

Tense, Aspect, Aktionsart and Related Areas

Approaches to Analysing the Core Meaning of English Perfect Verb Forms

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Chapter 1

Introduction

It is simply impossible to read, let alone to discuss, all possibly relevant literature. This has often been said before (even this has been said before).

W. KLEIN¹

The introduction consists of three sections. The first section contains a few remarks on the author's background and its relation to the subject matter. The second section states the subject matter and introduces the fundamental opposition *marked vs. unmarked* in the context of naming verbal categories. The third section shows how this study is organised and how its component parts are interconnected.

1.1 Starting point

Any analysis of tense and aspect is influenced – be it at a conscious or be it at an unconscious level – by the author's own visceral language competence, especially if he or she embarks on a comparative approach. This author has

¹The quote's context is: "Anyone writing a book on time in language has to face two problems which are also found elsewhere, but hardly to the same extent. The first is the amount of research on the subject. It is simply impossible to read, let alone to discuss, all possibly relevant literature. This has often been said before (even this has been said before). [...] The second problem is [...]: everything is connected to everything. Temporality involves lexical semantics, deixis and context-dependency of meaning, inflectional morphology, problems of quantification, word order and other aspects of syntax – it is connected to everything" [KLEIN 1994, p.xii].

been a German learner of English for over twenty-five years. He grew up in the Rhineland, which indicates two things concerning the German aspecto-temporal system: his using the German present perfect as a conversational past tense and his using the Rhenish progressive, a colloquial phenomenon not available in standard High German. The former leads to unfavourable German interference when learning the use of the English present perfect, whereas the latter leads to advantageous German 'interference' when learning the use of the English progressive – at least when it comes to the present progressive and the past progressive. Furthermore, spending one semester in Perth included several encounters with the so-called Australian present perfect, a colloquial variety which deviates from standard present perfect grammar². Also, having been raised bilingually, with a Czech mother and a German father, this author has a certain visceral knowledge of the Slavic imperfective-perfective dichotomy and the so-called Slavic perfect. The sequence of foreign languages in school was English (9 years), French (7 years), Latin (5 years). The author's knowledge of Russian, Spanish and Ancient Greek is rudimentary (varying degrees of basic reading skills).

It is believed that an analysis of the perfect and its role within the English aspecto-temporal system benefits from a contrastive approach. The choice of the languages used for comparison in this paper are due to the biographical details mentioned above. Still, there are cogent reasons for choosing Germanic, Slavic, Romance and Latin as a standard for comparison. Latin is important because of the impact that the influential Latinate grammatical tradition has had on grammarians describing the English verbal system. To a lesser degree this is also true for the daughter languages of Latin. The comparison with a Germanic sister language of English can reveal how parallel verb forms have followed different paths of grammaticalisation that have led to disparate uses of speciously similar structures. The comparison with a Slavic language can clarify the concept of grammatical aspect because it is the Slavic languages where the concept of aspect is at home.

²E.g. "Vlad [a cat] has been killed on the road yesterday" is a genuine mobile phone text message the author of this paper received in 2002.

1.2 In medias res

Linguists have always been keenly interested in verbal grammar because in most languages systems of tense-aspect-mood are at the very core of language competence and performance. This is certainly true for the Indo-European phylum, whose individual languages display a vast variety of disparate verbal systems. In English, formations of the *have* + *past participle* kind are an integral part of the language³, but there is little consensus about the categorisation of these forms, commonly – that is if a form of *have* and the participle are directly adjacent⁴ to one another – referred to as *perfect*: “Whether it should be regarded as a tense, an aspect, an intermediate category, or something unclassifiable is an unsolved issue” [ASHER and SIMPSON 1994, p.3000]. It is clear that one has to define one’s categories⁵ before classifying a verb form. However, there is a certain amount of fuzziness about some of the technical terms in the field of tense, aspect, aktionsart, and related areas. Some of these inconsistencies will be explained in this paper.

The ‘right’ classification of the perfect is not a *sina qua non* for understanding its semantics. Even within a comprehensive theory of verbal grammar it might be permissible “to downplay the role of the supercategories tense, mood, and aspect and focus more on individual types of markings [...] such as futures, perfects, perfectives etc. [...]” [DAHL 2006, p.577]. From a purely formal viewpoint, the

³W. STANNARD ALLEN claims that “the present perfect is probably the commonest tense in the English language, but it is the one the student of English usually finds the most difficult to learn” [ALLEN 1993, p.77]. ALLAN’s first claim (“commonest tense”) is simply wrong: “Verb phrases unmarked for [perfect and/or progressive] aspect are overwhelmingly the most common [...] (about 90% of all verbs)” [BIBER et al. 1999, p.461]. Perfect (and progressive) verb forms might be of low overall frequency but they are prominent and important in Modern English because they represent marked members of grammaticalised oppositions. ALLAN’s second claim (“most difficult to learn”) is certainly true for learners whose L1 has a perfect that is formally but not semantically similar to the English perfect.

⁴*Have* + past participle structures containing an inserted noun phrase, i.e. structures of the type *have something done*, are not considered to be *perfect* in Modern English – unless the *have* in the causative *have* + object + past participle structure is marked [PERF: +], of course, i.e. *have had something done*. Combining the structure *have something done* with a relative clause might lead to specious perfect forms, e.g. *the car I have repaired every week* (causative, present tense) vs. *the car I have repaired recently* (present perfect), cf. footnotes on p.133 (specious ‘progressive perfects’) and p.146 (specious double perfects).

⁵“The precise differentiation of tense and aspect is particularly important in considering the perfect” [COMRIE 1976, p.5].

combination *have* + *-en* represents a marker that brackets a main verb. Table 1.1 locates some traditional technical terms in relation to the dichotomy *marked*

Table 1.1: Verbal categories according to traditional grammar

<i>Category</i>	Tense	-	-	-	Voice
<i>Unmarked</i>	Present	-	-	Simple	Active
<i>Marked</i>	Past	Modal	Perfect	Progressive	Passive
<i>Markers</i>	-D	WILL <i>etc.</i>	HAVE -N	BE -ING	BE -N

vs. *unmarked*. It is modelled on a similar table published by MARTIN JOOS, cf. table 1.2. Because of the gaps at the top, table 1.1 is best read from bottom to top. Even the few terms in this table are not used unanimously in the literature⁶. Sometimes a renaming of terms clarifies the core meaning of a verb form, e.g. *non-past* instead of *present* encompasses more of the various uses of the ‘present’ tense in English.

The traditional names for the category referring to the marker BE -ING – be it *simple* vs. *progressive* or *simple* vs. *continuous* – are somewhat unfortunate because they do not represent complementary antonyms⁷. Still, these names are remarkably widespread, if not ubiquitous, in grammars and textbooks. From a logico-semantic viewpoint the names *simple* vs. *composed* (*complex*, *compound*) or *non-progressive* vs. *progressive* would be more appropriate. Neat names are *plain form* vs. *expanded form*, which can also be found in the literature⁸. They might be a little bit too general, though, because the words as such could also refer to all the other markers⁹.

The names for the categories whose markers are -D and BE -N are fairly undisputed: tense and voice. The other names that grammarians have proposed

⁶Cf. the following labels that are used instead of or along with the words from the table: *preterite* and *past*, *future* and *modal*, *perfective* and *perfect*, *continuous* and *progressive*.

⁷The same might be said about *present* vs. *past*, of course – an additional reason why *non-past* is a good substitute for *present*.

⁸E.g. “The category of aspect consists of two constituents, the **plain form** (PF) and the **expanded form** (EP). They form a binary opposition, the unmarked member (PF) being opposed to the marked member (EF)” [GIERING et al. 1987, p.166].

⁹Cf. footnote on p.127 giving reasons for the choice of the nomenclature used in this paper, where *expanded form* is used only occasionally as a synonym for the favoured “[PROG: +]”.

can be perceived as quite idiosyncratic if one does not take their genesis into account. A good example is the use of the terms *aspect* and *phase* in the writings of MARTIN JOOS and HENRI ADAMCZEWSKI. They are actually reversed: what JOOS calls *phase* is called *aspect* by ADAMCZEWSKI and vice versa, cf. table 1.2¹⁰ and table 1.3¹¹. JOOS explains and justifies the term *phase*:

Table 1.2: Verbal categories according to JOOS

<i>Category</i>	Tense	Assertion	Phase	Aspect	Voice
<i>Unmarked</i>	Actual	Factual	Current	Generic	Neutral
<i>Marked</i>	Remote	Relative	Perfect	Temporary	Passive
<i>Markers</i>	-D	WILL <i>etc.</i>	HAVE -N	BE -ING	BE -N

he borrowed it from “electrical circuit theory, used there for cyclically recurrent causes and effects” [JOOS 1964, p.139], cf. p.111 for details. On the other hand, he “borrowed [after refuting the terms *progressive*, *continuous* and *imperfect*] the Slavic technical term *aspect* for lack of a better” [JOOS 1964, p.107], although he is acutely aware of the fact that “the Slavic imperfective differ[s] crucially from the English marked aspect [= progressive]” [ibid.]. ADAMCZEWSKI’s using the

Table 1.3: Verbal categories according to ADAMCZEWSKI

<i>Category</i>	Temps	Modal	Aspect	Phase	Voix
<i>Unmarked</i>	Présent	-	-	Phase 1	Active
<i>Marked</i>	Prétérît	-	Parfait	Phase 2	Passive
<i>Markers</i>	-D	WILL <i>etc.</i>	HAVE -N	BE -ING	BE -N

term *aspect* for the category whose marker is HAVE + -N is in accordance with the usage of the term within Guillaumean linguistics, where the “aspect composé représenté par auxiliaire + participe passé = *avoir marché* [is called] *l’aspect extensif*” [GUILLAUME 1929, p.20]. The notion of *phase* is one of the key

¹⁰Taken from [JOOS 1964, p.101].

¹¹Taken from [ADAMCZEWSKI and GABILAN 1996, p.25].

concepts in ADAMCZEWSKI's 'metaoperational' theory¹². The binary opposition *phase 1* vs. *phase 2* reproduces the dichotomy *rhematic* vs. *thematic*¹³.

The varying nature of the technical terms in the three tables presented so far can be seen as an invitation to scrutinise and to compare the different approaches and their conceptual foundations. The unmarked vs. marked oppositions, which are integrated in the structure of the tables, are seen as fundamental in this study. Table 1.4 shows the terms that are used throughout this study. The

Table 1.4: Verbal categories according to the notation in this paper

Category	PRET	MOD	PERF	PROG	PASS
<i>Unmarked</i>	[PRET: ∅]	[MOD: ∅]	[PERF: ∅]	[PROG: ∅]	[PASS: ∅]
<i>Marked</i>	[PRET: +]	[MOD: +]	[PERF: +]	[PROG: +]	[PASS: +]
<i>Markers</i>	-D	WILL <i>etc.</i>	HAVE -N	BE -ING	BE -N

genesis of this nomenclature is explained as from p.126 (introduction to appendix A, which systematizes English verb forms). An analysis of the category PERF should not be isolated from the other categories because the various markers can interact with one another, both formally and semantically. "While time is fairly uncontroversially the notional category behind tense [...], mood and aspect are more difficult to pinpoint semantically" [DAHL 2006, p.577].

1.3 Road map

This study is an endeavour to state precisely what is meant by *time*, *tense*, *aspect* and *perfect*. Its organisation of chapters reflects this sequence by devoting one chapter to each of these notions. There are three additional chapters which have been put in the appendix. Appendix A about the systematization of English verb forms has been put into the appendix because it is of an ancillary nature. Its

¹²"Une grammaire d'opérations n'est pas une description des éléments d'une langue qui apparaissent dans les phrases produites. Le but final d'une grammaire d'opérations est de montrer par quelles étapes on est arrivé à l'énoncé" [ADAMCZEWSKI and GABILAN 2005, p.17]. This approach is evocative of GUILLAUME's concept of *chronogenesis*, cf. p.68.

¹³French: *saisie rhématique* 'rhematic seizure' vs. *saisie thématique* 'thematic seizure', cf. [ADAMCZEWSKI and GABILAN 2005, p.16], see p.76 for details.

first part (A.1) contains a detailed analysis of the interplay of the verbal markers introduced in table 1.4 above.

The second part (A.2) presents three different visualizations of the interplay of the markers PERF, PROG and PASS and discusses the application of the visualizations in teaching. Two of the three visualizations are original to this study: the RGB-cube metaphor and the telescope metaphor. The latter has already been used in an online grammar course developed at Koblenz University. It consists of a computer animation which was implemented according to (previously unpublished) guidelines, which are reproduced in appendix B.

Appendix C examines how the English (present) perfect is presented in a carefully chosen selection¹⁴ of grammars and textbooks. This overview has been put into the appendix because it contains an above-average percentage of quotes.

The chapter about **time** represents an interdisciplinary approach. A cross-linguistic study of the etymology of the words *present*, *past*, *future* and *time* shows how time is spatialized at the lexical level. The differences between time and space and their relation to the notion of deixis are discussed and evaluated. Mathematical, physical, philosophical, religious and psychological findings concerning the concept of time and the notion of *now* are examined and correlated.

The chapter about **tense** is about the embedding of situations in time. The relation between the moment of encoding and event time is stressed and the roles of further points of reference which can mediate this relation are examined. This entails a detailed study of the notion of *Reichenbach tense* and neo-Reichenbachian approaches such as GIERING et al.'s concept of *correlation*, which characterize the English present perfect as an anterior present.

The chapter about **aspect** begins with an exposition of the Slavic aspectual system. The *perfective vs. imperfective* dichotomy is identified as the fundamental opposition governing Slavic verbal grammar. Grammatical aspect and lexical aspect (*aktionsart*) are differentiated. Outside the sphere of the Slavic paradigm, GUILLAUME's concept of *chronogenesis* is explained to prepare the ground for the neo-Guillaumean approaches at the end of the subsequent chapter. English

¹⁴The selection covers mostly modern EFL material (both from the students' and from the teachers' perspective), contemporary linguistics handbooks and comprehensive grammars. See table C.1 on p.165 for details.

progressives are examined and compared to Slavic imperfectives to prepare the discussion of verb forms that are marked for *PROG* and *PERF* in the subsequent chapter.

The chapter about the **perfect** starts with a look at Latin, which had two perfects. The ensuing analysis of the Slavic perfect in Czech and of its similarities with the English perfect is embedded in an exposition of the evolution of European possessive perfects to establish the English perfect's status within a cross-linguistically observable path of grammaticalisation. The starting point for the examination of the prototypical and marginal uses of the English present perfect is SCHLÜTER's corpus-based analysis. The starting point for the examination of the meaning of the English present perfect is MCCOARD's classical differentiation into current relevance, indefinite past, extended now and embedded past theories. The subsequent survey into the approaches of JOOS, ADAMCZEWSKI and KORREL culminates in a neo-Guillaumean explanation of the difference between the English present perfect and its German counterpart.

Chapter 2

Time

Time is what happens when nothing else happens.

R. FEYNMAN¹

2.1 Introduction and rationale

The aim of this chapter is to shed some light on the notion of time and possible reasons for its notorious elusiveness when it comes to defining it. This chapter represents a very brief interdisciplinary tour of fields of knowledge that lie outside the immediate scope of temporal semantics and verbal grammar. It is supposed to prepare the ground for the chapters about tense and aspect that will follow. Ideally, it will serve as a profitable fund of ideas about time that both clarify and broaden the common-sense view, which is rather vague: we all seem to know what time is but verbalizing this knowledge is not easy, cf. AUGUSTINE OF HIPPO's famous quote about the incomprehensibility of time: "Quid est ergo *tempus*? Si nemo ex me quaerat, scio; si quaerenti explicare velim, nescio" [AUGUSTINE 1955, p.628²]. 'What then is time? If no one asks me, I know it; but if I am to explain it to someone who asks, I do not know it'.

The linguistic categories of tense and aspect refer to the grammaticalisation of time, the "indefinite continuous duration regarded as that in which the sequence

¹Taken from [FEYNMAN et al. 2006, section 5-2 *Time*].

²*Confessiones* (Book XI), written between AD 397 and AD 398 [BERNHARDT 1955, p.986].

of events takes place” [STEVENSON 2007, p.3269, headword *time* III 20]. This elaborated definition contains two modifiers, ‘indefinite’ and ‘continuous’, whose exact meanings need to be expatiated upon³. The expression “that in which the sequence of events takes place” alludes to the ‘container concept’ of time, which represents one of the many variations of the metaphor TIME IS SPACE. Events are lined up in a row and take up ‘temporal space’. Unfortunately, the definition given above is somewhat circular⁴ because the definiens ‘duration’ is defined as “the continuance or length of *time*” [STEVENSON 2007, p.780, headword *duration* 1; italics AE]. Here again, the use of an originally spatial term (‘length’) is striking. An etymological analysis of words pertaining to the word-field ‘time’ reveals that most temporal terms are construed by referring to spatial terms. For some of these terms this is fairly obvious, e.g. ‘short (time)’, ‘long (time)’, ‘always’, ‘before (= in front of)’; for others, especially those of non-Germanic origin, the inherent spatialisation is often hidden in the semantics of the donor language, e.g. ‘continuance’ goes back to Latin *continuus* ‘uninterrupted’ < *con-tinere* ‘to hang together’, clearly a primarily spatial notion. Even the word ‘duration’ has a non-temporal core meaning: Medieval Latin *duratio* < Latin *durare* ‘harden, endure’ < *durus* ‘hard’.

The etymology of the four English words *present*, *past*, *future* and *time* and their translation into a few languages of Europe corroborates the spatialisation of time at the lexical level: the prevalence of spatial, especially locomotive, metaphorical concepts in the following languages is remarkable: German *Gegenwart*, *Vergangenheit*, *Zukunft* and *Zeit*; French *présent*, *passé*, *avenir* and *temps*; Spanish *presente*, *pasado*, *porvenir* and *tiempo*; Czech *přítomnost*, *minulost*, *budoucnost* and *čas*; Latin *praesentia*, (*tempus*) *praeteritum*, (*tempus*) *futurum* and *tempus*; Greek *νῦν χρόνος*, *παρελθὼν χρόνος*, *μέλλον* and *χρόνος*.

³The modifier ‘indefinite’ can either mean ‘undetermined’ or ‘unbounded’. The notion of *continuousness* is discussed on p.25.

⁴This circularity made the physicist RICHARD FEYNMAN deliver the tongue-in-cheek definition, which can be found at the very beginning of this chapter. The full quote is: “What is time? It would be nice if we could find a good definition of time. Webster defines ‘a time’ as ‘a period,’ and the latter as ‘a time,’ which doesn’t seem to be very useful. Perhaps we should say: ‘Time is what happens when nothing else happens.’ Which also doesn’t get us far. Maybe it is just as well if we face the fact that time is one of the things we probably cannot define (in the dictionary sense), and just say that it is what we already know it to be: it is how long we wait!” [FEYNMAN et al. 2006, section 5-2 *Time*, his italics].

2.2 Lexical items denoting ‘present time’

The English, Romance and Latin nouns denoting temporal presence all have corresponding adjectives, whose forms are – except for Latin – identical to the forms of the nouns. The nominal use of the words can be derived from the adjectival one by omitting the words for time from the following noun phrases: *the present (time)*, *le (temps) présent*, *el (tiempo) presente*. Latin morphology is stricter, i.e. does not allow for conversion: a synonym for the noun *praesentia* is the noun phrase *tempus praesens*. (Omitting the noun *tempus* gave rise to German *Präsens*, which stands for ‘present tense’.) These constructions are paralleled by the Greek expression mentioned above, $\nu\tilde{\nu}$ ⁵ meaning ‘now’ and being etymologically related to the synonymous German *nun* and Latin *nunc* (via the enclitic particle $\nu\acute{\nu}$ ⁶). The same parallelism applies to the German and the Czech constructions: *die gegenwärtige Zeit*, *přítomný čas* ‘the present time’. Except for the Greek specimen, the deictic element expressed by the adjectives is primarily spatial, Latin *prae-sens* being a case in point: *prae* means ‘there, at hand’ and *-sens* is an archaic present participle of *esse* ‘to be (there)’ [KLUGE 1999, p.645, headword *Präsens*]. The notion of (spatial) presence is also present in the German word: *gegenwärtig* refers to something that is opposite (*gegenüber*) and therefore (spatially and temporally) present (*zugegen*). The Czech expression refers to (spatial and temporal) presence, too: the adjective *přítomný* comes from the adverb *přítom* = *při* ‘near, close to, at’ + *ten* (locative case *tom*) ‘this’ [HOLUB and LYER 1978, p.403, headword *přítomný*]. Obviously – at least for the languages at hand – temporal presence/nearness goes together with spatial presence/nearness.

2.2.1 Here and now

The underlying notion of *hic et nunc* ‘here and now’ might be connected to the immediacy of sensory input, which one experiences here and now. The centre

⁵“ $\nu\tilde{\nu}$ jetzt, nun, (von der Vergangenheit) soeben [...]. τὸ oder τὰ $\nu\tilde{\nu}$ Gegenwart, Jetztzeit” [MENGE 1913, p.475, headword $\nu\tilde{\nu}$].

⁶“ $\nu\acute{\nu}$ ursprünglich ‘jetzt, nun’, sanskrit, gotisch, althochdeutsch *nu*, neuhochdeutsch *nu* = *nun* [...], vielfach mit *n* erweitert: sanskrit *nū-nám* ‘jetzt’ = griechisch $\nu\tilde{\nu}$ = lateinisch *nu-n-c* = neuhochdeutsch *nun*” [MENGE 1913, p.475, headword $\nu\acute{\nu}$].

of one's awareness is *per definitionem* here and now. The concept of *here-now* can be understood in two ways: either it refers to a centre of awareness that has not yet differentiated temporal presence from spatial presence or it refers to a centre of awareness that has differentiated the two and merely juxtaposes them in order to combine them into one. The developmental stage of consciousness which relates to the undifferentiated here-now applies to infants and pre-historic humankind. It is pre-temporal, pre-personal, pre-linguistic, primitive and archaic. Sometimes the mythological terms *uroboros*⁷ and *pleroma*⁸ are applied to this stage of consciousness: *uroboros*, the snake that swallows its tail, symbolises a stage before the ego is differentiated from the unconscious; and *pleroma*, a gnostic term used by CARL GUSTAV JUNG, refers to physical nature, which primitive human consciousness is embedded in, cf. [WILBER 1987, p.38].

The difference between the here and the now in here-now, i.e. the concept of spatially present versus temporally present, can only be understood after having grasped that something can be here (= at this location) but not now or now but not here (= somewhere else). The former arrangement ("*here* \wedge \neg *now*")⁹ gives rise to the notion of non-present time, i.e. past and future. The latter ("*now* \wedge \neg *here*") gives rise to the notion of non-present space, i.e. elsewhere. The concept of absence – be it temporal or spatial – is more abstract than that of presence because it transcends the immediacy of sensory input. It is worth mentioning that " \neg (*here* \wedge *now*)" is logically equal to " \neg *here* \vee \neg *now*"¹⁰, which can refer to " \neg *here* \wedge *now*", "*here* \wedge \neg *now*" or " \neg *here* \wedge \neg *now*". Spatial distance can stand for or incorporate temporal distance, especially in works of fiction, such as utopian literature, or mythological legends: "[...] Genesislegenden der Griechen werden nicht in fremde Zeiten, sondern in fremde Länder versetzt" [HAASE 2002, p.91]. The literal meaning of the word *u-topia* is 'non-place'. Originally it referred to an ideal society that is neither here nor now.¹¹

⁷"Greek (*drakōn*) *ouroboros* [...] (snake) devouring its tail" [STEVENSON 2007, p.3483].

⁸"Greek *plērōma* that which fills" [STEVENSON 2007, p.2246].

⁹The symbol \wedge means 'and' and the symbol \neg expresses negation.

¹⁰The symbol \vee means 'or' in the inclusive sense ('and/or').

¹¹Cf. the name *Utopia* in the title of THOMAS MORE's book *De Optimo Republicae Statu deque Nova Insula Utopia*. "There may also be a pun on *eu-topos*, meaning 'good place'. More sometimes spoke of his book by a Latin equivalent, *Nusquama*, from *nusquam*, nowhere" [MORE 1975, p.3, foreword by ROBERT MARTIN ADAMS].

2.2.2 The “myopia of the time-sense”

Contrary to temporal distance, spatial distance can be perceived immediately. One’s field of vision can contain objects that are fairly far away but still immediately present. If one compares the perception of now and here, one notes

a marked *difference between the elementary sensations of duration and those of space*. The former have a much narrower range; the time-sense may be called a myopic organ, in comparison with the eye, for example. The eye sees rods, acres, even miles, at a single glance, and these totals it can afterward subdivide into an almost infinite number of distinctly identified parts. The units of duration, on the other hand, which the time-sense is able to take in at a single stroke, are groups of a few seconds, and within these units very few subdivisions [...] can be clearly discerned [JAMES 1950, p.611, his italics].

The point that WILLIAM JAMES makes here becomes even more salient if one takes into account that – strictly speaking – his comparison of units of time (seconds) and units of length (miles) is ill-founded. Comparing units that one cannot add in a meaningful way does not make sense within the realm of physics ($1 \text{ second} + 1 \text{ metre} = ?$). Still, the spatial metaphor of the “myopia of the time-sense” is appropriate in the following sense: what the eye can perceive at one glance covers significantly more orders of magnitude than what the time-sense can integrate into the experience of the present moment. In everyday life one might encounter length-scales ranging from millimetres to kilometres: $10^{-3} \text{ m} - 10^3 \text{ m}$ covers seven orders of magnitude. This can even increase to nine orders of magnitude when one looks at objects that are about 100km ($= 10^5 \text{ m}$) away, for instance from a high mountain. This is a fairly wide range if one takes into account that terrestrial distances, even at a global scale, are approximately of the order 10^7 m . Except for astronauts, no-one can really travel farther than to the antipodes. The “myopia of the time-sense” becomes evident by looking at the temporal orders of magnitude: the sensation of now covers at most three to four orders of magnitude ($10^{-2} \text{ s} - 10^0 \text{ s}$), whereas human life-spans are of the order of 10^9 s , e.g. 80 years $\approx 2.5 \times 10^9 \text{ s}$.

2.2.3 Deixis

The concept of *here-now* is often enlarged by adding the notion of *I*. Together the three elements of *hic*, *nunc* and *ego* represent the deictic centre, which can be seen as the origin of a coordinate system representing the index field ('Zeigfeld'¹²). The technical term *deixis*¹³

indicates those objective and subjective temporal, spatial, perceptual, and experiential, linguistic and situational contextual assessments of actions, states and events on the part of the encoder at the time of speaking and writing in specific narrative and speech situations [TOBIN 1988, p.72].

Within this "communicative-pragmatic-functional sense" [ibid.] of the concept of deixis the *here-now-I* normally refers to the time and place of a speech act and to the speaker/encoder of an utterance. The embryonic dichotomy 'close to *origo* vs. distant from *origo*' has the potential to differentiate into spatial, temporal, personal and other binary oppositions. E.g. 'here vs. there' refers to local deixis; 'now vs. then' refers to temporal deixis; 'I vs. you' refers to person deixis. An important example for a binary opposition that is neither strictly spatio-temporal nor strictly personal would be 'experienced/perceived by encoder vs. not experienced/perceived by encoder'¹⁴.

Scrutinizing the opposition PROXIMATE vs. REMOTE reveals an interesting difference between locally distal deictic elements such as *there* and temporally distal deictic elements such as *then*: it is possible to actually point at objects that are 'there' but because of the 'myopia of the time-sense' we cannot really point at anything that is 'then'¹⁵. From this fact one can deduce that temporal remoteness is more abstract than spatial remoteness. The difference between

¹²"Das Zeigfeld der Sprache im direkten Sprechverkehr ist das hier-jetzt-ich-System der subjektiven Orientierung". [BÜHLER 1982, p.149]

¹³from the Greek noun *δειξις* 'showing, pointing, presenting'

¹⁴In Modern Hebrew EXPERIENCED "is invariably paired to the so-called present and past tense morphology" [TOBIN 1988, p.55], whereas NOT-EXPERIENCED "is invariably paired to the so-called future tense morphology" [ibid.].

¹⁵Of course, it is possible to point at a certain page in a calendar and utter *That was the best day of my life* or *That's the day when I will hand in my paper* but in these cases the calendar is just a real-world object representing time, not time itself.

the experience of time and the experience of space in the context of the TIME IS SPACE metaphor and the notion of deixis can be summed up as follows:

Die Erfahrung der Zeit ist wesentlich abstrakter als die des Raums, Zeigegegenstände erfassen nur die räumliche Umgebung, zeitliche Gegebenheiten können wir dagegen weder sehen noch darauf zeigen. [...] Die Erfahrung der Zeit basiert auf der Wahrnehmung und dem Erfassen von Zustandsveränderungen im Raum und ist damit gegenüber dem Raumbegriff und dem Ereignisbegriff sekundär. Daraus erklärt sich, daß die Zeit in wesentlichen Punkten gleich oder ähnlich wie der Raum konzeptualisiert wird, nämlich als infinit, dicht und (ein)dimensional. Entsprechend gibt es in den Sprachen neben den deiktischen, topologischen und dimensionalen Raumbegriffen auch deiktische, topologische und dimensionale Zeitbegriffe (vergleiche deutsch *hier, jetzt; am Bahnhof, am Abend; vor dem Haus, vor dem Abendessen*) [EHRICH 1992, p.2].

2.3 Lexical items denoting ‘past time’

For the languages at hand the past is “that which has passed (by)”. The English word *past* and the two Romance words (*passé* and *pasado*) can be both, adjectives and nouns: *the past (time)*, *le (temps) passé*, *el (tiempo) pasado*. The Romance words are past participles used as adjectives (French *pass-é* < *pass-er* ‘to walk past’, Spanish *pas-ado* < *pas-ar* ‘to walk past’). In English *past* and *passed* are homophones. Both words are past participles of the verb *pass*¹⁶. In German the past participle *vergangen* (*die Vergangenheit* ‘the past’ = *die vergangene Zeit* ‘the past time’) belongs to the verb *vergehen*, which means ‘to go by, to pass’. This morphology is matched – albeit by using different lexical material – by the Czech words: *minul-ost* ‘the past’ = *minul-ý čas* ‘the past time’, *minulý* belonging to *minouti* ‘to go by, to pass’. The Proto-Slavonic stem **mi-* can be traced back to an Indo-European **mei-*, which is connected to Latin

¹⁶The adjective and noun *past* goes back to an obsolete past participle of *pass*. Cf. [STEVENSON 2007, p.2118, headword *past* adjective & noun].

meāre 'to move' [HOLUB and LYER 1978, p.315, headword *minouti*]. The notion of 'having/being passed' is present in the Latin and the Greek words for 'past', too: *praeteritum* is a past passive participle of the verb *praeter-īre* 'to go by, to pass' = *praeter* 'past' + *īre* 'to go' [KLUGE 1999, p.645, headword *Präteritum*] and the first component of the Greek collocation *παρελθών χρόνος* 'past time' comes from a verb meaning 'to drift past, to drive/march/ride past' [MENGE 1913, p.528, headword *παρ-ελεύω*].

To recap, there is cross-linguistic etymological evidence that the notion of 'past-ness' is conceptualised by referring to a completed motion of passing by: past time is construed as something that has moved past the observer. The etymology of the word *to pass* itself also reveals the sensory-motor origin of the notion of 'pastness': French *passer* 'to pass by' < Late Latin **passare* 'to walk' < Latin *passus* 'step' < *pandere* 'to spread, to extend'.

2.4 Lexical items denoting 'future time'

The future is conceptualised as 'that which is to come'. German *die Zukunft* 'the future' = *die zukünftige Zeit* 'the future time' is a case in point: it can be derived from *kommen* 'come' + *zu* 'to' and it used to mean *das Herankommen* 'the act of approaching' [KLUGE 1999, p.916, headword *Zukunft*]. The French word can also be derived from a verb which means 'to come': *l'avenir* = (*le temps*) à *venir* '(the time) to come'. The same is true for Spanish *el por-venir*. Both in French and Spanish there are synonyms, *le future* (= *l'avenir*) and *el futuro* (= *el porvenir*), which are related to the English word *the future* and the German technical term *das Futur* 'the future tense'. All of these go back to Latin (*tempus*) *futūrum* 'the time that will be'. Latin grammar labels the forms *futūrus*, *futūra*, *futūrum* as the future participles of *esse* 'to be'. Etymologically the stem *fu-* does not belong to *esse* but to *fore* 'to become'. Not only does the stem *fu-* of the verb *fore* provide the future participles of *esse* but it is also used as its perfect stem, i.e. all present perfect, past perfect and future perfect forms of *esse* begin with *fu-*.

The etymology of the Latin collocation *tempus futūrum* 'the future time' is paralleled by the Czech collocation *budoucí čas* 'the future time' in the sense

that the future participle of the verb meaning 'to be' has been derived from a different verb: *bud-oucí* 'fu-tūrus' (< *bud-u* 'I will be') contains the stem *bud-*, which is quite different from the stem *bý-* of *býti* 'to be' [MACHEK 1997, p.75, headword *budu*]. The original meaning of *budu* was "bdím, jsem duševně čilý" [HOLUB and LYER 1978, p.107, headword *budu*] 'I am awake, I am mentally alert'. According to MACHEK [ibid., p.75] one can assume a broader meaning for the Common Slavonic root of *budu*: 'I have on my mind, I am thinking about'. This meaning alludes to the notion of volition/intention and enabled *budu* to become "a suitable instrument" [ibid.] for forming the future tense of imperfective verbs (*budu* + infinitive).

To recap, in Latin and Czech the adjectives meaning 'future' can be derived from the future participles of 'to be', which are ersatz forms taken from a different verb completing the defective verb 'to be'. In Latin the future is construed as 'that which becomes' and in Czech it is construed as 'that which wants (to be)'. The Latin concept calls to mind the formation of the future tense in German: *werden* 'to become' + infinitive. The Czech concept calls to mind the formation of the English future tense: *will* + infinitive.

The Ancient Greek words for 'the future' (*τὸ μέλλον* and *τὰ μέλλοντα* 'that/those which is/are forthcoming/imminent/approaching') corroborate the concept of construing the future by referring to acts that are intended, wanted, imagined or planned. The Greek verb *μέλλω* is fairly polysemous. Depending on context, it can mean 'I am capable of, I am about to, I intend to, I should, I am destined to' [MENGE 1913, p.443, headword *μέλλω*].

2.5 Lexical items denoting 'time'

Etymologically and semantically the two English words *time* and *tide* are closely related: "Old English *tīma* = Old Norse *tími* time, good time, prosperity, from Germanic, from base of *tide*, which was superseded by *time* in the strictly temporal senses" [STEVENSON 2007, p.3268, headword *time*] and "Old English *tīd* = Old Saxon *tīd* (Dutch *tijd*), Old High German *zīt* (German *Zeit*), Old Norse *tíð*" [STEVENSON 2007, p.3262, headword *tide*] have the same Germanic root **tī-* [KLUGE 1999, p.906, headword *Zeit*]. In Modern English the core

meaning of *tide* is “tide of sea” but the older¹⁷ meaning “time, season” is still present in several compounds, e.g. *yule-tide* ‘the Christmas season’. According to [WATKINS 2000, p.14, headword *dā-*] there was an Old English denominative *tīdan* ‘to happen, to occur in time’¹⁸. Furthermore, the abstract notion of division was present in Germanic **tīdiz* ‘division of time’ < Indo-European **dā-* ‘to divide’ [ibid.]. To be precise, the extended form of Indo-European **dā-* is **dāi-*, with zero-grade **dī-*. The suffixed zero-grade form **dī-ti-* gave rise to Germanic **tīdiz* > Old English *tīd* > Modern English *tide* and the suffixed zero-grade form **dī-mon-* gave rise to Germanic **tī-mōn-* > Old English *tīma* > Modern English *time* [ibid.].

The Romance words (French *le temps* and Spanish *el tiempo*) are clearly of Latin origin. Latin *tempus* < **ten-p-* ‘to stretch’ [KLUGE 1999, p.821, headword *Tempo*] carries the idea of ‘extension’, which is primarily a spatial concept. The etymology of the Greek word *χρόνος* ‘time, lifetime, year, stay’ < *χρῶνίζω* ‘I stay, I pause, I hesitate, I delay’ < Indo-European **ghr-on-os* < **gher-* ‘to grasp, to enclose’ alludes to a conceptualisation of time as ‘that which seizes/grabs/ties everything’ [HOFMANN 1966, p.424, headword *χρόνος*]. The notion of ‘seizing/grabbing/tying’ suggests a personification of time. Chronos ‘Father Time’ is associated with but not identical to Kronos, the youngest of the Titans and father of Zeus. There are further Greek words referring to types of time: *ώρα* ‘specific time’ (cf. Modern English *hour*¹⁹), *σχολή* ‘free time’ (cf. Modern English *school*²⁰), *καιρός* ‘right, convenient time’ (cf. Modern English *kairos*²¹).

¹⁷The supersedure of *tide* by *time* is confirmed by the Brothers GRIMM, who point out that *time* narrowed the meaning of *tide*: “Neben dem germanischen Stamme *tīd* steht eine m-Bildung **tī-m-en-*: angelsächsisch *tīma*, m., ‘Zeit, Zeitraum, rechte Zeit, Gelegenheit’, woraus neuenglisch *time*, welches das angelsächsische *tīd* zu *tide* ‘Gezeiten’ eingeengt hat, stammt, und altnordisch *tími*, m., ‘Zeit, Zeitraum, rechte Zeit, Mal, Glück’” [GRIMM and GRIMM 1956, p.523, headword *Zeit*].

¹⁸Cf. German *zeitigen* ‘lead to, result in, bring forth/about, produce’.

¹⁹“Anglo-Norman *ure*, Old French *ore*, *eure* (mod. *heure*) from Latin *hora* from Greek = season, time of day, hour” [STEVENSON 2007, p.1285, headword *hour*].

²⁰“Old English *scōl*, *scolu* [. . .], from Germanic, from Latin *schola* from Greek *skholē* leisure, employment of leisure in disputation, lecture, (later) *school*” [STEVENSON 2007, p.2694, headword *school*].

²¹“Greek = right or proper time. Fullness of time; the propitious moment, especially for decision or action” [STEVENSON 2007, p.1485, headword *kairos*].

The Czech word *čas* 'time', which is not etymologically related to its Russian counterpart *время*²², goes back to the synonymous Common Slavonic *časъ* 'time, hour'. The root *ča-* can also be found in Old Czech *čakati, čekati* 'to wait' [GEBAUER 1970, p.155, headword *čas*]. According to [MACHEK 1997, p.95, headword *čas*] the word *časъ* seems to have "denoted first of all the progress, passing of time, as it is manifested in the fast change of everything"²³. He suggests a connection between the Old Czech words *čas* 'time' and *časati* 'to hasten, to (be in a) hurry'. Furthermore, he establishes the same connection for the Germanic branch by tracing back German *Zeit* and English *tide* to Indo-European **d̥i-ti-*, whose root is **d̥i-*, to which he ascribes the meaning 'to hurry' [ibid.]. Clearly, MACHEK and WATKINS contradict one another when it comes to ascribing a meaning to the Indo-European root **d̥i-*, the former suggesting 'to hurry', the latter suggesting 'to divide'. For the aim of this chapter, i.e. collecting ideas about how time is construed at the lexical level, it does not matter who is right, because the two concepts of time are not mutually exclusive: time can fly and it can also be subdivided.

In their discussion of the etymology of the German word *Zeit*, the Brothers GRIMM stress the notion of limitation²⁴. They argue in favour of the Indo-European root **dāi-* as the semantically compatible origin of *Zeit* and its Germanic cognates. Furthermore, they present four non-Germanic cognates within the Indo-European phylum:

Abzulehnen ist die Ableitung von einer indogermanischen Wurzel
**dei-* im Sinne von 'sich erstrecken', weil ihr Sinn dem Hauptmerkmal

²²According to [VASMER 1953, p.235], Russian *время* 'time' is a Church Slavonic loan word (**веремя*). He refers to other authors who establish a connection between *время* 'time' and *вертеть* 'to turn' (cf. Czech *vrťět* 'to stir'). One of these authors justifies this interpretation by calling to mind the Latin collocations *annus vertens* 'the current year', *mensis vertens* 'the current month' and *anniversārius* < **anno-versus* 'recurring every year'. The participles used here belong to *vertere* 'to turn (to)'. Indo-European cognates of *vertere* are – according to [VASMER 1953, p.235] – Sanskrit "**vārtman** *n* 1. Bahn *f*, Gleis *n*, Pfad *m*; 2. Rand *m*; 3. Lid *n*; 4. Basis *f*; 5. Raum *m*" [MYLIUS 1987, p.424] and – according to [PRAŽÁK et al. 1926, p.1291] – the German suffix *-wärts* '-ward(s)' and the German verb *werden* 'to become'. The distribution of *čas* vs. *время* within the Slavic group is listed in a footnote on p.42.

²³Translation AE.

²⁴"[Der] kraftvolle Gehalt des Wortbegriffs von *Zeit* [...] umfasst außer der abstrakten Vorstellung der Folge noch die Begriffe des realen Geschehens und der *Begrenzung*" [GRIMM and GRIMM 1956, p.523, headword *Zeit*, italics AE].

des Wortbegriffes von *Zeit*, der Begrenzung, widerspricht, dagegen bietet sich die Wurzel **dāi* 'teilen' als passende Grundlage für die Ansätze indogermanisch **dei-t-ís* (**deí-t-ís* > althochdeutsch Isidor *zîd*) und **dei-t-óm* dar; deren Bedeutung 'das Abgeteilte, das Zugeteilte, das Zugemessene' steht mit dem geschichtlich fassbaren Begriff des Wortes *Zeit* in bestem Einklang. Verwandt sind demnach altindisch *dajatē* 'teilt', griechisch *δαίεσθαι* 'teilen', altindisch *áditīś* 'zeitlos, unendlich', armenisch *ti* 'Zeit' [GRIMM and GRIMM 1956, p.523, headword *Zeit*].

The GRIMMS' reading of *time* as 'something that is partitioned off, allocated and allotted' gives *time* a quantity-like flavour, evocative of Lakovian metaphors of the TIME IS MONEY type. Not only can one 'spend time (and money)', but one can also 'have time (and money)'. Furthermore, there is also an almost religious overtone in the GRIMMS' etymological analysis: if time is apportioned, then who are the 'apportioners'²⁵?

The concept of time as 'something that can be divided' is present in spatial metaphors such as 'stretch of time' and 'space of time'. The same applies to Latin *temporis spatium* and German *Zeitraum*²⁶, both 'space of time'. The Czech translation is *doba* '(time) period, era, duration', which originally meant 'a long time'. It is related to (Czech) *dávno* 'long ago' and (Doric) Greek *δοᾶν* 'long ago' [MACHEK 1997, p.121/122, headword *doba*]. The difference between *čas* and *doba* is best illustrated by the following examples of colloquial usage: "čas utíká (nikdy: doba utíká!)" [MACHEK 1997, p.95, headword *čas*] 'time runs (never: period/era/duration runs!)' as opposed to "to je doba než to udělá (Nelze tu položit čas!)" [MACHEK 1997, p.121/122, headword *doba*] 'this/it is a period/era/duration till s/he does^{perfective} it (One cannot put time here!)'. The first example conceptualises time as 'running', i.e. moving and being in a hurry.

²⁵In Greek mythology these would be the three Moirae, who spin (Clotho), measure (Lachesis) and cut (Atropos) the 'thread of life'.

²⁶German *Zeitraum* and English *time-space* are false friends: *Zeitraum* means 'period (of time)', whereas *time-space* is a synonym of *space-time* (German *Raumzeit*), a technical term from physics referring to "time and three-dimensional space regarded as fused in a four-dimensional continuum containing all events" [STEVENSON 2007, p.2934, headword *space-time*, and p.3270, headword *time-space*].

English *time flies*, German *die Zeit ver-fliegt* ‘time fades (away)/evaporates/flies’ and Latin *tempus fugit* ‘time flees/runs away’ are similar metaphors. Idiomatic English and German translations of the second example do not contain nouns such as *duration* or *Dauer* ‘duration’ but rather verb phrases such as *take a long time* or *lange dauern* ‘to take a long time’, from *lange* ‘long’ (adverb) and *dauern* ‘to last, to go on’, which goes back to Latin *durare* ‘to last, to go on’ [KLUGE 1999, p.164, headword *dauern*¹].

2.6 Mathematics and physics

Mathematics, “the abstract deductive science of space, number, quantity, and arrangement” [STEVENSON 2007, p.1725, headword *mathematics*] represents a powerful language, whose technical terms conceptualise abstract structures and ideas. Some mathematical concepts have been used to describe time, not only in the realm of physics but also in philosophy and linguistics. One of these concepts is the notion of number: natural numbers are used to count periodic events; rational numbers (\mathbb{Q} ²⁷) are used to measure time; real numbers (\mathbb{R} ²⁸) are used to model time.

The natural numbers, i.e. the elements of the set $\mathbb{N} = \{1, 2, 3, 4, \dots\}$, can be defined in an axiomatic way in modern mathematics. Still, the source of this abstract concept is the mere act of counting, which is intimately connected to the notion of time. “Das Fortschreiten des Zählens [...] hat eine natürliche Beziehung zur Zeit mit ihren Modi. Hat man bis 5 gezählt, so ist dies ein Faktum; man kann weiterzählen: das ist eine Möglichkeit” [VON WEIZSÄCKER 1995, p.149]. Here the word *Modi* (short for *Zeitmodi* ‘modes of time’) refers to the past and the future. The act of counting, which underlies the series of the natural numbers, represents a prototypical model of the division of time into past and future. Having counted, e.g. up to 5, is a (present) fact that is remembered now. Being able to count on is a (present) possibility that is expected now. This

²⁷The set \mathbb{Q} contains all fractions. It is dense but not complete. Being dense means that between any two rational numbers there are other rational numbers. Being not complete means – loosely speaking – that there are still gaps.

²⁸The set \mathbb{R} contains rational and irrational numbers. It is complete. The ‘real number line’ represents a continuum, i.e. there are not any gaps.

relation between the past, present facts and present memory on the one hand and between the future, present possibilities and present expectation on the other hand gives prominence to the present moment; and yet, in physics the present moment is not distinguished from all others.

Jetzt wissen wir das Vergangene in Gestalt von Fakten, jetzt wissen wir das Zukünftige in Gestalt von Möglichkeiten. Das Jetzt verrinnt unablässig. Die seit einem bestimmten Ereignis verflossene Zeit, z. B. seit dem Schlag der Mitternacht auf einer Uhr, können wir als Faktum messen, eben mit Uhren. Die zukünftige Zeit erwarten wir. Von diesem Reichtum kommt in der Ontologie der klassischen Physik und auch in der traditionellen Quantentheorie nichts anderes vor als die auf Uhren messbaren Zeitdistanzen, idealisiert als gemessen im Kontinuum der reellen²⁹ Zahlen [VON WEIZSÄCKER 1995, p.278].

The set of the real numbers represents a successful and wide-spread model of time. Its spatialization – a spear, i.e. an oriented line – is ubiquitous when temporal relations are depicted, not only in physics textbooks but also in grammar books that deal with tense and aspect. Its characteristics can be summarized as follows: it is continuous, one-dimensional and oriented.

Being continuous means, loosely speaking, that there are not any gaps or holes in the line. This characteristic is a prerequisite for the notion of limit, the core concept of differential calculus, whose application in kinematics has clarified the concept of motion. E.g. Newtonian kinematics has solved Zeno's arrow paradox [ARISTOTLE 1988, p.91 and p.93³⁰]: ZENO OF ELEA (490 – 430 BCE) claimed that motion did not exist. An arrow that flies from A to B stands still in every moment during its passage. If it stands still in every moment, then it does not move, therefore motion must be an illusion. Newton's concept of instantaneous velocity (= the time derivative of the position vector) shows that Zeno's presupposition is wrong. The arrow's velocity is never zero between A and B, although Zeno's snap-shot view of the 'unmoving' arrow might suggest otherwise to our common sense. As Zeno's argumentation is difficult to discard

²⁹The word *idealisiert* is crucial here. Actual measurements, i.e. measurements that are performed in a real experiment, make use of the rational numbers \mathbb{Q} , not the real numbers \mathbb{R} .

³⁰*Physics* VI:9, 239b5 and 239b30 in the Greek original.

in everyday language but easy to refute in the language of infinitesimal calculus, this example shows that using the appropriate conceptual framework, i.e. the 'right' language, might help avoiding fallacious thinking.

Being one-dimensional refers to the fact that the set of real numbers is also an affine space whose 'difference space' is a (real) vector space³¹ whose basis consists of exactly one element. This means that one number suffices to describe the position of any point on the real time-axis. Contrary to time, ordinary space is three-dimensional³². That is why structural mappings from the source domain TIME into the target domain SPACE, i.e. Lakovian metaphors of the TIME IS SPACE type, usually map 1-dimensional time onto a 1-dimensional subset of 3-dimensional space, such as paths of imagined motions.

Being oriented means that an order relation (bigger-smaller) holds for the real numbers, i.e. for two different numbers it is always possible to decide which one is bigger, or – to use temporal terms – for two different points in time it is always possible to decide which one is later³³. It is of profound importance to understand that the orientation of this model of time as such does not provide the notions of past, present and future but only those of anteriority, simultaneity and posteriority. Only after distinguishing one point of time or an interval of time by naming it 'now', the above-mentioned modes of time exist. The orientation of time, i.e. the later-earlier order, is different from the notion of temporal distance, which presupposes clocks to measure time. Models of time without the notion of distance are referred to as "topological time" [MITTELSTAEDT 1996, p.19].

Physicists use the metaphorical term *arrow of time*³⁴ to refer to the directionality of time, which surfaces in various areas of modern physics, such as thermodynamics, cosmology and particle physics. The intricate details of the

³¹In mathematics the word space is used in a broader sense than in everyday speech. It can refer to entities of any dimension.

³²It can be shown that neither the one-dimensionality of time nor the three-dimensionality of space is arbitrary, cf. [LESCH and GASSNER 2007].

³³This is no longer true in relativistic physics, where the simultaneity of two different events depends on the state of motion of the observer and where 3-dimensional space and 1-dimensional time are merged into a 4-dimensional *space-time* manifold.

³⁴Coined by ARTHUR EDDINGTON in 1927: "I shall use the phrase 'time's arrow' to express this one-way property of time which has *no analogue in space*." [EDDINGTON 2005, p.69, italics AE].

ongoing discussion³⁵ about the emergence of the directionality of time are secondary for the purpose of this paper. Still, physics corroborates the everyday experience of time having a direction. How this is related to the passing of time is a metaphysical question (see below). Directionality and orientation are not identical. The former is a quality of time, whereas the latter is a property of the mathematical model of time. Traditionally, bigger numbers stand for later moments and the chosen orientation of the real numbers matches the direction of time: the spear spatializing the real numbers and the arrow of time point in the same direction, in graphical representations mostly to the right.

Singling out one real number t_0 for representing the present moment introduces the notions of past and future within this model of time. The set of all numbers that are bigger than t_0 contains the points of time that lie in the future of t_0 and the set of all numbers that are smaller than t_0 contains the points of time that lie in the past of t_0 . The most natural choice for t_0 – albeit by no means the only one – is the number 0. For this choice of t_0 the positive real numbers represent the future and the negative real numbers represent the past. This choice illustrates best a salient feature that the present moment shares with all other moments within this model of time: it does not have any extension. The present is modelled as a watershed that separates the past from the future. Contrary to the past and the future, the present does not contain any time if it is represented by one single number. Physical processes that are instantaneous are not impossible³⁶ but the everyday notion of *now* refers rather to a (fairly short) time interval than to a time point.

The set of the real numbers is not the only conceivable model of time. Physi-

³⁵“Die[se] Anisotropie der Zeit, metaphorisch auch ‚Zeitpfeil‘ genannt, lässt sich durch die Naturgesetze derzeit nicht erklären. Die Zeitrichtung kommt in den Grundgleichungen der Mechanik, Elektrodynamik, Quantenmechanik und Relativitätstheorie nicht vor, da alle symmetrisch bezüglich Zeitspiegelungen sind; das heißt, wenn man die Zeitkoordinate t durch $-t$ ersetzt, erhält man wieder einen physikalisch erlaubten Vorgang, aber keine Rückwärtsbewegung in der Zeit. [...] Man beobachtet aber nun in der Natur verschiedene Klassen von Phänomenen, die trotz der Zeitumkehrinvarianz der zugrundeliegenden Gesetze und Gleichungen eine Zeitrichtung auszeichnen” [BAMMEL et al. 2007, p.1324].

³⁶The best example for this is quantum tunnelling: “[Beim Tunnelprozess] scheinen die Teilchen mit unendlich hoher Geschwindigkeit durch die Tunnel-Räume zu reisen, also ohne Zeitverlust und damit unvergleichlich schneller als Licht. Licht breitet sich zwar sehr schnell, aber doch mit einer endlichen und messbaren Geschwindigkeit aus. Im Tunnel dagegen *existiert keine Zeit*” [NIMTZ and HAIBEL 2004, p.17, italics AE].

cists also work with models of (space-)time that are not continuous. Discrete space-time models are often introduced for computational purposes but they are also of general interest in experimental and theoretical physics. From the viewpoint of experimental physics there is a practical lower limit of temporal resolution, i.e. a minimal time scale that can be measured. The advancement of technology makes this lower limit smaller and smaller. Currently there are super-fast atomic stopwatches whose lower limit of resolution is about 100 attoseconds ($= 10^{-16}\text{s}$)³⁷. From the viewpoint of theoretical physics there is a principal lower limit of temporal resolution called Planck-time ($t_P \approx 10^{-43}\text{s}$)³⁸. It defines – in combination with the corresponding Planck-length l_P ³⁹ – the range of validity of the laws of classical space-time physics. To recap, the notion of a smallest time span⁴⁰ contradicts the traditional continuous model, i.e. the set of the real numbers, which does not have a smallest interval greater than zero.

One way out is to allow for a certain fuzziness when it comes to the concept of time point: if a real number t_A represents a point in time, then one can allow for a certain margin of error called Δt_A , so that t_A is always tacitly understood as $t_A \pm \Delta t_A$. A direct consequence of this approach is a similar fuzziness of the notion of temporal distance because temporal distance is nothing but the difference between two time points. Adopting a model of time allowing for this kind of fuzziness reflects both scientific honesty and everyday usage. Every measurement is taken within a certain margin of error and this margin should be mentioned when the measurement is given. In everyday usage an utterance such as “They met at 2:17pm” contains a pragmatic Δt that might range from less than a second to about half a minute. The same applies to utterances such as “The bomb went off at 5:34:27pm”, whose Δt is significantly smaller but still far bigger than the attosecond range mentioned above. Replacing time points by time intervals has the following effect: overlapping time intervals are

³⁷ “[E]ine unvorstellbar kurze Zeit, die sich zu einer Sekunde verhält wie eine Minute zum Alter des Universums” [GAEDE 2007a, p.1322].

³⁸ $t_P = \sqrt{G\hbar/c^5} = 5.4 \times 10^{-44}\text{s} \approx 10^{-43}\text{s}$ [WALD 1984, p.471], in which G = gravitational constant; \hbar = Planck’s constant (divided by 2π), fundamental to quantum theory; c = speed of light (in vacuum), fundamental to the theory of relativity

³⁹ $l_P = t_P \times c = 1.6 \times 10^{-35}\text{m} \approx 10^{-35}\text{m}$ [WALD 1984, p.471]

⁴⁰ In quantum physics there are theories that feature “a discrete fundamental quantum of time or chronon” [FINKELSTEIN 1996, p.22].

simultaneous in a way, especially when one interval is contained in another one. This affects the orientation of this model of time and preserves the strict order relation of ‘being later than’ only for non-overlapping intervals. On the other hand, this modified model is more flexible when it comes to describing moments of time. This is particularly desirable for modelling the present moment t_0 within the realm of temporal semantics. A strict watershed-reading of the present does not allow for any internal structure. Postulating an internal structure of the present moment might or might not be appropriate to the linguistic analysis of tense, but the underlying model of time should not rule it out *a priori*.⁴¹

2.7 Philosophy and religion

The nature of space and time is an important topic of metaphysics, “the branch of philosophy that deals with the first principles of things, including such concepts as being, substance, essence, time, space, cause, and identity” [STEVENSON 2007, p.1765, headword *metaphysics* 1] because “space and time are what render a world out of the totality of entities that are parts of it” [AUDI 1999, p.564, headword *metaphysics*]. It might be helpful to have a very brief look at philosophic definitions of *time*⁴². The following two quotes are taken from the introductions of the pertinent entries in two modern dictionaries of philosophy:

⁴¹A few concluding remarks concerning time in physics:

1. Quantum mechanics: contrary to a particle’s position \mathbf{r} and momentum \mathbf{p} , time t is not an observable, i.e. it is not associated with an operator describing a measurable physical quantity, cf. [COHEN-TANNOUJJI et al. 1977, p.136, 139 & 215]. Time is merely a real number parameter.
2. Relativistic physics: space and time are merged but “space-time is something more intricate than three dimensions of space plus one dimension of time” [HESTENES 1966, p.81].
3. Time is not necessarily a fundamental concept: “Zeit als solche kann nicht das letzte Konzept in der Beschreibung der Natur sein. Zeit ist weder ursprünglich noch genau. Sie ist eine Schätzung [...]. Sie ist ein sekundärer Begriff.” [WHEELER 1998, p.32], cf. [MISNER et al. 1973, p.1203–1212] and [EISENHARDT 2006, p.178–192, 200–224 & 272–280] for further reading on the concept of *pregeometry*.

⁴²It should be clear that this very brief look at philosophic definitions of time cannot represent – not even to some degree – a cultural history of the concept of time in philosophy. It merely collects a couple of philosophic ideas that are of linguistic interest, i.e. relevant for the main part of this paper.

Zeit, die nicht umkehrbare, nicht wiederholbare Abfolge des Geschehens, die als Vergangenheit, Gegenwart und Zukunft, am Entstehen und Vergehen der Dinge erlebt wird. Die philosophische Erörterung des Zeitbegriffs ist meist an den Begriff der Veränderung gekoppelt, sei es in Form der Bewegung, der Prozessualität oder der Entwicklung [GAEDE 2007b, p.379, headword *Zeit*].

time, “a moving image of eternity” (Plato); “the number of movements in respect of the before and after”⁴³ (Aristotle); “the Life of the Soul in movement as it passes from one stage of act or experience to another” (Plotinus); “a present of things past, memory, a present of things present, sight, and a present of things future, expectation” (Augustine). These definitions, like all attempts to encapsulate the essence of time in some neat formula, are unhelpfully circular because they employ temporal notions. Although time might be too basic to admit of definition, there still are many questions about time that philosophers have made some progress in answering by analysis both of how we ordinarily experience and talk about time, and of the deliverances of science, thereby clarifying and deepening our understanding of what time is [AUDI 1999, p.920, headword *time*].

It is conspicuous that in both dictionary entries above the circular definitions given are immediately commented on in an almost apologetic way (“Die philosophische Erörterung...” and “These definitions...”). This reflects well the elusiveness of the definiendum. The philosophic attempts to define time refer either to the chronological sequence of events (“*Abfolge des Geschehens*”, “*number of movements*”) or to the notion of motion (“*moving image*”, “*number of movements*”, “*Life of the Soul in movement*”), which reinforces the etymological findings. ARISTOTLE’s definition refers explicitly to the topology of time (“in respect of the *before and after*”) and stresses the numerical aspect of time (“*number of movements*”). PLATO’s reference to eternity stays enigmatic without taking his

⁴³An alternative translation of “*αριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ ὕστερον*” [ARISTOTLE 1987, p.212, *Physics* IV:11, 219b2 in the Greek original] would be: numbering of movement according to a before and an after.

theory of ideas into account⁴⁴: the world as we perceive it is an image of the eternal and unmoving cosmos of ideas.

The definition in German introduces the element of time awareness by linking the modes past, present and future to subjective experience (“als Vergangenheit, Gegenwart und Zukunft [...] *erlebt wird*”). AUGUSTINE goes one step further by reducing the modes of time to present consciousness (past = present memory, present = sight⁴⁵, future = present expectations). According to IMMANUEL KANT, the notion of time is not based on experience⁴⁶ but represents an *a priori form of intuition*⁴⁷, which makes experience possible in the first place. This concept of time is radically different from the everyday notion of the experience of time. It also contradicts the concept of time in physics. Physicists measure and model time, i.e. they base their findings on empirical experimental data. KANT's view and the view of modern physics cannot be reconciliated. HENNING GENZ, who wrote a 300-page book about time in physics, spends half a page on explaining why he does not take KANT's view into account. He points out that KANT's time and the time of modern physics are two different things:

Die Zeit, deren Grundsätze Kant *a priori* kennt, ist *seine* Zeit; wir wissen heute, daß die wirkliche Zeit manche *apodiktisch gewissen* Grundsätze nicht beachtet. Unter Zeit versteht Kant eine *wirkliche Form der inneren Anschauung* – also keinesfalls die Zeit, wie sie dieses Buch zum Gegenstand hat [GENZ 1999, p.72, his italics].

ALFRED N. WHITEHEAD points out that “time and space are characteristics of nature which presuppose the scheme of extension” [WHITEHEAD 1979, p.289]. He puts forward a theory of extension which sees temporal and spatial extensiveness as secondary, i.e. derived from the primary notion of extension:

⁴⁴The following statement is based on [GAEDE 2007b, p.379], which refers to PLATO's dialogue *Timaeus*, a speculative treatise on the nature of the physical world.

⁴⁵Cf. the discussion of one's field of vision in the context of the spatio-temporal here-now above (p.14).

⁴⁶“Die Zeit ist kein empirischer Begriff, der irgend von einer Erfahrung abgezogen worden” KANT quoted in [PÖPPEL 2000, p.14, Abbildung 2].

⁴⁷“Die Zeit ist eine Vorstellung, die allen Anschauungen zum Grunde liegt. [...] Die Zeit ist [...] *a priori* gegeben. In ihr allein ist alle Wirklichkeit der Erscheinungen möglich” KANT quoted in [PÖPPEL 2000, p.14, Abbildung 2].

The extensiveness of space is really the spatialization of extension; and the extensiveness of time is really the temporalization of extension. Physical time expresses the reflection of genetic divisibility into coordinate divisibility. [...] But extension does not in itself determine the special facts which are true respecting physical time and physical space [WHITEHEAD 1979, p.289].

Extension and divisibility are certainly attributes that space and time share. If one introduces a term such as *proto-space* that refers to these two attributes, then both space ('spatial space') and time ('temporal space') can be seen as spatializations of proto-space. The difference between time and space is due to further attributes that are added. An important added attribute of time is its flowing⁴⁸, but it should be noted that the passing⁴⁹ of time is not undisputed in philosophy:

The most fundamental debate in the philosophy of time concerns the status of temporal becoming. Do events **really** pass from the future to the present and into the past, as tensed- or A-theorists (derived from McTaggart's 1908⁵⁰, 1927⁵¹ A-series of past, present, and future moments or events) [...] have maintained? Or is the passage of time a myth and an illusion, as B-theorists (derived from McTaggart's B-series of events ordered by the relations earlier, later, and

⁴⁸We cannot move freely (back and forth) in time but we can think and talk about temporally remote times by opening mental spaces, whose flexibility is unlimited.

⁴⁹TIM MAUDLIN differentiates between the passage and the flow of time. He "defend[s] the claim that the passage of time is an intrinsic asymmetry in the structure of space-time itself, an asymmetry that has no spatial counterpart and is metaphysically independent of the material contents of space-time" [MAUDLIN 2002, p.237]. "Except in a metaphorical sense, time does not move or flow. Rivers flow and locomotives move. [...] The direction of the flow or motion is dependent on the direction of the passage of time. Change and flow and motion all presuppose the passage of time, so the reality of change is bound up with the reality of time's passage, but we will avoid saying that time itself changes or flows" [MAUDLIN 2002, p.238].

⁵⁰"McTaggart J E M (1908, 1934). 'The unreality of time.' *Mind* 18, 457–474. In Keeling S J (ed.), *Philosophical studies*. London: Edward & Arnold & Co. 110–134" [OAKLANDER 2006, p.576].

⁵¹"McTaggart J E M (1927). 'Time.' In Broad C D (ed.) *The nature of existence* 2. Cambridge: Cambridge University Press. [Reprinted 1968, Grosse Pointe, MI: Scholarly Press, 9–31.]" [OAKLANDER 2006, p.576].

simultaneous) [...] have maintained? [OAKLANDER 2006, p.574].

In religious contexts time is often associated with the notion of *eternity*. The word can either refer to a limitless amount of time⁵² or to the absence of time.⁵³ In an article about time in Ancient Egyptian thought⁵⁴ JAN ASSMANN points out: “Wenn eine Kultur überhaupt zu einem Ewigkeitsbegriff vorgedrungen ist, dann ist dieser zu beschreiben als die Negation der dominierenden Merkmale ihres Zeitbegriffs” [ASSMANN 1998, p.204/205]. His ensuing examples are summarized in table 2.1, which characterizes eternity as the negation of time.

Table 2.1: Eternity as the negation of time according to ASSMANN

Zeit (dominierendes Merkmal)	Ewigkeit (Negation von Zeit)
gerichteter Fluss	Stillstand
Entfaltung	punktartige Kopräsenz
Bindung an einen Zyklus der Wiederkehr	Erlösung
Sphäre des Werdens und Vergehens	Sphäre des Seins
zugemessene Spanne, Begrenztheit	unbegrenzte Duration
Einmaligkeit	unendliche Wiederholbarkeit

⁵² “All of time [...] ; infinite time, without a beginning or an end” [STEVENSON 2007, p.868, headword *eternity* 2].

⁵³ “Timelessness; a state to which time has no application” [STEVENSON 2007, p.868, headword *eternity* 4].

⁵⁴ Among other things, ASSMANN discusses the intricate semantics of the Egyptian words *djet* (*ḏt*) and *neheh* (*nḥḥ*), which have both been translated by the words time and eternity, although neither of these translations really fits: *djet* and *neheh* “sind nicht, wie [unser Zeitbegriff], gegen eine Ewigkeit begrifflich abgegrenzt. Sie ufern, sozusagen, in Richtung auf das aus, was man unter Ewigkeit verstehen, was man jedenfalls nicht mehr Zeit nennen kann. Wichtig ist, daß dem Ägypter diese Unterscheidung überhaupt fremd war. Für ihn gibt es kein „Jenseits der Zeit“. Der Übergang vom Diesseits zum Jenseits liegt innerhalb der Zeit” [ASSMANN 1998, p.202/203]. According to ASSMANN, the generic term *time* is not lexically realised in Ancient Egyptian. He suggests the hendiadys *neheh*-and-*djet* as a possible translation of *time*, cf. [ASSMANN 1998, p.201]. The author posits that the core meaning of *djet* is the resultative aspect of time, whereas the core meaning of *neheh* is the virtual aspect of time. According to ASSMANN, the Egyptian opposition *resultative* vs. *virtual* can be derived from the aspectual opposition *perfective* vs. *imperfective*, which represents the base of the temporal systems of Semito-Hamitic languages, cf. [ASSMANN 1998, p.199].

A concept related but not identical to eternity is that of *eternal present*. In Christian mysticism⁵⁵ the terms *nunc fluens* vs. *nunc stans* (elapsing now vs. stationary now) are used, cf. the following quote ascribed to ANICIUS MANLIUS SEVERINUS BOETHIUS (480-524 or 525)⁵⁶: *nunc fluens facit tempus, nunc stans facit aeternitatem* 'The passing now makes time, the standing now makes eternity'. The stationary now can be seen as a phenomenon that is concomitant with certain states of consciousness. In a deep meditative state one might transcend time, i.e. perceive it as standing still.

2.8 Psychology and neuroscience

Investigating the topic of time does not necessarily have to start with a definition of time. Describing the structure of the experience of time represents an equally valid approach to the topic. Brain researchers have replaced the basic question 'What is time?' by the starting point 'How do we come by time?'⁵⁷, which avoids the philosophical intractability in an elegant way. ERNST PÖPPEL points out that the question about time's *quidditas* 'nature, essence', cf. AUGUSTINE'S *Quid est ergo tempus?*, has created extremely disparate answers. By way of explanation, he states a psychological and an epistemological reason. Psychologically, the answers depend on the point of departure, which is different for

⁵⁵Cf. also: "Die gesamte Ewigkeit ist in jedem Zeitpunkt enthalten, so daß in der EWIGKEIT die GEGENWART alle Zeit ist. Jeder Zeitpunkt bleibt völlig er selbst, auf sich selbst gestellt, und er entfaltet sich ganz natürlich aus sich selbst heraus – und jeder Zeitpunkt ist in der Ewigkeit allein, von Augenblick zu Augenblick. Dies wird als *nunc stans* bezeichnet – der Ewige Augenblick, der alle Zeit umfaßt, ohne irgendeinen Moment davon zu entwerfen" [WILBER 1990, p.128, his italics and capitals].

⁵⁶The quote is allegedly from BOETHIUS'S *Philosophiae Consolatio* V 6 but that is not correct. The exact wording can be found in *Summa Theologiae* by THOMAS AQUINAS (1225–1274), who attributes the quote to BOETHIUS: "Sed aeternitas est aliquid factum, dicit enim Boetius quod nunc fluens facit tempus, nunc stans facit aeternitatem" [AQUINAS 2007]. Cf. also "Thom. S. th. I q. 10 a. 2 ob. I führt den Satz: nunc fluens facit tempus, nunc stans facit aeternitatem, auf Boethius zurück, der sich allerdings nicht in diesem Wortlaut bei ihm findet" [BEIERWALTES 1995, p.171].

⁵⁷"Um zu einer *begrifflichen* Klärung über Phänomene der Zeit zu kommen, wird nicht mehr von der Frage: „Was ist (die) Zeit?“ ausgegangen, sondern es wird vorgeschlagen, evolutionistisch zu denken und von der Frage „Wie komme ich zur Zeit?“ auszugehen" [PÖPPEL 1998, p.381/382, his italics].

different fields of knowledge⁵⁸. Epistemologically, the question might simply be too difficult, i.e. it transcends our thinking⁵⁹. Switching to the point of departure 'How do we come by time?' shifts the focus to the perception of time. The following classification of notions of time has been suggested, cf. [PÖPPEL 1998, p.382]:

1. Primary level: *experience of time* (neuroscience, physiology, psychology)
2. Secondary level
 - a. *Physical notion of time* (cognitive, explanation of the world)
 - b. *Semantic notion of time* (hermeneutic, interpreting life and history)

Neuroscience has discovered that there is a hierarchy of elementary phenomena that are relevant to human experience of time:

Die Hierarchie des menschlichen Zeiterlebens ist durch folgende elementaren Phänomene gekennzeichnet: Erlebnis der *Gleichzeitigkeit* gegenüber *Ungleichzeitigkeit*, Erlebnis der *Aufeinanderfolge* oder der zeitlichen *Ordnung*, Erlebnis der *Gegenwart* oder des *Jetzt* und das Erleben von *Dauer*. Jedes später genannte Zeiterlebnis setzt die zuvor genannten voraus [PÖPPEL 2000, p.20, his italics].

The experience of duration presupposes the experience of the present, which presupposes the experience of temporal succession, which presupposes the experience of simultaneity⁶⁰.

There is a 'window of simultaneity', which is not the same for the different kinds of stimuli. Two acoustic stimuli whose temporal distance is less than 2 to 5 milliseconds are perceived as simultaneous. For optical stimuli the corresponding

⁵⁸ "Jeder Denker (und Wissenschaftler) geht implizit oder auch explizit von dem Paradigma seiner Fachrichtung im Sinne von Thomas Kuhn [*The structure of Scientific Revolutions*, 1962] aus, wobei sein eigenes Denken und sein Fachgebiet zum Zentrum des Weltverständnisses wird" [PÖPPEL 1998, p.381].

⁵⁹ "Was ist Zeit? Die Frage – in dieser Form gestellt – ist für uns zu schwer. Sie übersteigt unser Denken und ist insofern vielleicht sogar eine „verbotene“ Frage [...]" [PÖPPEL 1998, p.370].

⁶⁰The following summary is based on experimental findings explained in [PÖPPEL 1998] and [PÖPPEL 2000].

threshold is 20 to 30 milliseconds. For tactile stimuli it is about 10 milliseconds. Physical simultaneity⁶¹ and subjective simultaneity are not the same. Two stimuli (or events) which are perceived as non-simultaneous but whose temporal distance is less than 30 to 40 milliseconds are not ordered yet, i.e. they are perceived as two but it is not possible to decide which one comes first. This 'threshold of ordering' is the same for acoustic, optical and tactile stimuli.

The experience of the present moment is based on the integration of successive events into a 'gestalt of perception'⁶², which can last up to 3 seconds. For the auditory sense this can be tested by listening to the ticks of a metronome set to a lower and lower frequency and mentally ascribing a subjective stress to every other tick: as from a certain frequency limit one can no longer integrate two ticks into one structure. For the visual sense the three-second present can be tested by looking at two-dimensional representations of three-dimensional objects, e.g. a cube: there are two possible perspectives but concentrating on one of them leads to an automatic change of perspective after a couple of seconds. The present moment might be thought as a durationless point of time but from the viewpoint of psychology this is just an abstraction. The present is perceived as having a temporal extension of about three seconds.⁶³

In PÖPPEL's hierarchy of categories of temporal experience the experience of duration comes last. The experience of simultaneity, the experience of succession and the experience of the present are necessary but not sufficient for the experience of duration. The additum that makes the experience of duration possible is memory⁶⁴. The subjective sense of duration depends on how much of what we have experienced has been stored in our memory. Two time intervals that have the same objective length can be perceived as being of different length. When a lot is going on, time seems to fly, whereas when little happens, time seems to

⁶¹Of course, the measuring instruments also have a window of simultaneity but their resolution is several orders of magnitude better than the resolution of the human sense organs.

⁶²"... daß das Jetzt auf einem Integrations-Mechanismus beruht, der aufeinanderfolgende Ereignisse zu Wahrnehmungsgestalten zusammenfaßt" [PÖPPEL 2000, p.63].

⁶³"Womöglich ist diese Spanne auch der Grund dafür, weshalb Foto-DVDs, die der Entspannung dienen sollen, dies besonders gut unter einer Bedingung tun [...]: wenn die Landschaftsmotive alle drei Sekunden wechseln" [PAULUS 2005, p.174].

⁶⁴"Ohne Gedächtnis ist Dauer nicht erlebbar; ohne eine bestimmte Form von Gedächtnis ist natürlich auch das Erleben von Jetzt und der Folge nicht denkbar" [PÖPPEL 1998, p.374].

crawl. These effects of subjective shrinking and subjective stretching are inverted if the respective time intervals are remembered. In retrospect the interval that created a lot of memory input seems to be stretched, whereas the interval that created little memory input seems to be shrunk. This is known as the subjective time paradoxon⁶⁵.

From the viewpoint of psychology one can see the past as something that is created by calling up content that has been stored in our memory. This is evocative of AUGUSTINE's definition⁶⁶ of time (cf. p.12): the past is seen as "a present of things past, memory" and the future is seen as "a present of things future, expectation". PÖPPEL stresses that expectation is also based on memory. If the world was totally determinate, one would not need a memory (and the experience of time). If the world was totally indeterminate, memory would be useless because expectations are based on an 'extrapolation' of the experience of the past. PÖPPEL sums this evolutionary approach up as follows: "Das Gedächtnis wird darum nur in einer Welt zwischen völliger Determiniertheit und völliger Indeterminiertheit vorgefunden" [PÖPPEL 2000, p.102].

HERMANN WEYL writes the following about the relationship between consciousness and the emergence of time:

Die Urform des Bewußtseinsstromes ist die *Zeit*. Es ist eine Tatsache, sie mag so dunkel und rätselhaft für die Vernunft sein wie sie will, aber sie läßt sich nicht weglegen und wir müssen sie hinnehmen, daß die Bewußtseinsinhalte sich nicht geben als seiend schlechthin (wie etwa Begriffe, Zahlen u. dgl.), sondern als *jetzt-seiend*, die Form des dauernden Jetzt erfüllend mit einem wechselnden Gehalt; so daß es nicht heißt: dies *ist*, sondern: dies *ist jetzt*, doch *jetzt* nicht mehr. Reißen wir uns in der Reflexion heraus aus diesem Strom und stellen uns seinen Gehalt als ein Objekt gegenüber, so wird er uns zu einem

⁶⁵Cf. [PÖPPEL 1998, p.374].

⁶⁶PÖPPEL mentions AUGUSTINE, whose view that temporal experience comes from the nature of consciousness can be summarized as follows: AUGUSTINE "suggested that perception can be divided into three parts: *continuitus*, 'on-going perception', *memoria*, 'memory', and *expectatio*, 'expectation'. *Continuitus* represents actual perception and hence direct experience of the current moment. As each new moment is updated, it passes into memory, which gives rise to expectations of the future being formed" [EVANS 2003, p.24/25].

zeitlichen Ablauf, dessen einzelne Stadien in der Beziehung des *früher und später* zueinander stehen [WEYL 1993, p.5, his italics].

WEYL's hierarchy of temporal experience (first the experience of now, then the sequence of events) is different from PÖPPEL's (first the sequence of events, then the experience of now). This is not a contradiction because PÖPPEL's findings refer to subconscious processes and the 'microscopic' events are stimuli, whereas WEYL refers to a sequence of nows.

RUDOLF TASCHNER stresses the aspect of duration and points out that space and time are perceived differently:

Zeit birgt in sich einfach mehr als nur angewandte Geometrie, sie manifestiert sich im Fließen und Werden, manchmal schnell, manchmal langsam. Die Zeit ist „la durée“⁶⁷, eine unumkehrbare, unwiederholbare, unteilbare „Dauer“. Der Raum wird durch den Verstand erfasst, die Zeit durch die unmittelbare Wahrnehmung, die Intuition [TASCHNER 2007, p.146].

TASCHNER's comment on WEYL draws attention to the act of counting, which plays a role in the process of integrating a sequence of events into a whole:

Da erklingt von Ferne der Schlag der Turmuhr. Und Sie zählen die Schläge: eins, zwei, drei, vier, fünf, sechs, sieben, acht. . . Nach dem achten Schlag verstummt die Glocke. Nun wissen Sie um die Zeit Bescheid: Es ist acht Uhr. Sie stellen dies fest, weil Sie gezählt haben. Denn die Schläge der Glocke selbst klingen gleich: der erste wie der letzte. Nur mit Hilfe des Zählens sind Sie in der Lage, aus den Glockenschlägen auf die Zeit zu schließen. Die einzelnen Glockenschläge sind in der geschilderten Situation die „Bewusstseinsinhalte“, von denen Weyl sprach, die man immer nur als *jetzt seiend* wahrnimmt. Aber indem Sie sie gezählt haben, haben Sie sie nicht in die Vergangenheit entgleiten lassen, sondern halten sie so lange präsent, bis der letzte Glockenschlag verklungen ist. Kurz gesagt: Im

⁶⁷The term *la durée* was coined by HENRI BERGSON [*Sur les données immédiates de la conscience*, 1888].

Zählen der Schläge haben Sie die Zeit im wahrsten Sinne des Wortes
festgehalten [TASCHNER 2007, p.148].

Being able to count seems to be important for being consciously aware of the passage of time. It seems to be unimportant for being aware of space. There seems to be neuropsychological evidence that time and space are not necessarily construed in the same way. DAVID KEMMERER has found out that “[t]he spatial and temporal meanings of English prepositions can be independently impaired” [KEMMERER 2005, p.797, title].⁶⁸

⁶⁸“English uses the same prepositions to describe both spatial and temporal relationships (e.g., *at the corner*, *at 1:30*) [...]. These spacetime parallelisms have been explained by the Metaphoric Mapping Theory, which maintains that humans have a cognitive predisposition to structure temporal concepts in terms of spatial schemas through the application of a TIME IS SPACE metaphor. [...] It is not clear, however, if the metaphor actively influences the way that modern adults process prepositional meanings during language use. To explore this question, a series of experiments was conducted with four brain-damaged subjects with left perisylvian lesions. Two subjects exhibited the following dissociation: they failed a test that assesses knowledge of the spatial meanings of prepositions, but passed a test that assesses knowledge of the corresponding temporal meanings of the same prepositions. This result suggests that understanding the temporal meanings of prepositions does not necessarily require establishing structural alignments with their spatial correlates. [...] Overall, these findings support the view that although the spatial and temporal meanings of prepositions are historically linked by virtue of the TIME IS SPACE metaphor, they can be (and may normally be) represented and processed independently of each other in the brains of modern adults” [KEMMERER 2005, p.797, abstract]. It should be noted that $N = 2$ is not an adequate sample.

Chapter 3

Tense

Tense is a grammatical category referring to the location of situations in time.

B. COMRIE¹

Embedding situations (events, state-of-affairs) in time can be deictic or non-deictic. An utterance that contains a finite verb form can lead to deictic embedding, i.e. it can create a relation between the moment of speaking and the state-of-affairs it refers to. The three temporal segments past, present and future are deictic in the sense that they refer to the moment of encoding: *past* means anterior to the moment of speaking; *present* means simultaneous with the moment of speaking; *future* means posterior to the moment of speaking. Anteriority, simultaneity and posteriority as such are non-deictic concepts, i.e. they refer to the temporal succession of two time points or time intervals. The expression “location of situations in time” in COMRIE’s quote at the beginning of this chapter implicitly contains the notion of the moment of speaking because without it a location of situations would not be possible in the first place. Here the word *time* refers to “time as experienced in communication” [GIERING et al. 1987, p.145], i.e. time containing “the three temporal segments” [ibid.] past, present and future because one of the time points of the manifold time has been made “the primary index of orientation” [ibid.]. The word *embedding* at the beginning

¹BERNARD COMRIE wrote two influential monographs about tense [COMRIE 1985] and aspect [COMRIE 1976]. The quote above is the first sentence of an encyclopedia article written by him [ASHER and SIMPSON 1994, p.4558, headword *tense*].

of this paragraph refers to the standard view of seeing objective time as the starting point. Alternatively, one could also say that tense creates time².

In the spirit of a Latinate grammatical tradition the word *tense* has been used – and is still being used – to identify a particular set of endings³ on the verb. It should be clear that the number of tenses depends on the definition of tense. Definitions of tense can focus on form, or on function, or on both. From a formal viewpoint one can distinguish inflectional and periphrastic ‘tenses’. If the focus is rather on function, then the difference between inflectional⁴ and periphrastic markers is less important or even neglected. Appendix A.1 represents an analysis of the verb forms of the English language. There is almost no reference to function in that appendix. The present chapter about tense expatiates – after some brief remarks about the etymology of the word *tense* – upon the location of state-of-affairs in time. Furthermore, the technical terms *Reichenbach tense* and *correlation* are discussed.

²An utterance such as *I bought a dog on 18 August 2170* is not ungrammatical. Apart from informing about the exact date of a purchase, it establishes a moment of encoding that is posterior to 18 August 2170.

³“How many tenses of the verb are there in English? If your automatic reaction is to say ‘three, at least’ – past, present, and future – you are showing the influence of the Latinate grammatical tradition. If you go for a larger number, adding such labels as perfect and pluperfect, this tradition is even more deep-rooted within you. Twenty or more tense forms are set up in some traditional grammars. [...] To see the extent to which this is a distortion of the way English works, we must be sure of how the word *tense* was used in traditional grammar. Tense was thought of as the grammatical expression of time, and identified by a particular set of endings on the verb. In Latin there were present-tense endings (*amo, amas, amat...* ‘I love, you love, he/she/it loves...’), future tense endings (*amabo, amabis, amabit...* ‘I will/shall love, you will/shall love, he/she/it will/shall love...’), perfect tense endings (*amavi, amavisti, amavit...* ‘I loved, you loved, he/she/it loved...’), and several others marking different tense forms. English, by contrast, has only one inflectional form to express time: the past tense marker (typically *-ed*), as in *walked, jumped, and saw*. There is therefore a two-way tense contrast in English: *I walk vs I walked* – present tense vs past tense. English has no future tense ending, but uses a wide range of other techniques to express future time (such as *will/shall, be going to, be about to*, and future adverbs. The linguistic facts are uncontroversial. However, people find it extremely difficult to drop the notion of ‘future tense’ (and related notions, such as imperfect, future perfect, and pluperfect tenses) from their mental vocabulary, and to look for other ways of talking about the grammatical realities of the English verb” [CRYSTAL 1995, p.196, blue box: “How many tenses?”].

⁴The abundance of inflectional affixes in the conjugation systems of languages such as Latin, Ancient Greek and Sanskrit might have led to the traditional view that inflectional tense marking is the paradigm.

3.1 Time and tense

3.1.1 Etymology

Unlike in many other European languages, the terminological differentiation between 'tense' and 'time' is already inherent in the English lexicon. This is due to the existence of two separate native words: *tense* denotes a linguistic category and refers to "any of the various (sets of) forms of a verb which distinguish temporal and associated features of a denoted action or state in relation to the time of utterance, writing, etc." [STEVENSON 2007, p.3208, headword *tense* noun 2], whereas *time* refers to the extra-linguistic, physical phenomenon discussed in the previous chapter. Often both English words are translated by one word only: French *temps*, Spanish *tiempo*, Latin *tempus*, Greek *χρόνος*, German *Zeit*, Czech *čas*, Russian *время*.⁵ The base meaning of these foreign words is 'time'. Emphasizing the meaning 'tense' can be achieved by placing 'grammatical' in front of or behind 'time', e.g. French *temps grammatical*, German *grammatische Zeit*, Czech *gramatický/mluvnický čas*, Russian *грамматическое время*.⁶ Alternatively, in some languages the Latin word for 'time' is used as a linguistic technical term for 'tense', e.g. German *Tempus*.⁷ It is worth mentioning that the adjective belonging to the word *time* is *temporal*, not *timely*. The word *timely* does exist but it refers to something "occurring, done, or made at an appropriate or suitable time" [STEVENSON 2007, p.3270, headword *timely* 1]. In light of the fact that *temporal* doubles as the adjective belonging to *tense*, one might conclude that the English language's privilege of having two separate native words for the concepts of 'time' and 'tense' exists for the nouns only.

The noun *tense* comes, via the Old French *tens*, from the Latin word *tempus*,

⁵The distribution of *čas* vs. *время* is as follows: cognates of Czech *čas* exist in seven Slavonic languages and cognates of Russian *время* exist in four Slavonic languages. Western group: Czech, Slovak, Sorbian (Lusatian) *čas*, Polish *czas*. Eastern group: Russian *время*, Ukrainian, White Russian *час*. Southern group: Bulgarian, Macedonian *време*, Serbo-Croat *време/вријеме*, Slovene *čas* [JEDLIČKA 1977, p.374/375, 6-22-1].

⁶Of course, this is also possible in English: the collocation *grammatical time* can be used as a synonym for *tense*.

⁷According to the *Dictionary of Slavonic Linguistic Terminology* [JEDLIČKA 1977, p.374/374, 6-22-1] there is only one Slavonic language where this is common: Sorbian allows for *tempus* as a synonym for *gramatiski čas*.

meaning 'time'.⁸ At first glance, there does not seem to be a connection between the noun and the adjective *tense*, which comes from the Latin word *tensus*, a past participle meaning 'stretched'. Still, the Indo-European root **temp-* is nothing but an "extension of **ten-*" [WATKINS 2000, p.90], both meaning 'to stretch'. Of course, this "portmanteau meaning for a root" [WATKINS 2000, p.xxi], derived from the meanings of cognate words in several languages, is nothing but the "semantic common denominator" [ibid.]. Still, there might be a semantic connection between the Modern English noun *tense* and the homonymic adjective. Whether or not this connection is too far-fetched to be of any significance, i.e. just a nice finding of comparative linguistics, is open to debate. At least, it might be permissible to use metaphorically the word *tension* when discussing verb forms. GUSTAVE GUILLAUME⁹ used extensively the French words *tension* (identical in meaning to its English cognate) and *détension* in his analysis of infinite verb forms (see p.70).

3.1.2 Localisation in time

It is important to bear in mind that without the additional selection of one particular point called *present (time)* there is neither a *future (time)* nor a *past (time)*. The primary concepts of the manifold called *time* are the notions of *anteriority/posteriority* and *simultaneousness*, i.e. those of "temporal precedence and simultaneity" [POIDEVIN 1996, p.467]. Without the selection of a reference time there is no global chart¹⁰ or coordinate system to localise situations in time. Therefore, "the grammaticalization of location in time" [FLEISCHMANN 1990, p.15], i.e. tense, presupposes a reference time.

⁸Cf. [STEVENSON 2007, p.3208, headword *tense*], Old French *tens* > Modern French *temps* [ibid.] This might explain why the Latin *tempus* never caught on amongst English and French linguists: etymologically, English *tense*, French *temps* and Latin *tempus* are actually the same word. In English the word *tempus* exists as a technical term in music: "In medieval measurable music, the duration of the breve relative to that of the semibreve" [STEVENSON 2007, p.3204, headword *tempus*].

⁹Cf. [GUILLAUME 1929].

¹⁰*Chart* '(local) coordinate system' is a technical term from differential geometry. Its use here alludes to the view that time is a manifold, i.e. an abstract mathematical space whose structure is described by the choice of coordinate system. Singling out a point (or stretch) of the manifold by labelling it 'present' can be seen as such a choice of coordinate system, cf. also p.27.

This reference time is normally the moment of speech but may be a surrogate temporal anchor indirectly linked to the moment of speech or conventionally established by the discourse. In contrast to other grammatical categories associated with the verb (aspect, voice, mood, evidentiality) tense is *relational* in that it involves at least two moments in time (which may coincide wholly or in part) [FLEISCHMANN 1990, p.15, her italics].

To recap, localisation in time relates to the moment of encoding.

If *tense* is a grammatical category, i.e. “a class or group of items which fulfil the same or similar functions” [RICHARDS and SCHMIDT 2002, p.232], then those items, i.e. the verb forms of English, require being interpreted. The very existence of the category tense hinges upon this interpretation, as does the number of tenses in English. Which of the oppositions MOD, PRET, PERF, PROG and PASS refers to a temporal difference involving – be it explicitly or implicitly – the moment of encoding? There are two almost clear-cut cases: [PASS: +] is not a tense and [PRET: +] is (mainly) a tense.

The binary opposition [PASS: ∅/+] is not a temporal one because it refers to “the relationship between a verb and the noun phrases which are associated with it” [RICHARDS and SCHMIDT 2002, p.582]. This category is called *voice* by traditional grammars. It is normally devoid of any temporal relevance. Still, as switching on PASS entails a change of emphasis, there might be cases of interference with other markers such as PERF, cf. the famous example of **Einstein has visited Princeton vs. Princeton has been visited by Einstein*.¹¹ Furthermore, using the passive voice might preclude a native speaker of English from switching on PROG or PERF because of the awkward combinations of *be(en)* and *being*.

¹¹There are variants (different subjects and objects) of this in the literature, e.g. “The shift from active to passive may change the meaning [...] of the perfective aspect: *Winston Churchill has twice visited Harvard* [vs.] *Harvard has twice been visited by Winston Churchill*. It has been claimed that the active sentence can only be appropriately used in the lifetime of Churchill, since the subject of the sentence determines the interpretability of the perfective in terms of a period of time leading up to the present [...]. The passive sentence, according to this claim, could appropriately be said now, after Churchill’s death, since Harvard University is still in existence. However, *speakers have differing intuitions on this matter*” [QUIRK et al. 1985, p.166, note; italics AE].

In most instances, the binary opposition [PRET: \emptyset /+] refers to the category tense because switching on PRET mainly expresses a remoteness which is prior to the moment of speech. An utterance such as *Peter played* localises Peter's playing in the past time. Therefore, the traditional name *past tense* is an appropriate one for the majority of uses of [PRET: +]. The best name for the unmarked counterpart [PRET: \emptyset] is *non-past* because utterances such as *Peter plays* do not necessarily refer to present time but might refer to general time, i.e. past, present and future. Unfortunately, there are uses of [PRET: +] which do not refer to past time but to an unreal present or general time, e.g. *if I had a hammer*.

The terminological difficulties alluded to in the previous paragraph are of a general nature. Firstly, the unmarked counterpart of a binary opposition seems to be defined by something which it is not, i.e. the mere existence of its marked counterpart. Secondly, it might be considered questionable to ascribe a temporal meaning to utterances referring to time in general. Thirdly, differing uses of a particular verb form impede our finding a basic meaning for it. All three of these problems need to be discussed at length. It is the key feature of markedness theory that "certain linguistic elements can be seen as unmarked, i.e. simple, core, or prototypical, while others are seen as marked, i.e. complex, peripheral, or exceptional" [RICHARDS and SCHMIDT 2002, p.320].

It is not a weakness of this theory that the unmarked linguistic elements are defined by the existence of their marked counterparts – it is its strength. The notion of a 'simple' verb form would be devoid of any meaning if there were no 'complex' verb forms. In the case of [PRET: \emptyset /+] the basic idea of markedness theory has led to ascribing a new name to [PRET: \emptyset]: *non-past*. Apart from the fact that the traditional name (*present tense*) is misleading when [PRET: \emptyset] refers to time in general or timeless statements such as *circles are round*, the new name is backed up by morphology: the suffix -ed, which expresses [PRET: +], is the only inflectional temporal marker in English. Therefore, one might adopt the view that there is just one tense in English. Adopting this view would mean disregarding periphrasis as a permissible means of localising events in time. This view would throw the baby out with the bath water because COMRIE's definition of tense does not rule out periphrastic verbal expressions to localise events in

time. His definition is neutral concerning the ways of localisation. Still, the fact that the English past tense is the only inflectional English tense singles [PRET: \emptyset /+] out as a basic dichotomy of English.

What is the temporal meaning of utterances referring to time in general, such as *I don't like spinach*, *Sicily is an island* or *5 is an odd number*? None of these examples singles out explicitly a temporal reference point. The statement *I don't like spinach* refers to a time-interval which presumably corresponds roughly to a particular I's life span. The same applies to the second example, Sicily's life span being considerably longer. The third example represents an eternal truth in the sense that if the statement is true at any point in time, then it is always true: the number 5's life span can be seen as infinite.¹² All three examples refer implicitly to time-intervals that *contain* the moment of speech but they do not *relate* to it. Therefore, utterances like the ones mentioned above are not 'tensed' in the sense of COMRIE. This changes immediately after switching on PRET: *I didn't like spinach* and *Sicily was an island* refer to time-intervals that do not contain the moment of speech. They are located in past time. Strangely enough, **5 was an odd number* can be seen as ungrammatical because it implies that the truth-value of the statement depends upon the parameter time.

A mapping establishing a one-to-one correspondence between any conceivable subdivision of the manifold *time* and English verb forms does not exist. Therefore, it is impossible to ascribe an exclusive temporal meaning to English verb forms. Still, it is possible to list different temporal readings of a particular verb form and choose one of them as the prototypical meaning. Ideally, this choice is backed up by statistical data derived from a corpus of sample sentences. The idea of a one-to-one correspondence between the tripartite division of time into past, present and future time and the notions of past, present and future tense is an old one. 2,100 years ago DIONYS THRAX, an influential grammarian, wrote about Greek verbs: "There are three tenses, present, past and future" [KLEIN 1974, p.17]. This classical view might have been facilitated by the inflectional Greek verbal system and is not necessarily true for other languages. For instance, the name future tense for forms containing *will* is a specious one because the presence of *will* is neither a necessary nor a sufficient condition for locating a situation

¹²In this context one could also say *eternal* or *atemporal*.

in future time. It is not a necessary condition because there are other ways of referring to the future, such as using a completely unmarked verb form plus a temporal adverb, e.g. *the train arrives at 9:30*, or using an expanded form plus a temporal adverb, e.g. *I am leaving at 2*, or using the structure *(to) be going to*, e.g. *I'm going to publish this*. It is not a sufficient condition because using *will* can refer to (present) volition, e.g. *will you help us?*, or to habit, e.g. *they'll drink one cup after the other*, or to (present) assumption, e.g. (telephone rings) *that'll be John*, or to general time, e.g. *water will boil at 100 degrees*.

3.2 Reichenbach

It is not at all necessary for the temporal reference point to coincide with the moment of encoding. In an utterance such as *they had left when she arrived* the action of leaving is localised in time by [PRET: +, PERF: +]. The leaving takes place in the past (time) but the point of reference is not the same as the moment of speech. Not only is the leaving prior to the moment of speech but it is also prior to the above-mentioned action of arriving, which itself is prior to the moment of speech. Therefore, [PRET: +, PERF: +], commonly referred to as 'past perfect', localises events in the pre-past. The separation between the point of reference and the moment of encoding allows for a more sophisticated division of the manifold time. The sequence "past < present < future" becomes "before-past < past < after-past < present < before-future < future < after-future" [JESPERSEN 1931, p.2]. There is neither a before-present nor an after-present in JESPERSEN's model of time. Not until dealing with the present perfect does he introduce a retrospective element for the present. Contrary to OTTO JESPERSEN's model of time, HANS REICHENBACH's does not exclude *a priori* a before-present and an after-present.

In REICHENBACH's system the notion of tense is established by fixing the temporal arrangement of three points according to the basic principles of precedence and simultaneity:

A Reichenbach tense¹³ [...] is a complex of three points (S, R,

¹³Called "fundamental form" in [REICHENBACH 1947].

and E), temporally ordered with respect to one another. One of the points, S, is a deictic element anchored within the discourse situation, often to the moment of speech. The primary tense relationship is between S and R, a reference point. E, the event point, is located through its relationship to R [HORNSTEIN 1990, p.14].

How many *Reichenbach tenses* are there? The number of simultaneous points can be 3, 2 or 0. For three simultaneous points there is just one possible arrangement: $S = R = E$. For two simultaneous points the number of possibilities can be counted by selecting two points out of three ($\binom{3}{2} = 3$ possibilities, i.e. $S = R$, $S = E$, and $R = E$) and then placing the third point either before or after the pair of simultaneous points (2 possibilities for each of the 3 above-mentioned arrangements, i.e. $E < S = R$ and $S = R < E$, $R < S = E$ and $S = E < R$, $S < R = E$ and $R = E < S$). For zero simultaneous points there are $3! = 3 \times 2 \times 1 = 6$ possibilities because there are 3 possibilities for the first point, i.e. the one on the left-hand side, then 2 possibilities for the second point, i.e. the one in the middle, and finally just one possibility for the third point, i.e. the one on the right-hand side ($S < R < E$, $S < E < R$, $E < R < S$, $E < S < R$, $R < S < E$, $R < E < S$). Therefore, there are $1 + 3 \times 2 + 3! = 1 + 6 + 6 = 13$ possible arrangements of the three points S, R and E. Table 3.1, taken from [REICHENBACH 1947, p.297], summarises REICHENBACH's approach¹⁴.

REICHENBACH himself was aware of the fact that there is not a one-to-one correspondence between his exhaustive list of 13 arrangements of S, R, E and English verb forms. He opted for 9 "fundamental forms" [REICHENBACH 1947, p.296] by proceeding as follows: S represents the origin of the temporal coordinate system, thus defining past, present and future. R can be located in S's past or present or future (3 possibilities). After that E can be placed in R's past present or future, i.e. prior to, simultaneous with, or after R (another 3 possibilities). In other words, considering only the position of R relative to S and that of E relative to R, i.e. neglecting the position of E relative to S, leads to $3 \times 3 = 9$ English (Reichenbach) tenses. The names that REICHENBACH gave them reflect their emergence: the modifier "anterior" refers to $E < R$, "simple" refers

¹⁴REICHENBACH's original notation is different: he used an em dash instead of "<" and a comma instead of "=", e.g. "E—S, R" instead of " $E < S = R$ ".

Table 3.1: Reichenbach tenses: nomenclature

<i>Structure</i>	<i>New Name</i>	<i>Traditional Name</i>
$E < R < S$	Anterior past	Past perfect
$E = R < S$	Simple past	Simple past
$R < E < S$	Posterior past	-
$R < S = E$	"	-
$R < S < E$	"	-
$E < S = R$	Anterior present	Present perfect
$S = R = E$	Simple present	Present
$S = R < E$	Posterior present	Simple future
$S < E < R$	Anterior future	Future perfect
$S = E < R$	"	"
$E < S < R$	"	"
$S < R = E$	Simple future	Simple future
$S < R < E$	Posterior future	-

to $E = R$, and “posterior” refers to $E > R$. Table 3.2 arranges the 9 fundamental forms in a 3×3 -table.

There is neither a traditional name for a posterior future nor for a posterior past. Both can be expressed by using the periphrastic *be going to*. An utterance referring to a posterior future would be: *you will be going to do it*. In the case of the posterior past, $R < E < S$, $R < S = E$ and $R < S < E$ are identified because an utterance such as *I was going to do it* is non-committal about the position of E relative to S , at least from a strictly logical point of view. There is a similar reason for identifying $S < E < R$, $S = E < R$ and $E < S < R$ (the three anterior futures): an utterance such as *you will have learnt a lot about it* is also non-committal about the position of E relative to S . Still, there are utterances that suggest quite strongly one of the three readings, e.g. the ‘future perfect’ in *Did he have a deep voice? It’ll have been Paul*¹⁵ clearly refers to past time and therefore represents an instance of REICHENBACH’s third anterior future ($E < S < R$). This usage is paralleled by German: *Hatte er eine tiefe Stimme? Es wird Paul gewesen sein*.

¹⁵This example is taken from [SOARS and SOARS 2003, p.67] and [SOARS et al. 2003, p.67]. Cf. also footnote 27 on p.55.

Table 3.2: Reichenbach tenses: 3×3 fundamental forms

		anterior	'simple'	posterior
		$E < R$	$E = R$	$E > R$
past	$R < S$	$E < R < S$	$E = R < S$	$R < \{E, S\}$
present	$R = S$	$E < S = R$	$S = R = E$	$S = R < E$
future	$R > S$	$\{E, S\} < R$	$S < R = E$	$S < R < E$

REICHENBACH's introduction of a third point is extremely helpful when it comes to comparing the temporal meaning of utterances which are indistinguishable by the relative position of the point of speech and the point of event only – especially when R coincides with either S or E . It is helpful for $S < E$, where REICHENBACH's approach differentiates a posterior-present reading of a (traditional) simple future from its (Reichenbachian) simple-future reading. For instance, an utterance such as *I will help you* is – if devoid of any context – non-committal about whether it is a posterior present (*I will help you now*, $S = R < E$) or a simple future (*I will help you tomorrow*, $S < R = E$). A third point is even more helpful for $E < S$, where REICHENBACH's approach differentiates a simple-past reading from an anterior-present reading. This is crucial for distinguishing the simple present from the present perfect, which both locate events in past time (see below).

If need be, REICHENBACH's scheme can be expanded by introducing a second reference point:

[...] {would have + -N} as a tense marker [...] requires four points: [the moment of] speech, the earlier point reached by the {-D} of would, the point after that reached by the {will} of would, and the moment of the event, anterior to this last point, as indicated by the {have + -N} [CLIFFORD 1975, p.41].

Beyond the spheres of reported speech and conditional clauses, this (purely temporal) use of [PRET: +, MOD: +, PERF: +], traditionally called ‘conditional perfect’, might be fairly rare but it is completely natural in a narrative, e.g. “By noon the next day his brother *would have made* contact with their accomplices and would be ready to confer about the results” [CLIFFORD 1975, p.41/42, his italics]. As pointed out in the quote above, a four-point Reichenbachian interpretation ($R_1 < E < R_2 < S$) is appropriate here. The other verb form in the above-mentioned sentence (*would be ready*) is a nice paradigm for REICHENBACH’s first posterior past ($R < E < S$): the past tense morpheme in *would* establishes a reference point before the moment of encoding ($R < S$) and the *will* in *would* places *be ready* later than the reference point ($R < E$). Pragmatic inference leads to the assumption that $E < S$ holds.

3.3 Correlation

As discussed in the previous section, the notion of *Reichenbach tense* represents a helpful approach when it comes to ascribing a function to English verb forms, but calling REICHENBACH’s fundamental forms *tenses*¹⁶ might be considered a (conceptual) remnant of a Latinate¹⁷ grammatical tradition. DIETER GIERING et al. have proposed a conceptually much more radical approach by distinguishing at the level of verbal categories between the S-R relation and the R-E relation¹⁸:

We have [...] two kinds of relation: the relation between the moment of speaking (t_1) and a secondary reference time (t_2), and the relation between this secondary reference time (t_2) and the state-of-affairs. In English there are two morphological categories to express

¹⁶REICHENBACH himself prefers the expressions “[13] possibilities of ordering the three time points” [REICHENBACH 1947, p.296] and “[9] fundamental forms” [ibid.], cf. the discussion of this in the previous section, especially table 3.1, where 9 new ‘tenses’ are compared to 6 traditional ‘tenses’. REICHENBACH points out that “the number of recognized grammatical tenses in English is *only 6*” [ibid., italics AE].

¹⁷6 Latinate ‘tenses’: (past, present, future) × (simple, perfect); 9 Reichenbach ‘tenses’: (past, present, future) × (anterior, simple, posterior).

¹⁸REICHENBACH’s and GIERING’s abbreviations differ: S =: t_1 , R =: t_2 , E =: “time of state-of-affairs”. Whenever GIERING et al. use a t_3 , e.g. when dealing with the ‘backshift’ of tenses in reported speech, it never refers to REICHENBACH’s E but the correspondence is as follows: R_1 =: t_2 and R_2 =: t_3 .

them, the **category of tense** [...], and the **category of correlation** [...] [GIERING et al. 1987, p.146].

A tertiary index (t_3) is needed to accommodate for the effects of reporting an utterance of a second speaker. The authors establish three binary oppositions between “=” and “≠” by regarding “<” and “>” as two variants of “≠”; one binary opposition for *basic tense* (t_1 - t_2 relation), one for *derived tense* (t_2 - t_3 relation) and one for *correlation* (relation between t_2/t_3 and the state-of-affairs).

The first binary opposition of the category tense includes Pres[ent] ($t_2 = t_1$) as the unmarked member. There are two variants of the marked member: Past ($t_2 < t_1$) and Fut[ure] ($t_2 > t_1$). This can be illustrated¹⁹ as follows:

$$(\emptyset) \text{ call-}\emptyset \text{ (-s)} \quad - \quad \text{---} \quad + \quad \left\{ \begin{array}{l} \text{call-ed} \\ \text{shall/will call-}\emptyset \end{array} \right. \quad (\text{basic tense})$$

A second moment of speaking in the past (t_2) is introduced to describe the temporal relations in reported speech²⁰. This establishes a “derived tense relation” [GIERING et al. 1987, p.147] between t_2 and the reference time t_3 . The second binary opposition of the category tense includes Pres[ent-in-the]-Past ($t_3 = t_2$) as the unmarked member. There are two variants of the marked member: Past[-in-the]-Past ($t_3 < t_2$) and Fut[ure-in-the]-Past ($t_3 > t_2$). This can be illustrated²¹ as follows:

$$(\emptyset) \text{ call-ed} \quad - \quad \text{---} \quad + \quad \left\{ \begin{array}{l} \text{had call-ed} \\ \text{should/would call-}\emptyset \end{array} \right. \quad (\text{derived tense})$$

The authors describe the “categorical meaning of tense²² [...] as follows: the speaker indicates a temporal interval (gap)” [GIERING et al. 1987, p.148] between t_1 , the moment of speaking, and t_2 , “a secondary reference time in past or future” [ibid.] (basic tense), or between t_2 , a second moment of speaking, and

¹⁹The illustration is taken from [GIERING et al. 1987, p.148].

²⁰This arrangement is appropriate if and only if the reporting verb is past.

²¹The illustration is taken from [GIERING et al. 1987, p.148].

²² “[T]hat is, the meaning which forms the common basis for the definition of the various tense functions” [GIERING et al. 1987, p.148].

t_3 , “a tertiary reference time in Past-Past or Fut-Past” [ibid.] (derived tense). The unmarked forms negate this categorial meaning.

The advantage of distinguishing between basic and derived tenses becomes clear if one looks at the use of [PRET: +] in reported speech, e.g. *she believed me* vs. *they said that she believed me*. The *believed* in the first sentence is Past: there is a temporal gap between the moment of speaking and the reference time, which lies in past time. The *believed* in the second sentence is Pres-Past: there is no temporal gap between the second moment of speaking established by *said* and the reference time, which also lies in the past. The temporal gap between the moment of speaking and the reference time is created by $t_1 \neq t_2$, not by $t_2 = t_3$. The direct version of *they said that she believed me* is *she believes you*. The ‘shift’ in tenses is Pres \rightarrow Pres-Past, i.e. the transition from a basic tense to a derived tense, not Pres \rightarrow Past, i.e. a ‘backshift’ within the set of basic tenses. All this was also observed by REICHENBACH²³.

The binary opposition of the category correlation includes Sim[ultaneity] (time of state-of-affairs = t_2 or time of state-of-affairs = t_3) as the unmarked member. There are two variants of the marked member: Ant[eriority] (time of state-of-affairs < t_2 or time of state-of-affairs < t_3) and Post[eriority] (time of state-of-affairs > t_2 or time of state-of-affairs > t_3). This can be illustrated²⁴ as follows:

$$(\emptyset) \text{ call-}\emptyset \quad - \quad \text{---} \quad + \quad \begin{cases} \text{ha(ve) call-ed} \\ \text{(be) going to call-}\emptyset \end{cases} \quad (\text{correlation})$$

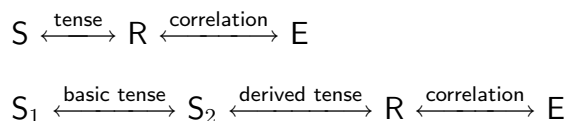
As correlation relates to the time of the state-of-affairs, it is always present, although the unmarked form might be invisible. Tense and correlation share the property of being *relational*, i.e. *two* points in time are involved. GIERING et al. explain that the categorial meaning of correlation indicates

²³ “In some books on grammar we find the remark that the transition from direct to indirect discourse is accompanied by a shift of the tense from the present to the past. This shift, however, must not be regarded as a change in the meaning of the tense; it follows from the change in the point of speech. Thus ‘I *am* cold’ has a point of speech lying before that of ‘I said that I *was* cold’ ” [REICHENBACH 1947, p.296, footnote, his italics].

²⁴The illustration is taken from [GIERING et al. 1987, p.158].

the non-simultaneity (anteriority/posteriority) of the state-of-affairs to be described with the secondary (or tertiary) reference time. Thus the speaker expresses non-parallelity of his temporal standpoint with the state-of-affairs (retrospection/prospection). The marked forms express anteriority or posteriority. [...] The unmarked form expresses simultaneity – that is, the speaker’s temporal standpoint and the state-of-affairs are simultaneous (no retrospection/prospection) [GIERING et al. 1987, p.158].

Contrary to tense ($S \leftrightarrow R$), correlation ($R \leftrightarrow E$) is detached from the moment of speaking (S). This means that correlation is – just like aspect – non-deictic. Contrary to the marked members of tense, the marked members of correlation can be used as infinitives. In other words, infinitives can be marked for non-simultaneity, e.g. *to have sung* is Ant and *to be going to sing* is Post. The function of the two categories tense and correlation can be illustrated as follows²⁵:



Correlation operates at the E-end of the two sequences above, whereas tense operates at the S-end. R can be seen as the hinge that connects tense and correlation.

If one takes the hinge away, the system of tense and correlation ceases to exist and all that is left is objective time. In order to see that it is R which creates the complexity of the English tense-correlation combinations, one might approach the problem by starting with the objective temporal segments present, past and future, which are determined by the E-S relation. If $E = S$, then E is objectively in the present of S. Introducing an R that is simultaneous with E and S, leads to the ‘linguistic time’ SimPres ($S = R = E$). Placing R in the past of S leads to the reading PostPast ($R < S = E$), and placing R in the future of S

²⁵The names for the time points – especially for those in the second sequence – are a synthesis of the nomenclature of REICHENBACH and GIERING et al. Names in the spirit of REICHENBACH: $S \xleftrightarrow{\text{basic tense}} R_1 \xleftrightarrow{\text{derived tense}} R_2 \xleftrightarrow{\text{correlation}} E$. Names in the spirit of GIERING et al.: $t_1 \xleftrightarrow{\text{basic tense}} t_2 \xleftrightarrow{\text{derived tense}} t_3 \xleftrightarrow{\text{correlation}} \textit{state-of-affairs}$.

leads to the reading AntFut ($S = E < R$). One E-S relation can be construed in three different ways²⁶. The number of tense-correlation combinations increases for $E \neq S$.

$E < S$ ('objective past') allows for five different interpretations depending on the position of R: PostPast ($R < E$, e.g. *she was going to buy a car*), SimPast ($R = E$, e.g. *she bought a car*), AntPast ($E < R < S$, e.g. *she had bought a car*), AntPres ($R = S$, e.g. *she has bought a car*), and AntFut ($R > S$, e.g. *she will have bought a car*²⁷). $E > S$ ('objective future') also allows for five²⁸ different interpretations: PostPast ($R < S$, e.g. *she was going to buy a car tomorrow*), PostPres ($R = S$, e.g. *she is going to buy a car now*), PostFut ($S < R < E$, e.g. *she will be going to buy a car*), SimFut ($R = E$, e.g. *she will buy a car*), and AntFut ($R > E$, e.g. *she will have bought a car*²⁹). All three 'objective times' can be construed as posterior past and anterior future³⁰. The two sets of five tense-correlation combinations for $E \neq S$ display a certain symmetry. Firstly, both allow for all three 'tenses' but the natural tense, i.e. past tense for past time and future tense for future time, appears three times more often than the others. Secondly, in both sets the natural tense allows for all three 'correlations'. Thirdly, in both sets the two 'unnatural' tenses are only possible with the appropriate variant of correlation, i.e. Ant for $E < S$ and Post for $S < E$.

The notions of correlation and derived tense make it possible to differentiate between different functions of [PRET: + PERF: +]. The 'past perfect' in *she had listened to 10 CDs before she bought one* is AntPast, whereas the one in *she told me that she had bought a car* can be either SimPast-Past (*she told me: "I bought a car"*) or AntPres-Past (*she told me: "I have bought a car"*).

"For the purpose of comparing the English Ant + tense forms and the German Perfekt (Plusquamperfekt, Futur II) forms" [GIERING et al. 1987, p.160]

²⁶Examples: *being president now* could be construed as *I am the president*, *I was going to be the president* or *I will have been the president*.

²⁷This could be said as a conjecture about the past, cf. *it will have been Peter*, uttered after the telephone has stopped ringing without having been picked up.

²⁸ $3 + 5 + 5 = 13$ confirms the total number, which was calculated in a different way in the previous section, of possible arrangements of S, R and E.

²⁹As in: *she will have bought a car by the end of the week*.

³⁰To differentiate between the three types of PostPast (or between the three types of AntFut) the full system of 13 possibilities of ordering S, R and E is necessary.

the authors introduce the concept of *exclusive* vs. *inclusive* anteriority. Their comparison is presented in appendix C.1.2 (p.189).

The system of tense-correlation is evocative of COMRIE's concept of *absolute-relative tense*, which refers to a verb form that "ha[s] as part of its meaning that a reference point is situated at, before, or after the present moment and in addition that a situation is located at, before or after that reference point" [COMRIE 1985, p.65]. The past perfect is an absolute-relative tense. Whether the present perfect is an absolute-relative tense is a controversial issue. GIERING et al. (and REICHENBACH) say yes, COMRIE says no. The fundamental problem that COMRIE, who rejects REICHENBACH's approach,³¹ calls attention to is the fact that for $R = S$ the reference point is invisible: "A reference point coinciding with the present moment simply gives absolute time reference, not absolute-relative time reference" [ibid.].

³¹Cf. [COMRIE 1985, p.65, footnote].

Chapter 4

Aspect

Within the area of aktionsart and aspect, terminological proliferation as well as terminological confusion is rampant.

H. BORER¹

This chapter aims at examining the notion of verbal aspect, a grammatical category there is little agreement about. As it refers to verbs, it can be regarded as a temporal category but, “[u]nlike tense, aspect is not deictic, in the sense that it is not relative to the time of utterance” [QUIRK et al. 1985, p.188]. The word *aspect* is of Latin origin: *aspectus* ‘look, view’ comes from *aspicere* ‘to look on’.² Its French and German cognates are *aspect* and *Aspekt*. As a technical term of linguistics it has “undergone a two-step loan translation process, during which the meaning has been significantly changed” [ДАHL 1994а, p.241]: *Aspekt* and *aspect* are loan translations of the Russian word вид³ (глагола) ‘viewpoint (of the verb)’, which itself is a loan translation of the Greek word εἶδος ‘appearance, form, idea, kind, nature, sight’. Both the Russian term and its Latin loan translation can refer to the way something looks and to the way someone looks

¹Taken from [BORER 2005, p.34].

²“Mit *Aspekt* meint man in alltagssprachlicher Verwendung zweierlei: die Art, wie man etwas ansieht (agentiv) [oder] die Art, wie etwas aussieht (statisch). Beide Verwendungsweisen gehen auf das Lateinische zurück (in agentiver Funktion bedeutet das Verbalabstraktum *aspectus* allerdings ‘Blick, Gesichtskreis’)” [TICHY 2000, p.115].

³Etymology: “altrussisch видъ ‘εἶδος, θεωρία’ [...]. Urverwandt mit litauisch *véidas* ‘Angesicht’, lettisch *veīds* ‘Form, Aussehen’, altindisch *vēdas* ‘Kenntnis, Umsicht’, avestisch *vaēdah-* ‘Besitz’, griechisch *Ἔειδος* ‘Ansehen, Gestalt’, irisch *fiad* ‘coram’, kymrisch *gwydd* ‘Anwesenheit’ (aus **veido-*)” [VASMER 1953, p.198].

at something. Contrary to the Latin *aspectus*, the Russian вид can also mean 'kind, species', even when referring to species in biology. The appropriate Latin translation of this meaning of the Russian word would be *genus* (Greek *εἶδος*), cf. [TICHY 2000, p.115].

According to [КНОБЛОХ 1986, p.172], the Greek term was used by DIONYS THRAX to refer to morphological changes of nouns and verbs: the primary form was called *εἶδος πρωτότυπου* (*species primitiva* in Latin) and the derivative form was called *εἶδος παράγωγου* (*species derivativa* in Latin). In the 17th and 18th century the Russian term вид had the same meaning, referring to morphology only. During the 19th century grammarians⁴ began to give it a new interpretation, which became widely accepted amongst Slavists at the beginning of the 20th century: "in Slavic linguistics, the term 'aspect' is constrained to denote only the opposition between perfective and imperfective aspect" [DAHL 1994a, p.241]. DAHL's using the word 'only' shows that the word 'aspect' has a wider sense than its Slavic cognate. According to HORST G. KLEIN, the study of Slavic verbal aspect should provide the starting point for any discussion of aspectology because verbal aspect is a phenomenon that is considered to be a grammatical category in the Slavic languages.⁵

There are many different definitions of the term 'verbal aspect', often contradicting one another. Furthermore, the Anglo-French word *aspect* is more polysemous than its German cognate *Aspekt*. English and French have borrowed the German word *Aktionsart* 'manner of action' (French *ordre de procès*) for denoting lexical aspect, but it is not as widely accepted as the word *aspect*. A well-balanced definition of verbal aspect is the following:

⁴"The Russian term вид [...] was first used by N. I. GREČ in his Russian grammar of 1827" [SASSE 2006, p.536]. He was not the first to describe Slavic aspectual oppositions. This was done more than two centuries earlier by the Prague scholar VAVŘINEC BENEDIKT Z NUDOŽER, who "was the first to describe grammatical aspect as a complementary system of two perspectives or viewpoints" [ibid.]. Bibliographical details: "Benedictus of Nudožery, *Grammaticae bohemicae ad leges naturalis methodi conformatae et notis numerisque illustratae ac distinctae libri duo*, 1603" [ŠABRŠULA 1972, p.95].

⁵"Der Verbalaspekt ist ein Phänomen, das in den slawischen Sprachen als grammatische Kategorie gilt. Der Ausgangspunkt für eine jede Erörterung des Problems sollte deshalb im Slawischen zu suchen sein" [KLEIN 1974, p.76]. Cf. also HANS-JÜRGEN SASSE, who points out the importance of the Slavic paradigm in a less categorical way: "The grammatical description of the Slavic verb system served both as an instigator and as a pacemaker for later developments of the theory [of verbal aspect]" [SASSE 2006, p.536].

The term 'aspect' is used in both a narrower sense, in which it refers to grammatical categories which have to do with the structure of a situation or the speaker's perspective on it, and a wider sense, in which it also covers lexical and notional (semantic) categories relating to the classification of situations (states of affairs). The term *Aktionsart* is often used to denote the latter [DAHL 1994a, p.240].

The "narrower sense" of the technical term 'aspect' is still broader than its sense in Slavonic studies, where it normally refers to the morphologically marked dichotomy perfective vs. imperfective only.

4.1 Grammatical aspect: the Slavic paradigm

4.1.1 Imperfectives and perfectives

As a first approximation (by ignoring the existence of bi-aspectuals and the status of iteratives for the time being) the notion of Slavic verbal aspect can be described as follows: aspect, which is called *vid*⁶ in almost all Slavic languages, refers to the course, the beginning and completion of an action or a state. There are two aspects representing an aspectual opposition: the 'unmarked' aspect is called *imperfective aspect* (Russian несовершенный вид, Czech *vid nedokonavý*), the 'marked' one *perfective aspect* (Russian совершенный вид, Czech *vid dokonavý*). Normally, a verb is either imperfective or perfective. In most cases there are two verbs sharing the same lexical meaning, thereby constituting an aspectual pair. It is also possible to consider an aspectual pair as one verb only because the perfective partner is often marked by adding a prefix, e.g.

1. Czech *dělat*^{imperfective} 'to make/do' + *u-* → *udělat*^{perfective}
2. Czech *volat*^{imperfective} 'to call' + *za-* → *zavolat*^{perfective}

⁶Czech, Slovak *aspekt, slovesný vid*, Polish *aspekt, postać*, Sorbian *aspekt, słowjesny wid*, Russian вид глагола, Ukrainian дієслівний вид, White Russian від (трыванне) дзеяслова, Bulgarian вид на глагола, аспект, Macedonian глаголски вид, аспект, Serbo-Croat аспект, аспект, [глаголски] вид, Slovene *glagolski vid, aspekt*, English [*verbal*] *aspect*, French *aspect verbal*, German *Aspekt* [JEDLIČKA 1977, p.264/265, 5-6-20].

On the other hand, there are also cases of making a perfective verb imperfective by adding an infix, e.g.

1. Czech *dát*^{perfective} 'to give' + *-va-* → *dávat*^{imperfective}

2. Czech *poslat*^{perfective} 'to send' + *-í-* → *posílat*^{imperfective}

Therefore, the presence of an affix as such, i.e. being morphologically more complex, is neither necessary nor sufficient for a verb to be perfective or imperfective. The same applies to Russian: "In certain cases, the Perfective has more morphological material than the Imperfective [. . .], while in others it is the Imperfective that has more morphological material" [COMRIE 1976, p.118].

Considering the perfective aspect as the marked one can be based on the perfectivisation-via-prefixation paradigm. Still, on the other hand, because of the imperfectivisation-via-infixation paradigm it might also be permissible to consider the imperfective aspect as the marked one. Semantically, neither of the two aspects encompasses the other. They are simply two different ways of looking at a process. Figuratively speaking, the process is filmed by the imperfective aspect and it is photographed by the perfective aspect. Attributes associated with imperfective aspect are: progression, unboundedness, unfinishedness. Attributes associated with perfective aspect are: wholeness, completion, boundedness, finishedness. According to HANA FILIP, ALEKSANDR ISAČENKO⁷ came up with a 'parade metaphor' to illustrate the difference between the two perspectives: "Perfective is like seeing the parade as a whole entity from the grandstand (e.g. standing on Lenin's Mausoleum on Moscow's Red Square), and Imperfective is like being a participant in the middle of the parade" [FILIP 2007, p.25].

The imperfective aspect refers only to the course of an action or to the continuance of a state. For instance⁸, an utterance such as *truhlář dělal stůl* 'the carpenter made a table', which contains an imperfective verb, means that the production of a table occupied the carpenter. Apart from that, nothing else is implied. The utterance is non-committal about the completion of the table.

⁷FILIP provides the following bibliographical details: "Isačenko (1960, p.132–133)" [FILIP 2007, p.25], which probably refers to his *Grammaticčeskij stroj ruskogo jazyka v so-postavlenii s slovackim: morfologija*.

⁸The four Czech examples in this and the following paragraph are taken from [FREI 1997, p.180].

Another example is the imperfective utterance *čekala u dveří* 'she was waiting at the door'. It just means that her waiting continued.

The perfective aspect refers to an activity or state as a whole, from its beginning to its end. 'Opening', duration and completion of an activity or state are expressed. For instance, the perfective utterance *truhlář udělal stůl* 'the carpenter made a table' means that the carpenter began making a table, continued making a table and completed making a table. There was (or is) a finished table. The same applies to the perfective utterance *počkala u dveří* 'she was waiting at the door': her waiting began, continued for a certain period of time and then it ended.

4.1.2 An alternative definition

It is possible to define Slavic verbal aspect by arraying verb forms and identifying those forms which share the same lexical meaning. Such a general definition of Slavic – here Czech – verbal aspect is the following:

Verbal aspect is the distinguishing element of the linguistic reality that it is possible to use our verbs in two to three rows of parallel forms which do not differ from one another by the basic word meaning (and which therefore can be translated into a foreign, non-Slavic language by a single form).⁹

KOPEČNÝ's definition, whose point of departure – contrary to the approximative description above – is neither the temporal meaning of aspect nor the morphological details of perfectivisation or imperfectivisation, is interesting for several reasons.

Firstly, the reference to translations into "foreign, non-Slavic" languages makes this approach inherently comparative: a linguistic phenomenon is examined by looking at its counterpart – or the lack thereof – in a different language. Here the non-Slavic translations provide words for the "basic word meaning", i.e.

⁹Czech original: "Slovesný vid je rozlišujícím prvkem té jazykové skutečnosti, že je možno užít našeho slovesa ve dvojích až trojích řadách paralelních tvarů, které se od sebe neliší základním slovním významem (a které je tedy možno přeložit do cizího, neslovanského jazyka tvarem jediným)" [KOPEČNÝ 1962, p.6].

the ‘semantic common denominator’, of the Slavic aspectual doublets/triplets. Meta-languages help grasp a phenomenon they lack.¹⁰ One of KOPEČNÝ’s examples is the Czech triade of infinitives *chválit* – *chválívat* – *pochválit*, whose non-Slavic translations lack this triadic structure: French *louer*, German *loben* and English *to praise*.¹¹ On the other hand, in light of the fact that there often is just one French or German translation for both progressive and simple forms, the definition at hand does ascribe an aspectual status to the English progressive forms. Still, if English PROG is an aspect, it still works differently from Slavic aspect, cf. p.80 for details. Of course, it is possible to use adverbs or other periphrastic structures to differentiate between the different Czech infinitives: *chválit* ‘to be praising’, *chválívat* ‘to praise habitually’, *pochválit* ‘to praise completely’.¹² The crucial difference between Slavic verb forms and these non-Slavic verb phrases is that these adverbs or periphrastic structures are added, i.e. optional, whereas no Slavic verb form can be non-committal concerning its aspect.¹³

Secondly, the reference to a ‘basic meaning’, which can be checked by translation into other languages, includes the differentiation between purely aspectual affixes and those affixes that change the aspect and the lexical meaning of the verb. E.g. the prefix *vy-* makes the imperfective *dělat* ‘to do/make’ (French *faire*, German *machen*) perfective but it also changes the lexical meaning because the perfective *vydělat* means ‘to make (money)’ (French *gagner*, German *verdienen*). To recap, *dělat* and *vydělat* do not represent an aspectual pair in the strict sense.

¹⁰This is special because normally it works the other way around: a meta-language that helps tackling polysemy does this by providing different words for different meanings of a word in the language that is examined. E.g. a non-Slavic language is a good meta-language for a dictionary of Slavic place names: “Die *Bedeutungen* werden nur deutsch angeführt; eine nichtslawische Sprache ermöglicht nämlich besser die einzelnen Bedeutungen auseinanderzuhalten (z.B. zima — a Winter, b Kälte)” [ŠMILAUER 1970, p.7, his italics].

¹¹Actually, KOPEČNÝ is content with the French and the German translations and does not mention the English one. It might be permissible to use an infinitive marked for PROG – *to be praising* – for the imperfective *chválit* and *chválívat*, as a translation aid so to speak. For a comparison of English progressives and Czech imperfectives see p.80.

¹²A fairly cumbersome adverb which does not really put across the idea of the praising being seen as a whole.

¹³There are exceptions, the so-called *bi-aspectual* verbs. “Such verbs typically have an imperfective present tense and a past tense which is either perfective or imperfective according to the context [...]. Many are loanwords” [NAUGHTON 2005, p.150].

The correct arrangement of aspectual partners is *dělat* and *udělat* 'to do/make' and *vydělat* and *vydělávat* 'to make (money)'.

Thirdly, a third aspectual form is introduced ("three rows of parallel forms"). It refers to the *va*-infix in Czech, which characterises the so-called non-actual iteratives (*neaktuální násobená*), e.g. *dělat* → *dělávat*.¹⁴ These forms are labelled imperfective in dictionaries – reflecting the view that the dichotomy perfective vs. imperfective is the basic one. It is also possible to locate these *va*-iteratives outside of this basic dichotomy, cf. table 4.1, taken from [ERHART 1984, p.96], who differentiates between aspect (*vid*) in the narrower sense (the opposition perfective vs. imperfective) and aspect in the broader sense (including a third, iterative form). Iterative aspect is morphological (*va*-infixation). It is not to be

Table 4.1: Czech iterative aspect according to ERHART

	completion	repetition
imperfektum	–	–
perfektum	+	–
iterativum	0	+

confused with iterative *aktionsart*, which is lexical and therefore independent of the infix *va*.

4.1.3 The incompatibility of perfectiveness and nowness

The present tense forms of perfective verbs do not refer to actual present time. Such forms have almost always a future time reading.¹⁵ Imperfective verbs,

¹⁴Multiple infixation of *-va-* is possible. It leads to affective forms such as *dělávávat* and *dělávávávat*, cf. [KOPEČNÝ 1962, p.5].

¹⁵There is a group of perfective verbs with 'non-realised' *aktionsart*, e.g. *unést* 'be able to carry', which can refer to present time. "Der Satz *Ten led unese psa, ale ne člověka* ['That ice will carry a dog but not a man'] bezieht sich auf die Gegenwart. Wir haben es also bei den nichtrealisierten Verben mit einer perfektiven Gegenwart zu tun [...]. In allen anderen Fällen gilt freilich die bekannte Regel, daß die Präsensform eines perfektiven Verbs die Zukunft ausdrückt" [FREI 1998, p.434/435]. The *will* in the English translation here is to be understood as referring to a present capacity. Furthermore, perfective present tense forms can also refer to time in general, e.g. "*země oběhne slunce jednou za rok* ['the earth moves around the sun once a year']", or characterisations, e.g. "*vykouří až 40 cigaret denně* ['s/he

whose present tense forms do refer to actual present time, form a periphrastic future tense (future tense form of the auxiliary *být*¹⁶ 'to be' + infinitive). The following example illustrates this state of affairs:

- *dělat* 'to do' → *dělám* 'I do, I am doing' (imperfective)
budu dělat 'I will do, I will be doing'
- *udělat* 'to do' → *udělám* 'I will do, I am going to do' (perfective)
**budu udělat* is ungrammatical

This property can be seen as the main criterion for determining verbal aspect¹⁷: it provides an almost error-proof method for finding out whether a Czech verb is perfective or imperfective – unfortunately only for native speakers and advanced learners. For beginners and intermediate learners the instruction to state the form one expresses future time with in order to determine the aspect of the verb at hand (inflectional future ⇒ perfective, periphrastic future ⇒ imperfective) is not very helpful. A pre-intermediate learner might rather check the aspect by looking up the infinitive in a dictionary, which provides the aspect, and then form the future (perfective ⇒ inflectional future, imperfective ⇒ periphrastic future). The fact that a particular rule is useful for native speakers and totally useless for learners at beginners' level confirms that the native speaker's linguistic competence is largely subconscious. In fact, the instruction above helps the native speaker become aware of his competence concerning verbal aspect, whereas it appears to be tautological to the foreign student. A general definition of verbal aspect is considered to be difficult: "A definition of the concepts of perfectivity and imperfectivity is difficult because it involves a highly abstract phenomenon, yet native speakers do not have any difficulty in using verbal aspect."¹⁸

smokes up to 40 cigarettes a day']" [KOPEČNÝ 1962, p.31].

¹⁶E.g. *budu* 'I will be'. The stem *bud* is a suppletive form, cf. p.20.

¹⁷Czech original: "Tato vlastnost je základním kritériem pro určování slovesného vidu" [ČECHOVÁ et al. 1995, p.155].

¹⁸Czech original: "Vymezení pojmu dokonavost a nedokonavost je obtížné, protože jde o jev vysoce abstraktní, přitom však rodilému Čechu nečinívá praktické užívání vidu potíže" [ČECHOVÁ et al. 1995, p.155].

4.2 Lexical aspect and situation taxonomy

The term *aktionsart* (Russian способ глагольного действия, Czech *průběh slovesný*¹⁹) has two different senses. On the one hand, it can refer to the ‘inherent [aspectual] meaning’ [COMRIE 1976, p.7] of verbs without taking into account how the meaning is lexicalised. On the other hand, the term *aktionsart* can refer to the ways of lexicalisation of the inherent meaning of verbs “by means of derivational morphology” [ibid.]. The latter interpretation of the term is common among Slavicists, who insist upon the fact that in Slavic languages there are only two aspects (*perfective vs. imperfective*) but many *aktionsarten*. The most important *aktionsarten* are: *durative* (describing an action that continues for some time, symbol: ———), *iterative* (describing an action that is repeated again and again, symbol: ······), *momentary or punctual* (describing an action that lasts for a very short time, symbol: ●), *inchoative* (expressing the beginning of an action or state, symbol: |→), *finitive* (expressing the ending of an action or state, symbol: →|).

The following Czech examples (‘to carry’) might illustrate the interrelation between aspect and *aktionsart*:

1. perfective

a. finitive

donést ‘to carry there’

b. momentary, punctual

—

2. imperfective

a. durative

¹⁹The following technical terms are also used: Czech *způsob (druh) slovesného děje*, Slovak *spôsob (druh) slovesného deja*, Polish *rodzaj czynności*, Upper Sorbian (Lusatian) *wašnje čina*, *kajkosć jednanja*, Lower Sorbian (Lusatian) *kakosć syna*, Russian способ глагольного действия, (совершаемость), Ukrainian слосіб (рід), [дієслібної] дії, White Russian слоцаб дзеяслоўнага дзеяння, Bulgarian начин на действието, Macedonian видски лик, Serbo-Croat глаголски лик, *Aktionsart*, Slovene *vrsta glagolskega dejanja*, English *Aktionsart*, French *modalité de l'action*, *Aktionsart*, German *Aktionsart* [JEDLIČKA 1977, p.262/263, 5-6-19-2].

- nést* 'to carry, to be carrying'
- b. iterative (repeated, regular)
donášet 'to carry there repeatedly', also: 'to deliver regularly'
nosit 'to carry regularly'
- c. frequentative (frequent, irregular)
nosívat 'to be in the habit of carrying'
nosívávat 'to be now and then in the habit of carrying'

One could add *donosit* 'to carry [a child] through to the full term', which is perfective and finitive, but whose lexical meaning is further detached from the prototypical meaning 'to carry'.

According to [VENDLER 1957], verbs can be grouped into a number of categories:

1. STATES, verbs that refer to unchanging conditions, e.g. *be, have, want*
2. ACTIVITIES, verbs referring to processes with no inherent beginning or end point, e.g. *play, walk, breathe*
3. ACCOMPLISHMENTS, which are durative (last for a period of time) but have an inherent end point, e.g. *read a book, write a novel*
4. ACHIEVEMENTS, which are nondurative and have an inherent end point, e.g. *finish, realize, arrive*

The Vendlerian term *accomplishment* corresponds to GAREY's notion of *telic*, which comes from the Greek word *τέλος*, 'end, aim' [GAREY 1957, p.106]. In its broader sense, the word *telic* means 'having an inbuilt point of termination'. As both accomplishments and achievements have "an inherent end point" [ibid.], both are telic in this broader sense. Still, achievements often lack the notion of 'goal orientation', whereas accomplishments do not. Telicity represents a helpful concept when it comes to teaching the difference between the present perfect simple and the present perfect progressive.²⁰

²⁰The utterance *he has cried* presents his crying as an accomplishment. Taken as a comment on eyes red from crying, the utterance is highly unidiomatic – contrary to the non-telic *he has been crying*.

4.3 Systems of aspect applied to English

4.3.1 A brief example

The following overview, taken from a mid-twentieth-century grammar written for German learners of English [SCHAD 1960, pp.139–147], illustrates one possible way of applying the notions of *aspect* and *aktionsart* to the English language:

- Aspekte (Aspects)
 - Temporale Aspekte (Time Aspects)
 - * Der retrospektive Aspekt — Rückschau
 - * Der introspektive Aspekt — Innenschau
 - * Der prospektive Aspekt — Vorschau
 - Der modale Aspekt (Emphatic Aspect)
- Aktionsarten (Actions, Characters of Action)
 - Ingressive Action²¹
 - Progressive Action (Die Verlaufsform)
 - Egressive Action, Conclusive Action (Abschlußform)
 - Kausative Aktionsart (Causative Action)
 - Frequentativum (Frequent Action)
 - Das Intensivum (Intensive Action)

The *aktionsart* part of SCHAD's system is compatible with the use of the term in Slavonic studies. He points out that *aktionsarten* refer to the manner of verbal action in an objective way.²² The *aspect* part of SCHAD's system is radically different from the *perfective-imperfective* opposition of the Slavic languages, although his definition of *aspect* is in accord with the Slavicist definition:

²¹The inconsistent mixture of German and English in this overview is due to SCHAD himself.

²²“Die Aktionsarten bezeichnen [...] objektiv die Art und Weise, in der die im Verb ausgedrückte Handlung vor sich geht, wie sie ausgeführt wird, wie der Vorgang an sich ist” [SCHAD 1960, p.139].

Die Aspekte bezeichnen die Art der Sicht oder Schau des Sprechenden über ein Geschehen, d.h. die Art und Weise, wie er den durch das Verb ausgedrückten Vorgang von seinem Standpunkt aus sieht und auffaßt und auch vom Leser oder Hörer gesehen haben möchte. Die Aspekte sind also subjektive Anschauungsformen [SCHAD 1960, p.139].

The remarkable thing is the appearance of the terms *aspect* and *aktionsart* as such in a pedagogical grammar that was written 50 years ago.

4.3.2 Chronogenesis

In Guillaumean linguistics “verbal systems [are seen] as cognitive systems having successive developmental stages” [HEWSON 2006, p.169]. Language is seen as an activity, tongue as its means of production, discourse as the product. The production of discourse takes time: “thought engaged in language activity requires real time”.²³ Of course, the representation of time itself takes real time too. GUILLAUME calls this preconscious mental process *chronogenesis*²⁴ ‘emergence of time’. He posits three stages of chronogenesis, which he characterizes as follows:

1. *La réalisation de l'image verbale dans le temps in posse*²⁵
2. *La réalisation de l'image verbale dans le temps in fieri*²⁶
3. *La réalisation de l'image verbale dans le temps in esse*²⁷

The three stages are explained as from p.69.

Memory, sensory experience and imagination are the elements of consciousness that correspond to past, present and future. The past can be memorised, the present can be experienced and the future can be imagined. According to [HEWSON and BUBENÍK 1997, p.3]

²³English translation taken from [HEWSON 1994, p.1508]; French original: “La pensée en action de langage exige réellement du temps” [GUILLAUME 1929, p.8, footnote].

²⁴From Greek χρόνος ‘time, tense’ and γένεσις ‘emergence, creation’.

²⁵Cf. [GUILLAUME 1929, p.15–27].

²⁶Cf. [GUILLAUME 1929, p.29–50].

²⁷Cf. [GUILLAUME 1929, p.51–75].

[t]here are therefore three important moments essential to the process of consciousness:

- i. the immediate past (the omega field), recorded in the memory
- ii. the moment of immediate experience (ω_0/α_0) being recorded by the senses
- iii. the immediate future (the alpha field), visualised in the imagination

For any practical purposes it is completely irrelevant that the topological manifold *time* is *hausdorff*, i.e. that any two distinct points have disjoint neighbourhoods, because there is a lower limit to human resolution of infinitesimally short time intervals. Therefore, it is reasonable to assume that time can be represented by a set of discrete points. Experiencing the flow of time is comparable to watching a film. Each picture represents a moment in time, the one currently being watched corresponds to ω_0/α_0 , the ones just watched to $\omega_1, \omega_2, \omega_2$, etc., the ones to be watched to $\alpha_1, \alpha_2, \alpha_3$, etc. The direction of the action on the film, ($\dots, \omega_3, \omega_2, \omega_1, \omega_0/\alpha_0, \alpha_1, \alpha_2, \alpha_3, \dots$), corresponds to *ascending time*, whereas the direction of the film in the camera, ($\dots, \alpha_3, \alpha_2, \alpha_1, \alpha_0/\omega_0, \omega_1, \omega_2, \omega_3, \dots$), corresponds to *descending time*. Table 4.2²⁸ summarises the differences between the two concepts.

The first stage of chronogenesis: the quasi-nominal mood

The most rudimentary verb forms are the building blocks (*to*) *verb*, *verb-ing* and *verb-en*, which “can have noun (substantive and adjective) functions in discourse” [KORREL 1991, p.13]. According to [HEWSON and BUBENÍK 1997, p.5]

[t]he three forms found at this level may be analysed and compared as follows:

- i. in the infinitive (*to*) *sing*, the event is represented as the kind of event that is conceived by the imagination, a complete whole

²⁸The film analogy and the table are taken from [HEWSON and BUBENÍK 1997, p.3], who use quotes from LAKOFF and GUILLAUME.

Table 4.2: Ascending and descending time

$\omega \longrightarrow \alpha$ Ascending Time	$\alpha \longrightarrow \omega$ Descending Time
direction of action on film	direction of film in camera
future in front, past behind	future behind, past in front
<i>in the weeks ahead of us</i> (future)	<i>in the following weeks</i> (future)
<i>that's all behind us now</i> (past)	<i>in the preceding weeks</i> (past)
we move, time stands still	we stand still, time moves
<i>l'esprit qui marche dans le temps</i>	<i>le temps qui marche dans l'esprit</i>
mind works in time	time works in the mind
time required for conative or imaginative mental activity	time that records our sensory experience in the memory

- ii. in the present participle *singing*, the event is represented as the kind of activity that takes place in immediate sensory experience
- iii. in the past participle *sung*, the event is represented as the kind of event that is recorded in the immediate memory, just completed.

According to GUILLAUME, the infinitive is under tension (event not yet actualised), the present participle has some of it defused, i.e. tension (French *tension*) and laxity (French *détension*) are juxtaposed (event being actualised), and the past participle is completely lax (event already actualised): *(to) sing* → *singing* → *sung*. This process can start anew by adding *have*: *(to) have sung* → *having sung* → **had sung*. Whether the same stages of actualisation are applicable to the second series is questionable.²⁹ The following examples may illustrate the different stages of actualisation: “in the offing, e.g. *To give in would be inconceivable*, [...] partly actualized, partly to be actualized, e.g. *Waiting for Godot*, [...] seen in retrospect as left behind: *This done, he locked the door and went to bed*” [KORREL 1991, p.13].

²⁹GUILLAUME's original paradigm was: *marcher* → *marchant* → *marché* and *avoir marché* → *ayant marché* → *eu marché*. In French it is even possible to derive an incomplete third series: *avoir eu marché* → *ayant eu marché* → \emptyset , called *formes surcomposées*.

The second stage of chronogenesis: the representation of Universe Time

The term 'Universe Time' refers to an intermediate stage between the Mental Time represented at the first stage of chronogenesis and the Event Time represented at the third stage of chronogenesis. (The capital letters indicate mental concepts.) Universe Time (*le temps expliqué*) is nothing but a temporal container, similar to the manifold time (see above) before fixing the moment of speech. Even the temporal order and the one-dimensionality of the manifold are unimportant at this stage, i.e. not necessary for it to represent a temporal container. Universe Time is the sphere of subjunctives, which lack precise localisation in time. Therefore, they "may be used in subordinate clauses where the localisation is determined by the tense of the main verb" [HEWSON and BUBENÍK 1997, p.9], e.g. *I asked that she suggest a successor* and *I wish it were over*, "the 'present' subjunctive expressing positive possibility [...] and the 'past' subjunctive expressing negative possibility, a condition that is not real" [KORREL 1991, p.14].

The third stage of chronogenesis: the indicative

The speaker's consciousness represents a focus that fixes the moment of speech and thereby turns Universe Time into Event Time. The amorphous Universe Time becomes the linear Event Time with a tripartite structure: future, present, and past. The present "separat[es] past time (Memorial Time) from non-past (Imaginary Time) [and in Greek, Slavic, and Germanic] it is seen as a watershed, a divide" [HEWSON and BUBENÍK 1997, p.9]. Guillaumean linguistics has put forward the following hypothesis: simple, i.e. non-periphrastic, tense forms of a particular language carry an immanent aspect, depending on whether the tense system of that particular language is represented in Ascending or in Descending Time. The nature of the basic past tense in that particular language is indicative for this distinction, cf. table 4.3. According to [HEWSON and BUBENÍK 1997, p.12], periphrastic verb forms of English give rise to three aspects, corresponding to PROG, PERF and MOD (see appendix): firstly, the progressive aspect, which locates the subject in the middle of the event; secondly, the retrospective aspect, which locates the subject after the event; thirdly, the prospective aspect, which

Table 4.3: Basic past tense and immanent aspect

	Descending Time e.g. Greek, Slavic	Ascending Time e.g. English
Basic past tense:	imperfect	preterit
Immanent aspect:	imperfective	performative

locates the subject before the event, cf. table 4.4. GUILLAUME himself illustrated

Table 4.4: Aspectual forms in English according to HEWSON and BUBENÍK

Aspect	Non-Past Tense	Past Tense
Performative	<i>I speak</i>	<i>I spoke</i>
Progressive	<i>I am speaking</i>	<i>I was speaking</i>
Retrospective	<i>I have spoken</i>	<i>I had spoken</i>
Prospective	<i>I will speak</i>	<i>I would speak</i>

his concept of chronogenesis by a 'chronogenetic line' (*temps chronogénétique*) with three axes perpendicular to it. The time-in-*posse* axis is attached to the initial point of the chronogenetic line, the time-in-*fieri* axis is attached to an intermediate point, and the time-in-*esse* axis is attached to the final point.

4.4 Progressives

This section is of an ancillary character. It aims at applying the above-mentioned concepts of tense, aspect and aktionsart to PROG in order to examine whether *be + -ing* is a tense or an aspect. The methods developed in this section (about PROG) will be useful for the examination of PERF in the next chapter. Furthermore, there are forms marked for PROG and PERF. Therefore, it makes sense to deal with [PERF: ∅, PROG: +] before examining [PERF: +, PROG: +].

4.4.1 Temporal embedding by switching on PROG

Does [PROG: +] represent a tense, i.e. is it possible to localise an action in time by switching on PROG? Yes, it is. An unmarked utterance [PROG: ∅], such as *she drinks tea*, might refer to a habit and is non-committal about localising her drinking in time. The marked counterpart *she is drinking tea* fixes $E = S$, even without the addition of a temporal adverb such as *now*. Does this prove “that the progressive inherently designates actuality” [KUČERA 1981, p.184], i.e. that the present progressive refers to the actual present? No, it does not. There are quite natural uses³⁰ of the present progressive “contain[ing] an explicit denial that the activity to which the progressive could refer is taking place at t_0 [= S]” [KUČERA 1981, p.186]:

1. Charles is giving a lecture every day this week, except today.
2. I am fixing the roof this summer but I haven't been able to do a bit of work on it for the past 2 weeks.
3. Nastase is winning a lot this year but he just lost in three straight sets to Borg 5 minutes ago.

The temporal adverbs belonging to the present progressive forms in these three examples (*this week*, *this summer*, *this year*) refer to time intervals that include the moment of speech. These time intervals contain sub-intervals when the action expressed by the verbs is in progress. The words *except* and *but*, which introduce the ‘explicit denial’, make sure that the moment of speech is not included in any of these sub-intervals. KUČERA’s examples can be transposed to the past:

1. Charles was giving a lecture every day last week, except Wednesday.
2. I was fixing the roof last summer but I wasn't able to do a bit of work on it in August.
3. Nastase was winning a lot last year but he lost in three straight sets to Borg in Paris on 23 May.

³⁰Examples taken from [KUČERA 1981, p.186].

The internal temporal structure of these sentences remains the same but a second reference point might be needed to localise the structure as a whole relative to S. The same applies to a transposition to future time:

1. Charles will be giving a lecture every day next week, except Wednesday.
2. I will be fixing the roof next summer but I won't be able to do a bit of work on it in August.
3. Nastase will be winning a lot next year but he will lose in three straight sets to Borg in Paris on 23 May. (E.g. a fortune-teller's prediction.)

This translational invariance is a strong indicator that PROG is not a tense. Furthermore, it is not a Reichenbach tense either but “an additional indication [...] concerning the time extension of the event” [REICHENBACH 1947, p.290]. In his schematic diagrams Reichenbach himself uses intervals instead of points when dealing with the progressive. If “the event covers a certain stretch of time” [ibid.], then there is place for a vast variety of internal temporal structures, i.e. aspectual differentiations. Reichenbach refrains from elaborating upon this. He just alludes to the fact that

the extended tenses are sometimes used to indicate, not duration of the event, but repetition. Thus we say ‘women are wearing larger hats this year’ and mean that this is true for a great many instances [REICHENBACH 1947, p.290/291].

4.4.2 Temporariness

A concept helpful in analysing the meaning of the progressive is that of temporariness. According to [QUIRK et al. 1985, p.198], temporariness refers to either duration or limited duration. Standard textbooks and learners' grammars introduce the progressive by contrasting utterances such as *she plays well* with *she is playing well* and *she played well* with *she was playing well*. The interpretation of these clear-cut examples is straightforward: [PRET: Ø, PROG: Ø] refers to her competence as a player (she is a good player), whereas [PRET: Ø, PROG: +] refers to her performance “on a particular occasion or during a particular season”

[QUIRK et al. 1985, p.197]. Therefore, [PRET: \emptyset , PROG: +] has a LIMITED DURATION reading. Similarly, switching on PRET leads to a DURATION reading for the utterance marked [PROG: +] because [PRET: +, PROG: \emptyset] “makes us see the event as a whole” (ibid.), whereas [PRET: +, PROG: +] “makes us see it as an activity in progress” [ibid.]. QUIRK et al. comment on the relation between progressive aspect and tense:

The progressive generally has the effect of surrounding a particular event or point of time with a ‘temporal frame’, which can be diagrammed:



That is, within the flow of time, there is some point of orientation from which the temporary event or state described by the verb can be seen to stretch into the future and into the past.³¹

[QUIRK et al. 1985, p.209].

The fact that a non-past “progressive ‘shrinks’ the time span of [its unmarked counterpart, whereas a past progressive] ‘stretches out’ the time span of [its unmarked counterpart]” [QUIRK et al. 1985, p.198] might be explained by combining two rather distinct concepts: the remoteness of the past and a bell-curve reading of the progressive. The latter was put forward by MARTIN JOOS, who called the marked member of PROG *temporary aspect* [JOOS 1964, p.107]. He explained the temporariness of a sentence such as *I am trying, sir* as follows:

Assuming that the predication is completely valid for the time principally referred to, then it is 99 percent probably valid (a 99-to-1 wager in favor of its validity would be a fair wager) for certain slightly earlier and later times, it is 96 percent probably valid for times earlier and later by somewhat more than that, and so on until the probability of its validity has diminished to zero (the actor then is doing nothing, or doing something other than trying, or is not-trying, or is trying something else) for times sufficiently earlier and later [ibid.].

³¹Into the future and into the past of *that point*, i.e. into the time anterior and into the time posterior to the above-mentioned point of orientation.

Clearly, JOOS is referring to a Gaussian bell curve (see figure 4.1, taken from [JOOS 1964, p.211, *Appendix: Graphs for Aspect and for Phase*]) whose centre is attached to the point of reference. In the case of $R = S$, i.e. in the case of the

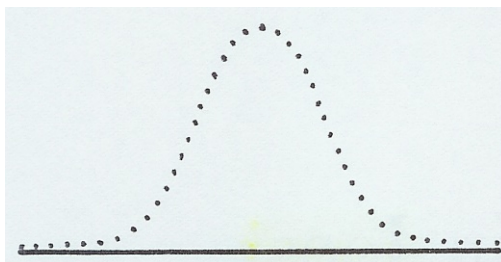


Figure 4.1: *Temporary aspect* according to JOOS

non-past, the curve's peak might be perceived as fairly pronounced, which would lead to a limited-duration reading of temporariness. This is connected to the fact that [PRET: \emptyset , PROG: \emptyset] often refers to habits or permanent attributes, which are only mildly tensed, and that the location in time is effected by switching on PROG. In the case of $R < S$, i.e. in the case of the past, switching on PROG might lead to a change from a rather myopic view of a point-like E to a zooming-in on the normally distributed E, dilating the seemingly point-like E of a non-progressive event. This is connected to the fact that in the case of [PRET: +] switching on PROG often leads to an altered viewpoint, i.e. referring to an event as a whole (external viewpoint) vs. referring to an event in progress (internal viewpoint).

4.4.3 Adamczewski's phase

HENRI ADAMCZEWSKI calls [PROG: \emptyset] *phase 1* and [PROG: +] *phase 2*. The difference between the two concerns the way the speaker wants to present things.³² The opposition *phase 1* vs. *phase 2* reproduces the dichotomy *rhematic* vs. *thematic*. A *phase 1* utterance such as *He opens the gate (jumps into his car and drives off)* is seen as not making any presuppositions about the state of affairs (*non-présupposant*). No special relationship between speaker and situation

³² "[L]a façon dont on veut présenter les faits" [ADAMCZEWSKI and GABILAN 1996, p.27].

is assumed.³³ A *phase 2* utterance such as (*Look!*) *He is opening the gate* is seen as bringing the speaker into it. The speaker *speaks* of the grammatical subject *he* to let us know in which situation *he* is at the moment when the speaker directs his or her attention towards *him*.³⁴

ADAMCZEWSKI and GABILAN point out that the French opposition *passé simple* vs. *imparfait* corresponds to the English opposition [PRET: +, PROG: ∅] vs. [PRET: +, PROG: +].³⁵ In the present tense French lacks this dichotomy, although the structure *être en train de* often helps translate English present progressives. The comparison of French and English can be summarized as follows³⁶:

- Present

$$Il \text{ ouvre } la \text{ grille} = \begin{cases} He \text{ opens } the \text{ gate} \text{ (récit, reportage)} \\ He \text{ is } opening \text{ the } gate \text{ (l'énonciateur filtre l'énoncé)} \end{cases}$$

- Past

Il ouvr-it la grille = *He opened the gate*

Il ouvr-ait la grille = *He was opening the gate*

It should be noted that – contrary to **He was being opening the gate* – *Il était en train d'ouvrir la grille* 'He was in the process of opening the gate' is not ungrammatical. Formally, *être en train de* corresponds nicely to English [PROG: +] because both can combine with all 'tenses'. Still, there are cases where they are not congruous.³⁷

³³ "Le caractère rhématique des énoncés de *phase 1* se manifeste essentiellement par *leur indépendance par rapport à l'énonciateur*" [ADAMCZEWSKI and DELMAS 2004, p.42, their italics].

³⁴ "[L'énonciateur] parle du sujet grammatical *he* pour nous dire dans quelle situation *he* se trouve au moment où [l'énonciateur] porte son attention sur lui" [ADAMCZEWSKI and GABILAN 2005, p.42, their italics].

³⁵ "[L]e passé simple correspond au prétérit de phase 1 et l'imparfait correspond au prétérit de phase 2" [ADAMCZEWSKI and GABILAN 2005, p.34].

³⁶ Taken from [ADAMCZEWSKI and GABILAN 2005, p.34].

³⁷ Counterexample from [ADAMCZEWSKI and GABILAN 2005, p.36]: *I am taking my umbrella* in an utterance such as *I am taking my umbrella because it looks like rain* cannot be translated correctly by *je suis en train de prendre mon parapluie*. It should be *je prends mon parapluie*.

What can be learnt in the context of ADAMCZEWSKI's approach? Firstly, English *be + -ing* is far more grammaticalised than its 'counterparts' in French (*être en train de + infinitive*), Spanish (*estar + -ndo*), German (*am + infinitive + sein*) or Dutch (*aan het + infinitive + zijn*).³⁸ Secondly, because of the advanced level of grammaticalisation in English the name *progressive* is a misnomer. A litmus test for the appropriateness of the name *progressive* would be substituting *be + -ing* by a periphrastic expression that has not been grammaticalised such as *be in the process of -ing*, cf. *I'm watching TV* → *I'm in the process of watching TV* but *we're going to LA this summer* → **we're in the process of going to LA this summer*. Thirdly, it is difficult to find a better name for the *progressive*. The word *phase*, which is used by ADAMCZEWSKI to refer to PROG, is used by JOOS to refer to PERF. The name used in this paper ("PROG") is a concession to tradition.

ADAMCZEWSKI and GABILAN posit an interesting difference of orientation between phase 1 and phase 2 utterances containing transitive verbs:

L'opposition phase 1 / phase 2 renvoie à une différence d'**orientation des énoncés** dans le cas des verbes suivis d'un complément quelconque.

He reads the paper (→)

Énoncé orienté à droite – vers le complément – PHASE1

Leave your father alone. He is reading the paper. (←)

Énoncé orienté à gauche – vers le sujet grammatical – PHASE2

[ADAMCZEWSKI and GABILAN 1996, p.32, differences in font size taken from original].

4.4.4 PROG as a marker of imperfectivity

In COMRIE's "classification of aspectual oppositions" [COMRIE 1976, p.25] the progressive is placed at the end of a branching tree of binary oppositions. The

³⁸Cf. p.80 for a very brief overview of the diachrony of *be + -ing* and table 4.5 for the grammaticalisation of the German and Dutch progressives.

basic opposition is that between *perfective* and *imperfective*. The imperfective can be subdivided into *habitual* vs. *continuous*. Finally, the continuous can be subdivided into *nonprogressive* vs. *progressive*, cf. figure 4.2. COMRIE points out

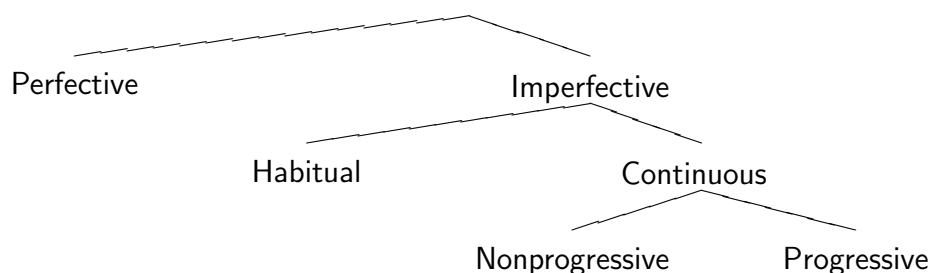


Figure 4.2: Classification of aspectual oppositions according to COMRIE

that his use of the terms *continuous* and *progressive* differs from the traditional one:

In the discussion of subdivisions of imperfectivity, a distinction is made between the terms ‘progressive’ and ‘continuous’, the former being a subdivision of the latter (progressiveness is the combination of continuousness with nonstativity). In traditional discussions of English, the forms here referred to as Progressive (e.g. *John was reading*) are sometimes referred to as continuous, so the particular distinction made here between the two terms should be carefully noted. [COMRIE 1976, p.12]

Cross-linguistically, there are progressives in many languages, e.g. Spanish *estar haciendo* ‘be doing’ but “the English Progressive has, in comparison with progressive forms in many other languages, an unusually wide range” [COMRIE 1976, p.33]. The most important special uses of the progressive are: firstly, its function as future tense, e.g. *we’re going to the party tonight*; secondly, its “matter-of-course implication” [QUIRK et al. 1985, p.210] when combined with *will*, e.g. *we’ll be flying at 10,000 ft*; thirdly, its attitudinal use, e.g. *I was wondering if you could lend me a couple of bucks*.

Diachronically, “the history of the Progressive Form is complex and unclear” [SAMMON 2002, p.28]. QUIRK et al. point out that “historically the aspectual

value seems to have been added to an original adverbial function ([...] derived historically from a prepositional phrase) which is still not entirely superseded" [QUIRK et al. 1985, p.507], e.g. *he was a-hunting, he was on hunting*. That construction is paralleled by the German Rhenish Progressive (*Rheinische Verlaufsform*), e.g. *er war am Jagen*. The stages of development of the use and form of the English progressive are summarized in [HOGG and DENISON 2006, p.111, Table 3.1 *The main syntactic changes*] as follows:

1. Old English: *be*³⁹ + *-ende*; no clear function
2. Middle English: *be* + *-ing*, infrequent, more aspectual
3. Modern English: frequent, grammaticalising

Comparison with Slavic imperfectives

Equating English progressives and Slavic imperfectives is tempting but a comparison of the underlying cognitive concepts reveals that they are different:

[S]peakers of Slavic languages do not ignore the right boundary of the depicted situation when using the marked imperfective,⁴⁰ but rather include it in their conceptualization and verbalization of situations. In other words, by using this form speakers refer to the time interval anchored in the here-and-now and to the linkage of this time interval to the right boundary. The Dutch and the English progressive, by contrast, are used to link situations to the deictic here-and-now without any explicit temporal information about the right (or left) boundary [SCHMIEDTOVÁ and FLECKEN 2008, p.378].

BARBARA SCHMIEDTOVÁ and MONIQUE FLECKEN characterize the temporal function of the progressive as *defocusing boundaries*. Table 4.5, taken from

³⁹ "[A] form of *beon* or *wesan* (sometimes *weorðan* 'become')" [HOGG and DENISON 2006, p.135].

⁴⁰ "The experimental approach consists of an online production task, in which speakers ($N = 30$) are asked to retell short everyday situations in answer to the question *What is happening?* [...], i.e., video clips depicting somebody drinking a glass of water, a dog running into a house, etc." [SCHMIEDTOVÁ and FLECKEN 2008, p.370].

[SCHMIEDTOVÁ and FLECKEN 2008, p.380], summarizes the differences between the languages they examined. Slavic aspect and English PROG share the

Table 4.5: Overview aspectual devices in different languages

Language	Czech/Russian	English	Dutch	German
Form	suffixes/ prefixes	<i>-ing</i>	<i>aan het +</i> V (inf) <i>zijn</i>	<i>am/bei +</i> V (inf) <i>sein</i>
Temporal function	± reaching of the right boundary	defocusing boundaries	defocusing boundaries	defocusing boundaries
Term	perfective/ imperfective	progressive	progressive	?
Degree of gram- matica- lization	both aspects fully gram- maticalized	fully gram- maticalized	in the pro- cess of be- ing gramma- ticalized	not in the process of being gram- maticalized

property of being fully grammaticalised. English, Dutch and German⁴¹ share the same function but the degrees of grammaticalisation vary. The entries “±”, “perfective/imperfective” and “both aspects” in the column “Czech/Russian” in the authors’ table contain the crucial piece of information: contrary to the pair [PROG: ∅] vs. [PROG: +], the Slavic pair perfective vs. imperfective represents an inherently binary opposition. “Simple forms in English [. . .] are with regard to grammatical aspect open [. . .]. [T]hey do not express any aspectual meaning that is contrastive to progressivity” [SCHMIEDTOVÁ and FLECKEN 2008, p.362].

⁴¹The “?” in table 4.5 could be replaced by *Rhenish progressive*.

Chapter 5

The perfect

Linguists have debated heatedly the question as to whether or not the perfect form of *have* + past participle in English takes on an aspectual function.

L. ZHANG¹

5.1 Latin origin of name

The grammatical term *perfect* is of Latin origin. The past participle *perfectus* belongs to the verb *perficere* 'accomplish', which contains the prefix *per* 'thoroughly' and the verb *facere* 'do, make'.² Presumably, those grammarians who started using the Latin term to refer to verb forms in languages that are different from Latin did not only know its denotation but also its connotation within the Latin verbal system, i.e. the forms and usage of the Latin perfect. There are two perfects in Latin: an inflectional one, whose examination profits from looking back at the prehistory of Latin, and a periphrastic one, whose examination leads to looking forward to the composed 'tenses' of the daughter languages of Latin. The next two subsections deal with these two perspectives – the retrospective view on Indo-European and the prospective view on Romance – from the vantage point of classical Latin.

¹Taken from [ZHANG 1995, p.97/98].

²Cf. [STEVENSON 2007, p.2154 & 2157].

5.1.1 The inflectional Latin perfect

The word 'inflectional' in the title of this subsection might be too mild because Latin verbs have two different stems, a present stem ('infectum') and a perfect stem ('perfectum'). The connection between the two is not necessarily obvious³. The fact that Latin joins the two stems gave rise to calling verbal flexion *conjugation* (Latin *coniungere* 'to join'). Furthermore, the tendency towards joining *infectum* and *perfectum* created two rows of forms for present, past and future.⁴ The obvious thing to do is to ascribe an aspectual reading to the opposition between *infectum* and *perfectum*. This was already done by MARCUS TERENTIUS VARRO⁵ (116–27 B.C.). Table 5.1 shows his view⁶. The symmetry of VARRO's

Table 5.1: Arraying of Latin (active) verb forms according to VARRO

	Time	past	present	future
Aspect incomplete		<i>discēbam</i> I was learning	<i>discō</i> I learn	<i>discam</i> I shall learn
	complete	<i>didiceram</i> I had learned	<i>didicī</i> I have learned	<i>didicerō</i> I shall have learned

2 × 3 arrangement is appealing. It applies to both diatheses (passive: table 5.2). R. H. ROBINS writes the following about VARRO's view⁷:

³“Ursprünglich waren diese beiden Gruppen unabhängig voneinander, und wenn das Infektum gegeben war, so konnte man nicht von vorneherein sagen, wie das entsprechende Perfektum lauten müsse und umgekehrt. So ist *stetī* gleichermaßen das Perfektum zu *sistō* 'stelle mich, bringe zum Stehen' und zu *stō* 'stehe', *cubū* zu *-cumbō* 'lege mich' und zu *cubō* 'liege'. Indes hat das Lateinische mehr und mehr dahin gestrebt, die beiden Stämme miteinander zu verbinden und zwischen ihnen eine immer engere Beziehung herzustellen” [ERNOUT 1920, p.86].

⁴“Diese [...] Neigung, Infektum und Perfektum miteinander zu vereinigen [...], tritt besonders in der Schaffung nebeneinanderlaufender Formen für die Zeitstufen [...] hervor” [ERNOUT 1920, p.86].

⁵“Im Anfang jedenfalls hatte dieser schon von Varro [in *De lingua latina*] beobachtete Gegensatz keine zeitstuflche Bedeutung; vielmehr bezeichnet das Infektum von Hause aus die Handlung als vor sich gehend (unvollendete Anschauung), der Perfektstamm dagegen stellt sie als beendet hin (vollendete Anschauung)” [ERNOUT 1920, p.85/86].

⁶Table taken from [ROBINS 1967, p.51], original table split into two here: 5.1 & 5.2.

⁷Presented in “*De lingua latina* 9.96–7, 10.48” [ROBINS 1967, p.63, notes].

In his analysis of the six indicative tenses, active and passive, the aspectual division, incomplete-complete, was the more fundamental for him, as each aspect regularly shared the same stem form, and in the passive voice the completive aspect tenses consisted of two words, though Varro claims that erroneously most people only considered the time reference dimension [ROBINS 1967, p.51].

Table 5.2 shows the symmetry of the arrangement of the “six [...] tenses” for the passive voice. It should be clear that here the word *tense* is rather used as a synonym for *verb form*. One could say that the ‘aspectual’ opposition *incomplete*

Table 5.2: Arraying of Latin (passive) verb forms according to VARRO

	Time	past	present	future
Aspect incomplete		<i>amābar</i> I was loved	<i>amor</i> I am loved	<i>amābor</i> I shall be loved
	complete	<i>amātus eram</i> I had been loved	<i>amātus sum</i> I have been loved	<i>amātus erō</i> I shall have been loved

vs. *complete* doubles the number of the ‘natural’ tenses *present*, *past* and *future*⁸. Latin morphology (*infectum* vs. *perfectum*) might have facilitated the notion of a second dimension ‘perpendicular’ to the classical trichotomy of past, present and future, but the idea as such is older and goes back to Stoic grammar: “In his treatment of the verbal category of tense, Varro displayed his sympathy with Stoic doctrine, in which two semantic functions were distinguished within the forms of the tense paradigms, time reference and aspect” [ROBINS 1967, p.51]. In Stoic grammar⁹ there was already a distinction between tense and aspect:

⁸It should be noted that – contrary to English and German – Latin has an inflectional future. The same applies to Greek, e.g. παιδεύ-ω ‘I raise, educate’ → παιδεύ-σ-ω ‘I will raise, educate’. The existence of an inflectional future might have facilitated the classical three-way division into past, present and future. To be more precise, thinking, i.e. developing linguistic terminology, in a language with inflectional past and future *tenses* might lead to the view that the ‘natural’ division into past, present and future *time* is reflected by the verbal system and vice versa.

⁹The Stoic school was founded by ZENO around 300 B.C.

Two dimensions are involved, time reference, and completion as against incompleteness or continuity. Four tenses can be arranged in relation to these two distinctions as follows:

	Time	present	past
Aspect			
incomplete		Present	Imperfect
complete		Perfect	Pluperfect

The future (*μέλλων*) and the aorist (*αόριστος*) fall outside this symmetrical system, and for this reason they were regarded as indeterminate, *μέλλων* with reference to the future and *αόριστος* with reference to the past; the morphological similarity of stem in many future and aorist forms may have reinforced this semantic interpretation [ROBINS 1967, p.29].

The Latinate grammatical tradition imposed Roman linguistic ideas on English and German but the same had happened to Latin. Greek linguistic categories were imposed on Latin.¹⁰ When it comes to the perfect, there is a fundamental difference between Latin and Greek:

Von den Verbalsystemen anderer altindogermanischer Sprachen wie etwa dem des Griechischen unterscheidet sich das lateinische erheblich. Dies gilt ganz besonders für das Perfektsystem: dem lateinischen Perfekt entsprechen im Griechischen zwei Kategorien, Perfekt und Aorist¹¹ [MEISER 2003, p.xi, Vorwort].

¹⁰ "In linguistic science the Roman experience was no exception to the general condition of their relations with Greek intellectual work. Roman linguistics was largely the application of Greek thought, Greek controversies, and Greek categories to the Latin language. The relatively similar basic structure of the two languages, together with the unity of civilization achieved in the Greco-Roman world, facilitated this metalinguistic transfer" [ROBINS 1967, p.47].

¹¹The quote continues like this: "Diese Feststellung ist zunächst ebenso trivial wie die Vermutung, dass das Lateinische hier eine Kategorie verloren habe [. . .]. Nicht trivial ist jedoch das Ergebnis dieses Kategorieverlustes: ein buntes Nebeneinander unterschiedlicher Stämme, die den Eindruck hervorrufen, jenseits der I. Konjugation sei die Bildung lateinischer Perfektstämme in hohem Grade regellos" [MEISER 2003, p.xi, Vorwort].

MEISER alludes to the exceptional position of the Latin language by pointing out that Latin *vidi* means 'I have seen', whereas its Indo-European cognates, e.g. Greek *οἶδα*, Sanskrit *véda*, Slavic *vědě*, Gothic *wait*, mean 'I know' [ibid.].

The syncretism of the Indo-European aorist¹² and perfect in Latin can be understood semantically as follows, cf. [ERNOUT 1920, p.143/144]: a (present) *perfectum* such as *vīxit* 's/he has lived' can mean either 's/he has carried her/his life through' or 'her/his life is over now', whereas the corresponding *infectum* (*vīvit*) means 's/he is still in the middle of the course of her/his life'. Originally, the opposition between the two stems was aspectual, not temporal. As the idea of completion is closely related to the notion of past, the *perfectum* was prone to express pastness. Still, the expression of pastness ('s/he lived') in *vīxit* is secondary, i.e. derived from the idea of completion, cf. the Greek *aorist* and the French *passé défini*. This reinterpretation of a completed action as a past action is a general phenomenon, which has been called 'resultative metonymy'. This also happened to the Indo-European perfect¹³.

To recap, VARRO's arrangement of the $2 \times 3 = 6$ Latin 'tenses' is questionable when it comes to the placement of the perfect. Morphologically his arraying of forms displays an appealing symmetry. Semantically it suggests a reading of the Latin perfect that does not account for all its meanings. ROBINS characterizes the flaw in VARRO's system as follows:

Varro put the Latin 'perfect' tense forms *didicī*, etc., in the present completive place, corresponding to the place of the Greek perfect tense forms. In what we have or know of his writings he does not

¹² "Der Aorist, von Haus aus ein „punktueller“ Praesens [. . .]. Der Keim der Umwertung zum Vergangenheitstempus [. . .] lag in der Bedeutung der mit ihrem Eintritt zugleich vollendeten Handlung bei punktueller Aktion" [SOMMER 1914, p.480].

¹³ "Perfekta altindogermanischen Typs bezeichnen einen **Zustand des Handlungsträgers**, der aus einer Handlung (meist Zustandsänderung) desselben Handlungsträgers in der Vergangenheit resultiert. Die **implizierte Handlung in der Vergangenheit** kann in dem bezeichneten Zustand weiter andauern [. . .]. Im Normalfall resultiert der Zustand allerdings aus einer abgeschlossenen Handlung in der Vergangenheit; das Perfekt ist daher normalerweise inhärent perfektiv, obwohl es in bezug auf den Verbalaspekt als Ganzes imperfektiv und einem Präsens gleichwertig ist [. . .]. Die inhärente Bezeichnung einer abgeschlossenen Handlung der Vergangenheit führte dazu, daß das Perfekt in mehreren idg. Einzelsprachen vom Gegenwartstempus zu einem Präteritum mit implizierter Gegenwartsrelevanz wurde (resultative Metonymie)" [TICHY 2000, p.88].

appear to have allowed for one of the major differences between the Greek and Latin tense paradigms, namely that in the Latin ‘perfect’ tense there was a syncretism of simple past meaning (‘I did’), and perfect meaning (‘I have done’), corresponding to the Greek aorist and perfect respectively. The Latin ‘perfect’ tense forms belong in both aspectual categories, a point clearly made later by Priscian¹⁴ in his exposition of a similar analysis of the Latin verbal tenses [ROBINS 1967, p.52].

The overwhelming influence of the Latinate grammatical tradition is reflected by the native German names for the traditional six German ‘tenses’, cf. table 5.3. The term *vollendete Gegenwart* ‘completed present’ for the German perfect is a

Table 5.3: Arraying of German (active) verb forms in the spirit of VARRO

	Zeit	Vergangenheit	Gegenwart	Zukunft
Aspekt unvollendet		<i>ich sah</i>	<i>ich sehe</i>	<i>ich werde sehen</i>
vollendet		<i>ich hatte</i>	<i>ich habe</i>	<i>ich werde</i>
		<i>gesehen</i>	<i>gesehen</i>	<i>gesehen haben</i>

case in point. Actually, the main use of the German *Perfekt*, which is markedly different from its English ‘counterpart’, refers to past time. Therefore, its native name is profoundly misleading. The name *unvollendete Vergangenheit* for the German past tense is also misleading. A brief comparison of the different types of past tense might elucidate where the terminological confusion comes from.

Ancient Greek has four ‘past tenses’: imperfect, perfect, pluperfect, and aorist. Classical Latin has three: imperfect, perfect, and pluperfect. The Latin perfect represents a syncretism of Greek (or rather Indo-European) perfect and aorist. The incomplete past position within VARRO’s system is an appropriate

¹⁴ “PRISCIAN 8.10.54” [ROBINS 1967, p.63]. PRISCIANUS CAESARIENSIS lived around 500 AD. His grammar *Institutiones grammaticae* was “by far the most widely used grammar [...] and formed the basis of medieval Latin grammar and the foundation of medieval linguistic philosophy” [ROBINS 1967, p.61/62].

place for an imperfect only. The English translation of *discēbam* in table 5.1 is 'I was learning', not 'I learned', because the English non-progressive preterite, i.e. [PRET: +, PERF: Ø, PROG: Ø], rather corresponds to the aorist, whereas the past progressive, i.e. [PRET: +, PERF: Ø, PROG: +], corresponds to the imperfect. The situation in German is comparable to the English one – apart from the fact that in German the progressive is not fully grammaticalized. A replacement of *ich sah* in table 5.3 by *ich war am Sehen* would fit VARRO's chart better. It should be noted that the notion of completion depends on lexical aspect, e.g. *ich schwamm* 'I swam, I was swimming' is rather an imperfect, whereas *ich erblickte* 'I caught sight of' is rather an aorist/preterite.

5.1.2 The periphrastic Latin perfect

Structures of the type *have* + past participle existed already in Classical Latin, e.g. *factum habeo* 'done/deed¹⁵ I have'. As from when they represented a periphrastic perfect is an open question in Latin and Romance philology. There was certainly a transitional period, which lasted several centuries, when the inflectional and the periphrastic perfects existed alongside one another. The semantical bleaching of *habere*, which originally meant 'to hold', i.e. its becoming (also) an auxiliary, represents a process of grammaticalization which was not finished before the Late Latin period.¹⁶ This can be demonstrated with reference to the Vulgar Latin authors of the fifth and sixth century.¹⁷ The linguistic transformation which gave rise to the emergence of the Romance composed perfect active

¹⁵The past participle *factum* (< *facere* 'to do, make') can also be a noun meaning '(completed) deed, action'.

¹⁶"Alle diese Umschreibungen stehen zwar manchmal dem einfachen Perfekt in ihrer Bedeutung scheinbar ziemlich nahe; aber erst im Spätlatein sind *habeo* und *teneo* so abgeschwächt, daß sie die Bedeutung eines bloßen Hilfsverbs erhalten haben und die Perfektbildung der romanischen Sprachen sich daraus entwickeln konnte" KÜHNER-STEGMANN (p.764 in vol. 2 of *Ausführliche Grammatik der lateinischen Sprache*, 1912/1971), quoted in [MARTÍN 2001, p.35].

¹⁷"[D]ort [en latín clásico] bewahrte *habere* in der grossen Mehrzahl der Fälle immer noch eine gewisse Selbständigkeit, hier [en los autores vulgares de los siglos V y VI] haben wir ohne Frage die reine Perfektumschreibung vor uns, in der *habere* nur als Hilfszeitwort zu betrachten ist" THIELMANN (p.543 in "Habere mit dem Part. Perf. Pass.", *Archiv für lateinische Lexicographie und Grammatik*, 2, 372–432 and 509–549, 1885), quoted in [MARTÍN 2001, p.34].

happened later than the third century.¹⁸ Still, the embryonic beginnings of the *habeo*-periphrasis assuming a perfect reading can be traced back to Classical Latin.¹⁹

To recap, the full connotational meaning of the technical term *perfect* encompasses several millenia of 'Latin' diachrony, from Italic to vulgar Latin, if not from Indo-European to Romance.

5.2 The perfect as a cross-linguistic phenomenon

The aim of this section is not to examine all verb forms that are called perfect in as many languages as possible. Instead a selection of those European perfects that are similar to the English one will be looked at from the viewpoint of their potential to learn more about the English perfect. This excludes inflectional perfects.²⁰ "The English Perfect is cross-linguistically typical in being expressed periphrastically" [DAHL and VELUPILLAI 2005, p.271, 68 The Perfect]. The

¹⁸ "[A]u IIIe siècle encore, la différence entre *fecit* et *factum habeo* est très nettement perçue. La transformation linguistique d'où est sorti le perfectum composé actif des langues romanes est par conséquent postérieure à cette date" NICOLAU (p.30 in "Remarques sur les origines des formes périphrastiques dans les langues romanes", 1936), quoted in [MARTÍN 2001, p.40]; and "[d]ie vollständige Gleichsetzung mit dem praesentischen Perf. ist erst spätlateinisch [...], auch im 3. Jh. sind das einfache Perf. und die *habeo*-Umschreibung noch klar geschieden [...]; voll ausgebildet erscheint sie erst im 6. Jh." HOFMANN and SZANTYR (p.319/320 in *Lateinische Grammatik auf der Grundlage des Werkes von Friedrich Stolz und Joseph Hermann Schmalz. II; Lateinische Syntax und Stilistik*, 1965/1972), quoted in [MARTÍN 2001, p.35].

¹⁹ "[Y]a en latín clásico esta locución empezó a tomar la significación de un perfecto o algo semejante [already in Classical Latin this locution began having the meaning of a perfect or something similar]; así Catón el Viejo, *quid Athenis exquisitum habeam*. . . ; en Plauto, *illa omnia missa habeo, omnes res relictas habeo*. . . ; en la fraseología legal *factum habeo*. . . ; en Salustio *comperit ego habeo*" GRANDGENT (p.97 in *Introducción al latín vulgar*, 1907/1970), quoted in [MARTÍN 2001, p.35]; and "déjà chez les auteurs comiques, la périphrase du type *scriptum habeo* n'a souvent d'autre valeur que d'un parfait" ERNOUT, quoted in BICHAKJIAN (p.39 in *Evolution in Language*, 1988), quoted in [MARTÍN 2001, p.36]. CATO THE ELDER: 234–149, PLAUTUS: 254–184, SALLUST: 86–34; "les auteurs comiques" probably refers to PLAUTUS (254–184) and TERENCE (195/185–159).

²⁰It should be noted that sometimes the difference between inflectional and periphrastic verb forms is blurred because auxiliaries might turn into morphemes. E.g. there are verb forms labelled perfect in Sanskrit which might be seen as representing a transitional phase. They are formed like this: root + *-ām-* + reduplicated perfect form of auxiliary (*as-* 'to be', *bhū-* 'to be', or *kr-* 'to make'), cf. [MORGENROTH 1985, p.195].

notion of periphrasis is necessary for characterizing the English perfect but it is not sufficient because even the restriction *auxiliary + participle* allows for different kinds of auxiliaries and different kinds of participles. Table 5.4, taken from [HOGG and DENISON 2006, p.111], provides a brief overview of the diachrony of the English perfect. Because of the decline of the *be*-perfect, the English per-

Table 5.4: The diachrony of the English perfect according to HOGG

Changes in:	Old English	Middle English	Modern English
<i>form of perfect</i>	<i>be/have</i> (past participle sometimes declined)	<i>be/have</i> ; <i>have</i> becomes more frequent	mainly <i>have</i>
<i>use of perfect</i>	embryonic	more frequent; in competition with 'past'	perfect and 'past' grammaticalised in different functions

fect can be classified as being of the type *factum habeo*, although the participle is not declined in Modern English.

5.2.1 Possessive perfects

Perfects of the *factum habeo* type are called possessive perfects. BERND HEINE and TANIA KUTEVA define

a possessive perfect as a grammatical construction having the form of a possessive (or 'have'-) construction, with the agent of the construction receiving the same case marking as the possessee noun phrase (i.e. one denoting the item possessed), there is a verb appearing in a non-finite form typically referred to as the past participle or the past passive participle (PPP) [HEINE and KUTEVA 2006, p.142].

The authors present a dynamic topology that sees the rise of possessive perfects as a cross-linguistically observable evolutionary process.²¹ Concerning the

²¹ "By dynamic topology we mean a cross-linguistic classification of grammatical categories according to salient structural properties which can be related in a principled way to the

meaning of possessive perfects, they posit the following stages of evolution:

- (i) *Stage 0: Possession*. [...] exclusively a possessive meaning [...] no relationship to tense-aspect marking
- (ii) *Stage 1: Resultative*. [...] the construction expresses the present result of some past event
- (iii) *Stage 2: Perfect (= present anterior)*. The construction expresses an event that occurred prior to the point of reference and has current relevance.
- (iv) *Stage 3*. The construction spreads into the domain of the past, assuming functions of an aorist/preterite and competing with already existing markers expressing past time reference.
- (v) *Stage 4*. [...] The construction is now largely established as a marker for past time reference, with the effect that the older past time marker declines.
- (vi) *Stage 5*. The possessive perfect is generalized as a past time marker. It can no longer be combined with future markers to form future perfects.

This process is characterized as “unidirectional” [HEINE and KUTEVA 2006, p.146]. The authors put Southern German at stage 4, Standard German at stage 3, all Germanic languages except German at stage 2 and most Slavic languages at stage 1. In colloquial Czech there are uses of the so-called Slavic perfect (see 5.2.3 for details) that can be put at stage 2.²² Standard English is at stage 2 but there are uses of the so-called Australian present perfect (see p.103) that can be put at stage 3.

The ‘bleaching’ of the notion of possession of the verb *have* is a cross-linguistic phenomenon. GUSTAVE GUILLAUME called it “subduction ésotérique” or “tournée vers l’intérieure” [PICOCHÉ 1986, p.8]. For the French *avoir* he proposed the following stages [ibid.]:

evolution of these categories” [HEINE and KUTEVA 2006, p.143].

²²The Slavic perfect is not limited to present tense forms of the auxiliary. An utterance such as *měla jsem to koupěný* ‘I had bought it’ represents a flawless past perfect. See p.95 for details.

1. Possession d'un objet extérieur (*j'ai une maison*);
2. D'une partie du sujet (*j'ai des cheveux bruns*);
3. D'une modification, d'un attribut du sujet (*j'ai la grippe, j'ai peur*);
4. Du résultat d'une action terminée (*j'ai mis mon manteau*²³);
5. Simple auxiliaire du temps passé (*j'ai couru*);
6. Simple désinence²⁴ verbale (*je viendrai*).

Stages 1–5 exist in English and German, too. A stage-5 utterance such as *I have run*²⁵ does not really evoke the concept of possession. Still, not only in a metaphorical sense might one refer to *having* an experience and *possessing* one's past, cf. ADAMCZEWSKI's analysis of the perfect (see p.113). Stage 6 is evocative of certain Latin verb forms such as *laudāverat*²⁶ and *laudāverit*²⁷, whose inflectional suffixes are nothing but forms of the verb *esse* 'to be', which can also stand alone.

5.2.2 Specious similarity

Being familiar with *have* + past/passive participle constructions in their native tongues, many Continental learners of English erroneously transfer usage patterns of the German or Romance present perfect to English. Naturally, learners' grammars and textbooks of English make this a subject of discussion. Appendix C.1 (p.165 ff.) provides a selection of examples. Even those books that have been written for the international market, i.e. which do not adopt a contrastive approach based on a particular L1, tend to mention the existence of a formal

²³“*J'ai mis mon manteau, donc je l'ai sur le dos*” [PICOCHÉ 1986, p.8].

²⁴The word *désinence* means 'ending, inflexion'.

²⁵German has a BE-perfect here (*ich bin gelaufen*). Still, the concept of subduction also applies – mutatis mutandis – to the verb (*to*) *be*. The stage-1 meaning of *existence* is almost totally 'subdued' at stage 5. Furthermore, there are more verbs with a HAVE-perfect than verbs with a BE-perfect in German.

²⁶'S/he had praised' containing *erat* 's/he was', cf. [BAYER and LINDAUER 1985, p.80 & 105].

²⁷'S/he will have praised' containing *erit* 's/he will be', cf. [BAYER and LINDAUER 1985, p.80 & 105].

similarity between the English present perfect verb forms and its Continental cognate forms. They either issue a general warning²⁸ or provide concrete examples in the context of the *present perfect vs. past tense* opposition. The following quote is taken from [ALLEN 1993, p.77]:

Compare the following random examples, where the presence or omission of the time-adverb seems immaterial; in English the tense must change too.

L'ho visto (ieri). [Italian *passato prossimo*]
Am văzut-o (eri). [Romanian *perfectul compus*]
Ich habe ihn (gestern) gesehen. [German (*Präsens-*)*Perfekt*]
Viděl jsem ho (včera). [Czech *minulý čas, préteritum*]

The greatest care must be taken to impress on students that the PRESENT PERFECT tense belongs to PRESENT TIME and may not under any circumstances²⁹ be used on an occasion notionally defined or implied as PAST.

The Romanian *perfectul compus* 'compound perfect' combines a present indicative form of *a avea*³⁰ 'to have' with the main verb's (past) participle, which – contrary to its use for forming the passive voice – does not change its ending³¹. In the example above the suffix *-o* has nothing to do with this kind of subject-verb agreement. It is the unstressed accusative form of the third-person personal pronoun, i.e. 'him', cf. [BEYRER et al. 1987, p.108].

²⁸ "In some other languages there are verb forms which are constructed like the English present perfect (compare English *I have worked*, French *j'ai travaillé*, German *ich habe gearbeitet*, Italian *ho lavorato*, Spanish *he trabajado*). Note that the English present perfect is used rather differently from most of these" [SWAN 2005b, p.438].

²⁹ The use of "may not under any circumstances" makes ALLAN's statement a prescriptive one. Modern descriptive grammars beg to differ, cf. the discussion of this on p.103.

³⁰ "[M]it der Serie *am/ai/a/ am/ați/au*" [BEYRER et al. 1987, p.195].

³¹ "Das Partizip erscheint im Rumänischen und Deutschen als unveränderliche Form in analytischen Paradigmen des Aktivs und Reflexivs, z.B. im zusammengesetzten Perfekt [. . .], im Futur II [. . .] oder im Optativ [. . .]. In den Passivformen oder als Adjektiv erhält das rumänische Partizip hingegen immer mit einem Subjekt übereinstimmende Genus-/Numerusmorpheme" [BEYRER et al. 1987, p.180].

The Czech example (*Viděl³² jsem ho*) is badly chosen because – contrary to the Romance and German examples – the parallelism of forms is superficial at best: it represents a periphrastic structure referring to past time but the Slavic “compound past tense [is formed] from a base which is different from that in the Romance and the Germanic languages, though (active participle [= I-participle³³] + *být* ‘be’)”³⁴ [ERHART 1984, p.98]. In the third person singular the auxiliary is omitted: *viděl* ‘he saw/was seeing’, *viděla* ‘she saw/was seeing’ *vidělo* ‘it saw/was seeing’. For this person the periphrastic structure has been lost, i.e. the Czech preterite is an inflectional past tense for the third person singular. “Present forms of the verb *být* ‘to be’ are added to the -I forms as an auxiliary verb to indicate singular subjects ‘I’, ‘you’ and plural subjects ‘we’, ‘you’ ” [NAUGHTON 2005, p.142]. Contrary to the English present perfect, the auxiliary is never *mít* ‘have’ and the participle is always in agreement with the subject³⁵. Furthermore, Czech I-participles do not double as passive participles. The passive participle corresponding to the I-participle *viděl* ‘saw’ is *viděný* ‘seen’. Czech passive participles “decline like regular standard adjectives” [NAUGHTON 2005, p.160].

5.2.3 The Slavic perfect

There are Czech verb forms of the type *mám uklizeno* ‘I have tidied-up’, which match the structure of the English (present) perfect far better than the (perfective) preterite forms dealt with in the previous paragraph. These forms are subsumed under the name *Slavic perfect of transitive verbs*³⁶. As alluded to by the name, this structure is not possible for intransitive verbs. Apart from that, the structural and semantic similarities between the Slavic and the English

³²The main verb in *viděl jsem ho (včera)* ‘I saw him (yesterday)’ is imperfective. The perfective version of the utterance is *uviděl jsem ho (včera)* ‘I caught sight of him (yesterday)’.

³³“Das I-Partizip, im Deutschen so genannt nach dem fast immer enthaltenen Laut *I*, wird manchmal nicht ganz treffend auch Partizip des Präteritums oder Partizip Aktiv genannt; tschechisch heißt es *příčestí činné*” [FREI 1997, p.223].

³⁴Czech original: “složené préteritum, ovšem na jiné bázi než v románských a germánských jazycích (aktivní participium + „být“).”

³⁵*Viděl jsem* can only be uttered felicitously by a man, i.e. if *jsem* ‘I am’ refers to the speaker himself. The female form is *viděla jsem*.

³⁶“[S]trukturelles Pendant der deutschen Perfektklammer *haben + Partizip II* [...], das sogenannte *slavisches Perfekt* der transitiven Verben” [ŠENKEŘÍK 2000, p.70].

perfect are striking enough to justify further exploration.

Just like in English, the Slavic marker PERF consists of a form of *have* (Czech *mít*) and a participle of the main verb. In both languages this participle doubles as a building block for the passive forms of verbs³⁷. Furthermore, perfect infinitives are possible in both languages, e.g. *to have cooked* and *mít uvařeno* are structurally the same. A direct consequence of this is the fact that PERF combines freely with the category tense:

1. Katrin *má koupenny* nový klavír.³⁸ (present)
'Katrin *has bought* a new piano.'
2. Katrin *měla koupenny* nový klavír. (past)
'Katrin *had bought* a new piano.'
3. Katrin *bude mít koupenny* nový klavír. (future)
'Katrin *will have bought* a new piano.'

Contrary to the participle of the English perfect, the participle of the Slavic perfect is in agreement (concerning case, gender and number) with the object, that is if an object³⁹ is present. In the examples above, the *-ý* of the participle is

³⁷In both languages the auxiliary for the passive voice is *be* (Czech *být*). The passive voice is rare in Czech, though.

³⁸"Katrin hat ein neues Klavier gekauft. (Das Klavier, das sie gekauft hat, ist neu.)" [ŠENKERÍK 2000, p.71].

³⁹This is evocative of the concord of the past participle in French perfects. The rules are different, though. In French, the main difficulty is not how to change the participle ending but to decide whether it is necessary to alter it at all. The *accord du participe passé* is a complex phenomenon of French grammar (including non-perfect verb forms), cf. STEFAN GUTWIN's algorithm [GUTWIN 1996, p.116]. The following example illustrates that the concord of the past participle in French – at least for *avoir*-verbs and reflexive constructions – depends on the syntactic position of the direct object, cf. [GUTWIN 1996, p.13]: *j'ai cassé la tasse* (no concord, direct object after verb phrase) vs. *la tasse que j'ai cassée*, where *-é* has become *-ée* because the feminine *tasse* precedes the relative clause containing the participle. GUTWIN speaks of a principal arbitrariness of the *accord du participe passé* because the function of the participle and the valence of the verb are the same in the two examples above: "grundsätzliche Arbitrarität des *accord du participe passé* in verbaler Funktion [...]. Weder die Funktion des Partizips noch die Valenz des Verbs ändern sich durch die Inversion: *J'ai cassé la tasse*. / *La tasse que j'ai cassée*. Dennoch gilt, daß eine Angleichung des Partizips nur bei Voranstellung des direkten Objekt stattfindet" [ibid.]. Another difference between the concord in Slavic and French perfects is the distance between the words that are in agreement. In Czech they are

accusative masculine singular because *klavír* is accusative masculine singular. If no object is present, the default ending (-o) is neuter singular, e.g. *mám uvařeno* 'I have cooked' ('dinner is ready'). Even if no object is present, the verb still has to be transitive.

For transitive verbs the semantic opposition between *past tense* and *present perfect* is – to some extent – comparable to that between preterite and perfect in Czech. An utterance such as 'You have arranged/fixed up/furnished the/that flat nicely'⁴⁰ can be translated as follows:

1. Hezky *jste* [you are] ten byt *zařídili* [I-participle]. (perfective preterite)
2. Hezky *máte* [you have] ten byt *zařízený* [passive participle]. (Slavic perfect)

The first translation is rather about the past action of furnishing ('You furnished the flat nicely'), whereas the second translation is rather about the present result ('You have a nicely furnished flat'). The difference between the two verb forms can be summarized as follows:

Im Gegensatz zum Gebrauch des perfektiven Präteritums thematisiert der tschechische Sprecher nicht die durch das Partizip bezeichnete Handlung, sondern er hebt den aktuellen Nachzustand hervor und bleibt dabei als ein potentiell passives Agens im Hintergrund. Das slavische Perfekt [. . .] steht damit auf dem Wege zwischen einer Aktiv-Konstruktion und deren Passiv-Transformation. Es scheint zweitrangig zu sein, wer⁴¹ die Handlung durchgeführt hat, es geht vielmehr um das Resultat der Handlung, also darum, wie die aktuelle

adjacent, whereas in French the congruence is mediated via the inserted relative pronoun *que*, cf. the notions of "Nah-Kongruenz" and "Fern-Kongruenz" [WEINREICH 1982, p.41]. Czech examples of "Fern-Kongruenz" mediated via a relative pronoun can be constructed. The point is that in French word order is the decisive factor.

⁴⁰This example („Schön habt ihr die Wohnung eingerichtet“[, fand Mutter]) and the Czech translations are taken from [ŠENKEŘÍK 2000, p.71].

⁴¹Just like in English, there is a continuum of verb forms that range from stressing who did the cooking to the mere existence of a ready-to-be-eaten meal: *já jsem vařil*^{imperfective, masculine} [imperfective preterite, *já* stressed in intonation] 'It is me who has cooked', *uvařil*^{perfective, masculine} [perfective preterite], *mám uvařeno*^{perfective, neuter} [Slavic perfect], 'I have cooked', *je uvařeno*^{perfective, neuter} [(it) is + passive participle] 'dinner is ready', literally 'it is cooked'.

Konfiguration der Realität aussieht. Ein Abschluss kann erschlossen werden [ŠENKERŮV 2000, p.71].

The most striking similarity between English and Czech in the context of the Slavic (present) perfect is its incompatibility with past-time markers such as *včera* 'yesterday': **včera mám uvařeno* is at least as ungrammatical as **I have cooked yesterday*.⁴²

How does the Slavic perfect interact with perfective verbal aspect? All passive participles in the perfect constructions above are perfective, i.e. derived from perfective infinitives: *uklizeno* < *uklidit*⁴³ 'tidy up', *uvařeno* < *uvařit*⁴⁴ 'cook (sth. through)', *koupený* < *koupit*⁴⁵ 'buy', *zařizený* < *zařít*⁴⁶ 'furnish (sth.)'. Imperfective passive participles (e.g. *viděný* above) "can refer to a type or category of thing, rather than the result of an action, e.g. *vařené nudle* 'boiled noodles' [...]" [NAUGHTON 2005, p.161]. Consequently, imperfective passive participles are semantically incompatible with the resultative meaning of the Slavic perfect. The Slavic perfect of an imperfective main verb would be considered ungrammatical: **mám vařeno*.

The auxiliaries *mít* 'have' and *být* 'be' are imperfective. Normally⁴⁷, they do not have perfective partners. They can be made iterative⁴⁸ by infixation: *mít* 'have' > *mívát*⁴⁹ 'have often, tend to have' and *být* 'be' > *bývát*⁵⁰ 'be often, tend to be'. Contrary to the preterite, which does not allow for its auxiliary *být* to take

⁴²The Czech sentence is probably even more ungrammatical than its English counterpart because its meaning is much closer to the reading **I have something as cooked yesterday*, i.e. the auxiliary's original meaning of possession has not yet been subdued much. Compared to the English perfect, which is fully grammaticalised, the Czech perfect can be seen as a perfect in statu nascendi, cf. the evolutionary stages of possessive perfects on p.90.

⁴³Imperfective partner: *uklízet*.

⁴⁴Imperfective partner: *vařit*.

⁴⁵Imperfective partner: *kupovat*.

⁴⁶Imperfective partner: *zařizovat*.

⁴⁷There is a perfective *pobýt* 'stay' but it is used as the perfective partner of *být* 'be' only if an emotional colouring is wanted. *Být* belongs to a group of imperfective verbs "für die beim normalen, sachlichen Gebrauch keine perfektive Entsprechung zur Verfügung steht, weil diese Entsprechung emotional ist und ohne Emotionalität nicht verwendet werden kann" [FREI 1998, p.499].

⁴⁸These 'frequentatives' behave like imperfective verbs. "In the past these verbs mean 'used to do' " [NAUGHTON 2005, p.166].

⁴⁹There is an emotionally coloured 'second-order' iterative form: *mívávat*.

⁵⁰Ditto: *bývávat*.

these iterative forms, the Slavic perfect can be combined with the iterative forms of *mít* 'have', e.g. *mívala uvařeno v šest* 'she used to have lunch/dinner ready at six', literally: 'she had^{iterative} cooked^{perfective} at six'. Even for the non-iterative *měla uvařeno* the literal English translation *she had cooked* enforces a pre-past reading because referring to the before-past is the prototypical function of the English past perfect. Combining the past perfect with a past time adverbial is borderline ungrammatical: *?she had cooked at six*, cf. "The past perfect is not used simply to say that something happened some time ago" [SWAN 2005b, p.398]. In German this is possible (*um sechs hatte sie gekocht*); even a double perfect is possible (*um sechs hatte sie (schon) gekocht gehabt*).

There are marginal uses of the English past perfect which do not necessarily refer to the pre-past. Being embedded in a past tense sentence seems necessary, though. Firstly, in utterances such as "*It was the first time that I had heard her sing*" [SWAN 2005b, p.425] the past perfect is mandatory. This sentence can be transposed to the present (*It is the first time that I have heard her sing*), where a present perfect is mandatory. In the Czech, French and German translations the perfect is not mandatory. That is the reason why the structure '*first/second ... that ... + PERF*' is perceived as unnatural by some EFL learners. Secondly, in an utterance such as "*He went out before I had finished my sentence.* (= ... before the moment when I had completed my sentence" [SWAN 2005b, p.84] the past perfect refers – strictly speaking – to the after-past because the event point E of *finishing* is later than the reference point R, which is established by the past tense of *went*. This posterior past reading ($R < E < S$) of the past perfect is exceptional⁵¹. It is also possible in German (*er ging hinaus, bevor ich meinen Satz beendet hatte*) but not mandatory (*er ging hinaus, bevor ich meinen Satz beendete*). In both languages this use of the past perfect "emphasise[s] the idea of completion" [ibid.].

⁵¹ "Note that in sentences like the last, a past perfect tense can refer to a time *later* than the action of the main verb. This is unusual" [SWAN 2005b, p.84, his italics].

5.3 The usage of the present perfect

[SCHLÜTER 2002] contains the following overview⁵² of the uses of the English present perfect:

- | | |
|--|-----------------------------|
| I. R = S | $\sum_{R=S} = 96.6\%$ |
| a. E < R (indefinite past) | $\sum_{E<R=S} = 79.5\%$ |
| (i) Single Acts/Events | 60.7% |
| <i>He has served as a border patrolman and was in the Signal Corps of the U.S. Army.</i> | |
| (ii) Multiple Acts/Events | 18.8% |
| <i>Several times recently I have wondered whether shows were being staged for the sake of the script or just to entertain the audience. . .</i> | |
| b. E ≤ R (continuative past) | $\sum_{E\leq R=S} = 17.1\%$ |
| (i) Continuous Acts/Events | 8.6% |
| <i>I've worked in universities for nearly ten years now.</i> | |
| (ii) States | 8.5% |
| <i>I have known de Gaulle for 17 years.</i> | |
| II. R < S | $\sum_{R<S} = 1.4\%$ |
| a. E < R < S | 1.0% |
| <i>In fact I used one of those tea-bags which I've never used until Milly gave them in that emergency the other day.</i> | |

⁵²The overview (including the examples) is taken from "Darstellung 6.7.1: Gesamtübersicht über die Verzeitigungsstruktur des *Present Perfect*" [SCHLÜTER 2002, p.169]. The numbers 96.6%, 1.0%, 0.4%, 1.1%, 0.9% are taken from "Darstellung 6.2.2: Übersicht über das Auftreten des *Present Perfect* mit unterschiedlichen Referenzzeitpunkten im Gesamtkorpus" [SCHLÜTER 2002, p.147]. The other four numbers in I.a. and I.b. have been calculated by multiplying the numbers from "Darstellung 6.6.1: Übersicht über alle Bedeutungsvarianten des *Present Perfect* geordnet nach der relativen Häufigkeit ihres Auftretens" [SCHLÜTER 2002, p.166], whose overall sum is 100%, with the 96.6% from "Darstellung 6.2.2". The numbers are based on a selection of parts ("Kernbereich des Gesamtkorpus") of the corpora mentioned on p.149.

b. E = R < S	0.4%
<i>He's been here two or three weeks ago.</i>	
III. R > S	1.1%
<i>I'll get them through quickly once I've had them from you.</i>	
IV. Timeless	0.9%
<i>The commander has failed in his duty if he has not won victory – for that is his duty.</i>	

5.3.1 Prototypical uses (R = S)

P[OSITION]-DEFINITENESS-CONSTRAINT:

In an utterance, the expression of TT [topic time] and the expression of TSit [time of situation] cannot both be independently p-definite.

This excludes utterances like [...] **At seven, Chris had left at six* and **Chris has left at six*. In both cases, the lexical content of INF is <Chris leave at six>, so the expression of TSit is p-definite. In [the first example] the position of TT is explicitly specified (in context!) by the p-definite adverbial *at seven*, and in [the second example] the position of TT is explicitly specified by the present-tense morpheme *has*, which is p-definite. Note that nothing in the actual temporal constellation excludes [the two examples]: If Chris indeed left at six, then both [...] are true. The P-Definiteness Constraint is a pragmatic constraint, not a semantic or even syntactic one [KLEIN 1992, p.546].

WOLFGANG KLEIN ascribes a tense component and an aspect component to the present perfect: "The tense component says that TT includes TU [time of utterance], so that TT cannot be specified by an adverbial like yesterday [...]. The aspect component says that TT is in the posttime of TSit; hence TSit itself is in the past" [KLEIN 1992, p.543/544].

MICHAEL SWAN points out that there are a couple of fairly widespread “bad rules” [SWAN 2005b, p.457] concerning the present perfect. Firstly, the notion of ‘definite time’ is an unfortunate one when referring to position-definite past time adverbials because the set of definite temporal adverbs is much larger than the set of position-definite past time adverbs:

1. *I’ve lived here for exactly three years, seven months and two days.*

(present perfect with very definite time-reference)

2. *Once upon a time a little girl lived with her mother in a lonely house in a dark forest.*

(simple past with very indefinite time-reference)

Interestingly enough, there are standard uses of the present perfect containing definite past time adverbs that are speciously position-definite. An utterance such as *I have washed my car at 2 a.m.* is ungrammatical if it is supposed to mean *(Last night) I washed my car at 2 a.m.*, but it is perfectly acceptable if it does not refer to my washing my car in a particular night but rather to the fact that there have been nights in my life when I washed my car. Similarly, an utterance such as *I have seen people sunbathing on Christmas Eve* does not refer to a particular Christmas Eve but to some 24 December between my birth and today. Note that **I have seen people sunbathing on Christmas Eve 2002* is true but ungrammatical. **Last night I have washed my car at 2 a.m.* is equally ungrammatical, if not even more so. There might be extremely far-fetched grammatical readings of *I have seen people sunbathing on Christmas Eve 2002* if and only if there had been more than one 24 December 2002 in my life, e.g. if I was a time-traveller who had many Christmas Eves 2002. To phrase it differently, the coexistence of a present perfect verb form and a possibly position-definite temporal adverb leads to a neutralisation of the adverb’s position-definiteness. If that is not possible, the utterance becomes ungrammatical. Therefore, one can conclude that the position-definiteness constraint is a fundamental rule of standard present perfect grammar. There are exceptions to the rule, though. An utterance such as *he has played golf on Tuesday*, which normally does not refer to a specific Tuesday, might implicitly refer to last Tuesday in an utterance such as “Believe it or not, he

has played golf on Tuesday (sous-entendu par exemple, though he usually plays on Monday)" [DÉFROMONT 1973, p.73]. One might argue that the sentence is rather about *playing-golf-on-Tuesday* than about *playing golf*.

Secondly, the concept of 'finished actions' is unsuited for differentiating between present perfect and simple past⁵³:

1. *That cat has eaten your supper.* (finished action – present perfect)
2. *I ate the last of the eggs this morning.* (finished action – simple past)

The concept of 'finished time period' is helpful, though. If E is explicitly confined to a past time-interval that is not adjacent to S, then the simple past has to be used, e.g. *I lived there as from 1987 to 1995*. A case in point is the use of temporal *for*: *I have loved you for ten years* contrasts with *I loved you for ten years*. Here, the use of the present perfect indicates that there is still love at S ($= R \geq E$), whereas the use of the simple past indicates that there is not any love at S ($> R = E$). Still, it might be conceivable to read *I have loved you for ten years* as a statement about *loving-you-for-ten-years* during some decade in my life up to now.

Thirdly, the concept of 'recent actions' does not necessarily help to differentiate between present perfect and simple past⁵⁴:

1. *The French revolution has influenced every popular radical movement in Europe since 1800.* (200-year-old event – present perfect)
2. *Ann phoned five minutes ago.* (very recent event – simple past)

The length of time elapsed between the point of event and the point of speech seems to be of minor importance when compared to the current relevance of the event.

⁵³Examples taken from [SWAN 2005b, p.457].

⁵⁴Examples taken from [SWAN 2005b, p.445].

5.3.2 Marginal uses ($R \neq S$)

$E < R < S$

Point of reference in the past, E precedes R ($E < R < S$, II a, paradigm: *In fact I used one of those tea-bags which I've never used until Milly gave them in that emergency the other day*): This use of the present perfect would be marked wrong by most prescriptive grammarians and teachers because a past perfect is much more appropriate for $E < R < S$, i.e. for an anterior past. Still, in 1.0% of its uses the present perfect seems to be an ersatz form for the past perfect. As the past-time reference in the specimen sentence above is established by the *I used* of the main clause, it might be conceivable that the present perfect form in the relative clause is supposed to express anteriority only. That would be comparable with the elliptical use of a present perfect instead of a future perfect. Another explanation might be a 'historical present perfect' reading, which is rather improbable because the specimen sentence does not seem to be a narrative. Maybe the speaker who uttered the sentence had a momentary lapse and gave in to the collocational pressure exerted by the adverb *never*, which collocates quite often with the present perfect.

$E = R < S$

According to SCHLÜTER (see p.100), KLEIN's pragmatic constraint does not hold in 0.4% of all utterances containing a present perfect, a negligible percentage. Still, there are at least three remarks to be made about the taking over of past time functions by the present perfect.

Firstly, the definite past time adverbial might be added as an afterthought: *I have seen Ivan, it was yesterday* is totally acceptable. *I have seen Ivan – yesterday* is borderline acceptable, the dash indicating that the time adverbial *yesterday* was added as an afterthought. *I have seen Ivan yesterday* is unacceptable.

Secondly, contrary to what is said in the previous sentence, utterances such as *Vlad has been killed on the road yesterday* are acceptable in colloquial Australian English.⁵⁵ The Australian present perfect "is used: (1) in combination

⁵⁵The example is a genuine mobile phone text message the author of this paper received from an Australian friend. *Vlad* was a cat.

with past temporal adverbials; (2) in sequences indicating narrative progression; (3) in alternation with the simple past and the present tense to express stylistic contrast" [ENGEL and RITZ 2000, p.119]. Most of the data examined in ENGEL's article was taken from radio news programs and chat shows, i.e. from the realm of spoken English.

Thirdly, the present perfect often occurs with past time expressions "in brief news items, where space is limited and there is pressure to announce the news and give the details in the same clause" [SWAN 2005b, p.443]:

Here are some real examples⁵⁶ taken from news broadcasts, newspaper articles, advertisements, letters and conversations.

1. *Police have arrested more than 900 suspected drugs traffickers in raids throughout the country on Friday and Saturday.*⁵⁷
2. *... a runner who's beaten Linford Christie earlier this year.*
3. *A 24-year-old soldier has been killed in a road accident last night.*
4. *The horse's trainer has had a winner here yesterday.*
5. *... indicating that the geological activity has taken place a very long time ago.*
6. *Perhaps what has helped us to win eight major awards last year alone ...*
7. *I have stocked the infirmary cupboard only yesterday.*
8. *I am pleased to confirm that Lloyds bank ... has opened a Home Loan account for you on 19th May.*

MICHAEL SWAN adopts both a descriptive and a prescriptive point of view. On the one hand, he does not refrain from listing the above-mentioned non-standard

⁵⁶All taken from [SWAN 2005b, p.443].

⁵⁷There is a similar sentence in a new book containing diagnostic tests (at upper intermediate, advanced and expert level) that refer specifically to the explanations in SWAN's *Practical English Usage*: "What do you think of this way of using the present perfect? Police **have arrested** 45 suspected terrorists in countrywide raids **last weekend**. A. It's normal. B. It's unusual. C. It's completely incorrect." [SWAN and BAKER 2008, p.133] The correct answer is B. The question is taken from the tests at expert level.

utterances containing a present perfect verb form and a position-definite past time adverbial. He even points out that, contrary to what most grammars say, these “structures are unusual but not impossible” [ibid.]. On the other hand, he recommends that “learners should avoid them” [ibid.]. His recommendation is a sound one, especially to intermediate learners, because these marginal non-standard uses, which are mainly taken from journalese, might take an intermediate learner’s attention off the standard uses of the English present perfect (indefinite and continuative past). Obviously, learners speaking a language featuring a perfect that is used like the English past tense (position-definite past) will be prone to use the present perfect erroneously. German learners of English are a case in point because the German *Perfekt*, whose native name *vollendete Gegenwart* ‘completed present’ is misleading, represents a past tense. This is particularly true of spoken Southern German; the rivers Moselle, Lahn and Main representing a dividing line, cf. [BÜNTING and ADER 1992, p.68]. The German *Perfekt* is freely combinable with position-definite past time adverbials. Furthermore, its formation (*haben/sein* + past participle) often corresponds to the formation of the English present perfect (*have* + past participle).

A purely descriptive remark on the present perfect referring to ‘definite’ past time can be found in [CARTER and MCCARTHY 2006, p.618]:

In spoken and written journalistic styles, the present perfect is sometimes used to stress the current relevance of events, even though definite past time adjuncts may be present:

1. *We’ve lost so much of our manufacturing industry in the 1980s and early 1990s.*⁵⁸
2. *A man has been arrested last night and will appear in court tomorrow.*

R > S

Point of reference in the future (R > S, III, paradigm: *I’ll get them through quickly once I’ve had them from you*): This use of the present perfect is clearly an

⁵⁸The authors add: “[speaker is speaking in 1998, i.e. not ‘the early 1990s’]” [ibid.].

elliptical one. The present perfect may replace the future perfect in subordinate clauses because the future-time reference has already been established by the *will* in the main clause. The use of the present perfect in utterances such as *she won't be satisfied until she has finished another chapter* or *the winner will be declared when every competitor has finished the course* "correspond[s] to the future use of the simple present in adverbial clauses" [QUIRK et al. 1985, p.216].

Timelessness

Point of reference indefinite (TIMELESS, IV, paradigm: *The commander has failed in his duty if he has not won victory – for that is his duty*): The specimen sentence is timeless because it refers to a prototypical commander and not to a particular one. It can be rephrased by using perfect infinitives: *For a commander, not to have won victory means to have failed*. Here, being in the aftermath of a lost battle means to be a loser. Using bare infinitives would not have the same effect: *not to win means to fail*. The difference is "quite palpable; compare TENNYSON's famous lines: *'Tis better to have loved and lost / Than never to have loved at all* with their revision *'Tis better to love and lose / Than never to love at all*" [MCCOARD 1978, p.12].

5.4 The meaning of the present perfect

5.4.1 McCoard

ROBERT MCCOARD grouped the theories about the (present) perfect into four categories, cf. [MCCOARD 1978, p.17/18]:

(a) current relevance (CR)

The present perfect expresses a present state resulting from past action.

(b) indefinite past (ID)

The present perfect expresses a past event which is unidentified as to time.

(c) extended now (XN)

The present perfect expresses a past event within a time span which is continuous with the present, not differentiated into “then” versus “now” .

(d) embedded past (EB)

The present perfect is made up of a past-tense sentence embedded as a sentential subject of a present-tense predicate.

MCCOARD himself favours the extended now theory because it “offers the best overall account of the perfect/preterit opposition and attendant phenomena” [ibid.].

Current relevance

CR theory claims that the English present perfect establishes a connection between a past event (situated at E) and the event’s pertinence to the moment of speech. Furthermore, it claims that the preterite does not establish such a link. According to current relevance theory, an utterance such as *she has left* implies that she is elsewhere, whereas an utterance such as *she left* is non-committal about her current whereabouts. It is very difficult to deny that an utterance such as *she left half a minute ago* has current relevance. Therefore, current relevance cannot be sufficient for using the present perfect because the preterite may equally carry relevance that applies to the moment of encoding. If current relevance is only necessary for using the present perfect, then “there is no consistent contrast with the preterite [...], hence current relevance fails to have any explanatory power as a theory” [MCCOARD 1978, p.32]. According to MCCOARD, recency is a variety of current relevance. As pointed out by SWAN (see p.102), recency is neither a sufficient nor a necessary condition for using the present perfect. The same applies to temporal remoteness as such. Furthermore, the opposition of present perfect vs. preterite does not correspond to the opposition between “events pertaining to persons presently alive and those of persons past and gone” [MCCOARD 1978, p.33]. For instance, it is acceptable to say *Einstein has explained the nature of gravitation*, but it is not acceptable to say **Einstein has visited Princeton* because it “seem[s] to presuppose the denial of Einstein’s death” [MCCOARD 1978, p.60]. Interestingly enough, *Princeton has*

been visited by Einstein is acceptable because “the passive transformation bring[s] a presently-extant entity to the front” [MCCOARD 1978, p.61]. The question whether these utterances about Einstein are acceptable or not depends on the interlocutors’ extra-linguistic knowledge. It is necessary to know who Einstein was and that he is dead. The same applies to current relevance theory in general: it presupposes a rudimentary knowledge of cause and effect. The following inferences⁵⁹ are straightforward but not all of them are logically necessary:

1. *I’ve broken my leg.* ⇒ *My leg is broken now.*
2. *Have you read the Bible?* ⇒ *Do you know the Bible?*
3. *Some fool has let the cat in.* ⇒ *The cat is in.*
4. *Utopia has invaded Fantasia.* ⇒ *Utopia is at war with Fantasia.*
5. *Mary has had a baby.* ⇒ *Mary now has a baby.*
6. *Our dog has died.* ⇒ *Our dog is dead.*
7. *All the wars in history have taught us nothing.* ⇒ *We know nothing.*

If two people’s views of causal connection differ, then they might infer different interpretations of current relevance. The only inference that is valid for all uses of the present perfect is the following: if *x has verb-en*, then *x* is in a current state of *having verb-en*. Such a reading is absurd because there is no progressive perfect in English: **x is having verb-en* is ungrammatical. Of course, one could argue that *to have verb-en* is a stative verb, which is equally nonsensical, and therefore precludes the expanded form. That would entail the following interpretation: if *x has verb-en*, then *x has verb-en*, which is true but not very helpful.

Indefinite past

ID theory “claim[s] that the present perfect locates events somewhere before the moment of coding, but without pointing to any particular occasion or subpart of the past” [MCCOARD 1978, p.75]. The opposition present perfect vs. preterite

⁵⁹Examples taken from [SWAN 2005b, p.438].

is reduced to, i.e. interpreted as an instance of, the opposition indefinite vs. definite (past time reference). The latter opposition is well known from the grammar of nouns and their possible modifiers, cf. *a book* vs. *the book*, *some occasion* vs. *the occasion*. It is tempting to explain *she has come* vs. *she came* by the familiar concept of (in)definiteness. As mentioned on p.101 (*a Christmas Eve* vs. *Christmas Eve 2002*), the opposition indefinite vs. definite certainly plays an important role in deciding whether a temporal adverb is combinable with the present perfect or not. “The cornerstone of ID theory is [...] the relationship between tense forms and adverbial expressions which may accompany them” [McCOARD 1978, p.77]. Unfortunately, the set of adverbial expressions that are combinable with the present perfect and the set of those that are combinable with the preterite are not mutually exclusive because there are temporal adverbs that are “variable in definiteness” (ibid.), e.g. *today*. Opposing *she has left today* vs. *she left today* shows that the intersection of the two sets might pose a problem for proponents of ID theory. In what way is the *today* in the first sentence less definite than the *today* in the second sentence? In an utterance such as *I’ve seen her this morning* the adverbial expression contains the moment of speech, whereas in *I saw her this morning* it does not (or does not have to), but does the definiteness of *this morning* in the two specimen sentences differ? It does not.

Extended now

XN theory represents “an analysis of the perfect as the marker of prior events which are nevertheless included within the overall period of the present, the ‘extended now’, while the preterite marks events assigned to a past which is concluded and separate from the extended present” [McCOARD 1978, p.123]. The opposition present perfect vs. preterite corresponds to the opposition –THEN : +THEN, or –REMOTE : +REMOTE (in the past). Here, the extension of ‘now’ encompasses the past, not the future. This can be illustrated by attaching a truncated Gaussian bell curve (see figure 5.1 on p.112) to the present moment, i.e. a normal distribution curve whose right-hand half has been deleted⁶⁰. Ex-

⁶⁰Cf. p.111 for a detailed discussion of this visualization of JOOS’s concept of *perfect phase*.

tended now theory accounts for using the present perfect for general experience. *I have been to Australia* refers to 'my life up to now'. Furthermore, it accounts for using the present perfect with 'bridge time markers', e.g. *we have lived here since 1976*. Extended now is the right concept to differentiate between *we have lived in Cologne for twenty years* and *we lived in Cologne for twenty years*. Utterances such as *I have washed your car*, which might be viewed from an ID and CR point of view (recent indefinite past & present result of a past event), can be understood easily within the framework of XN theory: *my washing your car is (over and) not remote - infer from this fact whatever seems appropriate within the context of our relationship*.

XN theory may assist in categorising the English present perfect because it establishes a correspondence between the opposition present perfect vs. preterite and "the opposition past-including-the-present versus past-excluding-the-present" [McCOARD 1978, p.152]. The pertinent category was named *inclusion* by McCOARD, who was acutely aware of the fact that this category refers to the present perfect only and not to the perfect in general: "Nontensed perfects express simple anteriority, [here 'simple' means] not 'tied' to the moment of coding" [ibid.]. To recap, +INCLUSION summarises [MOD: ∅, pret: ∅, perf: +] and -INCLUSION summarises [MOD: ∅, PRET: +, PERF: ∅]. Note that the category INCLUSION refers to past time only. It is not operative in the pre-past because [MOD: ∅, PRET: +, PERF: +], i.e. the past perfect, can refer to both pre-past-including-the-past and pre-past-excluding-the-past; cf. the back-shift of tenses in reported speech: both the present perfect and the preterite are mapped onto the past perfect. *Inclusion* is a subcategory of *tense*:

Apparently then, the category of inclusion emerges only when the preterite and the perfect are competing 'in the same territory'. Hence inclusion will have to be subordinate to tense in the hierarchy of categories, while aspect is pretty much coordinate with tense [ibid.].

Formally, INCLUSION could be functional for [MOD: +] but the pair [MOD: +, PRET: ∅, PERF: +], e.g. *she will have sung*, and [MOD: +, PRET: +, PERF: ∅], e.g. *she would sing*, does not represent an opposition. Semantically, INCLUSION might be seen as operational for the future: *John will leave soon*

vs. *John is leaving soon* can be interpreted as –INCLUSION vs. +INCLUSION. “Unfortunately for this parallelism, however, there is no evident corresponding classification of adverbs (like +THEN vs. –THEN)” [MCCOARD 1978, p.153]. Furthermore, there are other ways to refer to future time, e.g. *(to) be going to*, simple present tense, *(to) be about to*, etc.

Embedded past

EB theory aims at taking the compositional nature of the perfect seriously. Proponents of EB theory “characterise the perfect as a derivation from a string in which one tense is embedded in another, the embedded tense being *past*” [FENN 1987, p.159]. An utterance containing a present perfect verb form is analysed as follows: the auxiliary *have/has* is seen as a full verb and the past participle *verb-en* is interpreted as referring to a past event, i.e. the verb form *have/has* represents an embedding present, whereas the verb form *verb-en* represents an embedded past. Semantically, this alludes to a “present possession of past experience” (BACH quoted in [FENN 1987, p.162]) reading.

5.4.2 Joos

MARTIN JOOS calls the category PERF *phase*⁶¹, its unmarked member *current (phase)* and its marked member *perfect (phase)*. “The name derives from the special relation between cause and effect signified by verbs in the perfect phase” [JOOS 1964, p.138]. The innovative element in JOOS’s approach to ascribing meaning to forms marked [PERF: +] is his doing without any explicit use of notions of retrospection or completion. He actually points out that “the name *perfect* is traditional and entirely misleading” [JOOS 1964, p.140, his italics]. Within his terminology, the opposition *current phase* vs. *perfect phase* refers to the cause and the principal effects of an event as being *in phase* vs. *out of phase* with each other. These terms are borrowed from electrical engineering, where they refer to the phase difference between two sine functions⁶². JOOS explains

⁶¹JOOS points out that “this untraditional name” [JOOS 1964, p.138] was coined by GEORGE L. TRAGER and HENRY LEE SMITH, JR. [*An Outline of English Structure*, 1951].

⁶²The sine function’s periodicity is of subordinate importance here. JOOS’s illustrations of the perfect phase do not depict sinusoids but truncated Gaussian bell curves, cf. figure 5.1. “In

his approach as follows:

[T]he events designated by perfect verbs may be interesting in themselves, and may have simultaneous effects, but all that is now treated as uninteresting; the focus of attention is entirely on the *delayed* effects which remain uncertain until separately specified by other verbs. It is this focus of attention that determines what effects will figure as *principal* effects. [...] the essential point here is that the meaning of perfect phase is that *the principal effects of the event are out of phase with it*, which of course can only be true if they are delayed. [...] the perfect phase means that the event is *not mentioned for its own sake* but for the sake of its consequences. The perfect phase has removed our attention from the event which it itself presents, and has relocated our attention on the subsequent opportunities for events, now that they have been prepared for [JOOS 1964, p.140, his italics].

Just like for *temporary aspect*, i.e. [PROG: +] (see figure 4.1 on p.76), the author offers a graphical representation of perfect phase, cf. figure 5.1, taken from [JOOS 1964, p.211, *Appendix: Graphs for Aspect and for Phase*]. There

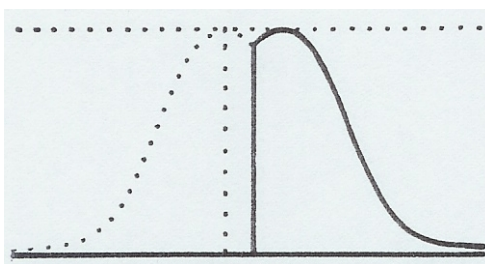


Figure 5.1: *Perfect phase* according to JOOS

are three dotted lines representing the “distribution, along the time-scale, of the probability that a predication is valid” [ibid.]. According to [JOOS 1964,

its English grammar use, the regular cyclic feature of that electrical *phase* drops out, though of course recurrence does not drop out with it: [...] items in the vocabulary and in the grammar [...] are kept alive by recurrent use, and the events they designate are not unique” [JOOS 1964, p.139, his italics].

p.140/141], the solid-line half-curved frame represents the new opportunities and the prepared-for events mentioned in the quote above. The vertical dotted line “represents an instantaneous event [... t] the high level dotted line represents any status verb [...] and] the curved dotted line represents an event of the limited duration sort” [ibid.].⁶³ JOOS makes a remark that is evocative of GIERING et al.’s concept of correlation (see p.51): “The meaning of BE GOING TO [...] turns out to be the exact reversal [...] of the meaning of perfect phase: it simply exchanges ‘previous’ and ‘subsequent’ on the graph” [ibid., footnote].

5.4.3 Adamczewski

HENRI ADAMCZEWSKI’s approach to the English present perfect is embedded in a general analysis of the meaning of *have*.⁶⁴ He opts for a unifying presentation⁶⁵ of all uses of *have* and sees the effect of the meaning of possession as the key factor in explaining the *fonction invariante* of *have*.⁶⁶ ADAMCZEWSKI integrates the following uses⁶⁷ of *have* into his overall analysis:

⁶³JOOS gives the following examples: He *has pronounced* them man and wife (instantaneous), He *has practised* anæsthetics for many years (status verb), [A]nother nurse [...] *has been waiting* outside the court (limited duration), cf. [JOOS 1964, p.140/141].

⁶⁴ “[N]ous avons décidé [...] pour des raisons fondamentales [...] d’insérer la construction en *have* + *en* dans une étude *globale* consacrée à l’opérateur *have*” [ADAMCZEWSKI and DELMAS 2004, p.109, their italics].

⁶⁵ “[A]u lieu de l’atomisation opacifiante d’analyses particulières disséminées ici et là dans la grammaire, on aura une *présentation unifiante* qui éclairera tous les différents emplois de *have* et les rendra assimilables” [ADAMCZEWSKI and DELMAS 2004, p.109, their italics].

⁶⁶ “[L]’effet de sens de *possession* constitue à nos yeux *la clé pédagogique* de l’invariant *have*” [ADAMCZEWSKI and DELMAS 2004, p.109, their italics].

⁶⁷List and examples taken from [ADAMCZEWSKI and DELMAS 2004, p.110]. This study focuses on no. 3 and deals with no. 1 because the notion of possession is central in ADAMCZEWSKI’s approach to the present perfect. The other three uses are mentioned for the sake of completeness. A few side notes concerning no. 2: ADAMCZEWSKI rejects vehemently the traditional analysis of the structure *have to do*. According to him, it is not [[have to] do] but [have [to do]]. Cf. “La grammaire traditionnelle parle de *have to* comme d’un substitut du verbe « défectif » *must*. De son côté, la grammaire transformationnelle parle du *modal have to*. Nous montrerons que ces deux points de vue sont insoutenables et, finalement, que *have to* n’a d’existence que comme segment brut de la chaîne linéaire (l’énoncé de surface)” [ADAMCZEWSKI and DELMAS 2004, p.114, their italics]. In Czech *have* + infinitive can express offering (e.g. *mám vařit?* ‘shall I cook?’, literally: ‘have I (to) cook?’) and recommendation (e.g. *měla bys vařit* ‘you should/ought to cook’, literally: ‘had [I-participle, feminine form] you be [special auxiliary form expressing irreality] (to) cook [imperfective infinitive]’, i.e. ‘you should have to cook’). In German **ich habe tun* is ungrammatical, whereas *ich habe zu*

1. *Have* et la possession : *Peter has a new car.*
2. *Have* et l'obligation : *I have to wash my car.*
3. *Have* et le *present perfect* : *I have washed my car.*
4. *Have* et le causatif : *I have my car washed once a week.*
Telephone to the police and have them send an ambulance.
5. *Have* et prédicat en *-ing* : *I won't have you swearing in front of the boy.*

According to ADAMCZEWSKI word order plays a key role in differentiating how possession is expressed. In English and French the order possessee – possessor is realised by *être* and *be*, e.g. *la voiture est à Pierre* and *the car is Peter's*. The order possessor – possessee is realised by *avoir* and *have*, e.g. *Pierre a une voiture* and *Peter has a car*.⁶⁸ Of course, *be/être* and *have/avoir* are not the only verbs that can express possession but they are the most interesting ones here because the others, e.g. *own*, *possess*, *belong*, are not used as building blocks for complex verb forms such as PERF, PROG and PASS.⁶⁹ Furthermore, it should be noted that here *be/être* are not bare; the structures are rather *be X's/être à X*. ADAMCZEWSKI's analysis of the operator *have* can be summarized as follows: *have* is not seen as a transitive verb because it cannot be made passive.⁷⁰ The central element of *have*-constructions is the grammatical subject of the utterance.⁷¹ Possessive constructions with *have* establish a relation between a locative subject, which is seen as the place or seat, and an object to express an extrinsic property of the grammatical subject.⁷² ADAMCZEWSKI backs his

tun 'I have work to do' expresses obligation. In colloquial French *j'ai faire* is sometimes used instead of *j'ai fait* 'I did', e.g. *j'ai faire du sport*.

⁶⁸Examples taken from [ADAMCZEWSKI and DELMAS 2004, p.110].

⁶⁹ADAMCZEWSKI's examples of verbs that are different from *be/être* and *have/avoir* are *Pierre possède une voiture* 'Peter owns a car' (order possessor – possessee) and *cette voiture appartient à mon frère* 'this car belongs to my brother' (order possessee – possessor).

⁷⁰Indeed, contrary to *the car is owned by Peter*, an utterance such as **the car is had by Peter* is of highly questionable grammaticality. The same is true for French (**la voiture est eu par Pierre*) and German (**das Auto wird von Peter gehabt*).

⁷¹"[L]e sujet grammatical de l'énoncé [...] est l'élément *central* de la construction" [ADAMCZEWSKI and DELMAS 2004, p.111, their italics].

⁷²"[L]e rôle de *avoir/have* est d'établir une relation entre un *sujet de type locatif* (= lieu, siège [...]) et un objet, l'ensemble de la construction ayant pour but d'énoncer *une propriété*

view up by pointing out that in foreign languages, especially those lacking the verb *have*, the locative function of the possessor is often much more explicit. His examples are Russian “*u Petra jest avtomobil*”. textuellement : *chez Pierre est voiture*” [ADAMCZEWSKI and DELMAS 2004, p.111] ‘at Peter is car’ and Latin “*mihi est liber (à moi est livre)*” [ibid.] ‘me is book’. Both examples are fundamentally different from the French and English *be/être*-constructions because the order of possessor and possessee is inverted. According to ADAMCZEWSKI the relation established by *avoir/have* signals that the subject is the privileged point of reference.⁷³

ADAMCZEWSKI rejects those approaches to the present perfect that operate with the notions resultative aspect, current relevance or perfect aspect. All these approaches refer to extralinguistic situations, which cannot explain the metalinguistic role of the operator *have*:

[L]a faiblesse fondamentale : en se référant sans cesse à l'*action*, elles se situent toutes trois dans l'*extralinguistique*, manifestant ainsi leur inaptitude foncière à rendre compte d'opérations métalinguistiques [ADAMCZEWSKI and DELMAS 2004, p.119, their italics].

ADAMCZEWSKI, who sees language as an “*affaire d'opérations et d'opérations sur des opérations*” [ADAMCZEWSKI and DELMAS 2004, p.121], attributes the following core meaning to the structure *have* + past participle: *possession de l'accomplissement* ‘possession of accomplishment’.⁷⁴ An utterance such as *I have forgotten your surname* is analysed as *I have (I-forgot-your surname)*. The operator *have* establishes a relation between the subject and a past utterance which is ‘placed’ in the subject. The relation is asymmetric and directed towards the subject.⁷⁵ ADAMCZEWSKI derives all uses of the (present) perfect from this “*valeur centrale de have + en*” [ibid.]. He points out that there is a danger in *extrinsèque du sujet grammatical*” [ADAMCZEWSKI and DELMAS 2004, p.111/112, their italics].

⁷³ “[L]e sujet est le repère privilégié” [ADAMCZEWSKI and DELMAS 2004, p.112].

⁷⁴ The term was coined by ÉMILE BENVENISTE, cf. [ADAMCZEWSKI and DELMAS 2004, p.121].

⁷⁵ “Autrement dit, [*I have forgotten your name*] résulte d'une opération de type *have* où sont mis en relation le sujet de ce dernier et un énoncé passé. En disant [*I have forgotten your surname*] moi sujet énonciateur et aussi sujet de l'énoncé je me crédite de l'énoncé passé entre parenthèses dans [*I have (I-forgot-your surname)*], je le porte « à mon compte », je le

relying on criteria of temporality when dealing with the meaning of the (present) perfect.⁷⁶ He emphasizes that a comparison of the past tense and the present perfect from the viewpoint of temporal location is beside the point because the right to exist of the present perfect has nothing to do with dating events.⁷⁷

ADAMCZEWSKI's approach belongs to the group of embedded past theories (cf. p.111) because he takes the compositional nature of the perfect seriously. How does he explain the ungrammaticality of utterances such as **she is ill since Xmas* (grammatical in French and German: *elle est souffrante depuis Noël, sie ist seit Weihnachten krank*) and **I have seen the film in Paris last winter* (grammatical in French and German: *j'ai vu le film à Paris l'hiver dernier, ich habe den Film letzten Winter in Paris gesehen*)? His metaoperational analysis of *she has been ill since Xmas* is *she has (she — past — be ill) since Xmas*, cf. [ADAMCZEWSKI and DELMAS 2004, p.124]. This is not very convincing because the analysis *she has (X) since Xmas* looks ungrammatical.

J'habite Paris depuis 1989 [...] est traduit par I have lived in Paris since 1989. Pourquoi cette différence? Le présent français peut s'accommoder d'emplois qui ne sont pas dans le spectre du présent anglais. Dans l'exemple ci-dessus, il ya un élément lié au moment de parole : « j'habite Paris », et un élément lié au révolu : « 1989 ». Le parfait anglais traduit cette double structure. I have : je m'attribue maintenant lived in Paris et ceci est vrai depuis 1989
[ADAMCZEWSKI and GABILAN 1996, p.70].

Saying that the French (and German) present can accommodate uses that are not in the spectrum of the English present is a correct description but not an

« loge » dans *I : on retrouve ici la notion de relation asymétrique axée sur le sujet grammatical*" [ADAMCZEWSKI and DELMAS 2004, p.121, their italics].

⁷⁶ “[L]e danger encouru par ceux qui avancent des critères reposant sur la temporalité” [ADAMCZEWSKI and DELMAS 2004, p.123].

⁷⁷ “[C]’est le fait même de vouloir comparer prétérît et parfait sous l’angle de la datation qui est condamnable. *Car la raison d’être du parfait n’est absolument pas de dater les événements, serait-ce de façon indéterminée* : elle consiste essentiellement en une opération qui crédite le sujet grammatical d’une relation prédicative versée au passé. On voit qu’entre un prétérît d’ordre événementiel et un parfait où ce qui importe est l’état présent du sujet grammatical, il ne saurait y avoir de point commun” [ADAMCZEWSKI and DELMAS 2004, p.121/122, their italics].

explanation. Furthermore, the crucial part of the authors' metaoperational analysis ("ceci est vrai depuis 1989") would be *this has been true since 1989* and not **this is true since 1989*. In a way the problem has just been shifted to the metalevel. It has not been solved. Concerning the other fundamental difference between English and French (or German) ADAMCZEWSKI contents himself with pointing out that

[l]e présent de parfait⁷⁸ français autorise des adverbes de temps passé car il fonctionne en fait, en dehors de sa valeur de parfait parallèle à celle du *present perfect* (j'ai déjà lu ce livre, êtes-vous jamais allé à New York ?, regarde, je t'ai apporté un disque. . .) *comme substitut du passé simple* au lieu de : *je le vis à Paris l'hiver dernier on a donc en français contemporain et particulièrement en français parlé : je l'ai vu. . .* [ADAMCZEWSKI and DELMAS 2004, p.122, their italics].

It is certainly important to differentiate between those uses of the French *passé composé* (and the German *Perfekt*⁷⁹) that correspond to the English present perfect and those uses that represent a usurpation of preterite territory but this differentiation is just the first step towards explaining the striking contrast of non-past usage in French (and German) and English.

5.4.4 Korrel

LIA KORREL's approach to the English present perfect in the spirit of GUSTAVE GUILLAUME's psychomechanics⁸⁰ has the merit of explaining why the scope of the English present perfect is different from the scope of its counterparts in languages such as Dutch, German and French. She uses the technical terms Transpast Tense vs. Past Tense⁸¹ and Immanent Aspect vs. Transcendent

⁷⁸*Présent de parfait* (coined by GUSTAVE GUILLAUME) = *passé composé* in traditional grammars.

⁷⁹See table C.2 on p.173 for a comparison of English and German.

⁸⁰"Psychomechanics does not stop at saying that [the present perfect's] mark is *have* + past participle, but tries to discern the mental make-up, the significant elements of each of these two parts, as well as the effect of combining them into a compound verb" [KORREL 1991, p.4].

⁸¹[PRET: ∅] = Transpast, [PRET: +] = Past.

Aspect.⁸² She points out that

the term “present perfect” is misleading: as regards grammatical form it is not a present tense, and as regards meaning, it is not a perfect. The unsatisfactory name of present perfect will therefore be replaced by one that gives it its proper place in universe time (Transpast) and identifies it correctly as to event time (Transcendent) [KORREL 1991, p.28].

Universe time refers to time thought of as a container for an event, whereas event time refers to time thought of as contained in the event, cf. [KORREL 1991, p.12 & 19]. According to KORREL, the system of aspect “opposes the *coming-to-be phase* of the event, the *Immanent Aspect*, to the duration of its *aftermath phase*, the *Transcendent Aspect*” [KORREL 1991, p.28].

Contrast of non-past usage in German and English

In two-tense systems, such as in German and English, the present “involves both immediate memory, the omega field, and immediate imagination, the alpha field” [HEWSON and BUBENÍK 1997, p.331/332]. In Ascending Time we are moving and time is standing still. Passing the present moment means passing the threshold between ‘just actualised’ and ‘not yet actualised’. According to KORREL, there is a fundamental difference between Dutch and German on the one hand and English on the other hand as to “where the movement from the ‘just actualized’ to the ‘not yet actualized’ is intercepted” [KORREL 1991, p.35]: in Dutch and German the present is represented as ‘just actualised’, whereas in English the present is represented as ‘not yet actualised’, cf. figure 5.2 for a visualization.⁸³ This “quantum difference” [HEWSON and BUBENÍK 1997, p.333] between German and English accounts for two types of glaring errors committed by German learners of English: **I have seen her yesterday* instead of *I saw her yesterday*, and **I know her for five years* instead of *I have known her for five years*. The German perfect is different from the English present perfect because in German the non-past auxiliary “include[s] the representation of both

⁸²[PERF: Ø] = Immanent, [PERF: +] = Transcendent.

⁸³Taken from [BÉLANGER 1999, p.40].

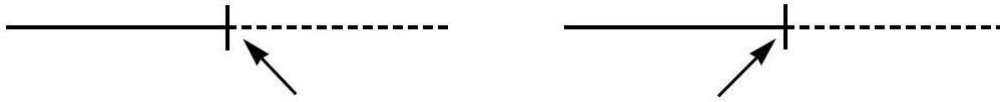


Figure 5.2: English and Dutch moment of duration according to BÉLANGER

α and ω moments” [HEWSON and BUBENÍK 1997, p.336], whereas in English the auxiliary “represents only the α -moment of the present” [ibid.]. Therefore, in German “the past participle is entirely free of any representation of present time” [ibid.] and the German perfect is combinable with position-definite past time adverbials, whereas in English the past participle of a present perfect construction has to represent the ω -moment of the present, “leading to the phenomenon of ‘present relevance’ as an inbuilt feature of the English present perfect” [ibid.]. As the English non-past excludes the ω -moment, an utterance such as *I speak for ten minutes* cannot refer to the past,⁸⁴ whereas the German equivalent can.⁸⁵ Figure 5.3, taken from [HEWSON and BUBENÍK 1997, p.336/337], summarises the neo-Guillaumean approach to the difference between the German perfect and the English present perfect.⁸⁶

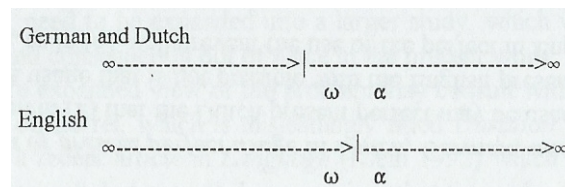


Figure 5.3: Quantum difference of tense systems in West Germanic

⁸⁴If I refers to the beginning of the ten-minute time stretch and F to its end, then *I speak for ten minutes* can neither have the reading $I < F < S$ nor $I < F \leq S$.

⁸⁵*Ich spreche seit zehn Minuten* has the reading $I < F \leq S$.

⁸⁶MARC ANDRÉ BÉLANGER has examined the difference between the Dutch-like conception of the moment of duration (“ $\delta(\omega)$ ”) and the English-like $\delta(\alpha)$ from a diachronic viewpoint. He has shown that “Old English had the same conception as Modern Dutch but that, towards the end of the Middle English period, this conception changed to the one we now have” [BÉLANGER 1999, p.v]. He calls this transformation, which occurred around the year 1500, *Korrel shift* [ibid.].

Chapter 6

Conclusion

A study of the English present perfect represents a multifaceted enterprise with abundant opportunities to scrutinize the concepts and procedures of diverse schools of linguistics and neighbouring fields of knowledge such as psychology and philosophy. The interdisciplinary approach adopted in this study has also taken mathematical and physical concepts into account to clarify the notion of time.

The existence of a systematically used verbal structure of the type *have* + past participle in the language whose varieties are subsumed under the name English is undisputed. Still, its semantic analyses and its designations are strikingly heterogeneous, which indicates that the *have* + past participle structure eludes a straightforward classification. In fact, the description of the perfect can be seen as a test case for theories about verbal grammar. Its classification challenges the appropriateness of our concepts of time, tense and aspect.

This study has categorised and analysed the many different approaches in the context of their usefulness for understanding and teaching the English perfect. It has identified contradictions between disparate uses of the terms tense and aspect and revealed the scope of their applicability to present perfect grammar. Furthermore, it has identified the key parameters that can be used to ascribe a core meaning to perfect verb forms: the non-deictic notion of anteriority and the non-temporal notion of possession

Investigating verbal grammar involves reasoning about time. Examining how

time is construed in language presupposes a concept of time. This study shows that spatialization is the key process that takes place when time is conceptualized. The cross-linguistic evidence presented here shows that words for temporal concepts such as *past*, *present*, *future* and *time* can be traced back to straightforward spatial notions or to locomotive notions, which presuppose space. It seems to be virtually impossible to think of non-spatialized time, although time and space are by no means identical. The notion of space is less abstract than that of time. The space our bodies are embedded in is the archetypical space that concepts of space are based on. It has two more dimensions than physical time, which makes conceptual spaces representing time less malleable than conceptual spaces representing physical space. The prevailing visualization of time as an oriented axis is a case in point. It represents a mathematical abstraction of tremendous value but it enforces a one-dimensional reading, which cannot accommodate real and unreal events in one graph. However, it is necessary to differentiate between real physical time and the final product of the chronogenetic spatialization. One cannot physically leave one's deictic centre but one can think and talk about elsewhere and elsewhen. One can decide where to travel in physical space but one cannot decide where to travel in physical time.

Psychologists have shown that the now is experienced as a gestalt of about three seconds of duration. It is unclear whether this has had an impact on the conceptualization of the present moment in language. Three seconds should be enough time to allow for the completion of an act. Still, the present does not allow for this completion, as can be seen by looking at verb forms that are associated with the notion of completion. In English the present perfect refers to past time and Slavic perfective presents refer to future time. The question that has just been raised demonstrates the danger of mixing physical, psychological and linguistic concepts of time. The psychological now is a whole. The attribute 'three seconds of length' refers to physical time. The use of the two verb forms mentioned above construes time in language. ADAMCZEWSKI's concept of 'possession of accomplishment' leads to the view that the present perfect does not localise events in time and that the meaning of pastness is a secondary concept derived from the fact that the accomplished act started at a time anterior to the present moment. Further interdisciplinary research into

the status of the present moment might clarify the relation between the different concepts of time.

The concept of tense is a cornerstone of verbal grammar. The present study has corroborated the view that the misuse of the term as a synonym for verb form goes back to a (misinterpreted) Latinate grammatical tradition and is to be rejected because it has no explanatory potential whatsoever: identical verb forms can refer to different time spheres and different verb forms can refer to the same time sphere. The manifold ways of future time reference in English are a case in point.

A functional definition referring to the location of situations in time is much more useful. Still, a remnant of the opinion that tense equals form can be detected in the view that inflectionally marked tenses are more genuine than periphrastically marked ones. This view fixes the number of English tenses at two (past vs. non-past) or even at one (past tense only). There are pros and cons to this point of view. On the one hand, the difference between inflection and periphrasis is to be downplayed because a purely functional definition referring to temporal location is independent of the manifestation of the temporal markers. Furthermore, the process of grammaticalisation can turn auxiliaries into morphemes. Even the Germanic dental preterite, the precursor of the English past tense, can be traced back to a periphrastic structure. On the other hand, the degree of grammaticalisation is a stringent criterion when it comes to introducing finer terminological distinctions, e.g. primary (morphologically marked) vs. secondary (periphrastically marked) tense, cf. HUDDLESTON and PULLUM's characterization of the present perfect as a secondary past tense. It should be clear that questions such as whether there is a future tense in English depend on the acceptability of periphrasis as a tense marker. Generally, periphrastic structures offer more points of attack for a semantic analysis, especially if the auxiliary is also used as a full verb and if the compositional structure is taken as a starting point for finding the core meaning of a periphrastic structure.

The relational nature of the notion of tense is fundamental. Localising events in past, present or future time presupposes fixing one or more points of reference. The time of encoding represents the default deictic reference point of the coordinate system. The explanatory power of REICHENBACH's system of three points

(time of event E, time of speech S, time of reference R) has been discussed in detail. The present perfect can be seen as a Reichenbach tense of the type $E < R = S$ and the past tense as one of the type $E = R < S$. The characterization $E < R = S$ can be interpreted as a formalized form of present relevance. As pointed out by COMRIE and others, the ontological status of R is highly debatable for the cases where E and S coincide. A conceptual separation of the S–R relation from the R–E relation – as pursued by GIERING et al. by naming only the former relation tense and the latter correlation – does not really solve this problem. On the other hand, REICHENBACH's and GIERING et al.'s taking the past and the future perfect as the starting point for explaining the present perfect leads to a consistent embedding of perfect verb forms within the English verb system. The concomitant core meaning of perfect within REICHENBACH's and GIERING et al.'s systems is anteriority. Obviously, the notion of anteriority interfaces differently with past and future tense than with the present tense. To recap, concerning the temporal placement of E as such, anterior present and past are indistinguishable. Aspectual approaches to the present perfect such as those by JOOS, ADAMCZEWSKI and KORREL avoid the problem of the invisibility of the point of reference R.

The terminological confusion associated with the collocations *perfect aspect* and *perfective aspect* – and the confusion associated with the term *aspect* as such – has been addressed in this study about the grammatical status of the English perfect. Some clarifying remarks about the history of the technical term *aspect* and a detailed description of the *imperfective* vs. *perfective* dichotomy in Czech have corroborated the view that aspect is a verbal category which is fundamentally different from tense. Slavic verbal aspect interfaces with tense, though, and this leads to certain peculiarities that have no parallels in Germanic or Romance, e.g. the future reading of present perfectives.

The aspectual status of the English progressive has been examined from the viewpoint of the Slavic aspectual paradigm. There are cases where the use of the Slavic perfective vs. imperfective opposition and the English non-progressive vs. progressive opposition coincide. Progressive infinitives are often a felicitous translation of Slavic imperfective infinitives and vice versa. The same applies to incidence schemata of the type *I was sitting in the café when it happened* but

there are also vast differences in usage, the above-mentioned future reading of Slavic present perfectives being a case in point.

Calling the English progressive an aspect is fairly widespread and not unacceptable, especially in teaching English to students whose L1 does not have a progressive. Calling the English progressive and the English perfect aspects is also common but this usage has little to do with the Slavic system, where the notion of verbal aspect is at home. Calling the English perfect a perfective aspect is very problematic because imperfective overlaps with progressive, not with non-perfect. Slavic aspect also interfaces with aktionsart, and this feature is paralleled by English (perfect and non-perfect) progressives.

A brief analysis of the origin of the technical term *perfect* and a look at the inflectional perfect in Latin have shown that the idea of a completed vs. incompleted opposition has a long tradition. The syncretism of simple past meaning and the notion of completeness in Latin has been identified in this study as a source of terminological confusion. The Latin inflectional perfect of the type *factum habeo* has been characterized as a possessive perfect. The rise of possessive perfects is a cross-linguistic phenomenon with clearly defined stages of grammaticalisation corresponding to a progressing subduction of the original notion of possession. A detailed analysis of the Slavic perfect in Czech and a comparison with its English counterpart have corroborated to some degree the evolution of possessive perfects.

A fascinating starting point for further research in the immediate and in the distant future would be a very careful monitoring of the usage of the English present perfect and the Slavic perfect in Czech to check whether the evolutionary model of the possessive perfects has any prognostic value. Are the Australian present perfect and currently marginal uses of the type $E = R < S$ in journalese spearheads of a development that will make the English present perfect similar to, say, the German *Perfekt*? And is this process influenced by the growing number of fluent EFL speakers who do not care about prescriptive present perfect grammar?

It should be noted that the unidirectionality hypothesis put forward by HEINE and KUTEVA in the context of the evolution of possessive perfects is seriously challenged by BÉLANGER's concept of *Korrel shift*. If the Middle English present perfect was freely combinable with past time markers such as *yesterday*, then

the Modern English usage of the present perfect can be seen as a withdrawal from past tense territory – a flat contradiction of the evolutionary claim that possessive perfects usurp past tense territory. The question whether the two opposing movements can be reconciled belongs to an area of inquiry where this study has not ventured.

Appendix A

Systematization of English verb forms

This appendix aims at developing a systematic description of English verbal constructions. Its first part explains the genesis of the notation used throughout this paper and its second part presents ideas for a didacticised visualization of English verb forms. In light of the topic of this paper special attention will be given to the difference between verb forms commonly referred to as *perfect* and their unmarked counterparts.

The approach adopted here is supposed to label the various forms present in English verb clusters in a cautious way. Ideally this labelling of the morphemes and auxiliaries involved would be done without any reference to their semantics. The idea is to first analyse the forms and then work out their meaning(s). The problem is that, on the one hand, one needs names for the verb forms in order to refer to them but, on the other hand, the traditional names such as 'future tense' or 'imperfect' do not represent meaning-neutral labels for the forms. One way out would be the use of a mathematical notation incorporating algebraic symbols as names for the verb forms. Unfortunately, this would probably lead to an idiosyncratic nomenclature, which is not desirable, especially if one plans to apply it productively in teaching. There is no need to break totally with the traditional names used in current (learners') grammar books as long as one is acutely aware of the problem just mentioned. Furthermore, out of mnemonic

considerations, it makes sense to use names that are not wholly detached from the traditional names. The compromise suggested here are the five names PRET, MOD, PERF, PROG and PASS. It is obvious that these names are derived from the words *preterite*¹, *modal*, *perfect*², *progressive*³ and *passive*.

A.1 The interplay of PRET, MOD, PERF, PROG and PASS

A.1.1 Elementary constituents

There are several ways of how the stem of an English verb can be expanded to carry grammatical information concerning tense, aspect and modality: affixation, prefixing an auxiliary, and a combination of the two. Irregular verbs exhibit additional ways of encoding grammatical information such as ablaut⁴ (e.g. *begin* → *began*) and suppletion (e.g. *go* → *went*).

NB Here the term 'auxiliary' includes the modals. Catenative verbs are discussed in a separate paragraph below (p.129).

Inflectional building blocks

Apart from the ending *-s* (third person singular present simple indicative mood⁵), the stem of an English verb can be combined with either the suffix *-ing* or *-ed*.

¹There are two reasons for using *preterite* and not *past*. Firstly, being a foreign word, *preterite* is slightly detached from its meaning 'past', whereas *past* is not. Secondly, *PAST* would be too similar to *PASS*.

²Some authors prefer *perfective*. Cf. the discussion of why this is problematic on p.206 ff.

³Some authors prefer *continuous*. Cf. figure 4.2 for COMRIE's differentiation of *continuous* and *progressive*. A third option is the expression *expanded form*, which is meaning-neutral concerning an aspecto-temporal reading of *PROG*, but ruled out for two reasons. Firstly, *EXP* would destroy the alliteration of the Ps in the triad *PERF, PROG, PASS* – admittedly a purely aesthetic consideration. Secondly, *PERF* and *PASS* are also expanded forms, of course.

⁴"Changes in the verb stem to express past tense is a common method with irregular verbs in English (e.g. *run, ran; see, saw*), though suffixing (e.g. *walk, walked*) is considered here the primary method for English" [DRYER 2005, p.282].

⁵The information about the mood is important because it makes clear that there are non-past third person verb forms – traditionally referred to as *subjunctive* – which lack the *-s*. Cf. *God save the Queen* vs. *God saves the Queen*. The fact that the scope of this rule is limited makes *-s* indirectly a marker of mood.

Depending on their function, *ing*-forms are either called *present participles* or *gerunds* in traditional grammar books. The term *gerund*, which was adopted from Latin grammar, refers to the English verbal noun. Originally, *gerundium* referred to “a form of the Latin verb which is used as a noun but retains the syntactic relationships of the verb” [STEVENSON 2007, p.1098 headword *gerund*]. The term *participle* refers to “a non-finite part of a verb used with an auxiliary verb in expressing tense and voice, as in English (*has*) *gone*, (*had been*) *kicked*, (*will be*) *working*, and which may be used adjectivally” [STEVENSON 2007, p.2110 headword *participle*]. The specification *present* in front of *participle* ascribes a temporal reading to *ing*-forms, which seems somewhat precipitous: a form such as *will be working* contains an *ing*-form but a present tense reading would be fallacious. Furthermore, marking tense stems from the combination of (non-finite) participle and (finite) auxiliary. A more neutral name for the *ing*-form is *first participle*. The most neutral name is just *ing-form*.

For regular English verbs the suffix *-ed* has a dual role: it is the so-called⁶ past tense morpheme and it indicates the so-called⁷ past participle. As there are irregular verbs whose past tense form differs from their past participle form, it makes sense to incorporate a disambiguating element into one's notation. Following the example of [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.110] and others, *-en*⁸ is used as the label for the past participle morpheme in this paper. An unbiased name for the past participle is *second participle*.

Periphrastic building blocks

In English auxiliary verbs are put in front of the main verb. There are two groups: the modals, which are defective, and the three verbs *be*, *have* and *do*, which can

⁶The traditional name *past tense morpheme* is only justified for this morpheme's prototypical use, i.e. when it refers to past time. This is not the case in unreal conditionals such as *If I worked less, I would do more sports*.

⁷Here the traditional name is also problematic for a variety of reasons: the form is a building block for the passive and the perfect; it is not a building block for the past tense, although for regular and many irregular verbs the preterite and the 'past participle' look the same. Cf. also SWAN's comment on the names 'present participle' and 'past participle': “These are not very suitable names: both forms can be used to talk about the past, present or future” [SWAN 2005b, p.378].

⁸The ending *-(e)n* is fairly common amongst the past participle forms of irregular verbs. Furthermore, it is virtually non-existent amongst the preterite forms.

also be full verbs.

Modal auxiliaries such as *can*, *may*, *must* “are used before the infinitives of other verbs, and add certain kinds of meaning connected with certainty, or with obligation and freedom to act” [SWAN 2005b, p.353]. They are called ‘defective’ because they lack most of the inflections that ‘full verbs’ exhibit. There is no -s in the third person singular (**mays*). There is no *do*-periphrasis (**Do you can swim?*). There are not any *to*-infinitives or participles (**to may*, **maying*, **mayed*). There are ersatz forms, though (‘phrasal modals’). The ungrammatical forms above (marked with an asterisk and taken from [SWAN 2005b, p.325/326]) can be replaced by *is allowed to*, *are you able to swim?*, *to be allowed to*, *being allowed to*, *been allowed to*. So one could say that suppletion suspends the modal auxiliaries’ defectiveness⁹.

The auxiliaries *be* and *have* can be put in front of the main verb, but only in combination with adding a suffix to the main verb. The auxiliary *do* can be put in front of the main verb in affirmative sentences to express emphasis (e.g. *I do love red wine*). This expansion of the verbal phrase by just prefixing *do*, i.e. without simultaneously adding a suffix to the verb stem, is similar to the expansion by prefixing modal auxiliaries. Contrary to the modals, emphatic *do* does not lack the third person singular -s, though. A key characteristic of Modern English is the use of *do* in negative and interrogative sentences when no other auxiliary is present (*do*-periphrasis). The collocation *do not* is put in front of the main verb to express negation. Prefixing *do* in combination with an inversion of *do* and the subject is used to form questions.

Catenative verbs

In addition to the phrasal modals mentioned above, there are many more periphrastic expressions, e.g. *going to*, *used to*, *had better*, that might expand the verb phrase. As these expressions make the ‘verb chain’ longer, the term *catenative verb*¹⁰ (Latin *catena* ‘chain’) was coined. DIETER MINDT lists CAT as one of “five verbal components (verb classes)” [MINDT 1995, p.13], cf. table A.1. One can distinguish between “three classes of catenative verbs: central catenative

⁹The lack of *do*-periphrasis remains because the ersatz form’s *be* lacks it too.

¹⁰Cf. [MINDT 1995, p.26].

Table A.1: English verb classes according to MINDT

Notation	Name	Class members
MV	main verbs	e.g. <i>go, dance, work, write</i>
MOD	modal verbs	e.g. <i>can, must, might, would</i>
CAT	catenative verbs	e.g. <i>want, try, seem, like</i>
AUX	auxiliaries	<i>have and be</i>
DO	-	<i>do</i>

verbs, catenative auxiliary constructions, and catenative adjective constructions” [MINDT 1995, p.27]. Central catenative verbs can be complemented by a *to*-infinitive, e.g. *try to forget*, by a first participle, e.g. *keep looking*, by a second participle, e.g. *become known*, or by a bare infinitive, e.g. *let go*. These subclasses are not mutually exclusive, e.g. *begin* can be followed by a *to*-infinitive or a first participle. Changing the subclass of a central catenative verb can change the meaning of the relevant verb phrase radically, cf. *stop to smoke* vs. *stop smoking*. Catenative auxiliary constructions are “formed by a catenative verb which is invariably preceded by a specific auxiliary” [MINDT 1995, p.29]. In the context of this paper the most important catenative auxiliary construction is *be going to*. In most cases the literal meaning of *go* has been replaced by a temporal reading (‘*going-to-future*’)¹¹. The phrasal modal *be allowed to* also belongs to the category of catenative auxiliary constructions, whereas the phrasal modal *be able to* belongs to the category of catenative adjective constructions, which “form an open list” [MINDT 1995, p.30]. Some other CAT constructions that are adjectival are: *be anxious to, be apt to, be glad to, be ready to*¹².

A.1.2 Fundamental principles

Verb forms can be marked for PRET, MOD, PERF, PROG and PASS. Table A.2 fixes and summarizes the notation used throughout this paper. All of these markers are optional, i.e. there are verb forms – both infinite and finite – which

¹¹Cf. the discussion of ‘spatial’ lexical items denoting ‘future time’ above (p.19).

¹²All examples in this paragraph are taken from [MINDT 1995].

Table A.2: The markers PRET, MOD, PERF, PROG and PASS

Notation	Rule	Effect	Example
PRET	stem + -ed	verb- ed	showed
MOD	modal + infinitive	mod verb	can show
PERF	have + 2nd participle	have verb- en	have shown
PROG	be + 1st participle	be verb- ing	be showing
PASS	be + 2nd participle	be verb- en	be shown

are unmarked¹³ for any of the items from the list above. Infinitives are never marked [PRET: +] or [MOD: +]. As mentioned above, CAT can be added as a sixth category to incorporate further periphrastic expressions such as *be going to* or *be about to*. The interplay of PRET, MOD, PERF, PROG and PASS is best studied by looking at the subset {PERF, PROG, PASS} first, i.e. by switching off PRET, MOD and CAT.

Infinite forms

English verb forms not limited by person or number can be marked for PERF, PROG and PASS. Three binary oppositions allow for $2^3 = 8$ different infinite verb forms (infinitives and *ing*-forms). The names for the eight infinitives stem from their markedness, e.g. [PERF: +, PROG: \emptyset , PASS: +] is called *infinitive perfect passive*. If all markers are switched off, the infinitive is called *unmarked* or *bare*¹⁴. See Table A.3 for an overview of English infinitives.

If the three infinitives for which only one of the three markers at hand is switched on are juxtaposed, their formal similarity becomes obvious:

$\overbrace{\text{have verb-en}}$

 $\overbrace{\text{be verb-ing}}$

 $\overbrace{\text{be verb-en}}$

The main verb is 'bracketed' by an auxiliary and an inflectional suffix. Switching on a second marker yields a string of morphemes which is constructed as follows:

¹³Unmarkedness is denoted by the symbol " \emptyset " in this paper.

¹⁴The collocation *bare infinitive* can refer to two different things: any of the eight infinitives without the particle *to*, or the totally unmarked infinitive [PERF: \emptyset , PROG: \emptyset , PASS: \emptyset] (with or without *to*).

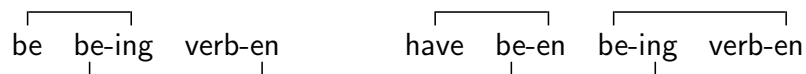
Table A.3: English infinitives

Notation	Paradigm
[PERF: ∅, PROG: ∅, PASS: ∅]	(to) verb
[PERF: +, PROG: ∅, PASS: ∅]	(to) have verb-en
[PERF: ∅, PROG: +, PASS: ∅]	(to) be verb-ing
[PERF: +, PROG: +, PASS: ∅]	(to) have been verb-ing
[PERF: ∅, PROG: ∅, PASS: +]	(to) be verb-en
[PERF: +, PROG: ∅, PASS: +]	(to) have been verb-en
[PERF: ∅, PROG: +, PASS: +]	(to) be being verb-en
[PERF: +, PROG: +, PASS: +]	(to) have been being verb-en

the auxiliary of the marker that brackets the main verb takes up the position of the main verb within the bracket of the second marker. For the two double marked infinitives that are fairly frequent, i.e. [PERF: +, PROG: +, PASS: ∅] and [PERF: +, PROG: ∅, PASS: +], this ‘nested bracketing’ can be made explicit as follows:



The two infinitives marked [PROG: +, PASS: +] are extremely rare because of the awkward combination of *be(en)* and *being*¹⁵. Notwithstanding its clumsiness, the infinitive marked [PERF: +, PROG: +, PASS: +] is a case in point for the interplay of PERF, PROG and PASS.



The three constructions PERF, PROG and PASS “are telescoped¹⁶ into one an-

¹⁵The finite counterparts of *be being verb-en* are not perceived as awkward – and consequently fairly common – because *be* then becomes *am*, *are*, *is*, *was*, or *were*. If PERF is also switched on (*have been being verb-en*) even the finite counterparts cannot remedy the awkwardness of *been being*. Both finite and infinite forms marked [PERF: +, PROG: +, PASS: +] are extremely rare. See the quote by SCHLÜTER on p.149 for quantification.

¹⁶The English verb *telescope* means “force (parts of a thing) one into another like the sliding tubes of a hand telescope; crush and compress (a carriage, vehicle, etc.) lengthwise by the

other” [QUIRK et al. 1985, p.151]. The fact that the word *to telescope* rather refers to compressing than to expanding ascribes the role of paradigm to the ‘fully expanded’ infinitive perfect progressive passive. The other seven infinitives can be derived from this paradigm by switching off some or all of the markers PERF, PROG and PASS.

There is a second reason why the metaphor ‘telescope’ is an apt one: just like the sliding tubes of a hand telescope, the three constructions do not combine freely because PERF always comes before PROG, which always precedes PASS. This meta-rule is needed in addition to the three basic rules for construction in order to rule out ungrammatical combinations such as **(to) be been verb-ing* (PASS before PROG), **(to) be had verb-en* (PASS before PERF) and – semantically¹⁷ probably the most interesting – **(to) be having verb-en* (PROG before PERF). If all three markers are switched on, there are $3! = 1 \cdot 2 \cdot 3 = 6$ possible permutations, i.e. six different ways to sequence the three markers. As all of the five ungrammatical arrangements contain at least one of the ungrammatical inversions from above (“PASS before PROG” or “PASS before PERF” or “PROG before PERF”), there is no need to list them here.

To recap, the notation “[PERF: \emptyset /+, PROG: \emptyset /+, PASS: \emptyset /+]” is to be understood as an ordered triple: the rightmost marker that is switched on acts on the main verb. If a second marker is switched on, it acts on the rightmost (switched on) marker’s auxiliary. If all three markers are switched on, the leftmost marker acts on the auxiliary of the marker in the middle. Switching on a marker ($\emptyset \rightarrow +$) expands the verb form, and switching off a marker ($+ \rightarrow \emptyset$) telescopes the verb form.

Infinitives are not the only infinite verb forms that can be marked for PERF,

force of an impact; *fig. combine, conflate, compress, condense*” [STEVENSON 2007, p.3199, headword *telescope* verb 3 a].

¹⁷Any aspect theory that deals with perfect progressive infinitives should be able to explain why there are not any progressive perfect infinitives. NB Finite verb forms might contain the string *be having verb-en*. Those forms are not progressive perfect but structures of a different nature. They might combine *have something done* and a relative clause, e.g. “[a]nother important thing that I’ll *be having worked* on tomorrow is my trailer wheel hubs” [sma, italics AE], or they might contain a gerund perfect, e.g. “[t]op off your meal with a piece of chocolate walnut pie, and your only regret will *be having eaten* too much great food” [san, italics AE]. The combination of *have something done* and a relative clause also accounts for specious ‘double perfect’ forms, cf. the footnote on this on p.146.

PROG and PASS. Expanded forms of the first participle can be described – mutatis mutandis – in a similar way. The forms marked [PROG: +, PASS: +], which are

Table A.4: Expanding *ing*-forms

Notation	Paradigm
[PERF: ∅, PROG: ∅, PASS: ∅]	verb-ing
[PERF: +, PROG: ∅, PASS: ∅]	having verb-en
[PERF: ∅, PROG: +, PASS: ∅]	being verb-ing
[PERF: +, PROG: +, PASS: ∅]	having been verb-ing
[PERF: ∅, PROG: ∅, PASS: +]	being verb-en
[PERF: +, PROG: ∅, PASS: +]	having been verb-en
[PERF: ∅, PROG: +, PASS: +]	??being being verb-en
[PERF: +, PROG: +, PASS: +]	?having been being verb-en

labelled “?” and “??” in table A.4, are even clumsier than the corresponding infinitives. The *ing*-form marked [PERF: ∅, PROG: +, PASS: +] is extremely clumsy because the word *being* appears twice and both tokens are next to each other. It is worth mentioning that the clumsiness of any verb form marked for PROG and PASS – be it an infinite or a finite verb form – is not caused by the nested bracketing (of the constructions PROG and PASS) as such but rather by the fact that the auxiliary *be* fulfils a double function as a building block of two different constructions¹⁸. As mentioned above (p.132, footnote), the clumsiness of ‘double-*be* constructions’ is suspended for those finite verb forms where the leftmost *be* takes on one of the forms *am*, *are*, *is*, *was*, or *were*.

Finite forms

Contrary to infinite verb forms, finite verb forms can be marked for PRET and MOD¹⁹. Theoretically, the two binary oppositions of [PRET: ∅/+] and [MOD:

¹⁸This is evocative of German future passive verb forms, e.g. *wir werden gelobt werden*. Here the auxiliary *werden* also fulfils a double function but the two tokens are not next to each other. This would be different for a fictitious infinitive such as **gelobt werden werden*. Contrary to Latin (cf. the active *laudā-tūrum esse* ‘to be going to praise’ and the passive *laudā-tum īrī* ‘to be about to be praised’), posterior infinitives do not exist in German, though.

¹⁹“MOD” refers to the defective modal auxiliaries only, e.g. *can*. Their synonymous phrasal counterparts, which can modify both finite and infinite verb forms, e.g. *be able to*, are labelled

$\emptyset/+]$ lead to $2^2 = 4$ different verb forms: [PRET: \emptyset , MOD: \emptyset], e.g. *we verb*; [PRET: +, MOD: \emptyset], e.g. *we verb-ed*; [PRET: \emptyset , MOD: +], e.g. *we can verb*, and [PRET: +, MOD: +], e.g. *we could verb*. Here ‘verb’ designates any of the eight infinitives (without *to*) from table A.3. If MOD is switched off, the marker PRET acts on the leftmost component of the infinitive, e.g. *be being followed* becomes *was/were being followed*. If MOD is switched on, the infinitive is simply added after the modal auxiliary, e.g. *they may have been joking* or *she would have been asked*.

Whether the modal auxiliaries can be marked for PRET is a moot point. On the one hand, structures such as *we may verb*, *we can verb* or *we will verb* are not really formally distinct from the corresponding structures *we might verb*, *we could verb* or *we would verb*. Formally, *may* and *might* can be seen as two different modal auxiliaries. According to this viewpoint, switching on MOD would preclude PRET from existing. Consequently, there would be just three – and not four – different verb forms because the two binary oppositions PRET and MOD do not combine freely. On the other hand, certain pairs of modal auxiliaries are intimately related, even from a purely formal point of view. Equations such as

Table A.5: Switching on PRET for [MOD: +]

[PRET: \emptyset , MOD: +]	can	may	will	shall
↓	↓	↓	↓	↓
[PRET: +, MOD: +]	could	might	would	should

“will + -ed = would” or “can + -ed = could”, which represent certain modal auxiliaries as the irregular preterite forms of other modal auxiliaries, are backed up by etymology²⁰. Furthermore, the fairly formal rules of back-shifting in reported speech link these verbal doublets²¹.

To recap, there are two opposing views when it comes to classifying verb

[MOD: \emptyset , CAT: +].

²⁰Cf. [STEVENSON 2007, headwords *can verb*¹, *may verb*¹, *will verb*¹, *shall verb*]: “can, [...] Past: [...] could” [p.335], “may, [...] Past: [...] might” [p.1731], “will, [...] Past: [...] would” [p.3636], and “shall, [...] Past: [...] should” [p.2784].

²¹Exception: first-person *shall* with a future reading becomes *would* when back-shifted, not *should*.

forms that are marked [MOD: +]. Table A.6 represents a fourfold table that summarizes the perspective that views MOD on par with PRET. Both markers can be switched on and off independently. The alternative view is shown in table A.7,

Table A.6: Equal treatment of MOD and PRET

	[PRET: ∅]	[PRET: +]
[MOD: ∅]	<i>you verb</i>	<i>you verb-ed</i>
[MOD: +]	<i>you may verb</i>	<i>you might verb</i>

where the symmetry of the 2×2 -table (A.6) is broken up: the binary opposition [PRET: ∅/+] ceases to exist if MOD is switched on. Forms marked [MOD: +] are seen as non-committal concerning the status of the marker PRET. From a

Table A.7: [MOD: +] precluding PRET

	[PRET: ∅]	[PRET: +]
[MOD: ∅]	<i>you verb</i>	<i>you verb-ed</i>
[MOD: +]	<i>you may/might verb</i>	

purely formal point of view both views are equally valid. Both are also prone to misunderstanding if one takes – contrary to the spirit of this appendix – the meaning of PRET into account. For instance, [PALMER 1968, p.106] points out that “[t]he analysis of the modal auxiliaries is made difficult by [. . . the fact that] the past tense forms do not often refer to past time”, i.e. he advocates the view that forms marked [PRET: +, MOD: +] exist but he presupposes a (desirable) past-time reading for them. He expatiates upon this in [PALMER 1968, p.107, his italics] as follows:

Four of the modal auxiliaries, WILL, SHALL, CAN and MAY, have (morphologically) present and past tense forms. But these are not regularly used to mark time relations; it is not the main function of the past tense forms to indicate past time. There is, for instance, no time difference in the following pairs:

He may go. He might go.
I shall ask him. I should ask him.
Can you help? Could you help?

But there is in some cases a difference in time:

He can run ten miles with ease.
When he was a boy he could run ten miles with ease.

In reported speech, moreover, the usual pattern *is* followed. With a past tense verb of reporting, a past tense form of the auxiliary is used where the original utterance had a present tense form (unless the statement is still hold to be valid [. . .]):

He'll come. He said he would come.
He may come. He said he might come.

PALMER's problem concerning the "function of tense" [ibid.] stems from the assumption that [PRET: +] normally refers to past time. This is certainly true but even for main verbs there are wide-spread uses that differ from the prototypical past-time reading, e.g. *I wish I had a faster car*. Switching on PRET is neither sufficient²² nor necessary²³ for a past-time reference. This is the reason why the marker PRET refers only to verb *forms* in this paper. Any temporal reading is added, not presupposed.

If MOD is switched on, ascribing an *a priori* past-time reading to [PRET: +] can lead to misunderstandings, as the following example might illustrate: VON STECHOW discusses²⁴ the sentence *he might have been helping them*, taken from [RADFORD 1997], and remarks "[d]ie Kategorisierung von *might* als Past scheint mir ein offensichtlicher Druckfehler zu sein, der sich über mehrere Seiten zieht. Das korrekte Tempusmerkmal muß Pres(ent) sein" [VON STECHOW 1999, p.21],

²²There are uses of forms marked [PRET: +] which do not refer to past time but to an unreal present time, cf. type-II conditionals such as *Her grades would be better if she worked harder*.

²³Finite verb forms marked [PRET: Ø, PERF: +], traditionally called 'present perfect *tense*', normally refer to events that are situated in the past *time*, e.g. *I've made a blunder*.

²⁴In the context of NOAM CHOMSKY's *affix hopping*, which refers to the 'nested bracketing' of verb forms.

although RADFORD himself writes explicitly “*might* is a past-tense auxiliary” [RADFORD 1997, p.180]. Obviously, the two authors are using the word *past* differently. A well-balanced view can be found in [CARTER and MCCARTHY 2006, p.640, Modal verbs and tenses], where the modals from the first line of table A.5, i.e. *can*, *may*, *will*, and *shall*, are labelled “historical present tense forms” [ibid.], whereas the modals from the second line of table A.5, i.e. *could*, *might*, *would*, and *should*²⁵, are labelled “historical past tense forms” [ibid.]:

Some of the core modal verbs historically represent present and past tense forms which are no longer in one-to-one contrast as tenses. [...] The historical present tense forms are not used to refer to the past; however, all of the forms may refer to either present or future time. In general, the historical past tense forms are used to express greater tentativeness, distance and politeness [ibid.].

The last sentence alludes to the fact that the prototypical meaning of English past tense forms is remoteness. In most cases the remoteness refers to temporal distance (past time) but it can also refer to non-temporal remoteness, such as present unreality²⁶ or social distancing²⁷.

Most third person singular verb forms labelled [PRET: ∅, MOD: ∅] feature the suffix *-s*. If this rule is defunct, the forms are referred to as *subjunctive*. Normally, the forms of *be* are irregular²⁸ (‘indicative mood’). If the forms of *be* are regular – that is *be* for all persons for [PRET: ∅, MOD: ∅] and *were* for all persons for [PRET: +, MOD: ∅] – the forms are called *subjunctive*²⁹.

²⁵English *should* and German *sollen* are partial false friends. An utterance such as *wir sollten arbeiten* is ambiguous if taken out of context. It can either refer to the present (‘we should work’) or to the past (‘we were supposed to work’). Using *should* instead of *was/were supposed to* is a typical mistake of German learners of English at intermediate level.

²⁶E.g. *if she went now*.

²⁷*Could/Would you...?* is more polite than *Can/Will you...?* and *might* is often seen as “a more indirect and tentative alternative to *may*” [CARTER and MCCARTHY 2006, p.646].

²⁸*I am/was, you/we/they are/were, he/she/it is/was*.

²⁹Of course, *you/we/they were* can be both subjunctive and indicative.

A.2 Graphical representation

This section presents three different – but interrelated – approaches to visualizing the nested bracketing of English verb forms. The term ‘polyhedron metaphor’ refers to the arrangement of so-called “verbal triangles”, an approach proposed by [MINDT 1995]. The ‘RGB-cube metaphor’ combines mapping the constructions PERF, PROG and PASS to the unit cube with the interplay of the colours red, green and blue. The ‘telescope metaphor’ exploits further the structural similarity between a hand telescope and verbal components. The polyhedron metaphor and the cube metaphor share the property of being inherently three-dimensional. The cube metaphor and the telescope metaphor share the property of benefitting substantially from the (optional) use of colours.

A.2.1 The polyhedron metaphor

In his analysis of the components of the verb phrase DIETER MINDT suggested a three-dimensional representation. The verbal components listed in table A.1 are depicted as little spheres interconnected by narrow rods. In figure A.1 the

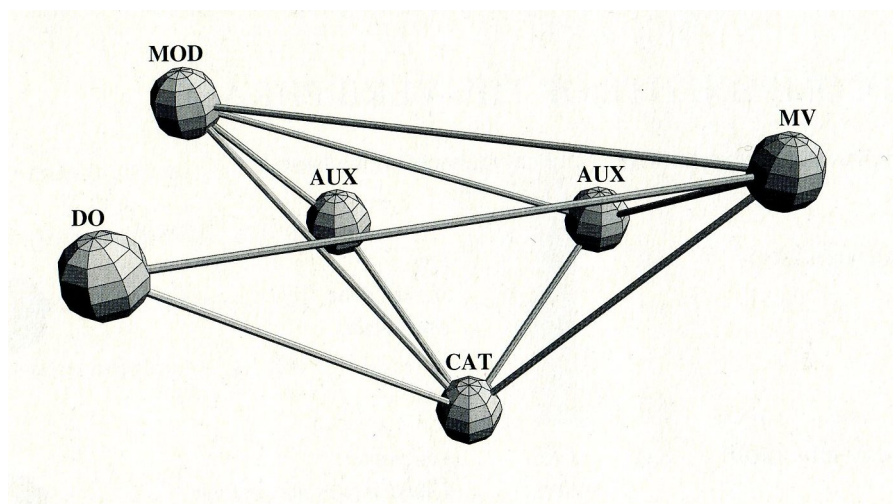


Figure A.1: The basic polyhedron

prototypical polyhedron is spatially oriented in such a way that the main verb (MV) is identified with the rightmost node (in relation to the observer/reader):

“The verb phrase can begin with any of the nodes and continues from there to the right” [MINDT 1995, p.14], where “the final element of the verb phrase” [ibid.] is situated. The topology of the basic polyhedron – in combination with the meta-rule “leftward movement prohibited” – allows for 15 different paths, including the “path” MV, which is of length zero. Table A.8 lists these paths

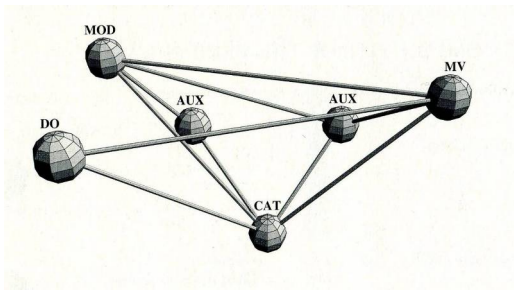
Table A.8: Possible paths in the prototypical polyhedron

Structure	MINDT's example
MV	<i>I go</i>
MOD-MV	<i>you can forget all that</i>
AUX-MV	<i>she has left your house</i>
CAT-MV	<i>he wanted to say something</i>
DO-MV	<i>I don't sleep in the afternoons</i>
MOD-AUX-MV	<i>the women must have come far</i>
CAT-AUX-MV	<i>he seemed to have solved a problem</i>
AUX-CAT-MV	<i>he had wanted to rush out</i>
MOD-CAT-MV	<i>I might want to stay on</i>
DO-CAT-MV	<i>don't you want to kiss my lips?</i>
MOD-AUX-CAT-MV	<i>she must have hoped to find him</i>
AUX-CAT-AUX-MV	<i>D. was not believed to have been a man of means</i>
MOD-CAT-AUX-MV	<i>he must pray to be spared</i>
DO-CAT-AUX-MV	<i>he did not wish to be stopped for speeding</i>
MOD-AUX-CAT-AUX-MV	<i>it can be seen to have been inevitable</i>

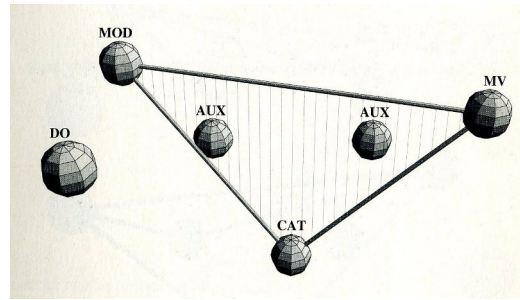
ordered by length. MINDT classified these structures by looking at the faces, i.e. the circuits of edges, of the basic polyhedron and named these polygons “verbal triangles”. The topology of the basic polyhedron allows for five verbal triangles³⁰: MOD-CAT-MV, MOD-AUX-MV, CAT-AUX-MV, MOD-AUX-CAT, and DO-CAT-MV. The MOD-CAT-MV triangle is considered basic because it does not contain nodes of the type AUX or DO. It “accounts for three types of verb phrase” [MINDT 1995, p.15], i.e. paths in the basic polyhedron, which are labelled by the formulae MOD-MV, CAT-MV and MOD-CAT-MV.

³⁰NB The order of the nodes in the names of the verbal triangles incorporates the meta-rule of imperative rightward movement within the basic polyhedron.

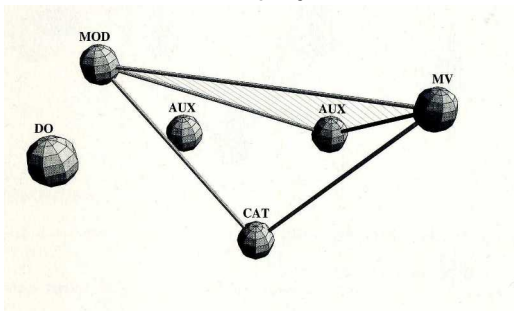
Figure A.2: MINDT's verbal triangles



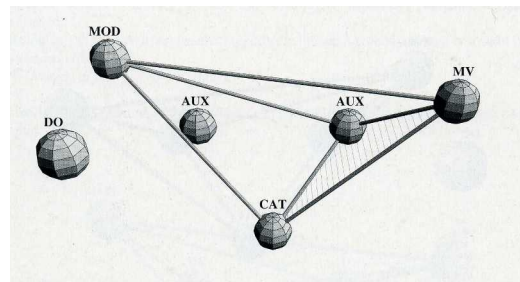
The basic polyhedron



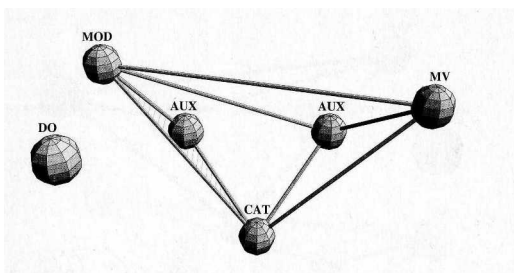
The MOD-CAT-MV triangle



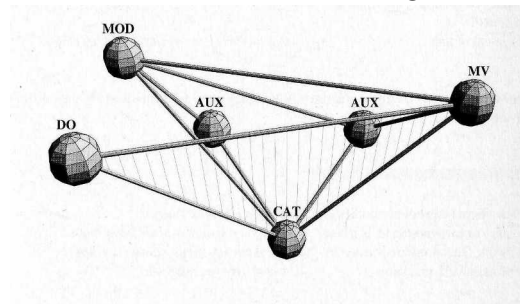
The MOD-AUX-MV triangle



The CAT-AUX-MV triangle



The MOD-AUX-CAT triangle



The DO-CAT-MV triangle

The three triangles that contain an AUX node form a group that is called ‘the AUX triangles’. They “operate within the MOD-CAT-MV triangle” [MINDT 1995, p.16] because all three of them share an edge with the basic MOD-CAT-MV triangle: the MOD-AUX-MV triangle shares the MOD-MV edge with the basic triangle; the CAT-AUX-MV triangle shares the CAT-MV edge with the basic triangle; and the MOD-AUX-CAT triangle shares the MOD-CAT edge with the basic triangle. The property of sharing an edge with the basic triangle is seen as a propensity for modifying the connection that is represented by the pertinent edge. The AUX triangles classify the formulae labelling verb phrases containing an auxiliary as follows: the MOD-AUX-MV triangle accounts for AUX-MV and MOD-AUX-MV; the CAT-AUX-MV triangle accounts for CAT-AUX-MV and MOD-CAT-AUX-MV; the MOD-AUX-CAT³¹ triangle accounts for AUX-CAT-MV, AUX-CAT-AUX-MV, MOD-AUX-CAT-MV, and MOD-AUX-CAT-AUX-MV.

Naturally, the DO-CAT-MV triangle accounts for the verb phrases containing DO (= auxiliary *do*), namely DO-MV, DO-CAT-MV and DO-CAT-AUX-MV. It is worth mentioning that the modals’ lack of *do*-periphrasis is reflected by the topology of the basic polyhedron. The DO-CAT-MV triangle and the MOD-CAT-MV triangle correspond in the second and the third node but there is no connection between their first nodes, i.e. “the first elements of the two triangles are mutually exclusive” [MINDT 1995, p.19].

The structure of the basic polyhedron – as discussed so far – needs to be enhanced to incorporate a description of the interplay of PERF, PROG and PASS because none of the formulae listed in table A.8 contains two auxiliaries next to each other. MINDT’s solution to this problem posits that both AUX nodes of the basic polyhedron allow for internal structure: AUX is seen as a placeholder for up to three auxiliary nodes, which are simply numbered consecutively from 1 to 3 (AUX1 := PERF³², AUX2 := PROG, AUX3 := PASS). The three auxiliary nodes and a fourth node labelled CAT/MV are pairwise connected to form a tetrahedron.

³¹ “The MOD-AUX-CAT triangle does not occur on its own, but is always followed by either a main verb or a combination of auxiliary + main verb” [MINDT 1995, p.18]. This property – in combination with the topology of the basic polyhedron – explains the fact that the longest possible path, which comprises five nodes, is accounted for by this verbal triangle.

³²MINDT uses the word *perfective* instead of *perfect* when referring to the auxiliary: “AUX1 (perfective)” [MINDT 1995, p.22]. When specifying infinitives, he uses the word *perfect*, though: “perfect infinitive” [MINDT 1995, p.12].

The CAT/MV node is a placeholder for the final element, i.e. the catenative or the main verb “which is premodified by AUX” [MINDT 1995, p.24]. The nested bracketing of the auxiliary phrase is made explicit by labelling the interconnecting line segments. The six labels specify whether the first or the second participle is needed. Additional arrows emphasize the meta-rule of imperative rightward movement. There are seven possible paths within the AUX tetrahedron (cf. figure

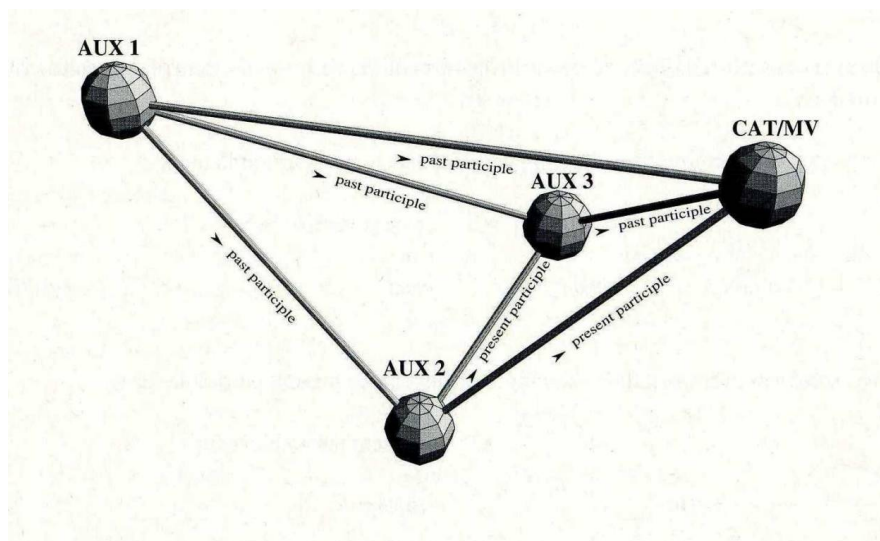


Figure A.3: The internal structure of the components of the AUX position

A.3). The formulae labelling these paths are: AUX1-CAT/MV, AUX2-CAT/MV, AUX3-CAT/MV, AUX1-AUX2-CAT/MV, AUX1-AUX3-CAT/MV, AUX2-AUX3-CAT/MV and AUX1-AUX2-AUX3-CAT/MV. There is a one-to-one correspondence between this notation and the [PERF, PROG, PASS]-notation, e.g. AUX2-CAT/MV \leftrightarrow [PERF: \emptyset , PROG: +, PASS: \emptyset] or AUX1-AUX3-CAT/MV \leftrightarrow [PERF: +, PROG: \emptyset , PASS: +]. If both AUX nodes have internal structure, then structures containing the string AUX-CAT-AUX might be expanded considerably. Theoretically, $7^2 = 49$ combinations are possible. The extreme case would be AUX1-AUX2-AUX3-CAT-AUX1-AUX2-AUX3-MV, e.g. *??we have been being begged to have been being loved* – admittedly a somewhat constructed example. Still, 9 out of the 49 formulae are needed to specify which auxiliaries are used in AUX-CAT-AUX, even if there is just one auxiliary in each node. A few more of

the remaining 40 formulae might be needed to accommodate constructions such as *she has been trying to be accepted* (AUX1-AUX2-CAT-AUX3-MV). Complex AUX-CAT-AUX constructions, i.e. those where both AUX nodes have more than one auxiliary, are rare for several reasons. Firstly, the AUX2-AUX3-combination as such is rare (awkwardness of *be(en) being*). Secondly, the catenative verb and the second auxiliary phrase have to ‘fit semantically’³³. Thirdly, some catenative verbs are followed by a second participle, which cannot be expanded³⁴.

Double AUX constructions with internal structure are not the only way to expand the verb phrase. A more flexible way is the combination of two or more catenative verbs. The internal structure of CAT can be CAT-CAT³⁵ or CAT-AUX-CAT³⁶. Figure A.4 represents this. “The components of the verb phrase which precede or follow the CAT position are disregarded in this diagram” [MINDT 1995, p.26]. Contrary to the AUX tetrahedron, the CAT triangle allows

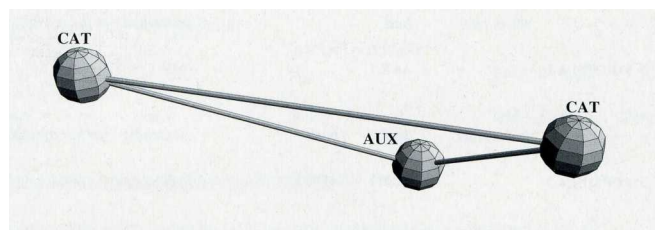


Figure A.4: The internal structure of the components of the CAT position

for further nesting because each of its CAT vertices can have an internal structure on its own. Theoretically, there is no upper limit to the length of strings that combine CAT and AUX. A fairly long example containing four catenative verbs would be *they might have seemed to have been going to be allowed to beg to be loved* (MOD-AUX-CAT-AUX-CAT-CAT-CAT-AUX-MV).

To recap, the basic polyhedron – in combination with the optional integration of a tetrahedron and a (series of nested) triangle(s) representing the internal structures of the AUX node and the CAT node – provides a powerful ordering

³³E.g. *seem to have been stealing* but *?want to have been loved*.

³⁴E.g. *get married* but **get been married*, **get had married* and **get been marrying*.

³⁵E.g. “*the gendarme **appeared to begin** to understand*” [MINDT 1995, p.26].

³⁶E.g. “*can be **seen to have started** happening then*” [MINDT 1995, p.26].

scheme for classifying English verb forms. Oriented paths along the edges of the basic polyhedron determine the linear order of the components of the verb phrase. The topology, i.e. the arrangement of the nodes and edges, of the basic polyhedron accounts for the great variety³⁷ of English verb forms while ensuring that all paths that are possible represent grammatical verb forms.

One major drawback of the polyhedron metaphor is the fact that it is not immediately comprehensible. At first, the topology of the basic polyhedron seems to be counterintuitive. An above-average capacity to think in three dimensions is needed because the basic polyhedron is asymmetric. Most people will need a blueprint of the basic polyhedron in front of them while working with this metaphor. Furthermore, one needs to have grasped the meta-rule of imperative rightward movement to understand this metaphor. All that does not detract from its academic value but makes it difficult to use it in teaching. One reviewer of MINDT's book put it like this: "These 3-D models [...] are certainly a novel approach, but their pedagogical value and necessity are not immediately apparent" [WYNNE 1997, p.2]. The eight³⁸ paths of the AUX tetrahedron can be mapped onto the eight corners of the unit cube. This yields an alternative visualization of the interplay of PERF, PROG and PASS, which is presented in the next section.

A.2.2 The RGB-cube metaphor

From a mathematical viewpoint, the notation of ordered triples of the form [PERF, PROG, PASS] has a natural three-dimensional representation if one makes the following two substitutions: $\emptyset \rightarrow 0$ and $+$ $\rightarrow 1$. The eight number triples (0,0,0), (1,0,0), (0,1,0), (0,0,1), (1,1,0), (1,0,1), (0,1,1), and (1,1,1) label points in a three-dimensional Cartesian coordinate system, which establishes a one-to-one mapping between the points of three-dimensional space and real-number triples of the form (x,y,z) . These eight points are the corners of a cube whose line segments have unit length. The edges of the unit cube can be oriented in such a way that they symbolize the switching on and the switching off of PERF,

³⁷This is – not exclusively but to a large extent – due to the inclusion of catenative verbs.

³⁸Zero-length path (none of the AUXs switched on) included.

PROG and PASS, e.g. the unit vector in x -direction (\vec{e}_x) symbolizes the switching on of PERF, and its opposite ($-\vec{e}_x$) symbolizes the switching off of PERF. The same applies mutatis mutandis to PROG ($\leftrightarrow \vec{e}_y$) and PASS ($\leftrightarrow \vec{e}_z$). Within the unit cube, each of the three unit vectors can act on, i.e. can be added to, four of the corners of the cube. Leaving the cube by adding any of these vectors is not allowed because this would yield verb forms that are double marked, e.g. **(to) have had done*³⁹ or **be being running*. The three 'switches' within this model are:

$$\vec{e}_{\text{PERF}} \equiv \vec{e}_x = \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix} \quad \vec{e}_{\text{PROG}} \equiv \vec{e}_y = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix} \quad \vec{e}_{\text{PASS}} \equiv \vec{e}_z = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}$$

The cube metaphor for visualizing the interplay of PERF, PROG and PASS benefits considerably from introducing colours. There are additive colour models which map the primary colours red, green and blue onto the three corners (1,0,0), (0,1,0) and (0,0,1) of the unit cube. This so-called RGB-cube coordinates all possible mixtures of the three primary colours⁴⁰. In the context of visualizing verb forms only the corners of the RGB-cube are needed: combining two of the additive primary colours (in equal amounts) yields the additive secondary colours yellow, magenta and cyan; combining all three of them yields white; switching off all colours yields black. The RGB-cube predetermines the choice of colours for

³⁹Double perfect forms are possible in German and French, e.g. *wir hatten das schon gemacht gehabt* 'doppeltes Plusquamperfekt' and *il a eu chanté* 'passé surcomposé'. Contrary to German and French, this is not possible in English: "L'une des différences entre le verbe français et l'anglais est que le premier présente trois aspects (immanent : *faire*; transcendant : *avoir fait*; bi-transcendant : *avoir eu fait*), alors que le second n'en présente que deux (immanent et transcendant; l'aspect bi-transcendant **(to) have had done* n'existant pas en anglais)" [DÉFROMONT 1973, p.123]. Still, it is possible to combine the structure *have something done* with a relative clause. This combination might lead to a string of words that looks like a double perfect, e.g. *the things that I have had done*. Cf. [LITVINOV and RAČENKO 1998, p.60] on this: "Eine ununterbrochene Kette *have had VPart* [= Vergangenheitspartizip] ist nur dort anzutreffen, wo das Objekt durch das Relativpronomen des Attributsatzes vertreten ist, aber das ist selbstverständlich bloß eine der DPF [= doppelte Perfektform] 'homonyme' Formkette [...]." The combination of *have something done* and a relative clause also accounts for specious 'progressive perfect' forms, cf. the footnote on this on p.133.

⁴⁰E.g. (0.4,0.25,0.8) stands for 40% of red plus 25% of green plus 80% of blue.

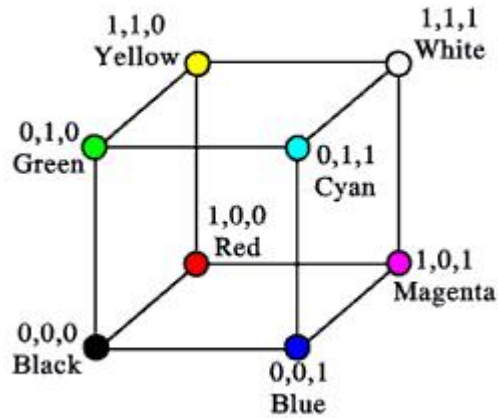


Figure A.5: The RGB colour cube

PERF, PROG and PASS. What has been said so far (cube corners \leftrightarrow verb forms and cube edges \leftrightarrow ON/OFF-switches for PERF, PROG, PASS) can be summarized as follows:

- Switching on PERF:

$$(0,0,0) + \vec{e}_{\text{PERF}} = (1,0,0): \text{verb} \rightarrow \text{have verb-en}$$

$$(0,1,0) + \vec{e}_{\text{PERF}} = (1,1,0): \text{be verb-ing} \rightarrow \text{have be-en verb-ing}$$

$$(0,0,1) + \vec{e}_{\text{PERF}} = (1,0,1): \text{be verb-en} \rightarrow \text{have be-en verb-en}$$

$$(0,1,1) + \vec{e}_{\text{PERF}} = (1,1,1): \text{be be-ing verb-en} \rightarrow \text{have be-en be-ing verb-en}$$

- Switching on PROG:

$$(0,0,0) + \vec{e}_{\text{PROG}} = (0,1,0): \text{verb} \rightarrow \text{be verb-ing}$$

$$(1,0,0) + \vec{e}_{\text{PROG}} = (1,1,0): \text{have verb-en} \rightarrow \text{have be-en verb-ing}$$

$$(0,0,1) + \vec{e}_{\text{PROG}} = (0,1,1): \text{be verb-en} \rightarrow \text{be be-ing verb-en}$$

$$(1,0,1) + \vec{e}_{\text{PROG}} = (1,1,1): \text{have be-en verb-en} \rightarrow \text{have be-en be-ing verb-en}$$

- Switching on PASS:

$$(0,0,0) + \vec{e}_{\text{PASS}} = (0,0,1): \text{verb} \rightarrow \text{be verb-en}$$

$(1,0,0) + \vec{e}_{\text{PASS}} = (1,0,1)$: have verb-en → have be-en verb-en

$(0,1,0) + \vec{e}_{\text{PASS}} = (0,1,1)$: be verb-ing → be be-ing verb-en

$(1,1,0) + \vec{e}_{\text{PASS}} = (1,1,1)$: have be-en verb-ing → have be-en be-ing verb-en

The meaning of the additive secondary colours yellow, magenta and cyan in this model is fairly straightforward: for the three verb forms [PERF: +, PROG: +, PASS: ∅], [PERF: +, PROG: ∅, PASS: +] and [PERF: ∅, PROG: +, PASS: +], for which exactly two out of three markers are switched on, the additive secondary colours symbolize the merging of the two markers at hand. This bridges the gap between the inherently atomistic approach of verb form analysis – the bicoloured words *been* and *being* being a case in point – and the traditional presentation of English verb forms in learner’s grammars, which often display the pertinent forms as one chunk, e.g. *have been + -ing*.

- The blending of two markers:

have be-en verb-ing → have been verbing

have be-en verb-en → have been verben

be be-ing verb-en → be being verben

The merging of all three markers in the forms labelled [PERF: +, PROG: +, PASS: +] is symbolized by the ‘colour’ white. When printed on white paper, it becomes invisible – an allusion to the fact that these forms are so rare that they are almost imperceptible⁴¹.

- The blending of all three markers:

have be-en be-ing verb-en → have been being verben

The infrequency of [PERF: +, PROG: +, PASS: +] has been estimated by means of automatic corpus lookups. SCHLÜTER points out that these forms do not belong to the core (“Kernbereich”) of the English language and provides the following figures:

⁴¹To stay within the metaphor, these forms are a very light grey because they are hardly perceptible but not totally invisible.

[Das] *Present Perfect Progressive Passive* trat in den Korpora LOB⁴² und BROWN⁴³ gar nicht auf, im Korpus CEC⁴⁴ nur ein einziges Mal. Ein automatischer Suchlauf auf das ganze BNC⁴⁵ ergab nur einen einzigen weiteren Fall in 100 Millionen Wörtern. Die Gründe für das seltene Auftreten liegen sicherlich in der komplexen Struktur dieser Verbform [SCHLÜTER 2002, p.114/115].

Switching on MOD makes the structure even more complex: “The verb phrase construction *may have been being sunk* is so rare that an extended example⁴⁶ is called for” [QUIRK et al. 1985, p.64, Note].

Does the structure *have been being verb-en* appear on the World Wide Web? A limited⁴⁷ internet search for the structure “have been being” at bbc.co.uk yielded thirty-one different hits: eight of them were [PASS: Ø], i.e. *be* was used as a main verb; thirteen were [MOD: Ø, PASS: +], e.g. “lovehearts have been being produced at a factory in Derbyshire since the mid 1950s” [bbca]; ten were [MOD: +, PASS: +], e.g. “babies are not the only ones who may have been being overfed” [bbcb] and “the submarine should not have been being towed in rough weather” [bbcc]. The bottom line is that the structure *have been being verb-en* is not – at least not exclusively – an invention of grammarians⁴⁸ but it

⁴²*Lancaster-Oslo/Bergen Corpus*: written BrE, non-fictional and fictional texts, 1961, about 1,000,000 words [SCHLÜTER 2002, p.64].

⁴³*BROWN-University Corpus*, written AmE, non-fictional and fictional texts, 1961, about 1,000,000 words [SCHLÜTER 2002, p.64].

⁴⁴*Corpus of English Conversation*: spoken BrE, 1953–1976, about 200,000 words [SCHLÜTER 2002, p.64]: “*All supply teachers at my school have been paid actually a little bit late but they’ve all been being paid*” [SCHLÜTER 2002, p.114].

⁴⁵*British National Corpus*: spoken (10%) and written (90%) BrE, non-fictional texts from 1975–1994 and fictional texts from 1960–1994, about 100,000,000 words [SCHLÜTER 2002, p.64]: “*That er, er, little action has been taken in the last thirty years since this has been being discussed, [. . .]*” [SCHLÜTER 2002, p.115, footnote].

⁴⁶“The following dialogue could well occur during an interview for an appointment: A: Has the candidate named Petersen been interviewed yet? B: He wasn’t in the waiting room two minutes ago. He may have been being interviewed then” [QUIRK et al. 1985, p.64, Note].

⁴⁷It is advisable to limit the search somehow because the results of an unlimited search will include many pages about English grammar which deal explicitly with verb forms. Finding *have been being* in such lists would not prove that these forms are really used. There is no special reason for choosing the British Broadcasting Corporation’s website. The exact search parameters were: “have been being” -learningenglish site:bbc.co.uk (search performed on 29 March 2008), in which “-learningenglish” excludes BBC pages about grammar.

⁴⁸Cf. the discussion of this in [ALLEN 1966, p.25/26]: “[T]here is always the danger that

has really been being used by people. Whether it is sound to teach this structure is an entirely different question. In light of the fact that it represents the ‘fully extended’ paradigm of the interplay of PERF, PROG and PASS, its pedagogical value is not negligible⁴⁹. The telescope metaphor, which is presented in the next section, also includes the ‘fully extended’ structure for pedagogical purposes.

A.2.3 The telescope metaphor

The telescope metaphor, which is already inherent in the special meaning of the verb *telescope*⁵⁰ in the above-mentioned quote by QUIRK et al. (“In these strings the different constructions are ‘telescoped’ into one another”), can be exploited further to develop a graphical representation of the interplay of PERF, PROG and PASS. In light of the fact that the verb *telescope* refers to a movement, it is desirable to provide an animated presentation for pedagogical purposes. This section describes the conceptual development of such an animation.

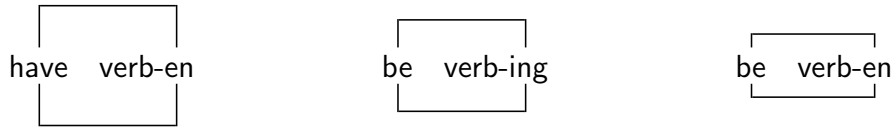
The constructions *have + -en*, *be + -ing* and *be + -en* bracket *verb* if only

the analyst, because of some linguistic theory he has in mind, may invent utterances [...] in order, for example, to fill some ‘hole’ in his analysis, and thus make his analysis ‘neater’. [...] When, therefore, one finds linguists discussing verb-clusters like *will have been being paid* and *would have been being loved*, one may ask [...] if they have been made up by the application of regular rules of analogy and extension.”

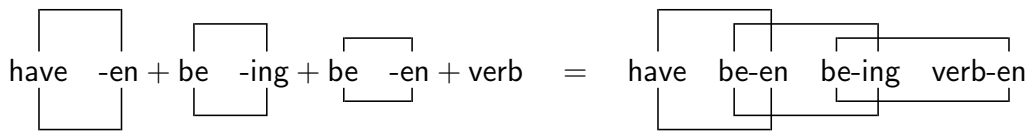
⁴⁹JESPERSEN begs to differ: “It is useless in a survey of English verbal forms or phrases to give such paradigms [...], in which combinations like *I have been being seen* [...] are registered as normal expressions on the same footing as *I am seeing*, etc., while as a matter of fact they are so extremely rare that it is better to leave them out of account altogether” [JESPERSEN 1931, p.231]. His rejection is moderated by “on the same footing”. Of course, these low-frequency structures are not as important as the simpler high-frequency structures. Foreign learners of English do not need to acquire them in order to use them actively, but the rare forms are relevant for grasping the interplay of PERF, PROG and PASS as presented here. Intermediate learners need to be informed about the rare forms’ infrequency.

⁵⁰The meaning “[f]orce (parts of a thing) one into another like the sliding tubes of a hand telescope [...] L19 [= 1870-1899]” [STEVENSON 2007, p.3199, headword *telescope* verb 3 a] refers to the sliding tubes of the actual instrument. The English noun referring to the optical instrument is older (1630-1669, cf. [STEVENSON 2007, p.3199, headword *telescope* noun]). Having sliding tubes is optional, i.e. not part of the core meaning of the noun. Normally, they occur in small portable telescopes only (“hand telescope”).

one of them is switched on. This can be depicted as follows:

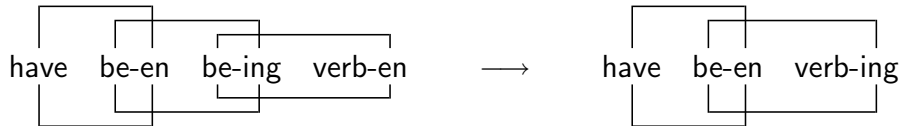


The three segments (“tubes”) can be assembled so as to be evocative of a three-part hand telescope:

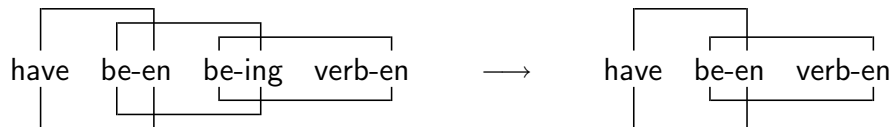


Telescoping the ‘fully expanded’ construction by switching off one of the three markers PERF, PROG or PASS will produce one of the following three states of the imaginary telescope.

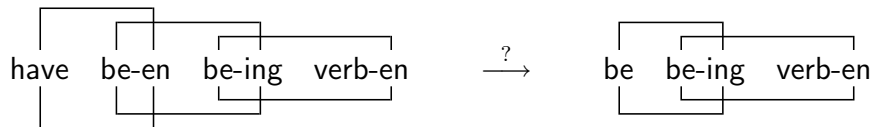
Switching off PASS corresponds to sliding the inner tube into the middle tube:



Switching off PROG corresponds to sliding the middle tube into the outer tube:

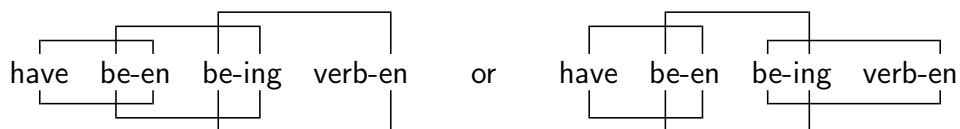


Switching off PERF corresponds – unfortunately – to removing the outer tube:

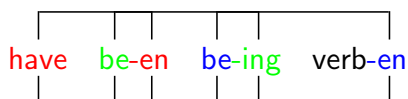


The last transition – indicated by a question mark above the arrow – reveals

the limits of the telescope metaphor: if one takes the analogy between verbal constructions and the sliding tubes of a hand telescope too literally, one cannot switch off the construction represented by the outer tube by sliding it into another tube. Selecting a different construction as the outer tube, i.e.



only shifts the problem. There is always one construction that cannot be switched off by 'sliding in'. One possible way of remaining within the telescope metaphor is to allow for self-intersecting tubes of equal diameter. Then the correspondence between tubular brackets and verbal construction needs to be made clear somehow, e.g. by using colours:



This is not very different from the coloured verb forms presented in the context of the RGB-cube metaphor. The colours contain the relevant information. The tubular brackets are in fact redundant.

The 'TingoLingo Tenses Telescope'

There is an interactive computer animation that is loosely based on the telescope metaphor. It has been programmed by student assistants from the Knowledge Media Institute (IWM) in Koblenz. The animation is based on guidelines summarized in [EUL 2006]⁵¹. It is part of an English grammar online course called *TingoLingo: English Grammar Online*⁵². The core idea, which makes the animation interactive, is the introduction of a switch panel with three ON/OFF-buttons for PERF, PROG and PASS. The switches can be operated in any desired order.

⁵¹Unpublished in 2006, see appendix B (p.158).

⁵²Further information – including a demo version of the *Tenses Telescope* – can be found at <http://www.tingolingo.de/>.

The effect of clicking on any of the six buttons is shown on the screen above the switch panel: there are adjacent rectangles which are reminiscent of the tubular segments of a hand telescope seen from the side, cf. figure A.6. Each rectangle

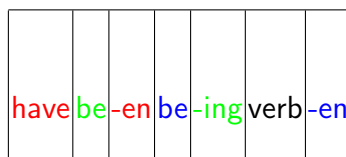


Figure A.6: The 'simplified' telescope of the animation (fully expanded)

contains one of the morphemes that belong to English infinitives. If the user operates one of the switches, a short Flash-movie is shown. Switching on one of the markers PERF, PROG or PASS leads to a separation of the respective rectangles and the insertion of additional rectangles, which flip open and contain the relevant morphemes. Switching on a second marker which is to the right of another marker which has already been switched on leads to a self-intersection of the two morphemes that need to 'swap'. Only after the swap the morphemes of the second marker are flipped open. The following sequence of snap-shots might illustrate this kind of process (e.g. switching on PASS for [PERF: +]):

1. (to) **have** kissed
2. (to) **have** kiss↔**ed** (before swap/self-intersection)
3. (to) **have** **ed**↔kiss (after swap/self-intersection)
4. (to) **have** **en** kiss
5. (to) **have** **been** kissed

Figure A.7 on p.156 gives an impression of the self-intersection of the tubular segments of the actual *Tingo Tenses Telescope*. It contains a selection of ten real snap-shots from the Flash-movie for the above-mentioned transitional process from [PERF: +, PROG: ∅, PASS: ∅] to [PERF: +, PROG: ∅, PASS: +].⁵³ The

⁵³In the caption of figure A.7 this process is referred to as "transition from 100 to 101".

screenshot in figure A.8 on p.157 shows the final result of this particular process and gives an impression of what the interactive switch panel looks like. The symbols 'Rewind To Index' and 'Forward To Index' in the corners at the bottom allow for changing the main verb.

Figure A.9 on p.157 alludes to how the *Tingo Tenses Telescope* is embedded into the storyline of the course *TingoLingo: English Grammar Online*. The *Tenses Telescope* is one of various objects in the mascot's *Grammar Mansion*. Each object stands for an area of grammar, e.g. the *Pronouns Prop*, the *Phrasal Verbs Phone*, the *Reported Speech Radio*, and many more. If the user clicks on one of these objects, he or she enters the corresponding area of the online course. After having mastered one of these areas of grammar, the user 'acquires' the respective object, which then symbolizes the acquired grammatical competence⁵⁴. Ingo, the mascot, introduces the *TingoLingo Tenses Telescope* like this: "A telescope has a number of segments which can be pulled out, depending on how long the telescope is supposed to be. For tenses too, a number of segments exist and they too can be telescoped into one another" [MARTIN et al. 2007, object: tenses telescope].

To recap, the *TingoLingo Tenses Telescope* visualizes the interplay of PERF, PROG and PASS by animating all twenty-four⁵⁵ transitions between the eight English infinitives. The interactive switch panel makes it possible to 'hop' from any infinitive to those three infinitives that are just one switch away⁵⁶. The use of three different colours ensures that the nested bracketing of PERF, PROG and PASS stays obvious for the stationary result of each transition.

The main advantage of the animated version of the telescope metaphor is its intuitiveness and interactiveness, which makes it ideal for pedagogical purposes. It is less abstract than the cube metaphor, which requires a certain mathemati-

⁵⁴The word *tingo* comes from the Pascuense language of Easter Island. It means "to borrow things from a friend's house, one by one, until there's nothing left" [DE BOINOD 2005, p.95]. The name reveals the structure of this online course.

⁵⁵The easiest way to see that 24 is the correct number of transitions is to think within the cube metaphor: each corner of the cube represents one of the 8 settings of [PERF, PROG, PASS] and each of the 12 edges can be traversed in two directions, one for switching on a marker and one for switching it off.

⁵⁶If one stays within the cube metaphor, one could say that the user can move freely from any corner to any of the three neighbouring corners.

cal understanding. For academic purposes the polyhedron metaphor is the most appropriate, simply because of the fact that it is exhaustive by including catenative constructions, *do*-periphrasis and modal auxiliaries. The guidelines for the animation⁵⁷ suggested two more switches (one for PRET and one for MOD) for finite verb forms. Originally, the current version was supposed to be a simplified test version only. Still, there are two reasons why the current version can be considered a full version. Firstly, PRET and MOD are of a different nature. As discussed above, they do not have the bracketing property⁵⁸, which led to the notion of tubular segments, and they are entangled⁵⁹, which might be confusing to the user. Secondly, the interplay of PERF, PROG and PASS, which accounts for the diversity of English finite verb forms, can be studied at the level of infinitives because these three markers are already fully operative at the level of infinitives. The step from infinitives to finite forms is a small one because the effects of the (optional⁶⁰) switching on of MOD or PRET are easily to grasp: MOD puts a modal in front of the infinitive and PRET operates⁶¹ on the left-most verb form of the infinitive.

It is hoped that the *TingoLingo Tenses Telescope* will help students avoid ungrammatical forms, e.g. **we had have fun*⁶², **she would has gone*⁶³, **he will being watched*⁶⁴, so that they can focus on the usage of the forms within the English aspecto-temporal system.

⁵⁷See appendix B.

⁵⁸Cf. table A.2 on p.131.

⁵⁹PRET and MOD do not combine freely: the viewpoint of table A.5 would be enforced by the existence of these two additional switches.

⁶⁰For forming finite verb forms of the type [PRET: ∅, MOD: ∅] one needs to know about the third person singular *-s*, *do*-periphrasis (*do/does*), and the irregular forms of *be*.

⁶¹If the infinitive is bare and the verb regular, this is done by adding *-ed*. There are irregular verbs for which switching on PRET leads to more complex changes than the mere addition of *-ed*. For negative verb forms switching on PRET leads to putting *did not* in front of the infinitive. The verb *be* lacks *do*-periphrasis.

⁶²The correct [PRET: +, PERF: +] form is *we had had fun*. Alternatively, the insertion of *better* would also make the utterance grammatical: *we had better have fun* (catenative *had better*, used to give strong advice).

⁶³The correct [MOD: +, PERF: +] form is *she would have gone*.

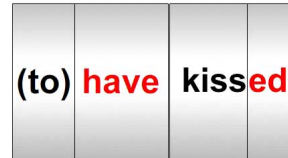
⁶⁴The correct [MOD: +, PROG: +, PASS: +] form is *he will be being watched*, and the correct [MOD: +, PROG: ∅, PASS: +] form is *he will be watched*.

Figure A.7: Tenses Telescope: transition from 100 to 101

Initial state:



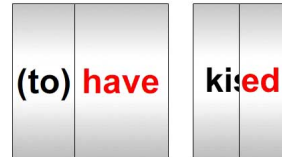
Switching on PASS:



Self-intersection begins:



Self-intersection in progress (1):



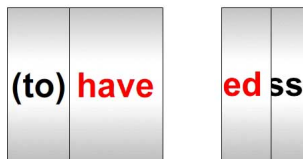
Self-intersection in progress (2):



Self-intersection in progress (3):



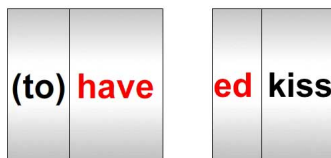
Self-intersection in progress (4):



Self-intersection in progress (5):



Self-intersection completed:



Final state:



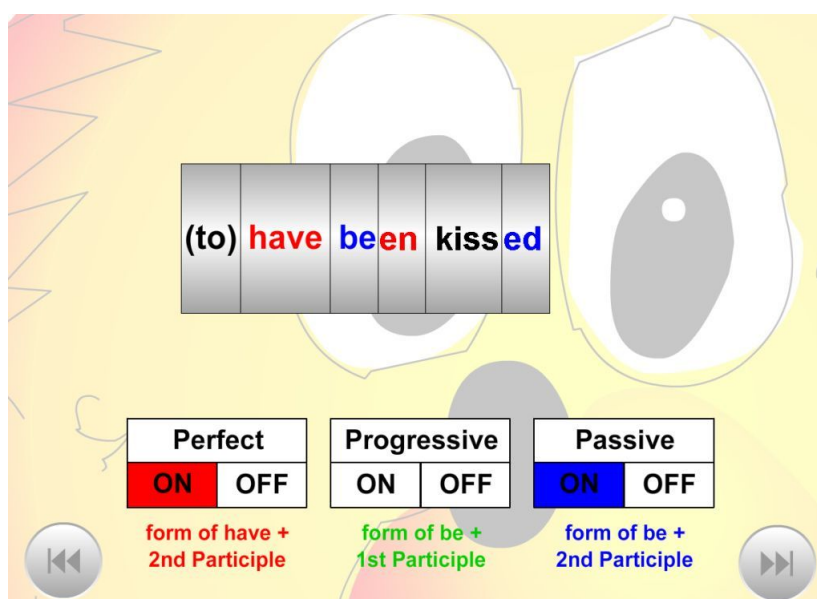


Figure A.8: The *Tenses Telescope* in the state [PERF: +, PROG: ∅, PASS: +]

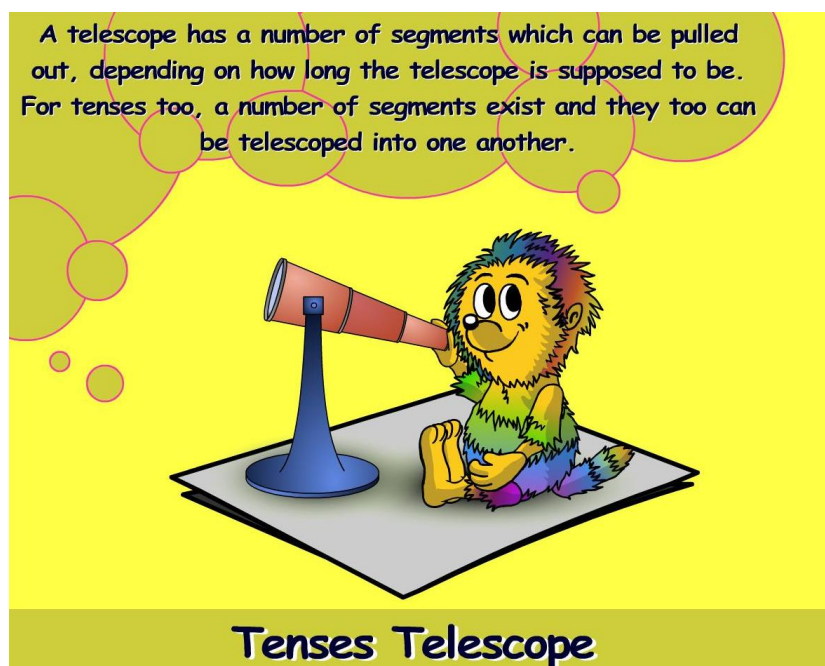


Figure A.9: Ingo and the introduction to the *Tenses Telescope*

Appendix B

Guidelines for the animation of English verb forms

The next five pages reproduce “Zielvorstellungen für die Animation englischer Verbformen”,¹ which was written in 2006 but not published. It represents the target setting according to which the interactive computer animation *TingoLingo Tenses Telescope* was programmed. The *TingoLingo: English Grammar Online* programme has been in use for a test group of students ($N \approx 250$) at Koblenz University since November 2007.²

The mapping of verbal markers to the additive primary colours is not RGB³, but BRG⁴ (a simple cyclic permutation with no adverse consequences for the present didacticization). This is due to the fact that “Zielvorstellungen für die Animation englischer Verbformen” had been written before the RGB-cube metaphor was developed. The colours have been adjusted in the meantime, i.e. the colours of the demo version at <http://www.tingolingo.de/> have been harmonized with the colour arrangement of the RGB-cube.⁵

¹Referenced as “[EUL 2006] (unpublished)” in appendix A and in the bibliography.

²The grammar course will be opened up to external students in due time.

³PERF: red, PROG: green, PASS: blue.

⁴PERF: blue, PROG: red, PASS: green.

⁵A direct link to the *TingoLingo Tenses Telescope* is http://www.uni-koblenz.de/~siggis/ingo/index-Dateien/viewMyWebCT_data/toolfs_data/telescope/level1-Dateien/telescope-loader.html, accessed 21 August 2008.

Zielvorstellungen für die Animation englischer Verbformen

Vorüberlegung

Die Vielfalt der englischen Verbformen erscheint Lernern und Lernerinnen auf mittlerem Niveau oft unüberschaubar. Die hier beschriebene interaktive Bildschirmanimation soll den Benutzer und die Benutzerin in die Lage versetzen, die dem englischen Konjugationssystem zugrunde liegenden Ordnungsprinzipien zu erkennen, so dass alle gängigen Verbformen erkannt und korrekt gebildet werden.

Ansatz

Fast alle englischen Verbformen lassen sich gemäß des Vorhandenseins einer der fünf folgenden Kategorien einteilen:

1. MOD: Modalverb vorhanden oder nicht
2. PRET: Präteritum wird ausgedrückt oder nicht
3. PERF: Perfekt oder nicht
4. PROG: Progressive oder nicht
5. PASS: Passiv oder nicht

Dies ergibt rein formal $2^5 = 32$ verschiedene Grundtypen.

Die fünf Merkmale sollen in der Animation einzeln an- und ausschaltbar sein. Dies bedeutet insbesondere, dass von jeder der 32 Verbformen zu jeder anderen, die sich nur durch Änderung eines der fünf Merkmale unterscheidet, gewechselt werden kann. Jene Übergänge sollen animiert sein, so dass das „teleskopartige Ineinandergleiten“ der genannten Merkmale deutlich hervortritt (siehe unten).

Vereinfachung / Versuchsversion

Da die Merkmale MOD und PRET miteinander verschränkt sein können, bietet sich zunächst eine Version an, welche nur die infiniten Verbformen (d. h. ohne MOD und PRET) berücksichtigt. Der didaktische Vorteil ist, dass das „teleskopartige Ineinandergleiten“ der Merkmale PERF, PROG und PASS bei komplexeren Verbformen bereits auf der Ebene der Infinitive sehr gut erkennbar ist. Da fast alle diese Infinitive auch benutzt werden, bzw. obige fünf Merkmale sich als „MOD/PRET + INF“ zusammenfassen lassen, hat eine Animation, welche nur die Infinitive enthält durchaus ihre Daseinsberechtigung, weil sie den Hauptzweck bereits erfüllt. Der

praktische Vorteil ist, dass eine Animation der Infinitive nach einer Testphase zu einer Vollversion, die alle fünf Merkmale enthält, ausgebaut werden kann. Im Folgenden ist jene „Testversion“ beschrieben.

Bildschirmhalte

Die 2³ = 8 Anzeigen sollten etwa folgende Struktur haben:

<Name der infiniten Verbform>					
<Infinitive Verbform>					
Perfect		Progressive		Passive	
ON	OFF	ON	OFF	ON	OFF

Dabei sollten die Schalter ON/OFF ihre jeweilige Position anzeigen:

(Bare) Infinitive to eat <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th colspan="2">Perfect</th> <th colspan="2">Progressive</th> <th colspan="2">Passive</th> </tr> <tr> <td>ON</td><td>OFF</td> <td>ON</td><td>OFF</td> <td>ON</td><td>OFF</td> </tr> </table>	Perfect		Progressive		Passive		ON	OFF	ON	OFF	ON	OFF	Infinitive Perfect Progressive to have been eating <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th colspan="2">Perfect</th> <th colspan="2">Progressive</th> <th colspan="2">Passive</th> </tr> <tr> <td>ON</td><td>OFF</td> <td>ON</td><td>OFF</td> <td>ON</td><td>OFF</td> </tr> </table>	Perfect		Progressive		Passive		ON	OFF	ON	OFF	ON	OFF
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Die Form *to have been being eaten* kommt fast gar nicht vor, da die Kombination *been being* als ungenau empfunden wird. Dies sollte auf jenem Bildschirminhalt vermerkt sein. Sie ist jedoch gleichzeitig das Paradigma der Animation, da nur hier alle Schalter auf ON stehen. Die Form *to be being eaten* ist aus dem gleichen Grund (*be being*) auch selten. Die entsprechende finite Variante (*am/are/is/was/were being eaten*) ist jedoch sehr gebräuchlich und sollte in der späteren Vollversion gebührende Beachtung finden, da sie eine häufige Fehlerquelle darstellt. In folgender Darstellung ist das „teleskopartige Ineinandergleiten“ farblich dargestellt:

(Bare) Infinitive to eat						Infinitive Perfect Progressive to have been eating					
Perfect		Progressive		Passive		Perfect		Progressive		Passive	
ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Infinitive Perfect to have eaten						Infinitive Perfect Passive to have been eaten					
Perfect		Progressive		Passive		Perfect		Progressive		Passive	
ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Infinitive Progressive to be eating						Infinitive Progressive Passive to be being eaten					
Perfect		Progressive		Passive		Perfect		Progressive		Passive	
ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Infinitive Passive to be eaten						Infinitive Perfect Progressive Passive to have been being eaten					
Perfect		Progressive		Passive		Perfect		Progressive		Passive	
ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF

Das Verweilen des Cursors über den Wörtern *Perfect*, *Progressive* und *Passive* in der Schalterleiste sollte dazu führen, dass die entsprechenden Bildungsregeln, etwa in einem Pop-Up Fenster, angezeigt werden. Diese sind:

Perfect: have + 3. Form (**have** + **-en**)

Progressive: be + ing-Form (**be** + **-ing**)

Passive: be + 3. Form (**be** + **-en**)

Gestaltung der Übergänge bei Betätigung der Schalter

Im Folgenden seien einige der 3 mal 8 = 24 möglichen Übergänge bei Betätigung der Schalter, d.h. die eigentlichen Animationen, beschrieben.

(PERF: OFF, PROG: OFF, PASS: OFF) → (PERF: OFF, PROG: **ON**, PASS: OFF)

to eat

Platz schaffen für Hilfsverb:

to eat

Be + -ing kommt von oben:

be ing
to eat

Be + -ing positioniert sich:

to be eat ing

-ing verschmilzt mit Hauptverb:

to be eating

Be + -ing verliert Design, z. B. Farbe:

to be eating

Beim **Ausschalten** von PROG möge obige Sequenz in umgekehrter Reihenfolge ablaufen, wobei ein **Verschwinden** von *be + -ing* **nach unten** vorgeschlagen wird.

(PERF: OFF, PROG: OFF, PASS: ON) → (PERF: ON, PROG: OFF, PASS: ON)

to be eaten

Platz schaffen für 2. Hilfsverb und Endung:

to be eaten

Have + -en kommt von oben:

have en
to be eaten

Have + -en positioniert sich:

to have be en eaten

-en verschmilzt mit dem anderen Hilfsverb:

to have been eaten

Have + -en verliert Design, z. B. Farbe:

to have been eaten

Beim **Ausschalten** von PERF möge obige Sequenz in umgekehrter Reihenfolge ablaufen, wobei ein **Verschwinden** von *have + -ing* **nach unten** vorgeschlagen wird.

Appendix C

The perfect in grammars and textbooks

This appendix presents an assortment of statements about the English (present) perfect taken from about¹ 20 different sources. Most of the material perused is fairly modern: half of the books cited were published in the 21st century and two were published in 1999. The aim of this appendix is to show how the English (present) perfect is taught². It is divided into two sections defined by the intended audience of the books at hand. The first section deals with the (present) perfect from the viewpoint of foreign learners and teachers; the second section deals with the perfect from the viewpoint of native speakers (or advanced foreign students) who are engaged in studying English grammar. Whenever the authors offer a classification of the perfect within a system of tense and aspect, the details of their approach are mentioned. This might include definitions of the terms *tense* and *aspect* and/or comments by the authors on the use of these terms.

It should be noted that the assortment of books in this appendix is not an absolute one. Of course, an EFL learner/teacher might benefit substantially

¹The introduction of the present perfect in the new teaching material *English G21* by the German educational publisher Cornelsen is analysed twice: from the perspective of the student's book and from the perspective of the teacher's book.

²To be precise, here teaching ("taught") does not refer to the actual processes of instruction/tuition in the classroom but to the ideas presented in the books at hand – ranging from 'recipes' of how to approach English present perfect grammar to descriptions of a conceptualization of the English aspecto-temporal system.

from reading a linguistics textbook for undergraduates³, especially if it contains material about pedagogical grammar, and thereby use it as a learner's/teacher's grammar. The classification of books in this appendix is mainly based on the publishers' information given in the blurbs and refers to the main target groups.

C.1 English as a foreign language

This section is organised as indicated in table C.1: the perspectives student vs. teacher and German vs. non-German are combined. The level of the books written for German learners of English range from a school book for beginners (*English G21* by Cornelsen) to a university handbook for teacher training programmes (*English Grammar* by GIERING et al., whose concept of correlation is discussed in 3.3). EFL grammars of English often focus on the present perfect

Table C.1: Organisation of section C.1

	Student's perspective (C.1.1)	Teacher's perspective (C.1.2)
L1 not specified	"No specific target group in terms of L1"	"Teacher's (and student's) L1 not specified"
L1 = German	"Target group: German learners of English"	"Target group: German English teachers"

first, i.e. before dealing with past perfect and future perfect, and the opposition between the present perfect and the past tense. German learners have fewer problems with the past perfect than with the present perfect, cf. "[c]ompared with present perfect aspect, past perfect aspect has a straightforward function—to refer to a time that is earlier than some specified past time" [BIBER et al. 1999, p.460].

³E.g. [RADDEEN and DIRVEN 2007], whose approach to the perfect is discussed as from p.200.

C.1.1 EFL learners' grammars and textbooks

No specific target group in terms of L1

Living English Structure by W. STANNARD ALLEN “provides clear explanations and graded practice in the key points of the English language” [ALLEN 1993, blurb]. Section 22 “Notes on English Tense” [ALLEN 1993, p.74–77] introduces three ‘aspects’:

1. the aspect of general time, i.e. past, present and future;
2. the aspect of action⁴, i.e. simple vs. continuous;
3. the aspect of fact, which is expressed by “the PERFECT tenses” [ibid.].

The name ‘aspect of fact’ comes from the idea that “we are not interested in the action but in the completed fact and its relationship to a given general time aspect” [ibid.]. The author sums up the characteristics of the (present) perfect as follows:

The three PERFECT tenses (present, past and future) express the completion or ‘perfection’ of an action BY a given time; NOT an act done AT a given time. The PRESENT PERFECT therefore expresses the completion or ‘perfection’ of an action by NOW. Therefore it is, strictly speaking, a kind of present tense, because we are NOT interested in WHEN the action took place, we are only interested in the PRESENT state of completion; i.e. its effect NOW [ALLEN 1993, p.77/78].

Obviously, ALLAN uses the word *aspect* rather in its general sense (‘point of view’) and not as a linguistic technical term. His characterization of the English present perfect is a standard one: he stresses the current relevance reading (“its effect now”) and the indefinite past reading (“not interested in when”) while

⁴ALLAN explains the aspect of action as follows: “Here we are concerned with an act AT THE TIME OF ITS OCCURRENCE” [ALLEN 1993, p.75]. SIMPLE tenses: “action, completed in the past, present, or future” [ibid.]; CONTINUOUS forms: “describe an act [...] in progress; we are not interested in its beginning or end” [ibid.].

emphasizing its status as a present tense (“strictly speaking, a kind of present tense”).⁵

Practical English Usage by MICHAEL SWAN is heralded⁶ as “*the* indispensable reference book on language problems in English for teachers and higher-level learners” [SWAN 2005b, blurb]. It contains the following neat⁷ overview about the terminology and the use of perfect verb forms:

A perfect verb form generally shows the time of an event as being earlier than some other time (past, present or future). But a perfect form does not only show the time of an event. It also shows how the speaker sees the event – perhaps as being connected to a later event, or as being completed by a certain time. Because of this, grammars often talk about ‘perfect aspect’ rather than ‘perfect tenses’ [SWAN 2005b, p.402].

There are several quotes⁸ by SWAN illustrating his ideas in the main part of this paper. That is why this appendix contains only some brief remarks concerning his approach.

In an entry providing basic information about the English present perfect SWAN characterizes the prototypical scope of the present perfect as follows: “finished events connected with the present” [SWAN 2005b, p.438] and “thinking about past and present together” [SWAN 2005b, p.440]. Figure C.1, taken from [SWAN 2005b, p.441], represents the gist of this characterization. Past tense

⁵ALLEN’s comment about the present perfect’s status as a *present* tense is probably connected to his remarks about perfects in foreign languages, which can be found on the same page of his book (cf. p.93 in this paper). Still, it should be noted that in non-technical language and in certain contexts it is not far-fetched to refer to the present perfect as past tense, cf. the following mini-dialogue between a dying prisoner and his cell-mate: A: “. . . you have been. . . a good friend. I have. . . appreciated your company. . .” B: “Stop talking in the damned past tense.” [dialogue taken from the science-fiction novel *Triangle: Imzadi II* by PETER DAVID, American English].

⁶“With over one and a half million copies sold worldwide” [SWAN 2005b, blurb].

⁷SWAN’s overview is neat because it sums up the basics about the perfect forms in non-technical language.

⁸SWAN on the present perfect in other languages: footnote 28 on p.93, SWAN on the past perfect: p.98, SWAN on bad rules concerning the English present perfect: p.101 ff., SWAN on utterances of the type *I have seen him yesterday*: p.104.

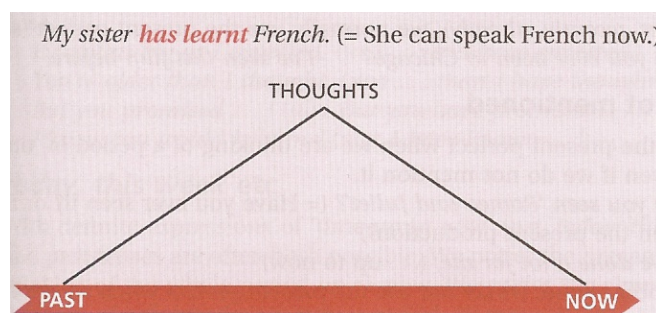


Figure C.1: Connecting past and present according to SWAN

usage – as opposed to present perfect usage – is characterized by “only thinking about the past” [SWAN 2005b, p.441], cf. figure C.2, taken from [ibid.]. SWAN

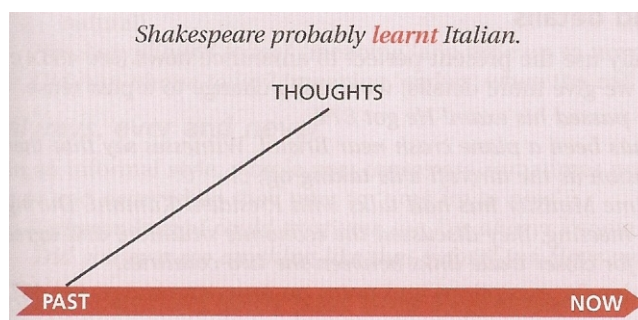


Figure C.2: Only thinking about the past according to SWAN

makes his readers aware of a couple of advanced points concerning causes and origin (paradigm: *Who gave you that?*) and expectation and reality (paradigm: *You're older than I thought*):

We normally use the present perfect when we are thinking about past events together with their present results. [...] However, we usually prefer a past tense when we identify the person, thing or circumstances responsible for a present situation (because we are thinking about the past cause, not the present result). Compare:

- *Look what John's given me!* (thinking about the gift)
- Who gave you that?* (thinking about the past action of giving)

- *Some fool has let the cat in.*

Who let the cat in?

[...] We use a past tense to refer to a belief that has just been shown to be true or false.

It's not as big as I expected. (NOT: ... *as I have expected.*)

[SWAN 2005b, p.442/443].

According to SWAN, certain present perfect uses are shifting to past tense in British English. Firstly, using the simple past for news is becoming common: "Recently, some British newspapers have started regularly using the simple past for smaller news announcements – probably to save space" [SWAN 2005b, p.444]. Secondly, "British English is changing under American influence, so [uses such as *Did you hear?*, *Uh, honey, I lost the keys* and *Did you eat already?*] are becoming common in Britain as well" [ibid.].

English Grammar by ANGELA DOWNING is a modern descriptive grammar which "is particularly suitable for those whose native language is not English" [DOWNING and LOCKE 2006, blurb]. The perfect (and the progressive) are considered to be aspects. "The Present Perfect is a subtle retrospective aspect which views a state or event as occurring at some indefinite time within a time-frame that leads up to speech time" [DOWNING and LOCKE 2006, p.362], clearly an extended now approach. The present perfect is introduced contrastively by comparing it to the past tense: extended now vs. past time-frame, indefinite/unspecified time vs. definite/specific time, non-deictic⁹ vs. deictic, psychologically connected to the moment of speaking ('current relevance') vs. psychologically disconnected from the moment of speaking, cf. [ibid., table]. Current relevance is seen "as a pragmatic implication deriving from the combination of time-frame, perfect aspect and verb type" [DOWNING and LOCKE 2006, p.364]. The notions of experience, continuity, recency, completion and result are seen as labels for the discourse interpretations of the functions of the present perfect.

⁹The present perfect "doesn't 'point' to a specific time but relates to a relevant time" [DOWNING and LOCKE 2006, p.362].

Target group: German learners of English

The following is taken from a recently published German school¹⁰ book for learners at beginner's level:

Mit dem *present perfect* drückst du aus, dass jemand etwas getan hat oder dass etwas geschehen ist. Dabei ist **nicht wichtig, wann** es geschehen ist. Deshalb wird auch kein genauer Zeitpunkt genannt. Wenn du aber den genauen Zeitpunkt angeben willst (*yesterday, last week, two years ago, in 2004*), musst du das *simple past* verwenden. Oft hat die Handlung Auswirkungen auf die Gegenwart oder die Zukunft: Im Beispiel links hat Grandma das Frühstück gemacht. Ergebnis: jetzt können alle frühstücken [SCHWARZ 2007b, p.139].

Introducing the present perfect this way is certainly appropriate for German learners of English at beginner's level. It can be seen as a 'preemptive strike' to avoid ungrammatical utterances of the type **I have done it yesterday* because the opposition present perfect vs. past tense is taught right from the start. Avoiding this notorious kind of German interference¹¹ might be facilitated by the fact that the simple past is introduced considerably earlier than the present perfect. It is introduced in volume A1 and its narrative function is stressed: "Mit dem *simple past* kannst Du über Vergangenes berichten – z.B. wenn du eine Geschichte erzählst" [SCHWARZ 2006, p.141]. The *English G21 A2* student's book contains a short 'grammar extra' section (p.141) where the present perfect vs. simple past contrast is made an explicit subject, but most of that section consists of an almost verbatim reiteration of the rules mentioned in the quote above.

Neue Grammatik der modernen englischen Sprache by GUSTAV SCHAD is a mid-twentieth-century grammar for senior classes at German secondary schools. The chapter about verbal grammar contains a section about *Aspekte und Aktionsarten*, which was innovative at the time, cf. p.67 for details.

¹⁰*English G21 A2* is the second book of a 6-volume series (A1–A6) to be used at *Gymnasium* from grade 5 to 10. Simple present, present progressive and simple past are introduced in the first volume (A1). The present perfect is introduced in the second volume (A2), after the introduction of the *going to*-future and the *will*-future. The simple past is introduced about three quarters of a year earlier than the present perfect.

¹¹For the corresponding notes in the *English G21 A2* teacher's book see p.188.

Das *Present Perfect* stellt eine Beziehung zwischen der Vergangenheit und der Gegenwart her. Es muß gebraucht werden,

1. wenn eine Handlung oder ein Zustand, der in der Vergangenheit begonnen hat und in der Gegenwart noch andauert, d.h. wenn sich das Geschehen selbst über den gesamten überblickten Zeitraum bis in die Gegenwart erstreckt. Das Deutsche gebraucht in diesem Fall oft das Präsens mit „schon“ oder „seit“ [...].
2. wenn der Vorgang zwar in der Vergangenheit abgeschlossen ist, sein Ergebnis aber für die Gegenwart noch gilt, d.h. das in der Gegenwart liegende Ergebnis mitberücksichtigt werden soll

[SCHAD 1960, p.136].

SCHAD's no. 1 represents clearly an extended now reading of the English present perfect, whereas no. 2 represents a current relevance reading. SCHAD refers explicitly to an article by HERBERT KOZIOL, "dem der Verfasser verpflichtet ist" [SCHAD 1960, p.136]. KOZIOL implicitly considers the current relevance reading as being reducible to the extended now reading: "Auch Sätze wie [...] *I have found the key* sind Mitteilungen, die das Geschehen als in einen von der Vergangenheit bis in die Gegenwart reichenden Zeitraum hineinfliegend darstellen" [KOZIOL 1958, p.499].¹²

Englische Grammatik heute by FRIEDRICH UNGERER is a systematic grammar for advanced learners, cf. [UNGERER et al. 1984, blurb]. Present perfect and past tense are dealt with together. Under *General*¹³ the author explains that

¹²KOZIOL himself summarizes the difference between the past tense and the present perfect as follows: "Das *Past Tense* wird gebraucht, wenn der Sprechende oder Schreibende eine Aussage über etwas macht, was er als ausschließlich einem bestimmten – ausdrücklich genannten oder auch nur gedachten – Zeitpunkt oder Zeitraum der Vergangenheit zugehörig und in keiner Weise mit der Gegenwart in Beziehung stehend betrachtet. Das *Present Perfect* wird dagegen gebraucht, wenn der Sprechende oder Schreibende eine Aussage über etwas macht, was er als in einen Zeitraum hineinfliegend betrachtet, der sich aus der Vergangenheit bis in die Gegenwart, also bis zu seinem Standpunkt heran, erstreckt, wobei er keine Zuordnung zu einem bestimmten vergangenen Zeitpunkt innerhalb des gesamten überblickten Zeitraumes vornimmt" [KOZIOL 1958, p.505].

¹³"Grundsätzliches" [UNGERER et al. 1984, p.145].

there are two perspectives¹⁴ upon past time and he provides an illustration, see figure C.3. UNGERER's key sentence concerning the English present perfect is

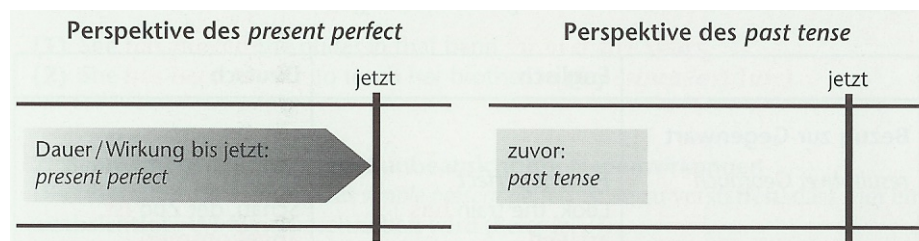


Figure C.3: Two perspectives on the past according to UNGERER

“Die Wahl des *present perfect* signalisiert, dass das an sich vergangene Ereignis **in Bezug auf die Gegenwart** gesehen wird” [UNGERER et al. 1984, p.145, his bold type]. He mentions the present perfect's resultative¹⁵ and continuative¹⁶ uses. A speaker who uses the past tense construes a past event as detached¹⁷ from the present. UNGERER presents a didacticised¹⁸ comparison between past time reference in English and German, see table C.2, taken from [ibid.]. He makes a point that, contrary to a wide-spread belief, the German *Perfekt* and *Imperfekt* are not freely interchangeable.¹⁹ His contrastive approach (English vs. German) and his differentiation between resultative and continuative use are mutually dependant. It is the resultative use that the English present perfect and

¹⁴“Sowohl *present perfect* als auch *past tense* beziehen sich auf etwas Vergangenes. Welche der beiden Tempusformen in Frage kommt, hängt von der gewählten Perspektive ab” [UNGERER et al. 1984, p.145].

¹⁵“Dabei steht häufig das Ergebnis im Vordergrund [...]; das Ergebnis kann auch ein Wissen oder eine Erfahrung sein [...]. Diese Verwendung wird als **resultativer Gebrauch** bezeichnet. Hier ist der Zeitpunkt, zu dem das Ereignis stattfand, unwichtig. Er wird nicht genannt” [ibid.].

¹⁶“Das *present perfect* kann [...] ausdrücken, dass ein Vorgang oder Zustand zwar in der Vergangenheit begonnen hat, aber bis zur Gegenwart reicht [...]. In diesem Fall liegt **kontinuativer Gebrauch** vor. Der Zeitraum bis zur Gegenwart kann auch ausdrücklich erwähnt werden” [ibid.].

¹⁷“Wählt man das *past tense*, so drückt man damit aus, dass das vergangene Ereignis als **getrennt von der Gegenwart** erscheint” [UNGERER et al. 1984, p.146].

¹⁸UNGERER's table C.2 is more accesible for learners than GIERING et al.'s overview on p.190 because rather technical terms such as inclusive and exclusive anteriority are avoided.

¹⁹“Auch das Deutsche verfügt über zwei Tempusformen der Vergangenheit, das Perfekt und das Imperfekt, die ebenfalls nicht in allen Fällen frei austauschbar sind. Es handelt sich also im Deutschen nicht nur um stilistische Unterschiede, wie oft behauptet wird” [UNGERER et al. 1984, p.146].

Table C.2: Comparison English – German according to UNGERER

	Englisch	Deutsch
Bezug zur Gegenwart <i>resultativer Gebrauch</i>	<i>Present perfect</i> Look, the train <i>has arrived.</i>	Perfekt Schau, der Zug <i>ist angekommen.</i>
<i>kontinuativer Gebrauch</i>	<i>Present perfect</i> We've <i>been working</i> like mad for the last two months.	Präsens Schon die ganzen letzten zwei Monate <i>arbeiten</i> wir wie verrückt. Eventuell: Perfekt Schon die ganzen letzten zwei Monate <i>haben</i> wir wie verrückt <i>gearbeitet.</i>
Getrennt von der Gegenwart	<i>Past tense</i> I <i>met</i> him yesterday.	Perfekt Ich <i>habe</i> ihn gestern <i>getroffen.</i> Imperfekt Ich <i>traf</i> ihn gestern.

the German *Perfekt* share, whereas the notions of continuity and detachment are realised differently in the two languages at hand. From the perspective of German learners of English this state of affairs can lead to non-prototypical utterances such as **I am here since yesterday* and **I have done it yesterday*. The author adds three "Details zum *present perfect*" [UNGERER et al. 1984, p.147]:

1. The simple present perfect can express both the resultative and the continuative meaning, whereas the present perfect progressive can only be used for the continuative function.²⁰
2. The resultative meaning of the simple present perfect is associated with intentional effects, whereas unintentional effects²¹ are expressed by the

²⁰ "Das *present perfect progressive* kann [...] nur in kontinuierlicher Funktion verwendet werden, weil die *progressive form* immer einen Ablauf signalisiert" [UNGERER et al. 1984, p.147].

²¹ "Der Vorgang an sich ist zwar schon abgeschlossen, aber das Geschehen ist noch ganz und gar, d.h. mit all seinen angenehmen und unangenehmen Aspekten, gegenwärtig" [UNGERER et al. 1984, p.147].

present perfect progressive. Compare:

- a. *I've written the letter to David. You can post it for me now.*
- b. *I've been working in the garden all day, so I think I deserve this little break.*

3. In interrogative and in negative sentences the distinction between resultative and continuative meaning is often blurred.²²

UNGERER's distinction between resultative and continuative meanings of the present perfect combines current relevance and extended now elements.

Avoiding Mistakes by HANS BRINKMANN and OLIVER GRAY is a practice book for German intermediate learners.²³ The present perfect is dealt with together with the past tense. After presenting the forms of both (including the progressive forms) and before analysing their use the authors issue a general warning: "Der deutsche Ausdruck (*war – bin gewesen*) gibt keinen Anhaltspunkt für den Gebrauch der Zeiten im Englischen" [BRINKMANN and GRAY 1981, p.132]. BRINKMANN and GRAY sum up the difference between past tense and present perfect as follows:

Das PAST TENSE gibt an, daß ein Vorgang in der Vergangenheit völlig abgeschlossen wurde; es steht entweder in Verbindung mit einer Zeitbestimmung der Vergangenheit [...] oder der Sinnzusammenhang weist eindeutig auf die Vergangenheit hin.

Das PRESENT PERFECT gibt an, daß ein Vorgang, der in der Vergangenheit begann, bis an die Gegenwart heranreicht bzw. in der Gegenwart noch andauert; es steht

1. wenn der Zeitraum, in dem eine Handlung sich ereignet, noch andauert [...];

²² "Man spricht deshalb davon, dass hier eine „unbestimmte“ Vergangenheit zum Ausdruck kommt" [UNGERER et al. 1984, p.147]. The author's examples are: *Have you watched that programme I recorded for you?* and *I haven't seen such a sad film for a long time.*

²³ Grammar rules are written in German. The instructions in the exercises are written in English.

2. wenn bei einer zwar der Vergangenheit angehörenden Handlung nicht der Zeitpunkt des Vorgangs, sondern dessen Folge oder Ergebnis für die Gegenwart betont werden soll;
3. wenn eine Handlung gerade eben (just) vollendet ist;
4. wenn ein Vorgang in der Gegenwart noch andauert (*deutsch Gegenwart + schon*) [...]. Meist steht hier die Verlaufsform

[ibid.].

The authors' rules refer to the standard readings of the present perfect: extended now, current relevance, (recent) indefinite past and continuation.

C.1.2 EFL teachers' grammars and textbooks

Teacher's (and student's) L1 not specified

A Teacher's Grammar by R. A. CLOSE "introduces the fundamental concepts²⁴ of English grammar to all teachers of English as a foreign or second language" [CLOSE 1992, blurb]. The author speaks of aspects of activity and of aspects of time.²⁵ His aspects of activity refer to two oppositions: *single act vs. series of acts* and *completed vs. uncompleted*. Figure C.4, taken from [CLOSE 1992, p.59], illustrates CLOSE's system.²⁶ CLOSE's four aspects of activity (IO, IU, SO and SU) "can be combined with nine aspects of time" [CLOSE 1992, p.66], which correspond roughly to REICHENBACH's nine fundamental forms.²⁷ The starting point of CLOSE's graphical representations of the

²⁴ "While most grammar books list a mass of detail, Close argues that the grammar of English is a matter of relatively few, but very powerful, distinctions" [CLOSE 1992, blurb].

²⁵ "In what are generally called the tenses, we are concerned with aspects of activity and of time. Time itself might be regarded as an aspect of activity, insofar as it is only in terms of events that time can be measured" [CLOSE 1992, p.57].

²⁶ A = general concept, I = single act, S = series, O = completed, U = uncompleted. The author establishes a connection between verbal grammar and the grammar of nouns: "We can compare the general idea of the act [A] with the general concept referred to by a noun [...] where the zero article is required" [CLOSE 1992, p.57]. "The difference between [O] and [U] is [...] comparable to that between *all* and *some*" [ibid.].

²⁷ CLOSE's nine aspects of time: 1. Unlimited, 2. Present, 3. Pre-present, 4. Past, 5. Pre-past, 6. Post-present, 7. Future, 8. Pre-future, 9. Future seen from the past. Seven out of nine of these forms correspond to REICHENBACH's system. REICHENBACH's posterior

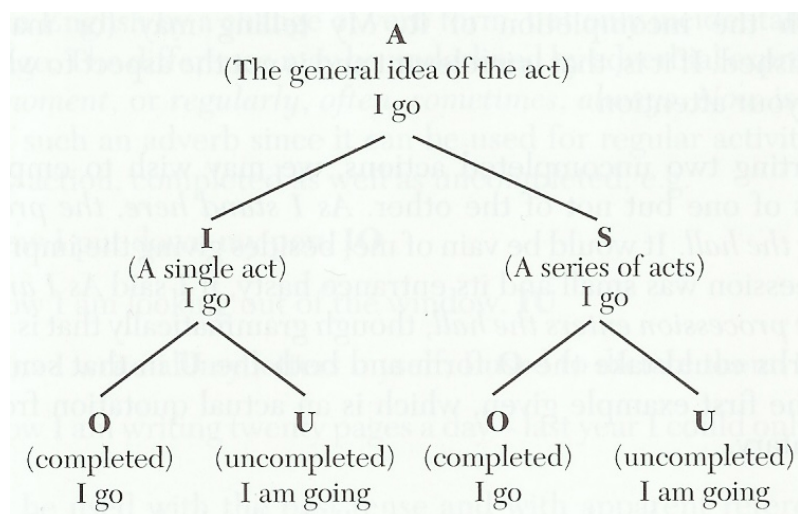


Figure C.4: Aspects of activity according to CLOSE

'tenses' is a scoreboard-like sequence of numbers with two arrows, see figure C.5, taken from [CLOSE 1992, p.67]. The row of numbers represents "the natural

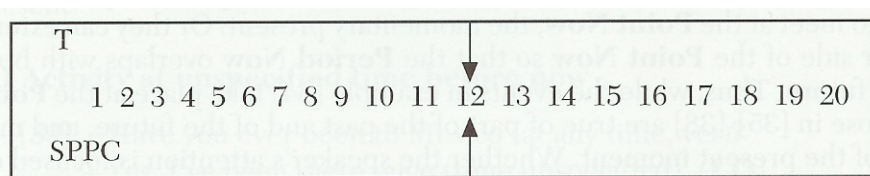


Figure C.5: CLOSE's scoreboard

order of events" [CLOSE 1992, p.66]. The arrow at the top represents time (T). The arrow at the bottom represents "the speaker's point of primary concern (SPPC)" [ibid.]. T's moving forward represents the flow of time. It "remains pointing vertically downwards" [ibid.] and marks the present moment. Contrary to T, the vector SPPC "can swing like the needle of an electrical instrument, so as to point backwards or forwards, at any angle, from whatever position it occupies" [ibid.]. The direction of SPPC represents "the direction of the speaker's

past and posterior future are not in CLOSE's system; CLOSE's No.1 and No.9 are not in REICHENBACH's system. No.1 can be seen as a variant of REICHENBACH's present; No.9 can be associated with REICHENBACH's posterior past.

vision" [ibid.], e.g. retrospection.

CLOSE's analysis of the aspect of pre-present time deals with the present perfect. T and SPPC, which points backwards, are at the same point in time, see figure C.6, taken from [CLOSE 1992, p.68]. This means that

the speaker is concerned with a period of time **before and ending at point now**. The speaker is not concerned with a **specified** time before now; if that were the case, SPPC would be behind T, not level with it. [...] This aspect of time is called perfective [...]. We can

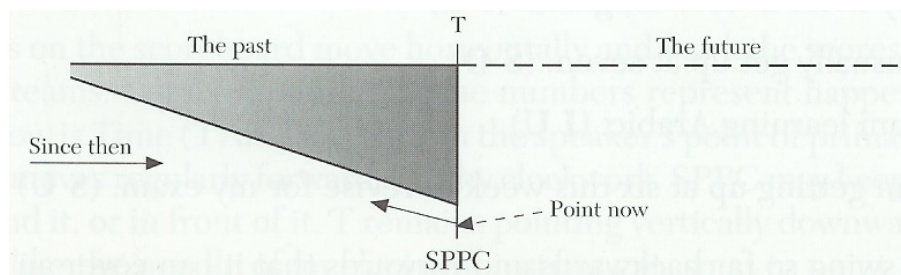


Figure C.6: The pre-present according to CLOSE

move the SPPC arrow in different ways. Either it can point vaguely towards some time within the pre-present, in which case the speaker is concerned with activity occurring at some unspecified time before now. Or it can move progressively from a backward-pointing position to a completely vertical one, in which case the speaker is concerned with activity continuing throughout the pre-present period till now. In either case, **it is the pre-present period that is the speaker's basic interest**; and it is this that determines the use of the Present Perfect [CLOSE 1992, p.68/69].

Clearly, CLOSE advocates an extended now reading of the present perfect. His presenting the pre-present as a two-dimensional wedge symbolizes the extension of the present into the past. The darker shading of the more recent parts stands for the "natural tendency to give more attention to that part of the period which is nearest the present" [CLOSE 1992, p.68]. The author differentiates between two "different sub-categories of the basic pre-present: **(a) Activity at unspecified**

time before now [...] &] **(b) Activity continuing till now**" [CLOSE 1992, p.69]. Both sub-categories combine freely with the four aspects of time (IO, IU, SO and SU), examples taken from [CLOSE 1992, p.69/70]:

(a) Activity at unspecified time before now

IO *I've been there once.*

IU *I've been working in the garden.*

SO *I've seen him several times.*

SU *They've been building blocks of flats.*

(b) Activity continuing till now

IO *I've lived here since 1984.*

IU *I've been learning Arabic for six months.*

SO *I've always got up at seven (and still do).*

SU *I've been playing tennis every day this week so far.*

It should be noted that CLOSE has added temporal adverbials to most of the eight sentences above to make them fit his system exactly.

Grammar for English Language Teachers by MARTIN PARROTT "encourages teachers to appreciate the range of factors which affect grammatical choices, but also introduces the 'rules of thumb' presented to learners in course materials" [PARROTT 2000, blurb]. In the introduction to the part about verbal grammar the author issues a general warning concerning the English present perfect:

The present perfect tense causes problems to many learners because we use it both to refer to events that translate into present tenses in other languages (e.g. *I've been here for three days*) as well as to events that translate into past tenses (e.g. *I've been here before*).

[PARROTT 2000, p.106]

PARROTT deals with these two comparatively differentiated ("in other languages") uses of the English present perfect in different chapters. He briefly

comments on the use of the technical terms *tense* (referring to verb forms²⁸) and *aspect* (referring to PERF and PROG²⁹). His 'extended now reading' of the present perfect (cf. "*I've been here for three days*" in the quote above) is dealt with in the chapter "The present, including uses of the present perfect", where the discussion of the present perfect continuous precedes the discussion of the present perfect simple. The semantic common denominator in this chapter is the "measure[ment of] the duration so far of a present action" [PARROTT 2000, p.159]. PARROTT's summary of the "differences between how we use the present perfect continuous and simple to express present meaning" [PARROTT 2000, p.161] is shown in table C.3, taken from [PARROTT 2000, p.162]. His 'indefinite past reading' of the present perfect (cf. "*I've been here*

Table C.3: The present perfect according to PARROTT 1

	Present perfect	
	contin.	simple
Expresses duration until now.	✓	✓
Frequently used with <i>for...</i> , <i>since...</i> or <i>How long?</i>	✓	✓
Emphasises that something is short-lived.	✓	
Emphasises that something is repeated.	✓	
Suggests a limited number of occasions.		✓
Not used with state verbs	(✓)	
After 'the first (second etc.) time'		✓

before" in the quote above) is dealt with in the chapter "The past: past simple, present perfect simple and present perfect continuous", where the discussion of the present perfect simple (after a discussion of the simple past) precedes the discussion of the present perfect continuous. PARROTT discusses carefully the danger of oversimplification concerning the present perfect:

²⁸ "The term 'tense' is sometimes used to refer only to present simple (e.g. *I eat*) and past simple (e.g. *I ate*). This book follows most modern coursebooks in using the term more generally to refer to the large variety of forms we use to refer to different aspects of time" [PARROTT 2000, p.106]. Actually, this "modern" usage is in accordance with a Latinate grammatical tradition.

²⁹ "The term 'aspect' is sometimes used in a technical sense to refer to: events viewed retrospectively [... and] events viewed as being in progress" [PARROTT 2000, p.107].

Course materials often explain why we use the present perfect with one or more rules of thumb. However, we need to be wary of simplifications such as these:

We use the present perfect simple:

- for a more recent past than that expressed by the past simple.
This is simply wrong (e.g. *I've lived through two world wars* is clearly not 'more recent' than *I saw him a minute ago*).
- for events which have present relevance or a connection with now.
This is very vague and we can argue that everything we express has present relevance regardless of the tense we choose (why else would we be saying or writing it?).
- with adverbs such as *just, already, yet, ever* and *before*.
This is misleading because we use these adverbs with a variety of tenses.
- in contexts such as news reports or personal biographies.
This is unhelpful since, depending on whether a finished period of time is or isn't mentioned or understood, other tenses are also used in these contexts.
- to refer to completed events, states or actions 'when no past time is specified'.
This rule of thumb may help some learners to make appropriate choices, but still ignores the key factor (unfinished time period).

We occasionally choose to use the present perfect simple with expressions of finished time (e.g. *I've seen him yesterday*) because, despite the adverb *yesterday*, we *feel* that the event is within a present time period. However, it would be confusing to draw learners' attention to examples like this [PARROTT 2000, p.187, his italics].

PARROTT's remark that utterances such as *I've seen him yesterday* are not necessarily ill-formed shows that his approach is descriptive and not prescriptive.

PARROTT's stressing the importance of "a period of time which is UNfinished" [PARROTT 2000, p.186/187], cf. also the last of his comments on the rules of thumb above ("key factor"), shows that the present perfect's uses he deals with in the chapter "The past" have also an extended now reading. It can be concluded that his differentiation of two basic present perfect meanings – albeit implemented in a didactically skilful way by putting it into two separate chapters of his book – is not a strict one. Actually, the differentiation of the two meanings depends on the obviousness of the extended now. It can be made explicit by using the progressive and/or corresponding adverbials, e.g. *we've been cycling for three hours*, or it is just implied, e.g. *I've never been outside Europe*³⁰. The implicit extended now encompasses the explicit one, which gave rise to seeing *extended now* as the core meaning of the present perfect, cf. MCCOARD's summary on p.109 for details. As can be seen from his allocating present perfect grammar to two separate chapters, PARROTT does not adopt this unifying approach – at least not explicitly. His notion of finished events within an unfinished period of time could be seen as an implied extended now approach. His summary of key differences between the present perfect simple and continuous referring to past time, i.e. taken from his 'past tense' chapter, is shown in table C.4³¹, taken from [PARROTT 2000, p.190]. PARROTT establishes the opposition *events in a finished period of time vs. events in an unfinished period of time* when pointing out the "key differences between [the past simple and the present perfect simple] (and their similarity)" [PARROTT 2000, p.188], which are summarized in table C.5, taken from [PARROTT 2000, p.189]. His remarks about the choice of tense when referring to living/dead people can be deduced from the general dichotomy unfinished vs. finished period of time. He also stresses the narrative function of

³⁰This example is taken from [PARROTT 2000, p.187], whose comment on this example is: "The period of the person's life is an implied unfinished period of time" [ibid.].

³¹The first question mark in table C.4 refers to the fact that utterances such as *I've read 'Crime and Punishment'* are – if taken out of context – non-committal about how recently the event finished, cf. [PARROTT 2000, p.190]. The second question mark refers to utterances such as "*Your wife has rung*. (She may have rung just once, and only briefly.)" [ibid.].

Table C.4: The present perfect according to PARROTT 2

	Present perfect	
	simple	contin.
Finished events	✓	✓
Events located in an unfinished period of time	✓	
Events which may be part of general biographical, historical or circumstantial detail	✓	
Events which have only very recently finished	?	✓
Events which took place over an extended period of time	?	✓

Table C.5: Past simple and present perfect simple according to PARROTT

	Past simple	Present perfect simple
Finished events	✓	✓
Events in a finished period of time	✓	
Events in an unfinished period of time		✓
General biographical details about a living person		✓
General biographical details about a dead person	✓	
Generally used in telling stories	✓	

the past tense, which normally is not fulfilled by the present perfect.³²

The Grammar Book by MARIANNE CELCE-MURCIA and DIANE LARSEN-FREEMAN is a comprehensive teacher's course (English as a foreign language), heralded as "the definitive source for grammar reference and teaching guidance" [CELCE-MURCIA and LARSEN-FREEMAN 1999, blurb]. Before the authors start a detailed discussion of "the meaning in the English tense-aspect system" [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.111] they present an overview of the various markers, i.e. "a form-oriented account of tense and aspect

³²But cf. the Australian Present Perfect (see p.104), which can indicate narrative progression.

in English” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.109]. The interplay of PRET, MOD, PERF, PROG and PASS (see appendix A.1) is summarized in the following phrase structure rule³³:

$$\text{AUX} \rightarrow \left\{ \begin{array}{l} \left\{ \begin{array}{l} \text{T} \\ \text{M} \end{array} \right\} \text{ (pm) (perf) (prog) (pass)} \\ \text{-imper} \end{array} \right\}$$

AUX = auxiliary³⁴, T = tense³⁵, M = modal, -imper = imperative mood, pm = phrasal modal, perf = perfect³⁶, prog = progressive³⁷, pass = passive³⁸.

CELCE-MURCIA and LARSEN-FREEMAN present a ‘Varronian’ 3 × 4 chart (see table C.6, taken from [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.110], adapted) showing the active voice of the three ‘tenses’³⁹ and four aspects⁴⁰. The

Table C.6: Verb forms according to CELCE-MURCIA and LARSEN-FREEMAN

	Simple	Perfect	Progressive	Perfect Progressive
	∅	have + -en	be + -en	have + -en be + -ing
Present	<i>write/writes</i>	<i>has/have written</i>	<i>am/are/is writing</i>	<i>has/have been writing</i>
Past	<i>wrote</i>	<i>had written</i>	<i>was/were writing</i>	<i>had been writing</i>
Future	<i>will write</i>	<i>will have written</i>	<i>will be writing</i>	<i>will have been writing</i>

³³This PSR is taken from [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.344]. The version depicted in the chapter about the tense and aspect system does not include “pass”.

³⁴Here “AUX” includes the inflectional past tense marker *-ed*. It is considered “as everything in the predicate but the verb phrase” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.96].

³⁵PSR: “T → $\left\{ \begin{array}{l} \text{-past} \\ \text{-pres} \end{array} \right\}$ ” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.97].

³⁶PSR: “perf → *have...-en*” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.97].

³⁷PSR: “prog → *be...-ing*” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.97].

³⁸PSR: “pass → *be...-en*” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.344].

³⁹“We do this in the following chart by listing the two tenses, present and past, along the vertical axis. We include the future on this list of tenses as well, for although there is no verb inflection for future time, any description of the English tense-aspect system needs to account for what form-meaning combinations *do* exist that relate to future time” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.110, their italics].

⁴⁰“The four aspects—simple (sometimes called zero aspect), perfect, progressive and their combination, perfect progressive—are arrayed along the horizontal axis” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.110].

authors describe the essence of the English perfect aspect as follows: "The core meaning of the perfect is "prior," and it is used in relation to some other point in time" [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.115]. This is clearly an approach in the spirit of REICHENBACH. The authors point out the perfect's retrospective use and

examine in detail the combination of the perfect with the three tenses to see how this core meaning obtains.

Present Perfect

- a. A situation that began at a prior point in time and continues into the present:

I have been a teacher since 1967.

- b. An action occurring or not occurring at an unspecified prior time that has current relevance:

I have already seen that movie.

- c. A very recently completed action (often with *just*):

Mort has just finished his homework.

- d. An action that occurred over a prior time period and that is completed at the moment of speaking:

The value of Johnson's house has doubled in the last four years.

- e. With verbs in subordinate clauses of time or condition:

She won't be satisfied until she has finished another chapter.

If you have done your homework, you can watch TV.

Past Perfect

- a. An action completed in the past prior to some other past event or time:

He had already left before I could offer him a ride.

She had worked at the post office before 1962.

- b. Imaginative conditional in the subordinate clause (referring to past time):

If Sally had studied harder, she would have passed the exam.

Future Perfect

- a. A future action that will be completed prior to a specific future time:

I will have finished all this word processing by 5 p.m.

- b. A state or accomplishment that will be completed in the future prior to some other future time or event:

At the end of the summer the Blakes will have been married for 10 years.

Thus, you can see that when it interacts with each of the three tenses, perfect aspect allows us a retrospective point of view from a particular point in time: present, past, future

[CELCE-MURCIA and LARSEN-FREEMAN 1999, p.116].

The authors see the perfect progressive aspect as a combination of “the sense of “prior” of the perfect with the meaning of “incompleteness” inherent in the progressive aspect” [CELCE-MURCIA and LARSEN-FREEMAN 1999, p.118]. They “examine how these two core meanings work in tandem” [ibid.] for the present tense as follows:

Present Perfect Progressive

- a. A situation or habit that began in the past (recent or distant) and that continues up to the present (and possibly into the future):

Burt has been going out with Alice.

- b. An action in progress that is not yet completed:

I have been reading that book.

- c. A state that changes over time:

The students have been getting better and better.

- d. An evaluative comment on something observed over time triggered by current evidence:

You've been drinking again!

[ibid.]

The authors comment on how the simple perfect interfaces with lexical aspect (*aktionsart*) as follows:

Activity verbs are not as commonly used with perfective aspect as some of the other categories of verbs. When these are used with perfect aspect, they describe a prior experience or activity:

I have run before.

Accomplishment and achievement verbs go easily with perfect aspect and signal prior events that are completed:

John Updike has written many novels.

The true meaning of that holiday has been lost.

Stative verbs with perfect aspect signal a state that may or may not have ended at the time of speech:

I have owned a Rolls Royce $\left\{ \begin{array}{l} \textit{before.} \\ \textit{since 1987.} \end{array} \right.$

[CELCE-MURCIA and LARSEN-FREEMAN 1999, p.120].

The authors comment on how the perfect progressive interfaces with lexical aspect (*aktionsart*) as follows:

With activity verbs, perfect progressive aspect implies that the action began in the past and has duration at the present time:

Mike has been running for two hours.

or is iterative and/or habitual:

Mike has been running for years.

With accomplishment verbs, the perfect progressive indicates that the action has been going on for some time and is not yet complete:

They have been repairing that bridge for months.

With achievement verbs, perfect progressive aspect is a bit strange if only one action is intended, due to the fact that achievement verbs are punctual:

?Mike has been winning that race for hours.

but not if the achievement is iterative:

Mike has been winning that race for years.

with stative verbs, perfect progressive aspect often appears to be more compatible than progressive aspect alone:

?I am wanting to see you.

I have been wanting to see you.

Here, the perfect adds the notion of inception prior to present time and thus signals that the state has history, or duration

[CELCE-MURCIA and LARSEN-FREEMAN 1999, p.122].

The authors' approach to the English perfect represents an in-depth analysis that differentiates clearly between tense, aspect and aktionsart. They speak of four aspects, which facilitates the didacticised representation of verb forms (see table C.6 on p.183). On the other hand, speaking of four aspects blurs the fact that there are two oppositions whose combination leads to the overall number of four different sets of forms. The authors are aware of this and in their discussion of the meaning of the perfect progressive they stress the compositional nature of this doubly marked verb form.

Target group: German English teachers

The following quote is taken from the *English G21 A2* teacher's book, whose present perfect student's book section was discussed above (p.170). It is placed in a box with the heading "Language awareness":

Im Deutschen wird zur Beschreibung von vergangenen Tätigkeiten umgangssprachlich häufig das Perfekt anstelle des Präteritums verwendet. Gegebenenfalls sollte dies noch einmal mit [den] S[chülern] thematisiert werden. Den S[chülern] sollte bewusst gemacht werden, dass im Englischen *present perfect* und *past tense* für unterschiedliche Handlungen verwendet und streng getrennt werden. Das Lernen von Signalwörtern hilft bei der richtigen Verwendung der Zeiten [SCHWARZ 2007a, p.152].

Contrary to the student's book, the teacher's book points out explicitly the marked difference between the use of the English *present perfect* and the German (*Präsens-*)*Perfekt*: in German the (present) perfect and the preterite are often interchangeable. Combining the German present perfect and temporal adverbials that are preterite key words in English is perfectly grammatical. The *English G21 A2* teacher's book recommends that this marked difference between English and German be taught by focussing on those temporal adverbials that govern the choice between present perfect and past tense – a sound advice for teaching the English present perfect to Germans at beginner's level.

English Grammar by DIETER GIERING et al. "is a textbook both for the training of teachers in universities and colleges and for the use of all German learners of the English language" [GIERING et al. 1987, blurb]. The authors see [PERF: +] as one variant⁴¹ of the marked member of the category of *correlation*⁴². Forms marked [PERF: +] are called "Ant[erriority]":

The **function** of Ant is to signal anteriority of the state-of-affairs to be described to the reference time, and also the speaker's retrospection [...]. The speaker's viewing the state-of-affairs in retrospective

⁴¹The other variant is *(be) going to*, which expresses "Post[erriority]".

⁴²This category, which is different from both tense and aspect, is discussed as from p.51.

is due to the fact that he proceeds from a situation/state-of-affairs which is valid at the reference time. It is thought to be the consequence of the state-of-affairs described. Keeping these consequences in mind the speaker directs his view backwards to the state-of-affairs itself thus expressing its “current relevance”. The consequences the speaker has in mind when using Ant are mainly either the results of or experiences arising out of the previous state-of-affairs. In most cases they are not explicitly mentioned, but rather merely implied [GIERING et al. 1987, p.159].

In the context of a comparison of English Ant forms and German Perfekt forms GIERING et al. introduce the concept of *inclusive* Ant vs. *exclusive* Ant:

With exclusive anteriority the state-of-affairs itself is not in direct contact with the reference time.

1. [...] He *has* just *returned* from work⁴³

With inclusive anteriority the state-of-affairs itself continues up to the reference time and even beyond.

2. [...] You *'ve worked* here for ten years and you ask that
3. [...] He *'s been waiting* a long time for a carpenter⁴⁴

[GIERING et al. 1987, p.160]

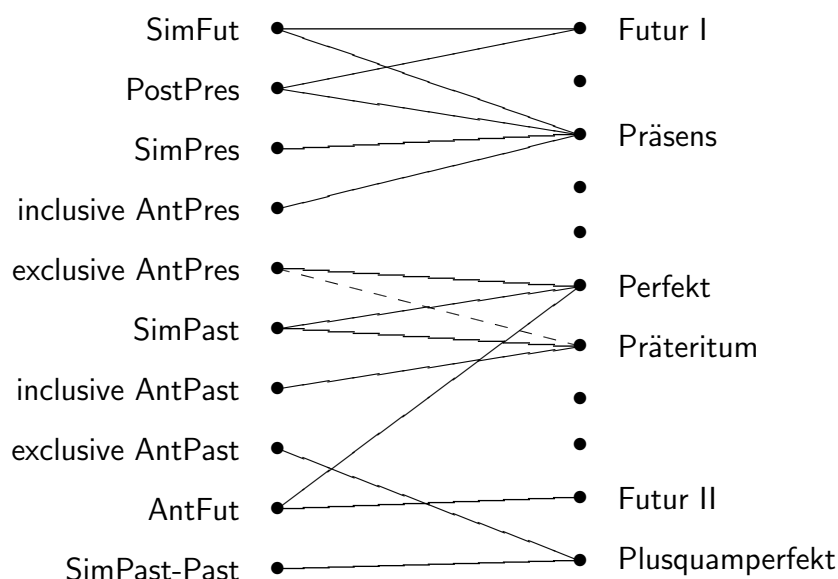
English AntPres forms are translated by different temporal forms in German. An exclusive AntPres utterance such as *what have you done?* corresponds to a (Präsens-)Perfekt form in German (*was hast du gemacht?*). An inclusive AntPres utterance such as *how long have you been here?* corresponds to a Präsens form in German (*wie lange bist du (schon) hier?*). Not differentiating between exclusive and inclusive anteriority leads to ungrammatical⁴⁵ utterances such as **how long are you here?* The authors point out that “in German the idea of the continuation

⁴³ “= ist gekommen” [GIERING et al. 1987, p.164].

⁴⁴ “= wartet schon” [GIERING et al. 1987, p.164].

⁴⁵Of course the utterance *how long are you here?* is only ungrammatical if it is supposed to mean *how long have you been here?* – there are contexts where it is perfectly grammatical.

of the state-of-affairs up to or beyond the reference time is predominant in the mind of the speaker” [GIERING et al. 1987, p.164]. GIERING et al. summarize and illustrate⁴⁶ the “functional correspondences of the English tense-correlation and the German temporal forms” [GIERING et al. 1987, p.165] as follows:



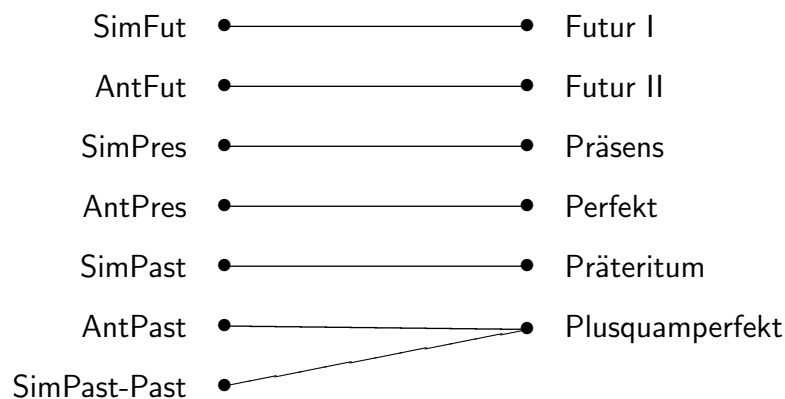
The dashline refers to the fact that exclusive AntPres utterances such as *have you (ever) been to Alaska?* can be translated by Präteritum forms (*waren Sie schon einmal in Alaska?*)⁴⁷. The line that crosses the dashline accounts for the other notorious error borne out of German interference (**we have done it yesterday* instead of *we did it yesterday*). The value of the bipartite graph above can be judged only if one takes into account that the “German *formal* counterparts of the English tense-correlation forms” [GIERING et al. 1987, p.163, italics AE] lead to the following bipartite graph⁴⁸, which creates the impression of a specious similarity, that is, if one erroneously projects the functions of the

⁴⁶The illustration is taken from [GIERING et al. 1987, p.165]. It has been modified. The five solitary nodes on the right hand side have been added for layout reasons only.

⁴⁷From the viewpoint of an extended now reading of the present perfect one might argue that an utterance such as *have you (ever) been to Alaska?* refers to a time period that is connected to the present. Still, Giering et al.’s definition of *inclusive* refers explicitly to the state-of-affairs – here the stay in Alaska – which does not continue up to the reference time (= moment of speaking for Pres).

⁴⁸GIERING et al. do not offer such a graph. They merely list the correspondences between the English and the German forms, cf. [GIERING et al. 1987, p.163].

German temporal forms onto their English formal counterparts:



C.2 Linguistic dictionaries, grammars and textbooks

The second section of this appendix deals with nine books which represent general linguistics course material or reference books. The modifier “general” refers to the fact that these books are about English grammar in general, i.e. they do not focus exclusively on the area of tense and aspect but they include large sections about verbal grammar. The two books which adopt a Cognitive Linguistics approach (EVANS/GREEN and RADDEN/DIRVEN) contain a considerable amount of valuable material on the perfect. The same applies, though in varying degrees, to the “big three” (QUIRK et al., BIBER et al. and HUDDLESTON/PULLUM), which stand out as reference grammars of English due to their sheer comprehensiveness (between 1,000 and 2,000 pages each).⁴⁹

C.2.1 Handbooks and dictionaries

Trask

A Dictionary of Grammatical Terms in Linguistics by R. L. TRASK “covers a huge number of descriptive terms in syntax and morphology [...] as well as

⁴⁹The fourth comprehensive grammar that is listed and inspected in this appendix (CARTER/McCARTHY) stays under 1,000 pages. It is also a guide to usage, which means that it would also fit into the first section of this appendix, where EFL material is discussed.

the most important theoretical concepts from the most influential contemporary approaches to the theory of grammar" [TRASK 1993, blurb]. The "**present perfect** [is characterised as a] verb form simultaneously marked for present tense and perfect aspect, such as that in *I have eaten dinner*" [TRASK 1993, p.216]. TRASK points out that "it is important not to confuse⁵⁰ the 'perfect' aspect with the perfective aspect" [TRASK 1993, p.204]. His dictionary entry "perfect" differentiates two meanings:

1. A distinctive **aspect** most typically expressing a state resulting from an earlier event, as in *Lisa has gone out* (i.e., she is not here now). In English and other languages, the same form is used also to express other related but distinct aspectual notions, such as the **experiential** (e.g., *Lisa has worked in Paris*), present relevance of a recent event, the **hot news perfect** (e.g., *The President has been shot*) and the 'perfect of persistent situation' (e.g., *Lisa has been working for an hour*). [...] The perfect is somewhat anomalous among aspectual forms, and its precise characterization is a matter of some controversy. [...]
2. In certain European languages, such as French or German, a conventional label for a verb form which is constructed in the same way as the English perfect, and which historically may have had the same function, but which now functions chiefly as a past tense [ibid.].

TRASK points out that DAHL differentiates between 'perfect' and resultative aspect and summarizes DAHL's view in the dictionary entry "**resultative**" as follows:

An aspectual form expressing a state resulting from an earlier event.

This term is often regarded as a synonym for **perfect**, but Dahl⁵¹

⁵⁰*Perfect* and *perfective* "are entirely distinct, in spite of the unfortunate similarity in their names, which results from the accident that Latin happened to use the same form in both functions" [TRASK 1993, p.204]. Cf. the discussion of this on p.207. TRASK defines **perfective** as a "superordinate aspectual category involving a lack of explicit reference to the internal temporal consistency of a situation, and contrasting principally with the **imperfective**. In English, perfective aspect is chiefly expressed by the simple past-tense form" [ibid.].

⁵¹Cf. [DAHL 1985, p.134], who points out that the distinction between perfect and resultative goes back to NEDJALKOV et al., see the following footnote.

makes a case for distinguishing the two. He points out that English *He is gone* and *He has gone*, both expressing a present state resulting from an earlier action, differ in that only the first can accept the adverb *still*: *He is still gone* vs. **He has still gone*. Dahl proposes to restrict the term 'resultative' to the first form, which seems to focus more strongly on the present state, and to use 'perfect' exclusively for the second, in which the earlier action appears to be more prominent. (The first construction is marginal in English, but in Swedish⁵² both constructions are fully productive.) [TRASK 1993, p.240].

There is an entry about *absolute-relative tense* in TRASK's dictionary, where "the past anterior (*I have already seen him*)" [TRASK 1993, p.2] is mentioned but the author does not establish a connection between the notion of absolute-relative tense and the present perfect. This is consistent with his overall treatment of the perfect as an aspect and in accordance with COMRIE⁵³, who denies that the perfect is an absolute-relative tense, cf. p.56.

Evans/Green

The 864-page book *Cognitive Linguistics: An introduction* by VYVYAN EVANS and MELANIE GREEN represents an "authoritative general introduction"⁵⁴ to

⁵²Actually Dahl's examples are Swedish. He refers to Nedjalkov et al. [Rezultativnye konstrukcii, 1983] by writing: "They point out that resultatives differ from perfects in the ways in which they can be combined with temporal qualifiers. I shall illustrate that by an example from Swedish. [...] *Han är bortrest* '(lit.) He is away-gone' [...] *Han har rest bort* 'He has gone away' [...] *Han är fortfarande bortrest* 'He is still gone-away' [...] ??*Han har fortfarande rest bort* 'He has still gone away' (If [the utterance labelled "??"] can be used at all, it would according to my intuitions mean something like 'I am tired of your asking for X; I am telling you that he has not returned yet.')" [DAHL 1985, p.134]. Interestingly, the distinction and DAHL's intuition also apply to *be*-perfects: German *er ist immer noch gegangen* 'he is/*has still gone' is as dubious as *er hat immer noch den Raum verlassen* 'he has still left the room'. If one accepts NEDJALCOV et al.'s distinction between *resultative* and *perfect*, then one can draw the following conclusion: German *er ist gegangen* is a (*be*-)perfect, whereas (Modern) English *he is gone* (= German *er ist weg* 'he is away') is no perfect at all.

⁵³TRASK refers to [COMRIE 1985].

⁵⁴This book can also be seen as a handbook because "this work is sufficiently comprehensive and detailed to serve as a reference work for scholars from linguistics and neighbouring disciplines" [EVANS and GREEN 2006, blurb]. That is the reason why it is listed under 'Handbooks and dictionaries' here.

cognitive linguistics” [EVANS and GREEN 2006, blurb]. The authors differentiate clearly between *perfect aspect*, which refers to “the perfect construction [*have* [PERF₄ [V]]]⁵⁵ (e.g. *have fixed*)” [EVANS and GREEN 2006, p.621], and *perfective processes*, which are dealt with in the spirit of RONALD LANGACKER⁵⁶. EVANS and GREEN explain that

PERF₄ represents the ‘past’ or perfect participial morphology [. . .], which gives rise to an ATEMPORAL RELATION. The perfect auxiliary *have* imposes its PROCESS profile upon this construction, giving rise to the perfect construction [. . .], which can then function as clausal head⁵⁷. As we have seen⁵⁸, the perfect construction encodes an event as ‘completed’ with respect to a given reference point in time [EVANS and GREEN 2006, p.621/622].

The semantic properties of the perfect auxiliary *have* are compared with those of the content verb (lexical *have*). Utterances such as *we have a lot of windy weather*⁵⁹ represent an intermediate stage within *have*’s development from a content verb whose prototypical meaning is POSSESSION to its role as the perfect auxiliary. The subject *we* represents a spatial reference point for the object *a lot of stormy weather*. Furthermore, the example “describes a relation that is a potential (if not actual) aspect of the subject’s experience” [EVANS and GREEN 2006,

⁵⁵Here “V” refers to the content verb. “The subscripts represent the different senses of the perfect participle in perfect constructions (PERF₄) and passive constructions (PERF₃) [EVANS and GREEN 2006, p.618].

⁵⁶“Langacker [*Concept, Image, Symbol: The Cognitive Basis of Grammar*, 1991/2002, p.86] defines a PROCESS as ‘a series of profiled relations . . . distributed through conceived time and scanned sequentially.’ [. . .] a perfective PROCESS is characterised by a sequence of relations where each is different from the last, which means that the situation described involves **change** through time” [EVANS and GREEN 2006, p.632].

⁵⁷“Langacker proposes that the verb string should be partitioned into **grounding predication** and **clausal head**. The grounding predication is the part of the verb string that is responsible for finiteness. [. . .] The remainder of the verb string [. . .] makes up the clausal head” [EVANS and GREEN 2006, p.617].

⁵⁸“In the [Reichenbachian] SER system, aspect is represented as the interaction between R (reference time) and E (event). In the case of perfect aspect, the whole completed event is located prior to the reference time, indicating that, relative to the time referred to in the utterance, the event is viewed as ‘completed’: [. . .] Perfect aspect: E < R” [EVANS and GREEN 2006, p.388].

⁵⁹EVANS and GREEN have taken this example and the ensuing discussion from LANGACKER [*Foundations of Cognitive Grammar II*, 1991, p.212].

p.622]. The final stage of this process of grammaticalization is described as follows: auxiliary *have* evokes “(1) a temporal (rather than spatial) reference point, and (2) current (rather than potential) relevance” [ibid.]. The authors point out that the term ‘current relevance’ is to be “understood relative to the temporal reference point [R] that is evoked by the construction or provided by the context” [EVANS and GREEN 2006, p.622/623], i.e. past perfect and future perfect share this property with the present perfect.

The semantic properties of the perfect participle morpheme $PERF_4$ are described by the authors as follows:

Turning to the ‘division of labour’ between the component parts of the perfect construction [*have* [$PERF_4$]], we can observe that [...] $PERF_4$, like the other instances of $PERF$, imposes its profile as an atemporal relation on the content verb. Unlike the passive $PERF_3$, it does not impose a TR-LM reversal⁶⁰. Instead, Langacker characterises the meaning of $PERF_4$ as **temporal anteriority**. It is important not to confuse this with past tense, which also makes reference to past time [EVANS and GREEN 2006, p.623].

The four instances of $PERF$ ⁶¹ are shown in table C.7, which represents a distillation of the authors’ discussion [EVANS and GREEN 2006, p.620/621]. ‘TR↔LM’ means “trajector-landmark reversal”. The $PERF$ s are seen as “a network of [...] morphemes that have related yet distinct meanings” [EVANS and GREEN 2006, p.620]. According to Langacker, “all four variants emphasise the terminal stage of an event” [EVANS and GREEN 2006, p.623].

EVANS and GREEN also deal with the English tense-aspect system from the viewpoint of Mental Spaces Theory, according to which this system “participates in discourse management” [EVANS and GREEN 2006, p.389]. The authors construct a Mental Spaces Theory representation of a short text to illustrate the shift

⁶⁰TR = trajector, LM = landmark. In *George deceived Lily* “the AGENT is prominent (TR): this clause construes the event from the perspective of what George did [EVANS and GREEN 2006, p.610]. In *Lily was deceived by George* “the PATIENT is prominent (TR): this clause construes the event from the perspective of what happened to Lily. The passive clause represents an instance of **TR-LM reversal**” [ibid.].

⁶¹Contrary to the nomenclature in this paper, here $PERF$ refers to *-en* only.

Table C.7: The network of PERF morphemes according to LANGACKER

Name	Found in	Example	TR↔LM
PERF ₁	intransitive stative adjectival constructions	<i>Lily's heart is broken</i>	no
PERF ₂	transitive stative adjectival constructions	<i>George left Lily betrayed</i>	yes
PERF ₃	passive constructions	<i>Lily was betrayed</i>	yes
PERF ₄	perfect constructions	<i>George has betrayed Lily</i>	no

and overlap of the status of mental spaces as base (B), viewpoint (V), focus (F) or event (E)⁶² as discourse progresses, cf. [EVANS and GREEN 2006, p.390]. The text starts like this: “Jane is twenty. She has lived in France. In 2000 she lived in Paris [. . .]” [ibid.]. The Mental Spaces Theory representations of these three sentences are shown in figure C.7, which illustrates (simple) present, (present) perfect and (simple) past. The crucial difference between simple past and present perfect is the position of F in relation to V and E. EVANS and GREEN explain this difference and the shift of focus in the example as follows:

The second sentence, *She has lived in France*, keeps the base in focus, as it adds new information of current relevance. This is signalled by the use of the present perfect *has lived*. The present tense auxiliary form *has* signals that we are building structure in space 1, which thus remains the focus space. However, the structure being built relates to an event that is complete (or past) relative to space 1, signalled by the past participle *lived*. This is set up as space 2. In this way, perfect aspect signals that focus and event diverge. Put another way,

⁶² “While the **base** represents the starting point for a particular stage in the discourse to which the discourse can return, the **viewpoint** is the space from which the discourse is currently being built. The **focus** is the space where new content is being added, and the **event** represents the time associated with the event being described” [EVANS and GREEN 2006, p.389/390, bold type AE].

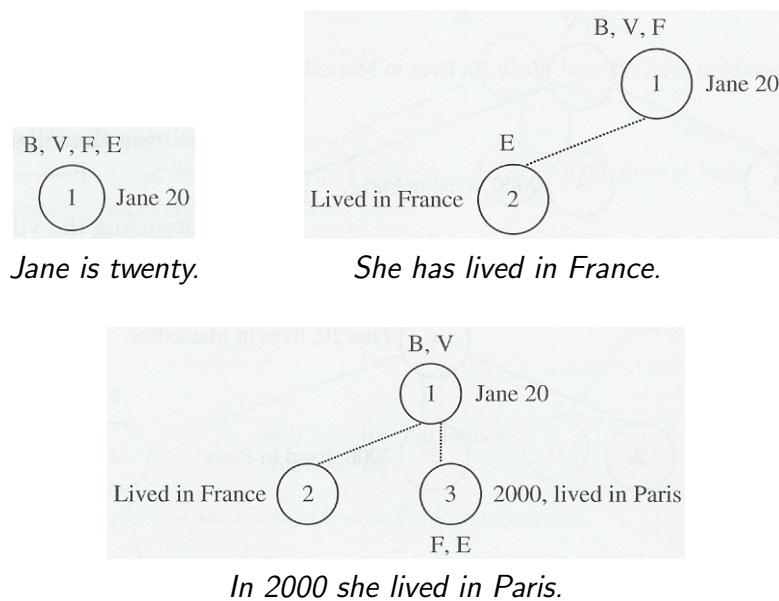


Figure C.7: Mental Spaces Theory representations of present, perfect and past

the present perfect *has lived* signals that knowledge of a completed event has current relevance. Because the focus space, ‘now’ (space 1), is also the perspective from which we are viewing the completed event, the focus space (space 1) is also the viewpoint. [. . .]

The third sentence, *In 2000 she lived in Paris*, contains the space builder *in 2000*. This sets up a new space, which is set in the past with respect to the viewpoint space which remains in the base (space 1). This new space (space 3) is therefore the event space. Because we have past tense marking, the focus shifts to the new space [EVANS and GREEN 2006, p.390].

There is a striking correspondence between the E, F and V here and REICHENBACH’s E, R, and S. Still, simply equating (E, F, V) with (E, R, S) would be misleading because Mental Spaces Theory is more general than REICHENBACH’s approach. It encompasses REICHENBACH’s model in a way. Firstly, from a purely topological viewpoint it can be seen that the mental spaces (symbolized by the circles in figure C.7) are embedded in a ‘super-space’ (symbolized

by the 2-dimensional sheet of paper the circles are printed on). Such a structure allows for a degree of flexibility concerning the arrangement of the mental spaces and their interconnections that cannot be attained by REICHENBACH's rigid linear time-line. E.g. embedding the E of an utterance such as *if you bought a yacht* is impossible within a one-dimensional model of time, whereas in Mental Spaces Theory it is fairly easy: *if* + 'past tense' opens a counterfactual space. A two-dimensional model can integrate temporal distance and "epistemic distance" [EVANS and GREEN 2006, p.394], although the 'directions' of these two distances are linearly independent. Secondly, contrary to the one-dimensional moments E, R and S, the spaces E, F and V have extension and can contain content. REICHENBACH's E can be seen as a mere temporal coordinate, whereas the mental space E can contain both the event and the conceptualization of time. Thirdly, the linking of the tense-aspect system with discourse management clarifies the notions of focus and viewpoint. F is seen as the space where new content is added as discourse progresses. V represents a moveable deictic centre that can be projected on previously established spaces.

EVANS and GREEN summarize the role of tense and aspect in discourse management in tabular form, cf. table C.8, which represents an adapted version⁶³. The words 'parent' and 'grandparent' refer to the interconnections between mental spaces in hierarchical structures such as figure C.7. The placeholder X stands for E, i.e. X refers to the mental space that contains the event that is construed by a verb in its perfect form. The perfect is characterised by three properties: E

Table C.8: The role of tense and aspect in discourse management

	Present	Past	Future	Perfect	Progressive
F	X	X	X	¬X	¬X
V	X	X's parent	X's parent	X's parent or grandparent	X's parent or grandparent
E	X ≡ V	X < V	X > V	X ≺ F	X ⊃ F

≠ F (indicated by ¬X in the table), which corresponds to E < R (anteriority) or

⁶³ "¬" stands for "Not". "≡" stands for "equivalent to". "<" stands for "before". ">" stands for "after". "≺" stands for "is completed with respect to". "⊃" stands for "contains".

$E > R$ (posteriority) in Reichenbachian systems. The latter, which corresponds to structures like *be going to*, is ruled out by the property of E being completed with respect to F (indicated by $X \prec F$ in the table). V is E's parent (present perfect) or grandparent (past perfect and future perfect).

C.2.2 Undergraduate linguistics textbooks

Kroeger

Analyzing Grammar by PAUL R. KROEGER is an "introductory textbook on grammatical analysis" [KROEGER 2005, blurb]. Its approach is comparative. The majority of examples are not taken from English. The perfect is seen as a tense/aspect category. It is introduced in a section of the book that is preceded by a section on lexical and morphological aspect.

The terms PERFECT and PERFECTIVE are often confused, or used interchangeably, but there is an important difference between them. As stated in the preceding section, the PERFECTIVE is an aspectual category which refers to an entire event as a whole. The PERFECT (e.g. English *I have arrived*) is used to express a past event which is relevant to the present situation. That is, it signals that some event in the past has produced a state of affairs which continues to be true and significant at the present moment [KROEGER 2005, p.158].

This differentiation of the terms *perfect* and *perfective* is in accordance with the approach adopted in this paper. Kroeger's analysis is in line with a current relevance reading of the English present perfect.

Meyer

Synchronic English Linguistics by PAUL GEORG MEYER et al. "is the first introduction to linguistics for students of English which is (a) written in English and (b) especially designed for students with a German-speaking background" [MEYER et al. 2005, blurb]. The "disagreement about which category the perfect 'tenses' [...] should be assigned to" [MEYER et al. 2005, p.22] is men-

tioned after the definition of *tense* and before the definition of *aspect*, which is taken verbatim from *A Dictionary of Grammatical Terms in Linguistics*⁶⁴.

The use of the word *perfective* as a synonym for *perfect* (cf. p.206) and the attribution of aspectual status to the perfect in [QUIRK et al. 1985] are criticized sharply: “flat contradiction to established terminology⁶⁵” [MEYER et al. 2005, p.23], “not very convincing, unless the notion of aspect is watered down in such a way that it is no longer of analytic value” [MEYER et al. 2005, p.24].

Radden/Dirven

Cognitive English Grammar by GÜNTER RADDEN and RENÉ DIRVEN is a general linguistics textbook that “introduces the reader to cognitive linguistic theory and shows that Cognitive Grammar helps us to gain a better understanding of the grammar of English” [RADDEN and DIRVEN 2007, blurb]. The present perfect is dealt with in “Chapter 9. Grounding situations in time: Tense”. The authors call the present perfect a (complex) tense⁶⁶ but they do not neglect its aspectual meaning:

The present perfect has both temporal and aspectual meaning: the temporal meaning of a situation’s anteriority and an aspectual meaning with respect to the inherent structure of the overall situation. The anterior situation is part of the overall situation. In many grammars of English the present perfect is therefore treated as a form of aspect. However, the past perfect and the future perfect do, as a rule, not express aspect, but are normally understood in a purely temporal sense: they refer to the anterior time of a situation relative to a reference time. The overall commonality of the English

⁶⁴ “A grammatical category which relates to the internal temporal structure of a situation” [TRASK 1993, p.21]. [PROG: ∅] and [PROG: +] are considered to be “the two aspects of English” [MEYER et al. 2005, p.23]. The connection to the Graeco-Slavic *imperfective* vs. *perfective* opposition is stated cautiously: “Progressive and simple aspect in English may be said to correspond very roughly to imperfective and perfective aspect in other languages” [MEYER et al. 2005, p.22].

⁶⁵ “If anything is ‘perfective’ in English, it is the simple past and not the perfect” [MEYER et al. 2005, p.23].

⁶⁶ RADDEN/DIRVEN’s system of times and tenses is clearly of Reichenbachian origin, cf. their “Table 9.1. Patterns of time and tense” [RADDEN and DIRVEN 2007, p.207].

perfect forms is thus to be seen in their function as tense markers [RADDEN and DIRVEN 2007, p.206].

The present perfect is seen as an anterior present tense. This is in accordance with REICHENBACH's analysis ($E < R = S$). Fig. C.8 [RADDEN and DIRVEN 2007, p.205], summarizes this neo-Reichenbachian approach enriched by some new el-

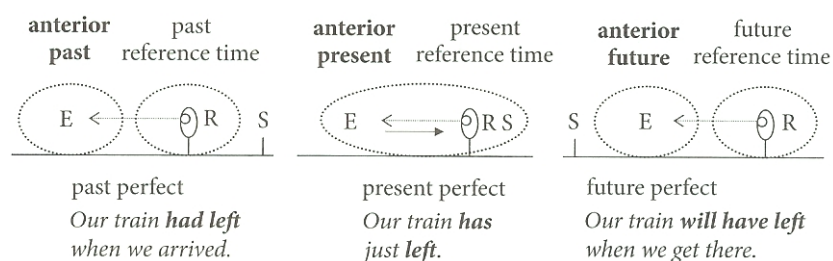


Figure C.8: Anterior times expressed by perfect tenses

ements⁶⁷, which both unify the meaning of the anterior tenses and explain the distinctiveness of the present perfect. One time sphere instead of two allows for “three properties which determine its general meaning: focus on the present, current relevance, and indefiniteness” [RADDEN and DIRVEN 2007, p.212]. Before discussing these properties in detail, RADDEN and DIRVEN characterise the present perfect as follows:

The **present perfect** is a complex tense that involves a backward-looking stance from a viewpoint at the present moment towards an anterior situation or an anterior phase of a situation. This viewing arrangement has consequences for properties of the present perfect and its uses in English [ibid.].

The present perfect's focus on the present time is explained by the 'division of labour'⁶⁸ between the auxiliary and the participle. The present tense form of

⁶⁷Ellipsis = time sphere; head = speaker's viewpoint; dotted arrow from right to left tracing line of vision from R back to E; solid arrow indicating a relation from E to S [RADDEN and DIRVEN 2007, p.205/206].

⁶⁸This word is not used by the authors.

have “grounds the situation in the present time” [ibid.], whereas the “atemporal” [ibid.] past participle describes the “anterior situation [. . .], which is scanned in summary fashion so that all its component states are viewed in their accumulated form” [RADDEN and DIRVEN 2007, p.212/213]. The authors mention the ‘bleaching of meaning’⁶⁹ of *have*, whose “original sense of ‘possession’ is still discernable with transitive verbs” [RADDEN and DIRVEN 2007, p.212].

The present perfect’s current relevance is seen as “a matter of inference” [RADDEN and DIRVEN 2007, p.213]. With the help of the mini-dialogue

- a. Dad: “I’m looking for my glasses. *Has* anybody *seen* them?”
- b. Son: “You’ve probably *left* them in the car.”

the authors illustrate “that the reasoning process with the present perfect goes from the present state of affairs back to an earlier situation, which may have caused it or may explain the present state, and from there back again to the present” [ibid.].

The present perfect’s indefiniteness “follows from focusing one’s attention on [the anterior situation’s] present relevance” [ibid.]. This is why “other aspects of the situation, especially its exact temporal occurrence, recede into the background [ibid.]. The tense shift in dialogues such as

- a. *Have* you ever *been* to Australia?
- b. Yes, I *was* in Perth from July 2002 to January 2003.

is seen as concomitant of the elaboration of the indefinite “mental space for an anterior situation” [ibid.], which was opened in (a.), “by shifting to [a mental space containing] a definite event [(b.)] in the past” [ibid.]. Staying within the indefinite mental space, e.g. by giving the answer *I have been to Australia twice*, does not lead to a tense shift.

⁶⁹Cf. GUILLAUME’s *subduction ésotérique* (p.91). RADDEN and DIRVEN point out that “*I have written the letter* originally meant something like ‘I have the letter written’, i.e. ‘I have it in its written state’. The grammaticised auxiliary *have* has the meaning of ‘existence’, as in French *il y a* ‘there is’, literally ‘it there has’ ” [RADDEN and DIRVEN 2007, p.212].

RADDEN and DIRVEN offer a detailed analysis of the uses of the present perfect – both simple and progressive – by classifying “anterior situation types” [RADDEN and DIRVEN 2007, p.214 ff.] and providing examples⁷⁰ as follows:

1. Anterior bounded events and lasting states: Present perfect non-progressive

i. Anterior bounded telic events: **Resultative perfect**

a. Grandpa *has repaired* his old tractor. [*accomplishment*]

b. Grandma *has passed* the driving test. [*achievement*]

ii. Anterior bounded atelic situations: **Inferential perfect**

a. The nurse *has cuddled* the baby. [*anterior activity*]

b. The baby *has burped*. [*anterior act*]

c. *Have you ever been imprisoned?* [*anterior state*]

iii. Anterior recent situations: **Recent perfect**

a. I've *just* talked to my lawyer.

b. I've talked to my lawyer *this morning*.

iv. Anterior phase of states and habits: **Continuative perfect**

a. We have been engaged *since Valentine's Day*. [*beginning of state*]

b. We have been engaged *for over a year now*. [*period of state*]

c. I've worked for BA *since 2002*. [*beginning of habit*]

d. I've worked for BA *for six months now*. [*period of habit*]

2. Unbounded events and temporary states: Present perfect progressive

i. Anterior unbounded events: Inferential perfect progressive

a. I *have been working* all day.

b. I *have been trying* to get Sally on the phone.

c. Grandpa *has been repairing* his old tractor.

⁷⁰The labels in square brackets such as *accomplishment* are also in RADDEN/DIRVEN's book.

ii. Anterior phase of temporary states and habits: Continuative perfect progressive

a. *We've been living* in tents for over a year.

b. *I've been looking* at computers for the past 18 months.

The authors provide visualizations (Fig. C.9) for these six situation types.

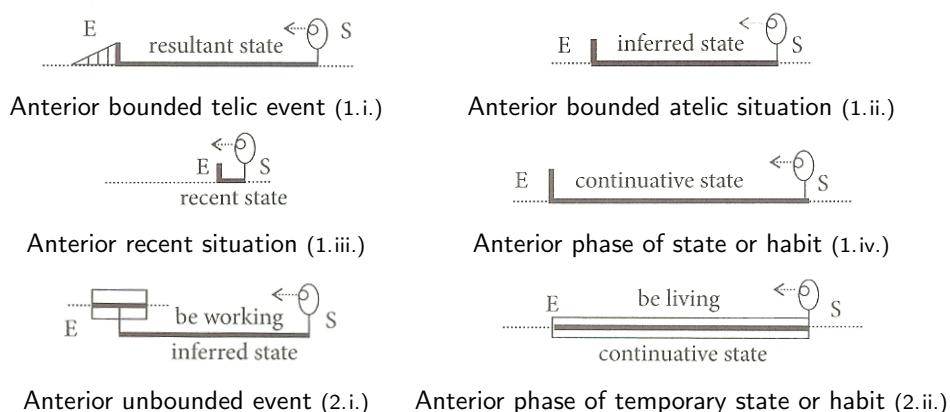


Figure C.9: Visualizations according to RADDEN/DIRVEN

C.2.3 Comprehensive grammars of the English language

Carter/McCarthy

The *Cambridge Grammar of English*, published in 2006 and heralded as “the ultimate guide to English as it is really used” [CARTER and MCCARTHY 2006, blurb], ascribes an aspectual character to the perfect (and the progressive):

Aspect Indicates the speaker’s perspective on time as indicated in a verb phrase, particularly whether an action is treated as finished or is still in progress or still relevant to the moment of speaking. English has two aspects: perfect and progressive (sometimes known as continuous) [CARTER and MCCARTHY 2006, p.892, glossary].

This definition is borderline tautological because it is tailor-made in such a way that it fits PERF and PROG in English perfectly. The expression “still relevant to the moment of speaking” in particular introduces an element of temporal relatedness⁷¹ that rather belongs to the sphere of tense than to the sphere of verbal aspect⁷². The ‘eternal’ question which represents the starting point of the present paper (perfect: tense or aspect?) is ‘solved’ at the level of definition of categories – intra-linguistically. This is certainly a valid approach to the (present) perfect but it should be clear that here the technical term *aspect* is used in a very loose way and differently from its usage in Continental and Slavicist linguistics.⁷³ This grammar’s glossary entry for the perfect is slightly more cautious (“a *type* of aspect”) when it comes to using the term *aspect* to categorise the perfect:

Perfect A type of aspect that gives information about a speaker’s perspective on the relationship of events to the moment of speaking or to some other point in time. [...] The present perfect relates events or states taking place in the past to a present time orientation:
I’ve made a lot of friends since I moved here.
 [CARTER and MCCARTHY 2006, p.914, glossary].

Still, the introduction of the moment of encoding and another reference point⁷⁴ combines a purely aspectual notion (“speaker’s perspective”) with the purely temporal, i.e. pertaining to the category *tense*, concept of “moment of speaking”. In the main part of the book the core meaning of the present perfect is described as follows: “The present perfect (simple and progressive) is used to refer to events taking place in a past time-frame that connects with the present.” [CARTER and MCCARTHY 2006, p.613], which can be seen as an extended now reading of the English present perfect.

⁷¹To S, the moment of encoding.

⁷²As it is understood in this paper.

⁷³The same is done by some successful EFL textbooks written for the international market, which introduce three aspects (simple, continuous and perfect), e.g. “English combines present or past time with the simple, continuous or perfect aspect to form different tenses” [KAY and JONES 2001, p.8] or “The three aspects add another layer of meaning to the action of the verb. Simple [...] action is seen as a complete whole. Continuous [...] action is seen as having duration. Perfect [...] action is seen as completed *before* another time” [SOARS and SOARS 2003, p.148].

⁷⁴Labelled R in REICHENBACH’s system.

Quirk et al.

A Comprehensive Grammar of the English Language by RANDOLPH QUIRK et al. was heralded as “the most thorough and most definitive grammar of modern English ever written” [QUIRK et al. 1985, blurb]. The authors refer to the two non-deictic markers PROG and PERF as *aspects*. They point out that

the two aspect constructions of English, the perfective and the progressive [...], can be seen as realizing a basic contrast of aspect between the action viewed as complete (perfective), and the action viewed as incomplete, *ie* in progress (imperfective or progressive). But this is an oversimplified view, as is clear as soon as we observe that these two aspects may combine within a single verb phrase [...]. In fact, aspect is so closely connected in meaning with tense, that the distinction in English grammar between tense and aspect is little more than a terminological convenience which helps us to separate in our minds two different kinds of realization: the morphological realization of tense and the syntactic realization of aspect [QUIRK et al. 1985, p.188/189].

The authors' using the word *perfective* as a synonym for *perfect* is highly problematic⁷⁵ and needs to be addressed. From the viewpoint of Slavic linguistics the equation of *perfective* and *perfect* is utterly unacceptable, of course, but one should probably not reproach the authors with not adopting the terminology of Slavic studies because their approach is not comparative – at least not in the context of tense and aspect⁷⁶. Still, the term *perfective* had been established in (Continental) general linguistics before QUIRK et al.'s grammar was published⁷⁷.

⁷⁵The criticism of the authors' use of the word *perfective* expressed here is not supposed to detract from the grammar's overall high quality as an encyclopedic reference grammar of English. Unfortunately, its international success might have perpetuated the word's misuse, which has been noticed before, cf. MEYER's remark on p.200.

⁷⁶Russian is briefly mentioned in the context of *gender* [QUIRK et al. 1985, p.314] and *case* [QUIRK et al. 1985, p.318].

⁷⁷COMRIE's remark on this is a case in point: “The term ‘perfective’ contrasts with ‘imperfective’, and denotes a situation viewed in its entirety, without regard to internal temporal constituency; the term ‘perfect’ refers to a past situation which has present relevance, for instance the present result of a past event (*his arm has been broken*). This terminological dis-

Even in non-technical English there is a subtle difference between the two terms: *perfect* 'accomplished' (< Latin *perfectus*) refers to a fact⁷⁸, whereas *perfective* refers to a propensity⁷⁹. The authors' equating *complete* with *perfective* ("complete (perfective)") ignores the meaning of the suffix *-ive*⁸⁰. The correct synonymic pairs are *complete* and *perfect* on the one hand and *completive*⁸¹ and *perfective* on the other hand. From a purely terminological viewpoint, calling PERF *perfective*⁸² might be permissible but doing so ignores, if not dismisses, those linguistic schools that attach a very distinctive meaning to the word *perfective* and stress the difference between *perfective* and *perfect*.

The tendency of equating the linguistic technical terms *perfect* and *perfective* can be traced back to a Latinate grammatical tradition:

The category of perfect should be distinguished from perfective aspect. There is considerable terminological confusion in this area, which has its historical explanation in the nondistinctness of perfect and perfective in classical Latin [DAHL 1994b, p.3000].

The details of this "nondistinctness" in Latin are discussed on p.86 (coincidence of the Indo-European perfective aorist and the Indo-European perfect).

QUIRK et al. seem to suggest an opposition ("basic contrast") between [PERF: +] and [PROG: +] but they are aware of the fact that this is an unduly simplified view ("oversimplified view"). Two markers A and B that also

tinction is usual in discussions of aspect by Continental linguists, and is insisted on by Slavists [...]. In many recent works by English-speaking linguists, however, there has been an unfortunate tendency to use the term 'perfective' for what is here termed 'perfect'; this tendency is particularly unfortunate when it leads to conceptual confusion, such as the view that what Slavists call perfective is the same as perfect in, say, English" [COMRIE 1976, p.12].

⁷⁸The word *fact* and the word *perfect* are related via their Latin ancestors: *factum* is the past participle of *facere* 'do, make' and *perfectus* is the past participle of *perficere* 'accomplish' = *per* 'thoroughly' + *facere* 'do, make', cf. [STEVENSON 2007, p.916 & 2154 & 2157].

⁷⁹"[P]erfective [...] tending to make perfect or complete; conducive to the perfecting of a thing" [STEVENSON 2007, p.2158].

⁸⁰The suffix *-ive* (< French *-if*, *-ive* < Latin *-ivus*) has the meaning "tending to, having the nature or quality of" [STEVENSON 2007, p.1446].

⁸¹Contrary to the words *complete* and *completed*, the term *completive* is suitable for describing perfective aspect in Slavic.

⁸²This is also done by others, e.g. "**perfective** Verb form expressing completion, e.g. 'I have written': cf. **aspect**" [SWAN 2005a, p.123, glossary]; "English has two sets of aspectual contrast, the Perfective [...] and the Progressive" [SAMMON 2002, p.28]; "**perfect** n[oun] also **perfective**" [RICHARDS and SCHMIDT 2002, p.391].

allow for [A: ∅, B: ∅] and [A: +, B: +] can hardly be seen as to stand in contrast with one another. Furthermore, the authors seem to suggest that in English the difference between the categories tense and aspect is unimportant or not fundamental (“little more than a terminological convenience”), although they make a clear-cut distinction between them: “The term aspect refers to a grammatical category which reflects the way in which the verb action is *regarded* or *experienced* with respect to time. Unlike tense, aspect is not deictic [...]” [QUIRK et al. 1985, p.188, their italics]. Their slightly dismissive assessment of the difference between tense and aspect might stem from the fact that they regard both PERF and PROG as aspects. The entanglement of PRET and PERF is much more pronounced than that of PRET and PROG. In fact, the aspectual status of PROG is fairly undisputed, whereas PERF eludes a straightforward categorisation.

Biber et al.

The *Longman Grammar of Spoken and Written English* by DOUGLAS BIBER et al. is an “entirely corpus-based⁸³ grammar of English” [BIBER et al. 1999, blurb]. The authors refer to PERF and PROG as *aspects*⁸⁴. They use almost always the word *perfect* but there are at least three instances where they use the word *perfective*⁸⁵ – presumably merely as a stylistic variant. “The perfect aspect designates events or states taking place during a period leading up to the specified time” [BIBER et al. 1999, p.460] is the authors’ succinct characterization of the meaning of the perfect. They characterize the present perfect as follows: “In general terms, the present perfect is used to refer to a situation that began sometime in the past and continues up to the present” [ibid.].

⁸³The LSWE Corpus (Longman Spoken and Written English Corpus) is “a 40-million-word corpus of texts representing different registers” [BIBER et al. 1999, blurb], e.g. conversation, fiction, news, academic prose.

⁸⁴Alongside with tense, voice, modality, negation and clause structure type, aspect is seen as one of “six major structural distinctions [...]”: [...] **aspect**: *unmarked/simple, perfect, progressive (e.g. sees v. has seen v. is seeing), or perfect progressive (e.g. has been seeing)*” [BIBER et al. 1999, p.452].

⁸⁵The collocation “perfective aspect” [BIBER et al. 1999, p.73 & 100] is used twice as a mere synonym for “perfect aspect”. The collocation “perfective meaning” [BIBER et al. 1999, p.399] is used once in the context of discussing the “*got/gotten* alternation” [ibid.] in American English.

BIBER et al. discuss “the distribution of aspectually marked forms across registers⁸⁶ in BrE” [BIBER et al. 1999, p.461]: [PERF: ∅, PROG: ∅] ≈ 90%, [PERF: +, PROG: ∅] and [PERF: ∅, PROG: +] between 5% – 10% each (depending on register), [PERF: +, PROG: +] < 0.5%. “The perfect aspect is used to report events or states existing at an earlier time; they are most common in fiction and news” [BIBER et al. 1999, p.462]. The combination of PERF and PRET depends on register: CONV, NEWS and ACAD display a clear preference for [PRET: ∅], whereas FICT favours [PRET: +]. “The register preferences for present or past aspectual forms parallel the distribution of simple tense forms across registers” [ibid.].

The frequency of PERF in American English vs. British English conversation and news ranges from about 5,500 to about 8,500 per million words as follows: AmE CONV < BrE CONV < AmE NEWS < BrE NEWS, cf. [ibid.]. The authors point out that

it has frequently been noted that AmE uses the past tense in contexts where BrE favours the present perfect, for example with *yet* or *already*:

*A: Hey, **did** you **read** through this yet?*

*B: No not yet I **didn't**. I **didn't** get a chance. (AmE CONV)*

*We already **gave** him a down payment. (AmE CONV †⁸⁷)*

Nevertheless, this difference of usage does not seriously affect the frequencies in conversation. It remains a mystery why the marked difference of frequency shows up mainly in news. It might be relevant that American newspapers are renowned for a space-saving drive towards stylistic economy⁸⁸, and that the simple past usually requires one less word than the perfect [BIBER et al. 1999, p.463].

⁸⁶The registers are: CONV = conversation transcription, FICT = fiction text, NEWS = newspaper text, ACAD = academic text, cf. [BIBER et al. 1999, p.xxvi].

⁸⁷“†” means “truncated example” [BIBER et al. 1999, p.xxvi].

⁸⁸Cf. also SWAN’s observation on p.169 concerning the fact that this ‘drive’ has started to spread to the editorial offices of some British newspapers.

BIBER et al. discuss their corpus findings concerning the type of verbs that occur in the present perfect as follows:

Most of the verbs that are common with perfect aspect denote physical or communicative activities with consequences that can exist over an extended period of time, these verbs therefore imply a resultant state in the present:

*He's **gone** home. (CONV) [...]*

*Doctors in the region **have called** for a review of the prescription charge system. (NEWS†)*

In academic prose, the present perfect is typically used with different verbs, to imply the continuing validity of earlier findings or practices:

*Experiments **have shown**, however, that plants can obtain their nutrients at sufficient rates [...]. (ACAD†)*

*This, as we **have seen**, is a stable arrangement. (ACAD†)*

*It **has become** the usual practice to use only maintenance applications. (ACAD†)*

By contrast, the verbs that rarely occur with the present perfect are mainly from the mental and existence domains. These verbs refer to states that typically exist at some past or present time but do not suggest any ensuing situation.

Mental states:

*He **needs** it for something. (CONV)*

*He **wants** another piece. (CONV)*

*But he **doubted** it. (FICT)*

*She **believed** she would be safer as a public figure. (FICT)*

Logical states:

*Each formation **comprises** a distinctive set of rock layers. (ACAD†)*

*Again, this **represents** a transposition of tendencies. (ACAD†)*

*Durkheim seeks to delimit what **constitutes** crime. (ACAD†)*

[...] Some activity verbs denoting bodily actions such as *glance*, *kiss*, *nod*, *scream*, *smile* also rarely occur in the present perfect:

*She **glanced** at him shyly. (FICT)*

*Judge Crawford **kissed** the woman on both cheeks. (NEWS)*

These typically involve short-term events⁸⁹ without long-term results [BIBER et al. 1999, p.465].

Huddleston/Pullum

The Cambridge Grammar of the English Language by RODNEY HUDDLESTON and GEOFFREY K. PULLUM “is based on a sounder and more consistent descriptive framework than previous large-scale grammars, and includes much more explanation of [...] concepts” [HUDDLESTON and PULLUM 2002, blurb]. The authors make a very clear distinction between terms referring to form and terms referring to meaning by pointing out that

a single form does not always convey the same meaning [...] and that the same kind of meaning can be expressed by very different formal means. [...] To facilitate this we will use different terms for the formal systems and the associated areas of meaning:

FORM	CHARACTERISTIC	MEANING
------	----------------	---------

Tense	Time
-------	------

Aspect	Aspectuality
--------	--------------

Mood	Modality
------	----------

The adjectives ‘aspectual’ and ‘modal’ can apply to form or meaning depending on the noun they modify

[HUDDLESTON and PULLUM 2002, p.117/118].

The authors’ nomenclature concerning the ‘four systems’ is summarized in table C.9, taken from [HUDDLESTON and PULLUM 2002, p.116]. The authors “take

⁸⁹The verbs *glance* and *nod* are punctual but the verbs *kiss*, *scream* and *smile* are not necessarily short-term or punctual.

Table C.9: Verbal categories according to HUDDLESTON/PULLUM

SYSTEM	TERMS	MARKING	EXAMPLE
Primary tense	Preterite	preterite inflection	<i>went</i>
	Present	present tense inflection	<i>goes</i>
Secondary tense	Perfect	have (+ past participle)	<i>has gone</i>
	Non-perfect	[unmarked]	<i>goes</i>
Aspect	Progressive	be (+ gerund-participle)	<i>is going</i>
	Non-progressive	[unmarked]	<i>goes</i>
Mood	Modal	modal aux (+ plain form)	<i>can go</i>
	Non-modal	[unmarked]	<i>goes</i>

the inflectional preterite to be the primary past tense and the [analytic] perfect the secondary past tense" [ibid.]. They justify their approach in a stringent and well-grounded way.⁹⁰ Three reasons are mentioned:

Relation to T_d

In languages in general, tense systems prototypically locate T_r relative to T_o/T_d , i.e. they are deictic, and we have seen that the English preterite is most often interpreted in this way, whereas the perfect is generally non-deictic. The preterite is thus a clearer instance of a tense than the perfect. Moreover, when they combine in the preterite perfect to express double anteriority, it is the preterite that encodes the first move back from T_d , while the perfect encodes a further move back beyond that [...].

Degree of grammaticalisation

The primary tense system is more highly grammaticalised than the secondary one. One obvious reflection of this is that it is marked inflectionally rather than analytically. The perfect marker *have* is a member of the small closed class of auxiliary verbs, so that the perfect can properly be regarded as a grammatical category, but analytic

⁹⁰The authors use the following abbreviations, cf. [HUDDLESTON and PULLUM 2002, p.126]: T_{sit} = time of situation, T_d = deictic time (normally the time of utterance), T_r = time referred to (identified with T_{sit} when aspectuality is perfective), T_o = time of orientation (identified as T_d in the default case).

marking of this kind represents a lesser degree of grammaticalisation than inflection. No less important, however, is the fact that the preterite is in contrast with another tense, the present, whereas the perfect merely contrasts with its absence. The present perfect and the preterite perfect are compound tenses (involving two T_r - T_o relations), whereas the present non-perfect and the preterite non-perfect are simple tenses (involving a single T_r - T_o relation): non-perfect is not a tense. The present tense is distinct from the absence of primary tense (*She is/ They are ill vs She is/ They are believed to be ill*), but there is no such distinction with secondary tense. A third factor commonly involved in grammaticalisation is discrepancy between form and meaning: highly grammaticalised elements tend to develop uses which depart from their core meaning. The preterite is used for modal remoteness and to indicate backshift as well as with its core meaning of locating T_r anterior to T_o , whereas the perfect is almost restricted to this latter use.

Anteriority expressed by the perfect when the preterite [is] not available

We have noted that when the preterite is used for modal remoteness or in backshift (to locate T_o), the perfect takes over the role of expressing the anteriority of T_r relative to T_o [...]. It similarly has this role in non-finite clauses, which lack primary tense altogether: compare finite *He died in 1806* with non-finite *He is believed to have died in 1806* [HUDDLESTON and PULLUM 2002, p.159].

The authors' notion of "secondary tense" is evocative of GIERING et al.'s notion of correlation but there is a major difference: HUDDLESTON and PULLUM call the present perfect secondary *past* tense, whereas GIERING et al. call it anterior *present*.

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Tabellarischer Lebenslauf

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