she does not address explicitly is the lack of punctual states, even though she discusses durativity and punctuality as applying to situations rather than events only.

As for the way temporal features of verb constellations are calculated, Smith (1997: 54) starts with the verb and claims it is

the aspectual center of a sentence. Verbs have an intrinsic aspectual value, based on its aspectual contribution to a 'maximally simple sentence'. A maximally simple sentence is either intransitive or has a quantized direct object,

where the term ‘quantized’ refers to bounded objects, i.e. objects with a definite quantity, either explicitly stated (e.g. *She read five books*) or implied by the use of the definite article (e.g. *She read the books*). This definition is rather precise, but Smith does not state why she uses quantized direct objects rather than unbounded ones. The direct consequence of this choice is that any verb which denotes an activity with an unbounded object and an accomplishment with a bounded object is defined as an inherent accomplishment. One possible explanation can be found in her earlier comment that “situations are neutrally presented as complete, functional wholes, by the general principles of basic-level categorization” (Smith 1997: 18). Even if this is not the main reason, Smith (1997:54) points out that this kind of treatment of situation type, which involves situation type shifts operating

upon underlying aspectual or temporal properties, “requires that the lexicon give the temporal feature values for verbs, and relevant values for other morphemes”. That is, even though there might be more than one plausible way of defining the maximally simple sentence, one of them must be adopted in order for the theory to function. Smith’s definition is used in this thesis. Namely, the idea that the verb is the sentential aspectual center is interpreted here as implying that the verb is the element which inherently carries all three basic aspectual features, whereas other aspectually relevant elements do not carry all three.

Another important point Smith (1997: 58) makes is that it is possible for some verb constellations to be vague, “with alternative aspectual values”, giving the sentence *Mary combed her hair* as an example: it can be interpreted either as an activity, in which case Mary combed her hair for some time without attempting to comb it “fully”, but it can also be interpreted as an accomplishment, in which case the act of Mary’s combing her hair leads to the state of her hair being fully combed. Therefore, in some sentences the interpretation of situation type depends on contextual information.

Returning to situation type shifts, Smith proposes two categories. She says there are explicit situation type shifts, triggered by, e.g. “dynamic or static verb morphology” (Smith 1997: 52). To illustrate, whereas the sentence *Alice is nice* denotes a state, the same verb constellation with a progressive form, *Alice is being nice*, is seen as an activity. There are also interpreted situation type shifts, which are

triggered by a clash of temporal feature values between a verb constellation and another form. The other forms are adverbials of different kinds, and aspectual viewpoints. I shall call such cases ‘interpreted situation type shifts’ to distinguish them from shifts that are due to explicit morphemes (Smith 1997: 52).

It is worth highlighting again the fact that she places aspectual viewpoints outside of the verb constellation. The phrase ‘explicit morphemes’ is somewhat vague, seeing that aspectual viewpoints are also expressed by explicit morphemes. Another odd thing is that she places dynamic or static verb morphology into the category of explicit type shifts, but then places aspectual viewpoints into the category of interpreted type shifts. In any case, the difference between explicit and interpreted type shifts is not important here. What is important is the way Smith resolves the clashes of temporal features. She argues that “in a clash between the verb constellation and an adverbial, the adverbial overrides. The principle also holds for

viewpoints” (Smith 1997: 53). To show how these principles work in practice, the sentence *Bob read a book for an hour* will be examined. The verb constellation underlying this sentence is [Bob read a book], while the adverbial *for an hour* is not an obligatory argument of the verb *read* and is therefore outside of the verb constellation. The inherent situation type of the main verb is an accomplishment: in a maximally simple sentence, it is transitive and with a bounded direct object. The adverbial implies that there was no attempt to finish reading the book. Rather, the situation is bounded temporally. The derived situation type of the given sentence, according to Smith, is an activity. However, it could also be argued that this example involves no situation type shift – a telic situation of reading a book is simply presented as unfinished, rather than being atelic.

It should be pointed out that clashes within the verb constellation can also cause type shifts. To take a similar example, *Bob read books* is an activity because its object is unbounded; this situation cannot reach an inherent terminal point because Bob can just continue reading books indefinitely. In this case, the unboundedness of the object, which is part of the verb constellation, overrides the inherent telicity of the verb.

Smith analyzes each of the situation types and a number of derived situation types in greater detail, but the focus of the present discussion is on the basic structure she elaborates. However, some important details of her approach need to be mentioned. First, she allows for different subclasses of the main situation types. For example, outside of derived activities, Smith (1997: 24) mentions two other main classes: “one class consists of processes that are unlimited in principle, such as [sleep], [push a cart], [laugh]. Another class of activities has indefinitely many internal stages, as in [eat cherries]”. Second, regarding the difference between accomplishments and achievements, both of which are telic, Smith (1997: 26) says that “the process component of an accomplishment is essential to the very notion of the event” and she calls this relation ‘non-detachability’. As for achievements, she argues that

preliminary or resultant stages may be associated with the event, but they are not considered part of it. The temporal schema of an achievement consists of a single stage, a change of state (Smith 1997: 30).

For example, while the verb *win* is generally analyzed as an achievement, it is not literally true that there is no process which leads to it – a team does not suddenly win a game without

doing something. Still, the process of playing a game is not part of the meaning of the verb *win*. Also connected to telicity is her proposal to introduce the aspectual feature ‘bounded’, with telicity, in the sense used up to now, being termed ‘intrinsic’ boundedness. For semelfactives, she introduces ‘implicit’ boundedness, which she argues for on the basis of the “single-stage nature of the event” (Smith 1997: 35). This implies that achievements are both intrinsically and implicitly bounded because they are also punctual situations. Finally, she claims that “the initial and final endpoints of a state are not part of the state” (Smith 1997: 32) and she defends this claim by pointing out the aspectual features of states, mainly their stativity. Transitions into and out of a state are dynamic events, therefore they cannot be parts of the state.

Mari B. Olsen (1997: 8) introduces the term ‘lexical aspect’ to refer to the “internal temporal constituency”. However, lexical aspect for her is not the same as situation type – whereas situation type denotes the aspectual features of verb constellations, lexical aspect is “encoded in the verb stems” (Olsen 1997: 11). Like Smith, Olsen (1997: 11) claims that “the lexical aspect classes are not primitives, but are generally assumed to represent clusters of values for lexical aspect features, specifically (a)telicity, (non)dynamicity and (non)durativity”². Here again, the same aspectual features are used as the building blocks of lexical aspect classes. Another similarity to Smith is the fact that Olsen’s approach assigns verbs inherent aspectual features and categorizes them as belonging to a certain lexical aspect class “based on their behavior in a variety of syntactic and semantic frames. However other sentence constituents may affect precisely the feature in focus” (Olsen 1997: 15). Likewise, she allows for other elements to “contribute to aspectual interpretation in principled ways” (Olsen 1997: 16), that is, she locates aspectual features at the level of the sentence. The term ‘lexical aspect’ is used in this thesis in the following sense: lexical aspect is found at the level of the verb, situation type is found at the level of the verb constellation and derived situation type is found at the level of the derived verb constellation.

While it was not stated in those terms, Smith’s concept of the maximally simple sentence can be seen as the environment where the lexical aspect of a verb can be determined. As was mentioned, maximally simple sentences are intransitive or have a

² The term ‘primitive’ is used to refer to the most basic notions of a system, i.e. to notions which are not reducible to or analyzable in terms of some other notions.

quantized direct object. Olsen does not give a detailed description of this environment and comments only that “the usual approach to such variation has been to assign verbs the semantic features that they have in the most contexts”, adding that it has been notoriously difficult to assign inherent aspectual features to verbs “since verbs vary in interpretation with respect to some features in certain contexts” (Olsen 1997: 19). It will be pointed out that the meaning the verb has in most contexts is a vaguely defined environment and could theoretically result in two verbs which can be used in the same “aspectual environments” to be categorized differently simply due to differences in frequency of a particular use, rather than any inherent aspectual differences. The main theoretical novelty she introduces is the idea that the three main aspectual oppositions are privative oppositions, with the marked members – dynamicity, durativity and telicity – denoting situations which obligatorily share those aspectual features and unmarked members being compatible with both values of a given opposition, i.e. verbs inherently marked as non-telic can be used in both atelic and telic sentences, while those verbs inherently marked as telic cannot be used in atelic sentences (Olsen 1997: 19). To illustrate, Olsen (1997: 19) discusses the verb *run* in sentences *Carl Lewis ran* and *Carl Lewis ran a mile*. According to her, the first sentence denotes an atelic activity, whereas the second sentence denotes a telic accomplishment. Because *run* can be used for both atelic and telic situations, it is categorized as unmarked for telicity.

A direct consequence of this approach is the inability of dynamic, durative and telic verbs to be used for static, punctual and atelic situations respectively. In this regard, Olsen differs from Smith, who argues that in the case of clashes of aspectual features, elements outside of the derived verb constellation (and elements of the verb constellation other than the verb) override the initial aspectual features. Furthermore, while Smith’s approach requires all verbs which can be either activities or accomplishments, depending on the boundedness of their objects, the existence of a goal, etc., to be categorized as inherent accomplishments, Olsen’s approach requires them to be categorized as activities, because telicity is a marked feature in her approach. This is simply the result of her use of privative features. One point about Smith’s definition of a maximally simple sentence should be mentioned: she claims those sentences are either intransitive or have a quantized direct object. The latter basically deals with the “eat two apples / the apples / apples” problem. In the first and second case, the use of *two* and the definite article indicates a certain, determinate quantity of apples,

meaning that the position of the terminal point is accessible. In the third case, however, the bare plural form denotes an unbounded, indeterminate quantity of apples, so that the position of the terminal point is not accessible. But what about the requirement for the sentence to be intransitive in relation to verbs which can be used in both intransitively and transitively? A good example is the already discussed verb *run*. It can be used both intransitively and transitively and, if transitively, then either with a bounded or an unbounded object. It can also be used with a prepositional phrase indicating the goal of the motion. Due to the fact that *run* denotes the manner of motion, it seems plausible for its maximally simple sentence to be intransitive and the verb to be inherently atelic. However, if the basis for the inclusion of quantized direct objects into maximally simple sentences is the claim that humans neutrally conceptualize situations as functional, complete wholes, and if it were applied to verbs such as *run*, it is not altogether clear what the result would be – is *run* still to be categorized as an accomplishment on the basis of the idea that running a mile is a complete whole? It is hard to see how the activity of running in general, or any specific situation of undirected running, could be seen as representing a complete whole. Obviously, the precise definition of the maximally simple sentence, or the environment(s) in which verbs are assigned their inherent aspectual features, still has room for improvement.

While Olsen sees some aspectual values as marked and others as unmarked, and therefore compatible with either value, her actual usage of the terms telicity, durativity, dynamicity and their unmarked pairs, does not seem to differ from the way Smith uses them. Nevertheless, they do not function the same way in the two approaches. For one, Olsen (1997: 27) uses the situation type she calls ‘stage-level state’, which she defines as a telic state, and she illustrates it with *be pregnant*. She indicates that “the class of lexically specified temporary states thus appears to be extremely limited, at least in English” (Olsen 1997: 50). As was mentioned, Smith explicitly denies the possibility of telic states and this is due to her treatment of the stativity/dynamicity opposition as, in a sense, foundational – she ascribes telicity only to dynamic situations. Olsen’s proposal that all unmarked features can become marked is incompatible with the centrality of stativity/dynamicity found in Smith.

Another interesting proposal introduced by Olsen, which is further developed in this thesis, can be found in her discussion on the temporal structure represented by the aspectual oppositions. She claims that “if a verb is [+durative], it denotes a temporal interval. If a verb is

[+dynamic], it denotes change. If a verb is [+telic], it denotes an end” (Olsen 1997: 51). This idea is reminiscent of Vendler’s time schemata. It should also be highlighted that Olsen (1997: 32) takes telicity to indicate not the attainment of an end, but rather the existence of an attainable end, and it is used in the same manner here.

Furthermore, she splits situations into two parts, or “intervals”: the nucleus and the coda (Olsen 1997: 52). She claims that the coda is denoted by the feature [+telic] and is for that reason optional. The other two features, dynamicity and durativity, denote the nucleus. Olsen (1997: 51) then makes the following generalization: “A VERB must be minimally [+dynamic] or [+durative]”. In other words, a verb must denote either a temporal interval, static or dynamic, or a dynamic situation, durative or punctual. This treatment does not allow for punctual states and is in that regard similar to Smith’s.

Laura Michaelis (2003) approaches the notion of aspect from an altogether different perspective, which can be seen in her inventory of situation types and the way she constructs it. Rather than relying on the three aspectual oppositions discussed so far, Michaelis uses causal and temporal representations to arrive at different situation types. Causal representations are not dealt with in this thesis, however, her temporal representations can be connected to Olsen’s use of situation intervals, the nucleus and the coda. Michaelis (2003: 8) argues, following Balthasar Bickel (1997), that the possible parts of a situation can be either states or transitions. In order to avoid confusion with the situation type ‘state’, the non-transition interval is here called a ‘phase’. For example, the temporal representation of a state includes only a single interval, a phase, while the temporal representation of an activity consists of an initial transition, a phase and a final transition. Michaelis (2003: 19–20) actually argues for two different types of activities, namely homogeneous and heterogeneous activities, which differ in that homogeneous activities consist of a single undifferentiated phase, e.g. the verb *stand*, while heterogeneous activities consist of a situation-internal iteration of transitions and phases. It is important to point out that none of those temporal representations include a phase after the final transition, the reason for that being the atelicity of these situation types. Both telic situation types include a final phase. What sets them apart is how they begin: achievements denote punctual situations and their temporal representation therefore has the form of transition-phase, while accomplishments include the interval leading up to the final transition as well. Michaelis represents this interval using the

notion of an event chain, which corresponds to the internal iteration mentioned for heterogeneous activities. She notes, however, that the event chain must contain “(a) type-identical onset and offset events and (b) at least one antipodal, type-identical event” (Michaelis 2003: 8).

The part of Michaelis’ proposal to be adopted here is the division of situation parts into phases and transitions, with phases corresponding to durative intervals and transitions to punctual, and therefore necessarily dynamic, intervals. One way of applying this to Olsen’s concept of the nucleus and the coda of a situation is to define which parts of situation type belong to the nucleus and which to the coda. Seeing that Olsen allows for the nucleus to be dynamic and punctual, it seems plausible that the nucleus can consist of a transition as well as a phase. Another similarity is the fact that telicity is represented by both authors, in Michaelis using situation-final phases, and in Olsen by a coda. Michaelis does not discuss semelfactives, but she does rule out the possibility of temporal representation consisting of a single transition, possibly on the basis of her claim that “a transition is necessarily defined relative to a prior or subsequent state” (Michaelis 2003: 8). In that regard, her theory does not represent semelfactives as basic-level categories, or as distinct categories at all. Since the theory of situation type to be used in this thesis rests upon the three main aspectual oppositions, semelfactives are treated as a distinct basic category.

3. Viewpoint aspect

In the present chapter, the focus shifts to the category of viewpoint aspect, which is presented as the second basic subsystem of the aspectual framework. Most of the works discussed above also deal with viewpoint aspect, so we deal with them as well, this time aiming to develop a working theory of viewpoint aspect and the way it is connected to situation types.

Aspect in the sense used here is the main focus of Comrie’s book. His first broad definition of aspects is that they are “different ways of viewing the internal temporal constituency of a situation” (Comrie 1976: 3). This approach to viewpoint aspects where they are presented as “viewing” situations from different perspectives can also be seen in the other works that are presented. It should be pointed out that the internal temporal constituency of a situation is taken to represent the situation type. To anticipate some of the following

arguments, this implies that situation type is something (viewpoint) aspect operates upon. Comrie (1976: 6–7) also stresses early on that he would discuss “semantic aspectual distinctions, such as that between perfective and imperfective meaning, irrespective of whether they are grammaticalized or lexicalized in individual languages” and adds that the noun ‘aspect’ will be used for “particular grammatical categories in individual languages that correspond in content to the semantic aspectual distinctions drawn”. According to this, perfective and imperfective meaning can be expressed universally, with languages differing only in the way these meanings are expressed. How much correspondence is necessary, i.e. do the forms have to correspond to the semantic aspectual distinctions completely, in all contexts, or only in their prototypical uses, is left unspecified. Before further discussing Comrie’s theory, a few comments are needed on the terminology used in the rest of the thesis. The nouns/adjectives ‘imperfective’ and ‘perfective’ are used to refer to the general aspectual distinctions and in this sense both English and Croatian are said to express imperfective and perfective meanings. As for language-specific morphosyntactic categories, the terms ‘imperfective’ and ‘perfective’ are used for the two possible aspectual categories in Croatian. The verb *pisati* ‘write’ is an imperfective verb, whereas *napisati* is a perfective verb. For English, the terms ‘simple/unmarked’, ‘progressive’, ‘perfect’ and ‘perfect progressive’ are used in the traditional sense: the form *see* is simple/unmarked, *be seeing* is progressive, *have seen* is perfect and *have been seeing* is perfect progressive. The same applies to the Past tense.

Discussing various definitions of the perfective, in particular the idea that it represents a completed action, Comrie (1976: 18) claims that

the perfective does indeed denote a complete situation, with beginning, middle, and end. The use of ‘completed’, however, puts too much emphasis on the termination of the situation, whereas the use of the perfective puts no more emphasis, necessarily, on the end of a situation than on any other part of the situation.

To illustrate his objection, the sentences *Alice read an article in five minutes* / *Ana je pročitala članak za pet minuta* can be used. Even though the presented situations are indeed completed, the fact that it is possible to explicitly indicate the duration of the phase interval of the situations seems to indicate that Comrie is correct in stressing that every part of the situation is available. In other words, if the focus was only on the inherent terminal point,

reference to the internal parts of the situation, especially to their totality, would not be possible since it would be outside of the scope of the perfective.

Comrie (1976: 19) points out that, cross-linguistically,

indicating the end of a situation is at best only one of the possible meanings of a perfective form, certainly not its defining feature [...] In many languages that have a distinction between perfective and imperfective forms, the perfective forms of some verbs, in particular of some stative verbs, can in fact be used to indicate the beginning of a situation.

An example of such use would be the verb *realize*, which can refer either to the beginning of the state or to the state itself, such as in the sentences *At that moment, he realized he forgot to lock the door* and *Do you realize what time it is?* respectively. In Croatian, the perfective verbs *zasvirati* 'start playing (an instrument/song)' and *zaljubiti se* 'fall in love' indicate the initiation of an activity/accomplishment or a state.

Regarding the nature of the perfective meaning, Comrie (1976: 21) argues that "perfectivity involves lack of explicit reference to the internal temporal constituency of a situation, rather than explicitly implying the lack of such internal temporal constituency". In other words, perfective meaning does not correspond to punctuality, nor is it used only for punctual situations. This is shown by the aforementioned example, *Alice read an article in five minutes*, where the situation is obligatorily durative, as indicated by the durative adverbial *in five minutes*. The phrase 'lack of explicit reference' also implies that such reference can be made, also confirmed by the example sentence. Further, Comrie (1976: 24) makes an interesting point which is further discussed later in this chapter; discussing the Russian verb *pozapirat'*, whose Croatian equivalent is *pozatvarati* 'close one by one', he claims that "although the Perfective Aspect still views the situation as a single complete whole, the distributive lexical meaning of this verb gives information as to the internal constituency of this action". The distributive meaning is the result of derivation with the prefix *po-*. However, the idea that the verb constellation gives the information necessary to calculate the underlying situation type, i.e. speakers can always access that information, regardless of the viewpoint aspect, is adopted in this thesis.

Comrie's discussion of imperfectivity basically concludes it is the opposite of perfectivity. In contrast to perfectivity, imperfectivity involves "explicit reference to the

internal temporal structure of a situation, viewing a situation from within” (Comrie 1976: 24). This means that the totality of a situation is not available to imperfective forms. At the same time, the situations denoted by the sentences *Bob was reading an article for five minutes* / *Bob je čitao članak pet minuta* are not obligatorily incomplete, in the sense that it is possible to add *...and he did read it* / *...i pročitao ga je*, i.e., the whole situation might have lasted for five minutes. Therefore, what ‘viewing a situation from within’ seems to imply is that the transition part is necessarily outside of the scope of the imperfective. The following point derives from the preceding one: “imperfective forms cannot be used to refer to situations lacking internal structure” (Comrie 1976: 26). Internal structure refers not to the stativity/dynamicity, but rather to the durativity/punctuality opposition. Whereas the perfective involves no explicit reference to internal structure and is in that regard not sensitive to this feature of situations, the imperfective requires a situation it can “see” within, which is not possible with punctual situations. Finally, Comrie (1976: 41) highlights the difference between imperfectivity and durativity:

imperfectivity means viewing a situation with regard to its internal structure (duration, phasal sequences), and durativity simply refers to the fact that the given situation lasts for a certain period of time.

This is generally the position taken in this thesis – the notions of perfectivity/imperfectivity and punctuality/durativity do not refer to the same aspectual features and do not belong to the same part of the aspectual framework, with perfectivity/imperfectivity being a part of viewpoint aspect and punctuality/durativity one of the three main aspectual oppositions underlying the situation types.

Comrie’s definitions of the terms ‘process’ and ‘event’ will be briefly discussed. According to him, ‘process’ refers to “a dynamic situation viewed imperfectively”, while ‘event’ refers to “a dynamic situation viewed perfectly” (Comrie 1976: 51). Focusing on the class of accomplishments, the sentence *Alice was building a doghouse* would denote a process, while the sentence *Alice built a doghouse* would denote an event. The main difference between these two sentences is that the first sentence does not imply that the doghouse was completed, while the second sentence does. At this point one observation regarding the aspectual interpretation of events can be made. The sentence *After working on it the whole afternoon, Alice finally built the doghouse at 8 PM* focuses specifically on the

transition part of the situation, while the sentence *Alice built the doghouse in five hours* refers to the whole period of building the doghouse. To take an example from Croatian to argue a slightly different point, the sentences *Ana je pročitala članak u podne* ‘Ana read the article at noon’ and *Ana je pročitala članak za pet minuta* ‘Ana read the article in five minutes’ focus the transition and the phase part of the situation, respectively. This difference in focus might account for the fact that the sentence *Ana je pročitala članak u podne za pet minuta* ‘Ana read the article at noon in five minutes’ sounds odd – the adverbial phrase *u podne* ‘at noon’ seems to require final transition focus, but the phrase *za pet minuta* ‘in five minutes’ requires phase focus.

Before moving on to the ways imperfectivity and perfectivity are actually expressed, an important point regarding Comrie’s categorization of viewpoint aspects should be stressed. Although Comrie treats the perfective as a single category, he actually discusses several different subcategories of the imperfective. He states that “while many languages do have a single category to express imperfectivity, there are other languages where imperfectivity is subdivided into a number of distinct categories” and he gives a diagram of the most typical subdivisions, including the habitual and the continuous, which is further subdivided into the nonprogressive and the progressive (Comrie 1976: 24–25). His analysis of these categories will not be discussed in detail. It will only be pointed out that he shows that the meanings of viewpoint aspects in different languages do not overlap perfectly. For example, he notes that the “meaning of the Progressive has extended well beyond the original definition of progressivity as the combination of continuous meaning and non-stativity” (Comrie 1976: 38), where ‘continuous meaning’ is the same as ‘non-habitual meaning’, as exemplified by sentences such as *The vase is standing in the cupboard*, whose progressive aspect denotes not progressivity, but rather non-habituality.

In regard to the formal expression of aspectual oppositions, Comrie (1976: 87) starts out with the division “between morphological (synthetic) and syntactic (analytic) means”. As an example of syntactic means of expression, Comrie (1976: 87) mentions the progressive in English, which is expressed using the construction *be* + the present participle form. As for the languages which express aspectual oppositions morphologically, he claims that there are languages “where there is a clearly identifiable marker of aspect (or of one member of an aspectual opposition), the forms of the verb being otherwise the same for both aspects, and

those languages where this is not so” (Comrie 1976: 88). Comrie seems to imply that either both members of an aspectual opposition are marked, or only one of them is. If the progressive and the perfect forms in English are provisionally taken to denote imperfective and perfective viewpoint aspects respectively, then this would be a situation where both members receive special marking. Comrie’s phrase ‘the forms of the verb’ can be taken to mean that, for example, the progressive and the perfect are all forms of the same lexeme and this is indeed the standard view of the situation in English. Regarding Slavic languages, Comrie (1976: 88) notes that “prefixation as a marker of Perfective Aspect in Slavonic [...] is a similar process, though slightly less systematic, in that the choice of prefix is often lexically determined”, mentioning also that there exists “a derivational process of imperfectivization, whereby imperfective verbs can be derived by suffixation from prefixed Perfectives”. The range of available derivational processes involving viewpoint aspect available in Croatian are broader. As mentioned by Comrie, perfective forms can be produced by prefixation of imperfective forms (*pisati – napisati*), while imperfective forms can be produced by suffixation of perfective forms (*pregledati – pregledavati*). Those are not the only options, as the forms *lupati* and *lupiti* show. Here, there are no additional morphemes, but rather a change in the suffix. This only proves Comrie’s observation that the expression of viewpoint aspect in Slavic languages is less systematic.

Returning briefly to Smith, the way Croatian viewpoint aspect is expressed is perhaps problematic for her definition of the maximally simple sentence. If viewpoint aspect is outside of the verb constellation, how are Croatian verbs to be analyzed? For example, does the verb constellation [Ivan pisati knjigu] underlie both *Ivan je pisao knjigu* and *Ivan je napisao knjigu* or only *Ivan je pisao knjigu*? Or, following Smith’s proposal that viewpoint aspect is outside of the verb constellation, are verb constellations to be regarded as undefined regarding viewpoint aspect, giving verb constellations such as [Ivan (na)pisati knjigu]? The latter approach is taken in this thesis.

Before proceeding to the next author, the discussion will briefly return to Comrie’s comments about the perfect forms of verbs in English, which will be important later on. Comrie (1976: 52) argues that “the perfect is rather different from these aspects, since it tells us nothing directly about the situation in itself, but rather relates some state to a preceding situation” and further mentions that, even though it is not an aspect in the same sense as the

other aspects, it is included in his discussion of aspect due to the fact it is traditionally listed as an aspect. In and of itself, that is not a particularly strong reason. Comrie highlights the nature of that difference: the perfect “expresses a relation between two time-points”. This relational, or rather deictic, meaning is much closer in meaning to the category of tense. At the same time, the perfect is not purely a tense. The approach to the perfect taken by other authors is discussed later on, but for now it will be argued, following Comrie, that the perfect in English is a category which combines elements of both tense and aspect semantics. Without a developed theory of tense, the tense-like meanings of the perfect cannot be accounted for. However, this does not mean that its aspectual contribution cannot be analyzed. For example, while discussing telicity and atelicity, Comrie uses sentences with the perfect form of the verb to refer to situations in which the terminal point is reached (*John has sung* (Comrie 1976: 45)). Even though the perfect in general has other uses as well, it seems plausible to conclude that Comrie uses it to highlight the fact that the terminal point is reached, whereas the sentence with the unmarked form of the verb is ambiguous in that regard: *John sung his favorite song for three minutes / in three minutes*. Whatever the case, this is why the perfect is used in the examples in this thesis.

In addition to not deriving lexical aspects or situation types the way Smith and Olsen do, Comrie’s approach does not explicitly show the nature of the connection between viewpoint aspect and situation type. Smith does present a full view of both levels and contextualizes them. She begins her discussion by stating that

the aspectual meaning of a sentence conveys information of two kinds: a situation is presented from a particular perspective, or viewpoint; and the situation is indirectly classified as a state or an event of a certain type” (Smith 1997: xiii).

At this point, all the main parts are present: the perspective or viewpoint the situations are presented from is expressed by different viewpoint aspects, while the type of the situation is clearly the situation type. The term ‘aspectual meaning’ refers to the product of the “interaction between two independent aspectual components, situation type and viewpoint” (Smith 1997: xiv). The term ‘viewpoint aspect’ is adopted in the rest of this thesis to refer to the general aspectual opposition involving perfectivity and imperfectivity. Viewpoint aspect is expressed in Croatian with the perfective and imperfective forms of verbs, and in English with progressive, perfect and perfect progressive forms, with unmarked forms generally being

compatible with both perfectivity and imperfectivity. Finally, she defines aspect as the “semantic domain of the temporal structure of situations and their presentation” (Smith 1997: 1). Again, the temporal structure refers to the situation type and their presentation refers to the viewpoint aspect. Smith seems to follow Comrie in treating aspect as a semantic domain, which is also the approach taken in this thesis. The phrase ‘aspectual meaning of a sentence conveys information of two kinds’ implies that her notion of aspectual meaning involves a combination of two different things. This would mean that aspectual meaning is, in a sense, situation type *and / together with* viewpoint aspect.

There is another way to conceptualize this notion. Rather than representing a simple juxtaposition of situation type and viewpoint aspect, aspectual meaning can be analyzed as a category different from both situation type and viewpoint aspect. This is the position taken in this thesis and it rests on the following observation. There are sentences in which the change of viewpoint aspect does not trigger a type shift. For example, the sentence *Alice was reading an article* denotes an accomplishment: it is dynamic, durative and telic. The sentence *Alice has read an article* is also an accomplishment. The only difference is that the first sentence does not state the terminal point was reached, whereas the second one does. In other words, situation type and derived situation type match. However, this changes if semelfactive verbs are taken into account. The sentence *Bob knocked on the door* denotes a semelfactive situation: it is dynamic, punctual and atelic. The sentence *Bob was knocking on the door*, however, refers to an activity: it is dynamic, durative and atelic. It was proposed earlier that the imperfective cannot be used for situations lacking internal structure and that it forces a durative reading; this is an example of a situation type shift. The fact that the verb constellation remains the same shows that aspectual meaning does not necessarily consist of two basic aspectual meanings taken together. There can be an additional step of type-shifting before the “full” aspectual meaning is arrived at. Importantly, this shows that Smith’s definition of the maximally simple sentence requires additional information: if the viewpoint aspect can in some cases trigger a situation type shift, which of the viewpoints is used in the maximally simple sentence? For example, the verb constellation [Bob knock on the door] can denote either a semelfactive situation, as in *Bob knocked on the door (once)*, or an activity situation, as in *Bob was knocking on the door*. If the principle of functional wholes is applied, it would seem that, in this case, the semelfactives, expressed with a perfective viewpoint

aspect, would be the preferred reading. However, Smith analyzes viewpoint aspect as outside of the verb constellation, so it is not entirely clear how she deals with the situations such as the one presented above.

As for the way viewpoint aspect is expressed, Smith (1997: xiv) writes that it is “generally indicated morphologically, with affixes or other designated morphemes”. This definition applies to both English, where it is mainly expressed using “other designated morphemes”, i.e. it is expressed synthetically, and Croatian, where affixes are used.

The already mentioned “viewing” approach is an important part of Smith’s (1997: 62) framework, as exemplified by her claim that “aspectual viewpoints focus all or part of a situation; what is in focus has a special status, which I will call ‘visibility’. Only what is visible is asserted”. While this approach reveals a lot, its utility is somewhat limited by the fact that viewpoint aspects can produce situation type shifts, i.e. they are capable of more than simply “illuminating” the temporal structure of a situation. Further, she uses the terms ‘focus’ and ‘visibility’ seemingly interchangeably. However, to return to the sentence **Ana je pročitala članak u podne za pet minuta*, the terminological proposal to be made is to use the term ‘visibility’ to refer to the sum of situation parts which are asserted and to use the term ‘focus’ for the highlighted situation part. This would mean, for example, that the sentences *Ana je pročitala članak u podne* and *Ana je pročitala članak za pet minuta* would have the same visibility, but different focus.

Regarding the scope of the interaction between viewpoint aspect and situation type, Smith (1997: 5) notes that in some languages, such as English and Russian (it is presumed the same applies to Croatian), aspectual viewpoints “require certain situation types, whereas in French they apply to all”. She also adds that tense and viewpoint aspect do not interact the same way in all languages: “English viewpoint contrasts appear in all tenses; in French and Russian, the past tenses offer viewpoint contrasts but the present and future do not” (Smith 1997: 5). The category of tense is not dealt with in this thesis and will be ignored. The fact that viewpoint aspects in English and Croatian require certain situation types is important and was implicitly mentioned in the discussion of situation type shifts resulting from use of imperfective forms with punctual verb constellations.

Due to the fact that the exact categories Smith proposes for viewpoint aspect are not used in this thesis, they will not be presented in too much detail. She recognizes three main viewpoints:

Perfective viewpoints focus a situation in its entirety, including endpoints; Imperfective viewpoints focus an interval that excludes endpoints; Neutral viewpoints include the initial point and at least one stage of a situation (Smith 1997: 62).

The main novelty here is the use of the neutral viewpoint. It should be pointed out that Smith does not see the neutral viewpoint as unmarked, i.e. as compatible with either the perfective or imperfective meaning, depending on the context. It is distinct from both. One similarity with Comrie is the fact that Smith discusses more than one type of imperfectivity. She says that “the two most common imperfectives are the general imperfective and the progressive. The former focuses intervals of all situation types; the latter applies only to non-statives” (Smith 1997: 73). Seeing that she mentions them as the two most common imperfectives leaves open the possibility there are more types, possibly including Comrie’s habitual and continuous forms. Also, like Comrie, she does not mention different types of the perfective.

Disregarding the category of neutral viewpoint, one of the main differences between the imperfective and perfective is the following: “open situations are compatible with assertions that the situation continues, or was terminated without completion (if the situation is telic)”, whereas “the perfective viewpoint is not compatible with assertions of continuation and incompleteness” (Smith 1997: 63–64). This was already implied in the present discussion; visibility of perfective forms spans the whole of a situation, but visibility of imperfective forms does not reach all the way to the final transition.

Finally, Smith’s discussion of marked imperfective viewpoints will be presented, mainly because it is connected to some theoretical notions to be developed in the following chapter on phase verbs. Smith (1997: 75) argues that there are uses of the imperfective viewpoints where the focus is “on the external stages of a situation, focusing the preliminary and/or the resultative stages of a situation” and she gives the sentence *She was winning the race* as an example. The verb *win* is usually analyzed as an achievement. Smith’s example does not denote an iterative activity consisting of numerous achievements, but refers to the preliminary stages of the transition which constitutes the nucleus of the situation. This can

perhaps be best illustrated by considering the use of the given sentence in two different situations: one after the first lap of a 10-lap race and the second near the end of the tenth lap. While the use of the sentence is not unusual when used in the latter case, it would be odd if uttered at the beginning of the race. Smith (1997: 75) also points out that achievements and semelfactives differ in that regard when she claims that “semelfactives, which are also single-stage events, never appear with imperfectives with the interpretation of a preliminary interval”. This fact, connected with viewpoint aspect, is further evidence that achievements and semelfactives should not be lumped together.

As for the categories used to express the viewpoint aspects, Smith analyzes the simple as denoting the perfective viewpoint aspect and the progressive as denoting the imperfective viewpoint. She takes an approach similar to Comrie’s regarding the perfect:

the Perfect is a construction with special meanings of temporal location and aspect [...] The English construction is unusual in allowing both the perfective and progressive viewpoint in Perfect sentences (Smith 1997: 186).

This proposal is close to the view taken here: the perfect in English is a hybrid category, combining different types of temporal meaning. She notes that the perfect and the progressive can combine in English. However, the perfect progressive matches much more closely the meaning associated with imperfectivity. For instance, the sentence *Alice has been reading an article all morning* does not assert that the terminal point was reached, which is a large part of the imperfective meaning, at least for telic situations. The situation is simpler in Russian (and Croatian), where Smith sees the imperfective and perfective forms as expressing imperfective and perfective meaning, respectively.

The theory of viewpoint aspect presented by Olsen rests heavily on her theory of tense. Therefore, the precise details of her approach cannot be applied in this thesis. At the same time, some aspects of her theory can be mapped onto the theory developed here. It should be pointed out that the general outline of her aspectual framework is highly similar to Smith’s:

In my analysis viewpoint aspect is a type of propositional or sentential operator, taking the lexical aspect structure as input, and outputting an imperfective or perfective view of the structure (Olsen 1997: 16).

This idea of aspectual meaning as consisting of two subsystems, with lexical aspects, or rather verb constellations, serving as the temporal structure upon which viewpoint aspect operates, should be familiar by now.

The central difference between Olsen and Smith is Olsen's proposal that "imperfective and perfective aspect are independently marked grammatical aspect features, EACH representing a privative opposition, rather than representing a SINGLE opposition, either privative or equipollent", with the result that languages can mark imperfective aspect, perfective aspect, both of them or neither (Olsen 1997: 98). This follows the way she structures the basic aspectual features, with unmarked members being compatible with either value of their respective oppositions. Her proposal also means that the category of the neutral viewpoint, distinct from the imperfective and perfective viewpoints, is not recognized.

As for Olsen's definitions of the viewpoint aspects, they generally seem to match Smith's approach. Regarding the imperfective, Olsen (1997: 66, 77) argues that "situations marked [+dynamic] in the imperfective are interpreted at the RT as changing or in progress", adding that "in the imperfective, situations marked [+telic] are interpreted at the RT as incomplete". Other than introducing the concept of reference time, part of her theory of tense, this view is compatible with Smith: a dynamic telic verb constellation with an imperfect form of the verb is interpreted as involving change and is interpreted as incomplete because the visibility of the imperfective form does not reach the terminal point of the situation. Olsen (1997: 81) points out that "the imperfective does not say that a situation will not eventually be completed, it simply does not give enough information to assert it". Again, this is the same point made by Smith during her discussion of open and closed situations. The form used to express the imperfective viewpoint, according to Olsen (1997: 163), is the progressive.

Her treatment of the perfective aspect is perhaps closer to Smith's than her conceptualization of it suggests. She claims that the "perfective aspect presents a coda view of a situation, asserting that ET intersects RT at its coda" (Olsen 1997: 82). Whereas Smith argues that the perfective focuses, or makes visible, the entire situation, Olsen seems to present it as depicting a single point "outside", or "to the right of", the situation proper. She does account for the fact that the nucleus is accessible for explicit reference, thereby predicting sentences such as *Alice read the article in five minutes*, by stressing that

since the nucleus is temporally prior, its status is known: the perfective situations marked [+dynamic] and/or [+durative] are interpreted as involving change and/or duration at a time preceding RT. The perfective therefore entails that the nucleus has held at a prior time (Olsen 1997: 91).

Regarding the difference between telicity and perfectivity, she argues that “lexical telicity and grammatical perfectivity are properly distinguished: the former denotes HAVING AN INHERENT END and the latter as HAVING REACHED AN END” (Olsen 1997: 83). This is the position taken in this thesis as well. As for the form used to express the perfective viewpoint, Olsen (1997: 172) claims it is the perfect.

Finally, Olsen argues that treating some forms as unmarked for both imperfectivity and perfectivity helps to account for the range of their possible aspectual meanings. She claims that

aspectually unmarked forms allow both imperfective and perfective interpretations, with the most common interpretations arising as a result of pragmatic principles operating in conjunction with the marked forms in the language (Olsen 1997: 104).

To illustrate this, Olsen (1997: 183) lists a number of examples where simple forms are used with an imperfective interpretation, for example *The sun burned brightly through the window as he was getting up* and some where the perfective is the more natural interpretation, for example *After he left, she called Sue*. These examples do seem to prove her point.

Before proceeding, one remark will be made regarding one of the arguments Olsen puts forward to build her case for using unmarked rather than neutral viewpoint. She says that

analyzing some forms as unmarked maintains a more direct relation between morphological and semantic markedness: morphologically unmarked forms are semantically unrestricted, rather than marked for the neutral viewpoint (Olsen 1997: 104).

The idea here is not to argue against treating some forms as unmarked. This is the approach which is followed in this thesis. However, when analyzing her proposal in light of a language such as Croatian, it becomes obvious it is a broad generalization rather than a rule. Olsen argues that the imperfective in Russian (and presumably Croatian as well) should best be analyzed as an unmarked form, compatible with both viewpoints. As was already mentioned, Croatian perfective verbs are indeed often derived using a prefix (*pisati – napisati*) and in this

situation the morphologically unmarked form does encode the imperfective. However, in cases of secondary imperfectivization via suffixation, Olsen's claim does not hold. For example, the perfective verb *prepisati*, derived using a prefix, is the aspectual counterpart of the imperfective verb *prepisivati*, derived using a suffix. Furthermore, *prepisivati* includes two morphemes more than the root verb *pisati*, even though both of them are imperfective. Even if *pisati* is disregarded, *prepisivati* is still more morphologically marked than *prepisati*. Finally, in cases where imperfective and perfective forms differ in the form of the suffix (*bacati* and *baciti*), it cannot meaningfully be said which form is the marked one – none of them includes the other.

4. Phase verbs

In the final chapter of the theoretical part, attention turns to a class of verbs with a primarily aspectual meaning. The discussion mainly focuses on Alice Freed's book "The Semantics of English Aspectual Complementation" and the temporal framework presented in it, but proposals by several other authors are presented as well. Freed (1979: 1) refers to this class of verbs as "'aspectualizers' since they lend aspectual readings to the sentences in which they occur". Due to the fact that sentences always have an aspectual reading, regardless of aspectualizers, the term 'phase verbs' is used in this thesis in order to stress the fact that they focus a specific phase or part of a situation.

Freed (1979: 1) starts with a syntactic definition of phase verbs: "the aspectualizers are characterized as verbs which take sentential complements, derived nominals, or primitive (concrete) nouns as their objects". While it is true that phase verbs can take derived nominals, denoting the situation expressed by the base verb and primitive nouns, this thesis is only concerned with cases of sentential complementation. There are a number of reasons for this decision. First, phase verbs with nominal objects function more like regular verbs. The sentence *The friends started the band a year ago* can be passivized: *The band was started a year ago by the friends*. In contrast, the sentence *The friends started playing in a band* cannot be transformed in this way: **Playing in a band was started by the friends*. Second, and in connection to the theoretical discussion in this thesis, sentences with a phase verb and a sentential complement seem to be about the situations expressed by the complement and sentential complements are the only type expressing the whole verb constellation, which has to be present in order to analyze the situation type of the complement. As Freed (1979: 17)

argues, “since aspectualizers are viewed as verbs which specifically operate on forms that name events, such sentences may be thought of as primarily descriptive of the complement events”, proposing further that the sentence *They just started eating* can be analyzed as imperfective because the focus is on the complement event, the eating. Her precise argument is that the imperfectivity can be deduced from the progressive form of the complement, but this does not seem to be the main reason, seeing that the sentence *They just started to eat* can be analyzed as imperfective for precisely the same reason as the first sentence: the initiated situation of eating did not reach its terminal point. This would mean that the interpretation of sentential viewpoint can differ from the viewpoint expressed by the phase verb. In other words, while the starting is finished, the eating is not.

The view of phase verbs presented here, with regard to their general syntactic and semantic characteristics, follows the approach to the category of synsemantic verbs proposed by Ivo Pranjković (2013: 186), who claims that “synsemantic verbs have partial meaning or meaning which modifies some other action (process) and not the meaning of the action itself”, adding that such verbs require a complement, most often an infinitive form of a full lexical verb. Of course, he is dealing with Croatian; English phase verbs are not restricted to the infinitive form. Pranjković (2013: 190) defines phase verbs as synsemantic verbs which “denote different phases of a particular process (action)”, mostly its beginning, continuation and cessation. The fact that phase verbs require a complement means that they do not fully specify the number and type of elements to be expressed. In a discussion of the criteria for modal verbs proposed by Milivoj Đorđević, Marko Samardžija (1986: 19) writes that modal verbs do not “affect the basic sentence structure because they do not constitute their own sentence model”. As for the subject, which is outside of the complement, Samardžija (1986: 19), following Đorđević, claims that modal verbs together with verbal complements form a “complex predicate, a verb phrase in which there must exist an “identity of the subject” for both verbs”. Even though Samardžija is concerned with modal verbs, the same criteria apply to phase verbs as well.

To illustrate these claims, a number of example sentences is analyzed. In the sentences *She started reading an article / Počela je čitati članak*, the subject identity criterion is satisfied: ‘she’ is the subject of both starting and reading. The complex nature of the predicate can be seen in the fact that some adverbial phrases do not modify the phase verb and its sentential

complement equally. For example, the adverb *suddenly/odjednom* in *She suddenly started smoking / Odjednom je počela pušiti* seems to modify the phase verb much more than the complement. In other words, the starting is sudden, not the smoking. These sentences refer to either a single smoking situation which is brought about suddenly or a sudden initiation of a habitual situation. If the adverb is analyzed as modifying the complement, the meaning of these sentences would roughly be that, whereas before 'she' used to smoke in a normal manner, now every time 'she' smokes, it is somehow sudden or unexpected. This interpretation is highly unlikely, at the very least. Adverbial phrases can also modify the complements: in the sentences *She started driving carefully / Počela je oprezno voziti*, the adverb *carefully/oprezno* modifies the driving, rather than the starting. Finally, there are also ambiguous sentences where the adverbial phrase can modify either element. For example, the sentences *She started smoking at work / Počela je pušiti na poslu* can be interpreted in two ways. The first possibility is that 'she' smoked before, but not at work, and now she smokes at work as well. In that case, the adverbial phrase *at work / na poslu* seems to modify the complements *smoking/pušiti*. The second possibility is that 'she' did not smoke before, taking up the habit of smoking after starting to work somewhere. Here, the adverbial phrase modifies the phase verb.

The claim that phase verbs do not constitute their own sentence models rests on the following observation. The verb *give*, a full lexical verb, specifies the minimal number and type of elements it needs to co-occur with (subject, direct object, indirect object), i.e. a sentence with *give* as the main verb will necessarily include a subject, a direct object and an indirect object. Of course, optional elements can be expressed as well, depending on the meaning of the exact verb, but the focus here is on the obligatory elements. With the verb *start*, however, it is not possible to tell in advance how many obligatory sentence elements there will be. It requires a subject, which is the same as the subject of the equally obligatory non-finite verbal complement. All other obligatory elements are required by the verbal complement, rather than the phase verb.

Even though phase verbs cannot be used on their own syntactically and modify another situation semantically, they are still the primary verbal elements. As Nataša Milivojević (2011: 72) mentions, phase verbs carry the main aspectual value of the sentence, i.e. they express the viewpoint aspect, but also the "grammatical features which mark the VP as finite, such as

person, number or tense". For example, in the sentence *Počela je čitati članak*, the verb *počela* is marked for past tense, perfective viewpoint aspect, singular number and third person. The infinitive form *čitati* is not marked for tense, number and person. However, in contrast with English, infinitives in Croatian are marked for viewpoint aspect. Milivojević (2011: 70) points out that phase verbs in Serbian require imperfective forms of infinitive complements; the same applies to Croatian. Therefore, sentences such as **Počela je pročitati članak* are always ill-formed. In English, complements of phase verbs are not marked for viewpoint aspect.

It was already mentioned that the semantics of phase verbs involves reference to a particular phase of a situation. As Freed (1979: 19) argues, phase verbs "constitute a time-index indicating the onset, beginning, continuation, duration, repetition, cessation, or completion of such activities or events". This characteristic makes them somewhat similar to the categories of viewpoint aspect. For example, the imperfective viewpoint, along with its other meanings, also involves time-indexing: it focuses a situation-internal point. On the other hand, the perfective viewpoint indexes a situation boundary, sometimes the situation-initial boundary, but prototypically the situation-final boundary. In that regard, phase verbs have a similar function, although they allow for much more nuanced differences in what part of the situation is highlighted. Freed (1979: 20) claims that phase verbs such as *start*, *stop*, *resume* and *finish* "are capable of delimiting either a left- or right-hand time boundary [...], and to this extent, they are perfectivizers", whereas *continue* and *keep* indicate "the unbounded or unspecified nature of their complements" and are therefore imperfectivizers. Her comment that the sentence *They just started eating* can be interpreted as imperfective seems to contradict this claim. It seems plausible that she has in mind the difference between phases and transitions as defined in this thesis: perfectivizers, as used by Freed, refer to specific transitions, whereas imperfectivizers refer to some point within the phase interval of a situation. However, some phase verbs can be used both as perfectivizers and imperfectivizers, as the difference between *continue* and *keep* shows. The verb *continue* can be used to indicate a situation-internal transition marking the resumption of the situation after an internal period of rest: *She started running, stopped to tie her shoe and then continued running*. In such examples, *continue* is closer in meaning to *resume*. The verb *keep*, in contrast, denotes a situation without an internal transition into a state of temporary rest: in the sentence **She started running, stopped to tie her shoe and then kept running* there is a clash between the

explicit reference to the situation-internal rest interval and the uninterrupted temporal scheme required by *keep*. To sum up, phase verbs are perfectivizers or imperfectivizers to the extent that they denote a transition or a phase of a situation. From another perspective, sentences with phase verbs marked for the perfective viewpoint aspect are interpreted as imperfective if the situations denoted by the sentential complements have not reached their terminal point. Finally, Freed (1979: 26) argues that

the nature of the complements themselves, in particular their aspectual and temporal qualities in addition to their interaction with aspectualizers, is crucial for a comprehensive account of these verbs.

This is the main orientation of the following analysis: special attention is paid to the aspectual and temporal qualities of the complements and their interactions with phase verbs.

In her analysis, Freed (1979: 30) employs the notion of time segments in order to divide situations into different parts, two of which have been mentioned earlier, mainly the nucleus and the coda, and one which has not been mentioned in that context, the onset. Freed (1979: 30) claims that “each of these can be individually described, and each can be viewed in relation to some other segment”. Although it was not stated in these terms, Smith’s use of preliminary and resultative stages, mentioned in her discussion of marked imperfective viewpoints, seems to involve basically the same framework as the one used by Freed, with the preliminary stage corresponding to the onset and the resultative stage to the coda. Freed (1979: 33) also uses the informal division of the nucleus into an initial, middle and final stage, but these categories are not used in this thesis. In connection to the preceding discussion about the differences between *continue* and *keep*, Freed (1979: 26) proposes that

the possibilities that are present in the analysis of time intervals of the nucleus are as follows: the nucleus can be interrupted; it can be interrupted and resumed unchanged, or it can be explicitly maintained without interruption.

Applied to telic situations, the first case refers to situations whose terminal points were not reached, while the other two cases refer to situations whose terminal points can be reached.

The following 12 phase verbs are featured in Freed’s (1979: 1) analysis: begin, start, continue, keep, resume, repeat, stop, quit, cease, finish, end, complete. In the analysis itself, the verbs are grouped into four categories: verbs of initiation (begin, start), verbs of

continuation (continue, keep, resume, repeat), verbs of cessation (stop, quit, cease) and verbs of completion (finish, end, complete). Her discussion of the various phase verbs will not be presented here, mainly because she compares different phase verbs belonging to the same category. The number of phase verbs analyzed in this thesis is much smaller; no two verbs belonging to the same category are analyzed.

Finally, it was mentioned that Croatian phase verbs require imperfective infinitives as complements. In English, the use of the infinitive form is actually more lexically restricted than the use of the present participle form. Discussing the infinitive form of the complement, Freed (1979: 150) points out that “only start, begin, continue, and cease occur with complements of this type but no aspectualizer occurs only with to V”. This implies that, in cases where both forms can be used, the use of one form over another could express some difference in meaning. For example, Freed (1979: 74) proposes that “either *start* or *begin* when followed by to V carries with it a generic reading whereas either verb followed by V-ing produces a durative reading”, where generic event implies a series of events at different times and durative reading implies a single event. Whatever the difference in meaning may be, it should be pointed out that it can be found only with phase verbs which can take both of these forms. Moreover, the environment in which such difference in meaning can be expressed is also limited by the inability of the present participle form to take further non-finite verbs as complements, something which is not true for to-infinitive forms. This means that any differences are neutralized with phase verbs explicitly marked for imperfective viewpoint, i.e. verbs with the progressive aspect. Also, this means that phase verbs which take only present participle forms as complements cannot be used in the progressive. For example, *She started to smoke / She started smoking / She was starting to smoke* are all well-formed sentences, but **She was starting smoking* is not. Finally, *stop* does not appear in the progressive when used as a phase verb in the way described in this thesis: **She was/is stopping smoking* is ill-formed.

Finally, Smith's view of phase verbs will be briefly presented. Even though she does not give a systematic account of phase verbs, Smith discusses sentences with phase verbs in the context of derived situation types, specifically derived activities, accomplishments and achievements. She argues that some derived Activities

focus on the internal stages of situations [...] The verbs [continue], [keep on] belong to this class, as in *Mary continued to read the letter, John kept on walking to school*” (Smith 1997: 24).

This category seems to correspond to Freed's imperfectivizers. As for the verbs that Freed calls perfectivizers, such as *begin*, *start* and *finish*, Smith interprets them as either derived accomplishments or achievements. She argues that

derived Accomplishments may have super-lexical verbs such as [begin], [start], [finish], which focus one endpoint of an event. The endpoints are changes of state with internal structure ,

and gives the sentence *He slowly stopped walking* as an example (Smith 1997: 28). What sets derived achievements apart from derived accomplishments seems to be the idea that derived accomplishments "focus on an instantaneous initial or final endpoint", exemplified by the sentence *Mary started/finished reading the book* (1997: 32). It seems that the inclusion of the durative adverb *slowly* forces a durative reading of the telic situation, producing an accomplishment interpretation. Without such external durative-forcing elements, these verbs are interpreted as punctual transitions. As for her analysis of *continue* and *keep on* as derived activities, and keeping in mind the preceding discussion of the use of *continue* as either an imperfectivizer or a perfectivizer, it should be pointed out that, in its resumptive sense, *continue* can be analyzed as a derived achievement since it refers to a transition. This categorization, however, considers only the phase verbs and says nothing about the situations denoted by the sentential complements. While Smith's approach is not particularly controversial, the fact that she does not mention the aspectual characteristics of the complements and the way these interact with phase verbs to produce more complex aspectual structures and representations is an obvious omission. The rules of this system, among other things, are analyzed in the following chapter.

5. Analysis

In the preceding chapters, a two-part theory of the aspectual system was developed. The first component of the system, termed 'situation type', defines the three basic aspectual oppositions – stativity/dynamicity, punctuality/durativity and atelicity/telicity – and the way these combine to create the five basic situation types – states, activities, accomplishments, achievements and semelfactives. This is the inventory of situation types proposed by Smith. Situation types were defined as semantic categories, whereas their syntactic realizations were termed 'verb constellations', which consist of the verb and its obligatory arguments. The notion of derived verb constellations was also used to refer to the verb constellation together with other aspectually relevant optional sentential elements. Furthermore, and in connection

to derived verb constellations, the notion of situation type shifts was introduced to refer to changes in the interpretation of situation type caused by elements other than the verb's lexical content.

The second component of the system, termed 'viewpoint aspect' following Smith, was defined as distinct from situation type, but heavily interconnected with it. It was argued that the system encodes imperfective and perfective meaning, with the main difference between them being the parts of a situation they make visible. In that regard, the imperfective does not make the terminal point of a situation visible, whereas the perfective does. The use of the perfective to make visible the terminal point of a situation is connected to the telic nature of some situations, and they are the ones where the difference between the two viewpoint aspects is most visible. At the same time, it was mentioned that the actual uses of the viewpoints do not exactly match this description. One example of this are Croatian perfective ingressive verbs. Viewpoint aspect was defined as the second-stage aspectual subsystem, with situation type serving as the input upon which it operates. Finally, it was pointed out that viewpoint aspect can cause a situation type shift, mainly with punctual situation types.

Finally, phase verbs were defined as sentential-complement-taking verbs which denote or focus a certain part of the situation expressed by the complement. There are numerous parts which can be highlighted, such as the initiation, continuation, cessation, resumption or termination. It was mentioned that the possible forms of the complement in English are the infinitive form and the present participle, while in Croatian the imperfective infinitive form is obligatorily used.

The goal of the following analysis is to examine the behavior of English and Croatian phase verbs, paying special attention to the aspectual properties of the sentential complements – their (derived) situation types – then the aspectual properties of the phase verb, primarily the role of viewpoint aspect on their interpretation, and the form of the aspectual structure defined by the interaction of those two elements. Syntactically, sentential elements are analyzed with regard to whether they refer to the phase verb or the sentential complement. Finally, the difference between infinitive and present participle complements is discussed, where applicable.

The analysis is divided into three parts, each covering a different category of phase verbs. The first part deals with verbs of initiation, the second part with verbs of continuation and the third part covers verbs of cessation. One English and one Croatian verb are analyzed in every part. For English, the verbs *start*, *continue* and *stop* are presented, together with their Croatian equivalents, *početi*, *nastaviti* and *prestati*, and their imperfective counterparts, *počinjati*, *nastavljati* and *prestajati*. For each verb, 80 sample sentences were taken into consideration. The focus of the present analysis is not on the relative frequency of forms or meanings, therefore, 40 examples with infinitive complements and 40 examples with present participle complements were taken for *start* and *continue*. Likewise, 40 examples with perfective and 40 examples with imperfective verbs were taken for the analysis of Croatian, even though the perfective forms are more frequent. 480 sentences in total were analyzed, however, only a small part of them is presented here, specifically those illustrating the attested complement situation types, but also those which exhibit situation type shifts. English examples were taken from the English Web corpus 2020 (enTenTen20) and Croatian examples from the Croatian Web corpus (hrWaC).

5.1. Verbs of initiation

The first verb to be analyzed is *start*, a phase verb denoting the initiation, or the initial transition, of a situation. The possible forms of its complements include the infinitive and the present participle form. The attested viewpoint aspects marked on the phase verbs in the examples include the perfective, the imperfective and the unmarked aspect. Although it was mentioned earlier that English verbs can be marked for both imperfective and perfective viewpoint aspect, as exemplified by the perfect progressive form, none of the sentences contained such markings on the phase verb. This is not a claim that phase verbs cannot be marked for both aspects, as nothing in the presented theory imposes such restrictions, only a point which should be kept in mind throughout the discussion.

Aspectually unmarked forms of the verb *start* include the past simple, present simple and will-future, imperfective forms include the progressive and perfective forms the perfect. All of them can be found in the following examples:

- (1) *In 2010, Fiona **started** going in to the local prison to do recreational singing with inmates.*

- (2) *We normally **start** setting it up around one hour before sunset, weather permitting.*
- (3) *These remains **will start** accumulating in the pockets and will start calcifying.*
- (4) *By the time they removed the stone, he **was starting** to have issues with his kidney.*
- (5) *I **have started** reading through your teaching material...*

Even though their phase verbs are aspectually unmarked, (1–3) are all interpreted as perfective with regard to the phase verb, i.e. in each sentence, the situation expressed by the complement is interpreted as having passed the initial transition. In (4), the phase verb is marked for imperfectivity, which was defined as implying a situation-internal view, as well as internal complexity. Applied to phase verbs, this means that the situation is presented as “being in the process of starting” or, alternatively, the preliminary stages of the situation are presented, with the consequence that the situation in the complement does not yet hold. However, it seems that this is not a completely adequate description of the given sentence. The aspectual input of the imperfective form in (4) will be further examined shortly. Finally, the perfective viewpoint in (5) makes the initiation of the complement situation obligatory, along with other meanings carried by the perfect form, which are not discussed here.

The verb constellation of the complement in (1) can be analyzed as [(Fiona) go in to the local prison] and categorized as an accomplishment. However, the sentence does not denote one prolonged situation of Fiona slowly approaching the local prison, but rather an activity whose subunits are accomplishments. In other words, the activity of visiting the prison started in 2010. This can be interpreted as either habitual or iterative meaning, but because these are not the basic categories used in this thesis, such distinctions will not be further discussed. It should be pointed out that the adverbial phrase *in 2010* refers to the phase verb, not the complement. The verb constellations in sentences (2) and (5) also represent accomplishments.

In sentence (3), the verb constellation contains only [(These remains) accumulate], with the phrase *in the pockets* being part of the derived verb constellation. In other terms, the *accumulation* is happening in the pockets, not the *starting*, although the accumulation might have started there also. There are two different approaches to verbs such as *accumulate*: one

is to analyze it as an accomplishment, where the situation is seen as involving some predetermined amount to be accumulated. On this reading, the amount of actually accumulated material could be in some sense insufficient. On the other reading, the accumulation is simply seen as an activity without a set terminal point. Without additional context, (3) is aspectually ambiguous regarding the telicity of its complement.

The verb constellation in (4), [(He) have issues], denotes a state, which is defined as static. However, this would mean that the imperfective aspect of the phase verb is focusing a preliminary interval of the given state, during which the state does not hold – ‘he’ did not have any issues by the time the stone was removed. The more likely interpretation of the given sentence seems to be the following: at the point when the stone was removed, he was already experiencing some issues with his kidney, but they were less severe and/or frequent than they would be later on. In that sense, one suggestion would be to treat this as a case of a situation type shift which produces an activity reading. On the one hand, “having issues” would be true in both situations. On the other hand, the severity and/or frequency of the issues would progressively increase. This does not mean there are not any sentences whose stative complements are interpreted as states, as exemplified by (6):

(6) *...after that things **started** to look good.*

In this example, the complement situation is presented as simply holding; no development of the “looking good” is implied.

Verb constellations denoting achievements were also attested in the analyzed sentence, for example:

(7) *If you look around, you **start** to notice the same techniques used in marketing...*

The verb constellation [(You) notice the same techniques] can be interpreted as an achievement, in which case the sentence denotes a transition from not noticing the techniques to noticing them. Alternatively, it could refer to the state of noticing/seeing which obtains after the transition. Even if it is analyzed as an achievement, the phase verb forces an iterative reading consisting of several different occasions of noticing, i.e. an activity.

Finally, regarding the difference in meaning between infinitive and present participle complements, the sentence (1) shows that Freed’s proposal that the present participle

denotes a single durative event is not a general rule. The sentence (5) also arguably does not refer to a single undivided situation of reading, but rather to several situations of reading different parts of the same material. Likewise, the infinitive form in (6) does not denote several different situations at different times, also contradicting Freed.

The Croatian perfective verb *početi* and its imperfective aspectual counterpart *počinjati* denote broadly the same phasal meaning as *start*, with the difference that *start* allows for the non-initiation of the complement situation, whereas *početi* and *počinjati* do not. However, all of them focus the initial transition of a situation. As remarked earlier, Croatian phase verb require the imperfective infinitive form of the complement, which means there is no way of using alternative forms to denote some difference in meaning, as is theoretically possible with some phase verbs in English, including *start*. Example sentences are given below:

- (8) *Polako **počinje** izgovarati neke osnovne kraće rečenice s kojima se služimo pri telefonskom razgovoru. ((S)he is slowly starting to pronounce some basic short sentences which we use when talking over the phone.)*
- (9) *Mi već ovoga tjedna **počinjemo** raditi sljedeći festival. (Already this week, we're starting to organize the next festival.)*
- (10) *Međutim, ovaj se sport u mjestu organizirano **počinje** igrati 1954. godine. (However, this sport started to be played in an organized manner in 1954.)*
- (11) *Sve više **smo se počeli** razlikovati jedni od drugih. (We started to differ more and more from each other.)*
- (12) *Nedugo nakon eksplozije dimnjak **je počeo** padati u suprotnom smjeru. (Soon after the explosion, the chimney started falling in the opposite direction.)*
- (13) *Muškarac i žena **su počeli** bacati kosti u zrak u nekakvom ritualnom plesu... (The man and the woman started throwing bones in the air in some kind of ritual dance...)*
- (14) *Ako se koža ne nahrani kremom, **počne** pucati i gubiti vlagu. (If skin is not nourished with cream, it starts to crack and lose moisture.)*

In examples (8–10), imperfective phase verbs are used, all of which are in the Present tense. No sentences with *počinjati* in Past or Future tense were found in the 40 example sentences, but such forms are possible. It is interesting to note that only (8) has actual present interpretation, although it does not refer to the moment of speaking, but rather to a wider general present. Sentence (9) denotes a situation in the future, with the adverbial phrase *ovoga tjedna* ‘this week’ specifying the time frame for the initiation of the complement situation. Sentence (10) is an example of historic present, as evidenced by the adverbial phrase *1954. godine* ‘in 1954’. Perfective phase verbs are used in sentences (11–14), with Past tense in (11–13) and Present tense in (14). Future tense was not found in the examples, but its use is generally possible. In Croatian, perfective verbs do not have true present reference when used in the Present tense; therefore, (14) presents a general fact, rather than any one situation in particular.

The aspectual nature of phase verb complements in Croatian, mainly the fact that they are obligatorily marked for imperfectivity, means that complement situation types cannot be achievements or semelfactives. Because the imperfective viewpoint forces a situation type shift with punctual verb constellations, achievements and semelfactives are usually interpreted as activities, with achievements or semelfactives serving as the iterated subparts of the activity. This does not mean that imperfective counterparts of perfective verbs expressing semelfactives or achievements are not used with *početi* and *počinjati*, as evidenced by (13) and (14), respectively. In (13), the situation type of the complement is an activity, meaning that the situation is atelic. The perfective counterpart of *bacati*, *baciti*, is a semelfactive, referring to a single atelic instance of throwing. Therefore, (13) denotes a temporally and inherently unbounded activity consisting of numerous distinct throwing situations. In (14), the phase verb has two coordinated complements, but the focus here is on the first one, *pucati*. Disregarding the accomplishment interpretation, which would imply that the skin breaks in half or something similar, the iterated achievement, i.e. activity, interpretation denotes a series of distinct cracking situations; numerous cracks develop on different parts of the skin. What makes this an iterated achievement rather than an iterated semelfactives is the existence of a result state – the skin is cracked.

Other than achievements and semelfactives, which are used only with iterative/habitual meaning in the analyzed examples due to the imperfective marking-on the

infinitive complements, every other situation type can be used with *početi* and *počinjati*, even though situation type shifts make matters a bit more complex. In sentence (8), the complement *izgovarati neke osnovne kraće rečenice...* denotes an activity or an accomplishment, depending on the boundedness of the object. The lack of a definite article in Croatian means that dynamic durative situations expressed with a plural object without an explicit reference to number are structurally ambiguous as far as telicity is concerned. This information is generally contextually supplied. Returning to example (8), the actual aspectual meaning of the whole sentence does not denote a single event, nor does it denote an accomplishment. It refers to an iterated activity consisting of accomplishment subparts. The adverb *polako* 'slowly' does not refer to the complement; the sentences are not said in a slow manner. It modifies the phase verb, producing the interpretation of slowly increasing frequency of sentence use. Therefore, the imperfective marking on the phase verb does not actually entail that the complement situation did not cross the initial transition; some basic short sentences had to already be used for (8) to be uttered, i.e. it does not refer to the preliminary stages. The imperfective marking on the complement, while obligatory, also has a partially perfective interpretation in the sense that some sentences have been said. However, those situations are the telic subparts of an atelic activity, which is imperfective. This is the case for every activity consisting of accomplishment or a achievement subparts – the subparts may be telic, but the whole denoted situation is atelic.

Sentences (9) and (12) have accomplishment complements. In (9), the situation denoted by the complement, *raditi sljedeći festival* is dynamic, durative and telic, with the inherent terminal point being the moment when the festival is ready or organized. In (12), the situation is likewise telic, even though the adverbial phrase in the derived verb constellation, *u suprotnom smjeru* 'in the opposite direction' does not express the goal of the movement. The adverbial phrase *nedugo nakon eksplozije* 'soon after the explosion' modifies the phase verbs, denoting the moment when the specific falling started. If it modified the complement, the meaning would roughly be that the chimney starts to fall in the opposite direction after explosions in general, hardly the intended meaning, further highlighted by the fact that the chimney ceases to exist after the given situation. The complement in (10) is also dynamic and durative, but it is unambiguously atelic. The verb *igrati* can be used in telic situations, for example *igrati košarkašku utakmicu* 'play a basketball game', but what is being played in (10)

is a sport, not any particular instance of playing it. The adverbial phrase *1954. godine* ‘in 1954’ modifies the phase verb. Finally, the situation type of the complement in (11) is a state; to be different does not require any input of energy. However, the adverbial phrase *sve više* ‘more and more’ cannot refer to the phase verb, since it is marked for perfectivity and must, therefore be modifying the complement. This would imply an increasing degree of differences, requiring a dynamic interpretation. This is similar to (4), where a state was presented as increasing in intensity, forcing an activity interpretation. Even though all Croatian examples with stative complements implied a change of degree, true stative interpretations are possible, for example *početi voljeti* ‘start loving’.

5.2. Verbs of continuation

This subchapter covers verbs of continuation – *continue*, *nastaviti* and *nastavljati*. These verbs focus a situation part “to the right” of the part focused by verbs of initiation, that is, they focus a situation-internal part. Continuation can follow a situation-internal rest period, in which case the phase verb denotes a transition. If no rest period is presupposed, then the phase verb simply denotes a situation-internal non-transition point, in which case the situation denoted by the complement continues / does not stop relative to some other situation. Finally, every continuation presupposes an earlier initiation.

The analysis will start with the verb *continue*, which can take both infinitive and present participle complements, like the abovementioned *start*. The fact it takes infinitive complements means it can be marked for imperfectivity, i.e. it can be used in the progressive. However, there were no sentences with *continue* used this way in the analyzed examples. The attested viewpoint aspects are the perfective viewpoint and the unmarked viewpoint, all of which can be seen in the following examples:

(15) *Carter **continued** appearing in TV movies throughout the early 1990s...*

(16) *Natural gas prices **continued** to climb from 2005 to 2008 as the world did not recognize the fundamental energy shift sweeping across the planet...*

(17) *Students **continue** programming their apps under guidance of instructor.*

(18) *Long after the pipeline construction jobs are gone, the KXL bitumen pipeline **will continue** to pose financial risk to the American taxpayer...*

(19) *Since then, Nagler **has continued** trying to understand which bacteria offer allergy protection...*

(20) *For three years they **had continued** being respectable...*

The aspectual interpretation of *continue* is slightly more problematic than the interpretation of *start* and the reason for this lies in the fact that *start* in general denotes only one point, the initial transition. On the other hand, and excluding the resumptive interpretation, *continue* can refer to practically any situation-internal point; if a situation is hypothetically divided into ten points, t_1 – t_{10} , with the boundary points t_1 and t_{10} denoting the initial and final transition respectively, *continue* could refer to t_2 , t_3 ... t_8 or t_9 . To put it differently, whereas the starting of a situation takes only a single moment, the continuation of a situation can be true throughout the situation. This is best exemplified in (16), where the adverbial phrase *from 2005 to 2008* indicates the time frame of both climbing and continuing. In that regard, non-resumptive use of *continue* can be categorized as imperfective. With regard to (19–20), where phase verbs are marked for perfectivity, it seems that the perfect does not denote perfectivity, but rather other, non-aspectual meanings. For example, the adverbial phrase *for three years* in (20) can refer to both phase verb and the complement, *being respectable*.

The verb constellation in (15), [(Carter) appear in TV movies], denotes an achievement – appearing is dynamic, punctual and telic. However, the plural object, the adverbial phrase *throughout the early 1990s* and the phase verb all require a durative reading, while the unbounded object marks the constellation as atelic. Therefore, the final interpretation is an activity involving numerous achievements of appearing in TV movies. Depending on the context, the adverbial phrase *throughout the early 1990s* can be interpreted as modifying the phase verb or the non-finite complement: if Carter was appearing in TV movies in, for example, 1990 and 1991, he could have *continued appearing in TV movies throughout the early 1990s*, with the adverbial phrase modifying the complement; if Carter was appearing in TV movies in the late 1980s, he could not have continued *appearing in TV movies throughout the 1990s*, because that is not the situation which held in the late 1980s. In that case, in the period of the early 1990s, Carter continued appearing / was still appearing in TV movies.

Sentences (16) and (19) are also interpreted as activities, but there is no situation type shift here – the verb constellations of both complements denote activities. In (16), the climbing of prices denotes an atelic increase in price, where the final price is not predetermined. The adverbial phrase *from 2005 to 2008* does not modify the complement, but rather the phase verb, similar to (15). In (19), the situation of trying to understand is atelic – *Nagler was trying to understand* entails that *Nagler has tried to understand*. It does not, however, entail that Nagler has understood / succeeded in understanding. Regarding the interpretation of the sentence in view of the adverbial phrase *since then*, two approaches are possible: either Nagler has continued trying to understand for the whole period since ‘then’, or Nagler has continued trying to understand at a certain moment since ‘then’, in which case the attempt to understand does not span the whole period.

The situation type of the complement in sentence (17) is an accomplishment. The situation of programming an application can fail to reach its inherent terminal point, after which the application is completed/programed. Even though the object of the complement is not explicitly bounded, the most probable interpretation is that each student is continuing to program their own application. If the situation were atelic, it would mean that each student is programming an unspecified quantity of their applications, i.e. each student is working on more than one application simultaneously or one after another. The phase verb *continue* implies that the students are moving towards the terminal point.

Finally, the verb constellations in (18) and (20) denote states. In sentence (18), the verb constellation [(KXL bitumen pipeline) pose financial risk] denotes a situation which does not involve any necessary change; the pipeline is not actually doing anything. The adverbial phrase *long after the pipeline construction jobs are gone* does not express the moment in the future when the pipeline will again pose risk – the pipeline will pose risk from the moment the construction jobs are gone, at least. The sentence (20) denotes a state as well. The use of the present participle form of the verb *be* should not be taken as implying a dynamic, activity interpretation. As for the element modified by the adverbial phrase *for three years*, it seems to be the phase verb. If it were to modify the complement, then the phase verb would modify the temporally bounded situation of “being respectable for three years”.

As for the difference in meaning between infinitive and present participle complements, there are again counterexamples to Freed’s proposal. In sentence (18), the use

of the infinitive complement seems to refer not to different situations at different times, but to a single durative situation. Also, the use of the present participle complement in (15) cannot refer to a single situation because the verb *appear* denotes an achievement. There are some examples which follow Freed's proposal, such as the use of the present participle complement in (20) denoting a single durative situation, but the counterexamples show her suggestion does not account for the distribution of those forms.

The Croatian perfective phase verb *nastaviti* and its imperfective aspectual counterpart *nastavljati* are semantically equivalent to the English *continue*, not only in focusing a situation-internal point, but in being able to denote either a situation-internal transition point, i.e. having a resumptive meaning, or a situation-internal non-transition point. Examples of use are the following:

- (21) *Istraživanja na području psiho-neuro-imunologije **nastavljaju** dokazivati kako s u um (emocije) i tijelo (imunološki sustav) usko povezani. (Research in the field of psycho-neuro-immunology continues to prove that the mind (emotions) and the body (immune system) are tightly connected.)*
- (22) *Nakon razvoda braka tuženica **nastavlja** živjeti u stanu... (After the divorce, the defendant continued to live in the apartment...)*
- (23) *PBZ Card **je** u 2009. godini **nastavio** biti vodeća kartična organizacija u Hrvatskoj. (PBZ Card continued being the leading card organization in Croatia in 2009.)*
- (24) *Sveučilište **je nastavilo** djelovati na stari način. (The university continued to act the old way.)*
- (25) *Tvrtka **je nastavila** osvajati nagrade... (The company continued winning awards...)*
- (26) *Poljakinje **su** u nedjelju prvo **nastavile** igrati dan ranije prekinuti polufinalni susret... (On Sunday, the Polish team first continued playing the semifinal match which was interrupted the day before...)*

Imperfective phase verbs are used in (21) and (22), both of which are in the Present tense, whereas (23–26) feature perfective phase verbs. The Present tense in (22) has a past

reference, i.e. it is a case of the historic present. The situation types used with *nastaviti* and *nastavljati* are the same as the ones used with *početi* and *počinjati*. The requirement for imperfective complements means that punctual situations – achievements and semelfactives – cannot be modified by *nastaviti* and *nastavljati*. All durative situation types were found in the examples.

The situation type of the complement in sentence (21) is somewhat ambiguous, but the activity interpretation seems more probable. In that case, at least one research project has successfully found at least one piece of evidence for the mind-body connection and further research is in the process of finding other pieces of evidence. The second possible interpretation, accomplishment, would involve a particular set of research projects which are jointly trying to prove the mind-body connection, but which have not proven it yet. Sentences (24) and (25) also have activity complements. In sentence (24), the complement *djelovati na stari način* ‘to act the old way’ expresses a non-static situation which involves no set goal. The fact that the imperfective verb *djelovati* has no perfective counterpart, which means that no transitions can be focused for the situation using only viewpoint aspect, is further evidence that the complement denotes an activity. Sentence (25) involves an iterated activity consisting of achievement subparts. Regarding the interpretation of the phase verb, sentences (24) and (25) are ambiguous between resumptive and non-resumptive meaning.

The verb constellation of the complement in (26), [(Poljakinje) igrati susret], denotes an accomplishment. Every match has a terminal point, temporal or otherwise, after which the playing of that particular match is not possible; if a team scores a point after the final second, it does not count. The phase verb in this example has a strictly resumptive interpretation, as indicated by the modifier of the object, *dan ranije prekinuti* ‘interrupted the day before’, which means that the sentence expresses a true situation-internal transition, rather than the non-occurrence of a cessation.

Finally, the complements in (22) and (23) are aspectually analyzed as states. In sentence (22), the verb constellation [(Tuženica) živjeti u stanu] involves no necessary change. In a certain sense, living somewhere is more like being some way than doing something; the defendant is never actively living in the apartment, nor is she necessarily always in the apartment. If the phase verb is interpreted non-resumptively, which is the most probable interpretation, the adverbial phrase *nakon razvoda braka* ‘after the divorce’ expresses the

point at which the potential cessation of the state did not occur. The phase verb in (23) most probably has a non-resumptive interpretation, i.e. PBZ Card was the leading card organization in Croatia in 2008 as well. The complement denotes a state, as can be seen in the copular complement verb.

5.3. Verbs of cessation

In the final subchapter of the analysis, phase verbs of cessation, *stop*, *prestat* and *prestajati* will be covered. The interpretation of verbs of cessation depends on the telicity of the complement situation. For telic situations, or rather for accomplishments, seeing that phase verbs modify durative situations, phase verbs of cessation indicate a situation-internal transition before the inherent terminal point, expressing that the complement situation is not finished. For atelic situations, phase verbs of cessation can express either a situation-internal transition into a state of rest, if the situation continues, or the situation-final transition, indicating that the situation ended.

The first verb to be presented is the English verb *stop*. In contrast to the two already analyzed English verbs, which can take either infinitive or present participle complements, *stop* only allows for the present participle complement. *Stop* can be followed by an infinitive form in a to-infinitive construction, but such constructions express the purpose of stopping and can be paraphrased with the construction 'in order to + infinitive'. Also, both constructions can be used in the same sentence, e.g. *He stopped smoking to get healthy*, which further shows they do not have the same meaning. This means that the differences in meaning between infinitive and present participle complements found with *start* and *continue*, whatever they may be, cannot be expressed with *stop*. Furthermore, due to the fact that verbs marked for progressive cannot take present participle complements, *stop* is never marked for imperfectivity when used as a phase verb. In the analyzed examples, *stop* was marked for perfectivity or unmarked. The examples are as follows:

(27) *He almost **stopped** hating Rance Tucker, in his admiration for this stroke of cleverness.*

(28) *When she married Mr. Humiston, for instance, Grace **stopped** working for several years...*

(29) *A town of all sorts of festivals, Cannes never **stops** pulling in the crowds.*

(30) *We'll **stop** taking it anyway, as soon as your balance is back to zero.*

(31) *Also, the British public **had stopped** supporting the long and costly war.*

(32) *Fifteen years later, the public **has stopped** noticing.*

In sentences (27) and (31), the complement verb constellations express states. In (27), [(He) hate Rance Tucker] is a situation which requires no input of energy and which does not change over time. The adverb *almost* modifies the phase verb rather than the complement. The sentence expresses a cessation of a state which almost took place, but did not; the state still holds. Alternatively, one possible interpretation of (27) involves a scalable state, in which case the adverb *almost* would imply that the intensity of hate towards Rance Tucker is less than before, but that it still exists. This interpretation involves a situation type shift from a state into an activity. In sentence (31), the situation of the complement is also a state, but there are no elements which allow for a non-state reading. The verb *support* is here used not in the active sense of undertaking actions to actively support the war, but rather in the sense of 'thinking that' the war is justified, for example.

The verb constellation in (28), [(Grace) work] unambiguously denotes an activity – it necessarily involves change and has no inherent terminal point. The adverbial phrase *when she married Mr. Humiston* expresses the temporal location of the transition denoted by the phase verb. The phrase *for several years* implies that the situation resumes in the future, that is, the transition is situation-internal, rather than situation-final. In sentence (29), the verb constellation of complement, [(Cannes) stop pulling in the crowds], generally expresses an accomplishment; the crowds could be "pulled in" partially, that is, not every member of the crowd is necessarily in Cannes. The use of the definite article in *the crowds* implies that the situation is inherently bounded; however, the use of the unmarked present shows that this is a general statement, in which case the object of the complement is not bounded in the same way as it is in, for example, *He stopped eating the cookies*. This means that a situation type shift takes place, from an accomplishment to an activity; Cannes pulls in people generally.

In sentences (30) and (32), the underlying situation types of the complements are achievements. Supposing that 'it' in (30) refers to some kind of payment/fee, the taking of a fee is an punctual situation, involving no actual process; the fee is not taken from the person and carried somewhere else. The adverbial phrase *as soon as your balance is back to zero*

denotes the moment when the situation expressed by the complement of the phase verb will no longer occur. The derived situation type, therefore, is an activity consisting of achievement subparts. In sentence (32), the verb constellation [(The public) notice] is ambiguous between achievement and state interpretations, where the achievement interpretation would denote a punctual situation which brings about the state of noticing / being aware of something. On the one hand, if it is interpreted as a state, then the final aspectual interpretation involves no situation type shift; the state of noticing / being aware simply stops holding. On the other hand, the achievement reading, being punctual, requires a situation type shift into an activity reading. In that case, the individuals that make up the public no longer notice / become aware something, that is, they no longer transition from a state of not being aware of something into a state of being aware of it. The adverbial phrase *fifteen years later* denotes the moment when the situations of noticing stop occurring.

The meaning of Croatian phase verbs *prestati* and *prestajati* corresponds to the English verb *stop*. They indicate a situation-internal transition point with telic situations and a situation-internal or situation-final transition point with atelic situations. The following examples are discussed here:

- (33) *...veliki broj pušača je više puta **prestajao** pušiti... (...a large number of smokers stopped smoking numerous times)*
- (34) *...s početkom povratka prognanika svojim kućama, postupno **su prestajali**, djelovati neki naši organizacijski oblici. (...with the exiles beginning to return to their homes, some of our organizational forms gradually stopped functioning.)*
- (35) *Bolesnik **prestaje** iznositi svoje žalosne misli... (The patient stops sharing their sad thoughts..)*
- (36) *Prerano **je prestalo** kucati srce našeg prijatelja, prebrzo, iznenada... (Our friend's heart stopped beating too soon, too fast, suddenly...)*
- (37) *Čim ste odlučili prodati vašu nekretninu ona **je prestala** biti vaš dom (As soon as you decided to sell your real estate, it stopped being your home)*
- (38) *...u jesen šaran **prestane** jesti... (...in autumn, the carp stops eating...)*

Imperfective phase verbs are used in sentences (33–35), while perfective phase verbs can be found in (36–38). In sentences (33–34) and (36–37), phase verbs are marked for the Past tense and (35) and (38) for the Present tense. As was the case in previous subchapters, the use of a perfective verb in the Present tense does not refer to the actual present, but is rather used to express a general rule or fact.

In the first example, the situation type of the complement, *pušiti* ‘to smoke’, is an activity, expressing smoking in general, rather than any one particular occasion of smoking a cigarette. The imperfective phase verb can be interpreted in two ways. First, some smokers did manage to stop smoking for a period of time several times. Croatian imperfective verbs in the Past tense can have perfective interpretations, i.e. the same meaning can be expressed with a perfective phase verb (*Veliki broj pušača više je puta prestao pušiti*). Second, some smokers tried to stop smoking on several occasions, but they never managed to stop. In that case, the phase verb *prestajati* is seen as either an accomplishment verb, denoting a durative process, arbitrarily bounded by a temporal limit indicating the necessary amount of time required for someone to be regarded as having stopped smoking, or as an achievement verb, where the imperfective viewpoint focuses the preliminary stages of the transition from smoking to not smoking. Sentence (34) also features an imperfective phase verb and an activity complement. The adverbial phrase *postupno* ‘gradually’ modifies the phase verb, possibly forcing an accomplishment interpretation, where the different organizational forms have less and less functions over time. However, the combination of the plural subject and the imperfective phase verb can also be interpreted as a situation in which different organization forms fully stop functioning one after another, where each such event constitutes a single transition. The adverbial phrase *s početkom povratka prognanika svojim kućama* ‘with the exiles beginning to return to their homes’ denotes the moment at or after which the organizational forms started losing their functions and use, or the moment at or after which the first organizational form stopped functioning.

In sentence (36), the verb constellation in the complement, [(*Srce našeg prijatelja kucati*)], denotes an activity consisting of numerous semelfactive subparts. Due to the use of a perfective phase verb, the situation is presented as completed; the heart no longer beats. The adverbial phrases *prerano*, *prebrzo* and *iznenada* (‘too soon’, ‘too fast’, ‘suddenly’) modify the phase verb, not the complement. The verb constellation in (38), [(*Šaran*) jesti], also denotes

an activity. The adverbial phrase *u jesen* 'in autumn' modifies the phase verb and expresses the moment in time when the transition takes place.

The situation type of the complement in sentence (35) is accomplishment; the sharing of someone's thoughts can be interrupted before finishing, in which case the thoughts are not shared completely, not all relevant thoughts are shared etc. The Present tense can be interpreted as indicating true or wider present – the patient is in the process of, or about to, stop sharing their thoughts – a general fact – patients in general stop sharing their thoughts – or historic present.

Finally, the verb constellation in (37), [(Ona) biti vaš dom], is unambiguously a state, as highlighted by the use of a copular complement verb. The phase verb expresses that the given state no longer holds. The adverbial phrase *Čim ste odlučili prodati vašu nekretninu* 'As soon as you decided to sell your real estate' expresses the moment of the transition.

6. Conclusion

The focus of this thesis has been twofold: phase verbs were the primary object of analysis, but the theoretical framework used to analyze them has also been discussed in detail. After introducing a number of previous important works on aspect, mainly by Comrie (1976), Smith (1997) and Olsen (1997), the thesis presented an aspectual framework based on these works, but not completely overlapping with them. The general shape of the framework follows Smith and Olsen, who give a two-fold subsystem framework, where the first subsystem deals with situation type and the second one with viewpoint aspect. What is important is that the two subsystems are seen as interconnected but distinct. The situation type subsystem is modelled as consisting of three aspectual oppositions: stativity/dynamicity, punctuality/durativity and telicity/atelicity. These values are further combined to arrive at a set of situation types, which are not seen as primitive notions. Even though, theoretically, eight different situation types can be derived on the basis of those aspectual oppositions, only five of them are recognized here: states, activities, accomplishments, achievements and semelfactives. These are also the same situation types used by Smith.

Regarding aspectual interpretation, the sentence was syntactically divided into three levels – the verb, the verb constellation and the derived verb constellation – which correspond to the semantic aspectual categories of lexical aspect, situation type and derived situation

type, respectively. The aspectual content of different semantic aspectual categories is the same, i.e. it consists of the combination of values of the three aspectual oppositions. Following Smith, it is claimed that aspectual values of the “outer” categories override the aspectual values of the “inner” categories. This principle of external override plays the role of monotonicity in Olsen’s framework, while allowing for greater flexibility in terms of possible inputs and outputs of situation type shifts.

Smith’s notion of the maximally simple sentence, as the environment in which the basic lexical aspect of verbs can be seen, is used in this thesis. It is pointed out that the given framework requires verbs to have defined aspectual values for the theory to work. Smith’s proposal was followed because it is more refined than Olsen’s. However, a number of inconsistencies and places requiring further elaboration were highlighted. First, it is necessary to precisely define which syntactic and semantic elements belong to which levels of aspectual meaning. Second, the problem of optionally transitive verbs was mentioned: what is their syntactic environment in the maximally simple sentence, transitive or intransitive? Furthermore, should the same approach be followed for all optionally transitive verbs? Third, which tense is used in the maximally simple sentence in cases where the tense constricts the aspectual choice? Fourth, regarding viewpoint aspect, what does the maximally simple sentence look like for languages such as Croatian, where markers of viewpoint aspect are lexically specified? Of course, it would be preferable if the answers to these questions were theoretically motivated, rather than being arbitrarily chosen so as to simply match real-world language use.

The second aspectual subsystem expresses the viewpoint aspect, which is modelled as taking the situation type of the sentence as input and giving the final aspectual interpretation, consisting of the (derived) situation type, certain parts of which are made visible by the viewpoint aspect. Following Olsen (1997), two viewpoint aspects, imperfective and perfective, were posited, as were the categories of verbs unmarked for viewpoint aspect and verbs marked for both aspects. Also, and as argued by Smith, it was proposed that viewpoint aspects can be marked: the use of the marked imperfective to refer to the preliminary parts of a situation was mentioned.

The given framework was applied in the context of phase verbs, which were represented in this thesis as having a meaning very close to that of viewpoint aspect: phase

verbs highlight certain parts of the situation. Phase verbs and their complements were analyzed as a split predicate, where phase verbs carry the mentioned viewpoint-like meaning and complements express the situation whose parts the phase verb focuses. Implied in this view is a certain set of situation elements, consisting of situation-external and situation-internal transitions, situation-internal phases and situation “neighborhood”, i.e. preliminary and resultant phases.

In the analysis, the English verbs *start*, *continue* and *stop* were compared with their Croatian equivalents – *početi/počinjati*, *nastaviti/nastavljati* and *prestati/prestajati*. The difference between the aspectual nature of their complements was highlighted: the complements of English phase verbs, specifically the infinitive and present participle forms of verbs, are unmarked for viewpoint aspect, whereas Croatian phase verbs require their complements to take the form of the imperfective infinitive. It was shown that both English and Croatian phase verbs modify states, activities and accomplishments, but that they do not take achievements and semelfactives as complements. This is accounted for in the framework proposed in this thesis by pointing out that states, activities and accomplishments are defined as durative situations, while achievements and semelfactives are punctual. The nature of phase verbs, mainly the fact that they presuppose a situation consisting of multiple “moments”, requires the complement to be durative, therefore ruling out achievements and semelfactives. Further, it was shown that aspectually relevant elements, such as adverbials expressing duration, do not modify phase verbs and complements to equal measure – some modify the phase verb and others modify the complement. Finally, no positive conclusions have been reached regarding the difference in meaning between the infinitive and present participle complements for phase verbs which allow both (*start* and *continue*), at least in the context of the framework used. However, a number of counterexamples were analyzed which seem to show that Freed’s (1979) proposal, namely that infinitives denote a series of events and present participles a single event, does not give the full picture.

The aspectual framework was applied to the relatively complex case of phase verbs and a number of weaknesses and vague points were identified in the process. However, the overlap in English and Croatian between the situation types which can be complements of phase verbs, implied in the framework, suggests at least a certain level of validity. In addition to developing the concept of the maximally simple sentence, further research in this direction

should also attempt to delineate the verb constellation from the derived verb constellation more clearly, as well as suggest a list or a typology of aspectually relevant elements and how these combine with verbs or verb constellations.

7. References

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