

**Contrasting Perfect and Past Semantics:  
Diachronic Data, Dialect and the Classroom**

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# Zusammenfassung in deutscher Sprache

Die vorliegende Dissertation ist interdisziplinärer Natur und verbindet Erkenntnisse der theoretischen Linguistik mit Sprachdiachronie, Dialektologie und schulischer Didaktik.

Semantik kann gewinnbringend eingesetzt werden, um Sprache zu beschreiben und Vorhersagen zu treffen. Es wird ersichtlich, dass dies nicht nur für die Beschreibung synchroner Daten, sondern auch für bisher semantisch untererforschte Gebiete wie den Sprachwandel und die dialektale Variation gilt. Darüber hinaus beschäftigt sich diese Dissertation mit der Schnittstelle zwischen Linguistik und Schule. Hier wird deutlich, dass die formale Semantik für den Sprachunterricht nutzbar gemacht werden kann. Damit werden gesellschaftlich relevante Aspekte der Grundlagenforschung in den Dienst des sprachlichen Lernens gestellt.

Exemplarisch wird dies am semantischen Kernphänomen **Tempus** und hier insbesondere anhand der Zeitform **Perfekt** erarbeitet. Bezüglich der sprachlichen Entwicklung des Perfekts identifiziert die vorliegende Arbeit eine Reihe von Merkmalen, die für eine extended-now-Analyse des mittelhochdeutschen Perfekts sprechen. Die daraus folgenden Vorhersagen werden unter anderem durch Daten aus dem Schwankroman *Der Pfaffe Amis* verifiziert. Mit Blick auf die Weiterentwicklung des Perfekts im oberdeutschen Raum werden neue schwäbische Daten erhoben und ausgewertet, um mehr über die Semantik dieser Zeitform zu erfahren. Dieses Vorgehen unterscheidet sich von früheren Herangehensweisen, die stets um die Semantik des standarddeutschen Perfekts bemüht waren und für die es bis heute keine Analyse gibt, die auf allgemeine Einigung gestoßen ist. Die vorliegende Arbeit beschränkt sich daher auf einen oberdeutschen **Dialekt** und leistet damit nicht nur einen Beitrag zur semantischen Theoriebildung, sondern erweitert auch das Feld der Dialektologie um eine semantische Perspektive.

Schließlich werden die aus der theoretischen Linguistik hervorgebrachten Erkenntnisse auf den schulischen Kontext übertragen. Einerseits wird anhand einer Interventionsstudie veranschaulicht, wie ein linguistisch aufbereiteter Sprachvergleich zwischen dem englischen present perfect und dem schwäbischen Perfekt aussehen könnte. Andererseits wird anhand einer Videographie einer Deutschstunde gezeigt, welche Probleme momentan in der Tempusdidaktik bestehen und dass die Schülerinnen und Schüler der 6. Klassenstufe trotz dieser Hürden über überraschend gute linguistische Intuitionen verfügen. Die vorliegende Arbeit ist damit auch relevant für Forschung im Bereich der angewandten Linguistik.



# Contents

<b>Acknowledgements</b>	<b>i</b>
<b>Zusammenfassung in deutscher Sprache</b>	<b>iii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Aims . . . . .	1
1.2 Semantic background . . . . .	2
1.2.1 Reichenbach's tense system . . . . .	2
1.2.2 Compositional interpretation . . . . .	3
1.2.3 Events and lexical aspect . . . . .	5
1.2.4 Viewpoint aspect . . . . .	6
1.2.5 Tense . . . . .	8
1.3 Contrasting perfect and past semantics . . . . .	9
1.3.1 Diagnostics for an extended-now analysis . . . . .	9
1.3.2 Extended-now analysis . . . . .	12
1.3.3 Diagnostics for a past analysis . . . . .	18
1.3.4 Past analysis . . . . .	19
1.4 The semantics of the perfect cross-linguistically . . . . .	21
1.4.1 The Swedish perfect . . . . .	22
1.4.2 The Bulgarian perfect . . . . .	24
1.4.3 The Niuean perfect . . . . .	27
1.4.4 The German Perfekt . . . . .	30
1.4.5 Summary . . . . .	40
1.5 Outline of the investigation . . . . .	41
<b>I DIACHRONIC AND SYNCHRONIC SEMANTICS</b>	<b>43</b>
<b>2 The Perfekt in Middle High German</b>	<b>45</b>
2.1 Introduction . . . . .	45
2.2 On Middle High German . . . . .	45
2.3 The origins of the German Perfekt . . . . .	46
2.4 Data . . . . .	47
2.4.1 The experiential use . . . . .	48
2.4.2 The resultative use . . . . .	50
2.4.3 The universal use . . . . .	51
2.4.4 Close connection to the speech time . . . . .	56
2.4.5 The present perfect puzzle . . . . .	58
2.4.6 Temporal adverbials . . . . .	62
2.4.7 Future uses . . . . .	64

2.5	Analysis . . . . .	66
2.6	Semantic change in Early New High German . . . . .	72
2.7	Chapter summary . . . . .	75
<b>3</b>	<b>The Perfekt in Modern Swabian</b>	<b>77</b>
3.1	Introduction . . . . .	77
3.2	On Swabian . . . . .	77
3.3	Previous research on the Modern Upper German Perfekt and Präteritum . . . . .	79
3.4	Data . . . . .	81
3.4.1	Testing for an XN semantics . . . . .	81
3.4.2	Testing for a past semantics . . . . .	85
3.4.3	Testing for the availability of future uses . . . . .	89
3.5	Analysis . . . . .	94
3.6	The Perfekt in Standard German . . . . .	101
3.7	Chapter summary . . . . .	102
<b>II</b>	<b>SEMANTICS AND SCHOOL</b>	<b>103</b>
<b>4</b>	<b>How to teach the English present perfect? A semantic approach</b>	<b>105</b>
4.1	Introduction . . . . .	105
4.2	Semantic background . . . . .	106
4.3	Didactic background . . . . .	107
4.3.1	The traditional approach . . . . .	107
4.3.2	The problem of simplistic semantic approaches to tenses . . . . .	108
4.3.3	Narrowing down complexity using semantic visualizations . . . . .	110
4.4	Intervention study . . . . .	112
4.4.1	Design . . . . .	112
4.4.2	Lesson plan and teaching material . . . . .	114
4.4.3	Answer accuracy . . . . .	116
4.4.4	The use of linguistic metalanguage . . . . .	119
4.4.5	The use of visualizations . . . . .	125
4.5	Chapter summary . . . . .	131
<b>5</b>	<b>Semantics in grammar instruction? Analysis of a practice lesson on German tenses</b>	<b>133</b>
5.1	Introduction . . . . .	133
5.2	Tenses in linguistics, didactics and schoolbooks . . . . .	134
5.3	Videography of a grammar lesson . . . . .	136
5.4	Tenses in German language teaching . . . . .	137
5.4.1	Disregarding linguistic form . . . . .	137
5.4.2	Simplifying the semantics . . . . .	142
5.5	Chapter summary . . . . .	149
<b>6</b>	<b>Conclusion and outlook</b>	<b>151</b>

<b>Appendix</b>	<b>155</b>
Appendix A: Items Swabian study . . . . .	155
Appendix B: Lesson plan and material . . . . .	162
Appendix C: Pre- and posttest . . . . .	174
<b>References</b>	<b>180</b>



# List of Figures

1.1	Reichenbach's (1966, p. 290) tense system . . . . .	2
1.2	The German Perfekt according to Rothstein (2008, p. 39) . . . . .	36
2.1	The development of the Perfekt, adapted from Fischer, 2018, p. 282, "Abb. 35: Übersicht Perfektgrammatikalisierung, Perfektexpansion und Präteritumschwund." . . . . .	73
3.1	The Alemannic dialects in Germany, adapted from Streck, 2019, p. 213 and references therein . . . . .	78
3.2	The preterite loss in German dialects, adapted from Fischer, 2021, p. 349, "Abb. 3: Der Präteritumschwund in den Dialekten des Deutschen" . . . . .	79
4.1	A semantic visualization exercise . . . . .	112
4.2	"Translating" semantic visualizations into English and German sentences .	113
4.3	Grandpa talks about the past . . . . .	116
4.4	Tense errors encountered during the lesson. . . . .	117
4.5	Correct answers in the pre- and posttest for the two groups (in %) . . . . .	117
4.6	Answer correctness from pretest to posttest for the four types of items (difference values) . . . . .	118
4.7	Categorization system developed for the qualitative content analysis of ver- bal explanations . . . . .	120
4.8	Proportion of the classification categories for the two groups in pre- and posttest (in percent) . . . . .	122
4.9	Changes in scientific and pre-scientific explanations from pretest to posttest for the two groups (difference values) . . . . .	123
4.10	Differences in quality between verbal explanations and visualizations (RE- SULT13postI) . . . . .	125
4.11	Categorization system developed for the qualitative content analysis of vi- sualizations . . . . .	128
4.12	Proportion of the visualization categories for the two groups in pre- and posttest (in percent) . . . . .	129
4.13	Changes in visual labels from pretest to posttest for the two groups (dif- ference values) . . . . .	129



# List of Tables

1.1	The cross-linguistic distribution of the extended-now perfect . . . . .	40
2.1	Middle High German sources . . . . .	48
2.2	The Perfekt in dialogue, monologue and frame narrative in <i>Der Pfaffe Amis</i>	56
2.3	The distribution of Präteritum and Perfekt in <i>Herzog Ernst</i> , as reported in Zeman (2010, p. 7) . . . . .	57
2.4	Percentages of the <i>hân</i> -Perfekt in non-dialogue passages, reported by Ze- man (2010, p. 8) . . . . .	57
2.5	The distribution of <i>dô</i> across past tenses in <i>Der Pfaffe Amis</i> . . . . .	59
2.6	Adverbials co-occurring with the Perfekt in <i>Der Pfaffe Amis</i> . . . . .	62
2.7	Interplay of Aktionsart and future use in MHG Perfekts . . . . .	65
2.8	The cross-linguistic distribution of the extended-now perfect . . . . .	75
2.9	The extended-now Perfekt in Middle High German . . . . .	75
3.1	Participants of fieldwork study . . . . .	81
3.2	The Perfekt in Middle High German and Swabian . . . . .	102
4.1	Lesson plan (simplified) . . . . .	114
4.2	Contrasting the German/Swabian Perfekt and Präsens with the English present perfect and simple past . . . . .	115
4.3	Contrasts between the English and Swabian perfect . . . . .	131
5.1	Comparing terminologies, Granzow-Emden (2019, S. 166) . . . . .	135



# 1 Introduction

## 1.1 Aims

This dissertation investigates the interplay of tense and aspect in German. One major aim is to describe the properties of the Perfekt in its diachronic and synchronic stages in a formal semantic framework. Thus, this dissertation revolves around the following three phenomena: The grammaticalization of tense, the expansion of perfects and the diachronic development of past meaning.

Crosslinguistically, there is variation when it comes to perfect meaning. Experiential and resultative uses are generally considered core functions of perfects across typologically diverse languages. Due to language-specific properties, however, there is variation with respect to the availability of universal and future uses. Additionally, the present perfect puzzle (Klein, 1992), i.e. whether the perfect is judged ungrammatical when modified by definite past time adverbials varies across languages that possess grammaticalised perfects.

The languages that will be investigated in this dissertation are Middle High German (MHG) and its Modern Swabian descendant. I want to find out how these languages fit into the cross-linguistic landscape of perfect constructions. In order to do that, I will systematically describe the attested uses of the Perfekt in MHG and Swabian. For the MHG data, my main objective is to unite the available findings on the MHG Perfekt (cf. Bybee & Dahl, 1989; Shimazaki, 2002; Szczepaniak, 2009; Zeman, 2010) by providing one coherent analysis that can predict the variety of data. For Swabian, I provide novel fieldwork data which will be compared to previous accounts of perfect constructions and analysed in a systematic fashion. I thus want to shed more light on the question of how past meaning develops and in particular, how perfect meaning develops into past meaning. There is a widely attested development path for perfects (Bybee & Dahl, 1989; Bybee et al., 1994; Lindstedt, 2000) and Southern German dialects are frequently reported as an example for this development (Bybee & Dahl, 1989, p. 74; Lindstedt, 2000, p. 371). By focussing on dialectal variation, I want to gain a more comprehensive picture of perfect and past meaning in German. This is especially relevant because there is no consensus as to the correct analysis of the Perfekt in the literature. In my semantic analyses, I want to reflect areal variation – a task that has been neglected by previous semantic accounts of the Perfekt.

An additional aim of this dissertation is to find out if semantic analyses of tense and aspect prove to be useful in educational contexts and how those analyses could be integrated in Grammar lessons. In order to do this, I will compare research in tense semantics to current practices in grammar instruction in German schools. This dissertation is thus not only relevant to the field of formal semantics but also to linguists working at the interface of descriptive and educational linguistics.

## 1.2 Semantic background

The purpose of this section is to introduce the semantic framework that I am using throughout this dissertation. As described by Eckardt (2012) “[t]ruth conditional semantics has developed a level of exactness, explicitness and sophistication in the semantic analysis of meaning composition which has never been reached [...] by traditional frameworks of semantic description.” (p.2680). Throughout this dissertation, I will show how this semantic toolkit enables us to adequately describe language data that stem from both diachronic and synchronic sources, see Chapter 2 and 3. Formal semantics will also be shown to be useful when applied to issues pertaining to first and second language teaching, see Chapter 4 and 5.

### 1.2.1 Reichenbach’s tense system

In his influential work, Reichenbach (1947/1966) characterizes the English tenses as having a complex structure. In his system, each tense is described as consisting of three time points: the “point of speech”, the “point of the event” and the “point of reference” (p.288). This system is provided in Figure 1.1. According to Reichenbach, tenses do more than stating whether an event occurs before, is simultaneous to or occurs after the speech time. Instead, tenses are regarded as a “three-place structure” or a “three-point structure” (p. 290).

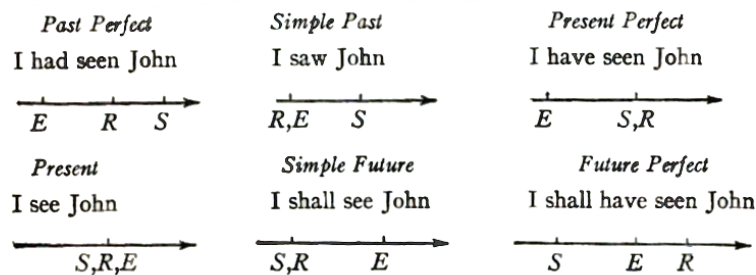


Figure 1.1: Reichenbach’s (1966, p.290) tense system

The past perfect is determined by an event time which precedes the reference time which precedes the speech time. Reichenbach argues that the point of reference R (which I will call reference time in the remainder of this dissertation) can be given by adverbials or also by other tenses that occur in a narration (p.288ff.). Applied to Reichenbach’s example in Figure 1.1, this means that the event of the speaker seeing John must have happened before a certain other time (which may be given by context or an adverbial). While E and R are distinct from each other in the past and future perfect, they are simultaneous in the simple past and in the present tense. For the present perfect, Reichenbach (1947/1966) pursues an anteriority approach. E precedes R and R and S are simultaneous. This is supposed to show that “the past events are seen, not from a reference point situated [...] in the past, but from a point of reference which coincides with the point of speech” (p.289). However, Reichenbach already realised that this analysis of the present perfect is insufficient: “Actual language does not always keep to the schemas given in our tables”

(p. 292). He observes that the event E in (1) “reaches up to the point of speech” (p. 292). I will discuss this use of the present perfect at length in Section 1.3.

- (1) *I have known him for ten years.* (Reichenbach, 1966, p. 292)

Building on the tense system shown in Figure 1.1, Reichenbach states that the duration of E can be extended whenever the English present participle is used, as in the sentences in (2).

- (2) Reichenbach (1966, p. 290)
- a. *I had been seeing John.*
  - b. *I was seeing John.*
  - c. *I have been seeing John.*
  - d. *I am seeing John.*
  - e. *I shall be seeing John.*
  - f. *I shall have been seeing John.*

This can be thought of as a first step towards the analysis of aspect, which has been developed further drastically since Reichenbach’s original system. Let us take the simple past to illustrate this. The basic three-point analysis stays the same but when the duration of the event time is extended, it will no longer be simultaneous to R but include it instead. This is exactly what imperfective aspect does: it relates E and R by inclusion. I discuss the formal implementation of aspect in Section 1.2.4.

## 1.2.2 Compositional interpretation

The framework that I will be adopting here is the one developed in Heim & Kratzer (1998). In this framework, the meaning of a sentence is its truth conditions, i.e. to know the meaning of (3) amounts to knowing what the world would have to look like for the sentence to be true.

- (3) *Amis stole the jewels.*

In particular, the meaning of a sentence consists of the meaning of its parts and how they are combined.<sup>1</sup> The input to any semantic calculation is a phrase structure tree and Heim & Kratzer (1998, p. 43f.) posit the three general principles for phrase structure trees in (4).

- (4)
- a. **Terminal nodes (TN)**  
If  $\alpha$  is a terminal node,  $\llbracket \alpha \rrbracket$  is specified in the lexicon.
  - b. **Non-Branching Nodes (NN)**  
If  $\alpha$  is a non-branching node, and  $\beta$  is its daughter node, then  $\llbracket \alpha \rrbracket = \llbracket \beta \rrbracket$ .
  - c. **Functional Application (FA)**  
If  $\alpha$  is a branching node,  $\{\beta, \gamma\}$  is the set of  $\alpha$ ’s daughters, and  $\llbracket \beta \rrbracket$  is a function whose domain contains  $\llbracket \gamma \rrbracket$ , then  $\llbracket \alpha \rrbracket = \llbracket \beta \rrbracket(\llbracket \gamma \rrbracket)$

<sup>1</sup>This principle of compositionality is generally attributed to Gottlob Frege and was worked out by Lewis (1972), Cresswell (1973) and Montague (1974).

In other words, the system is structure-driven because semantic composition relies on the syntactic input. The system is also type-driven because the semantic types of the daughter nodes decide which node serves as a function and which as an argument. The important ingredients are thus only lexical items and the hierarchical structure while syntactic category labels (NP, VP, ...) and linear order are ignored by semantic composition (Heim & Kratzer, 1998, p. 44).

The semantic types that I will use in this dissertation are provided in (5). Types of denotations are either in the set of individual entities (which have type  $e$ ,  $i$  or  $v$ )<sup>2</sup> or in the set of truth-values (which are of type  $t$ ). Semantic types can be more complex, as illustrated in (5-b) (cf. Heim & Kratzer, 1998, p. 28).

(5) **Semantic types**

- a.  $e$ ,  $i$ ,  $v$  and  $t$  are semantic types
- b. If  $\sigma$  and  $\tau$  are semantic types, then  $\langle\sigma, \tau\rangle$  is a semantic type.
- c. Nothing else is a semantic type.

(6) **Semantic denotation domains**

- a.  $D_e := D$  (the set of individuals)
- b.  $D_i := D$  (the set of time intervals)
- c.  $D_v := D$  (the set of eventualities)
- d.  $D_t := \{0,1\}$  (the set of truth-values)
- e. For any semantic types  $\sigma$  and  $\tau$ ,  $D_{\langle\sigma, \tau\rangle}$  is the set of all functions from  $D_\sigma$  to  $D_\tau$ .

In addition to functional application (FA), I will also make use of the pronouns and traces rule (Heim & Kratzer, 1998, p. 111), namely whenever I am not reconstructing tense operators in their base position but instead interpreting them in the German V2-position, i.e. in the CP head.

(7) **Pronouns and Traces**

If  $\alpha$  is a pronoun or a trace,  $g$  is a variable assignment, and  $i \in \text{dom}(g)$ , then  $\llbracket \alpha_i \rrbracket^g = g(i)$ .

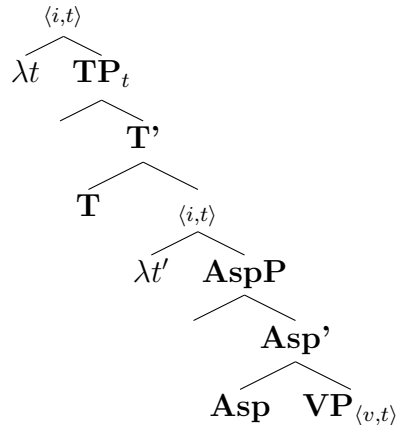
As this dissertation is about the Perfekt, I will describe in the next sections in more detail the syntactic projections and semantic notions that are necessary in order to deal with tense semantics. The LF architecture developed in Beck & von Stechow (2015) will serve as a general guideline. Their basic hierarchy is illustrated in (8).<sup>3</sup>

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<sup>2</sup>Events are objects in the real world. They are countable, they can be anaphorically referred to and can be located in time (Maienborn, 2019).

<sup>3</sup>In the remainder of this dissertation, I use a different schönfinkelization of the arguments for aspect. While Beck & von Stechow (2015) use type  $\langle i, \langle v, t \rangle, t \rangle$ , I use type  $\langle \langle v, t \rangle, \langle i, t \rangle \rangle$ .

(8)



### 1.2.3 Events and lexical aspect

Davidson (1967) was the first to argue for events as arguments of verbs. In pre-Davidsonian semantics, transitive verbs were treated as a relation between the subject and the direct object, see (9-b). In contrast, Davidson treats transitive verbs as a three-place relation between the subject, the object and an event (Maienborn, 2019), as illustrated in (9-c). Only by adding this additional event argument can we refer to the action itself which can be modified by adverbials like *slowly* or *with a knife*. These, as Davidson argues, do not refer to Jones nor to the toast. What is modified is the event itself.

- (9) a. Jones buttered the toast.  
 b. BUTTER (jones, the toast)  
 c.  $\exists e.$ [BUTTER (jones, the toast,  $e$ )]

One of the reasons why Davidson's approach has been so attractive is because it can be combined with Vendler's (1957) classification of 'Aktionsarten', also called 'lexical aspect.' One could say that while Davidson showed that verbs need an event argument, Vendler illustrated the different appearances in which events occur.<sup>4</sup> Lexical aspect or Aktionsart describes the inherent meaning of verb phrases which Vendler (1957) subdivides into four different classes: achievements, accomplishments, activities and states.

As explained by Maienborn (2019), eventualities share certain characteristics but also differ from each other: Accomplishments and achievements are telic eventualities while activities (also called processes) and states do not have a culmination point and are not telic. Achievements, accomplishments and activities have a dynamic component while states are static. And lastly, states, activities and accomplishments are durative, while achievements are not.

Ever since Bach (1986), the term 'eventuality' is used to refer to events in the narrow sense (i.e. accomplishments and achievement), as well as to processes and states. In the

<sup>4</sup>While Davidson had based his argument only on activity verbs, it is now common practise to assume that all verb classes or Aktionsarten have an event argument. This assumption goes back to the Neo-Davidsonian turn (cf. Higginbotham (1985, 2000) and Parsons (1990, 2000)).

formal semantic framework adopted here, the idea that all verb phrases have an event argument is reflected in the make-up of the VP: All verb phrases are assumed to be of type  $\langle v, t \rangle$ . The variables that are commonly used for eventualities are  $e$  for events (accomplishments, achievements) and processes (activities) and  $s$  for states.

### 1.2.4 Viewpoint aspect

Aspect refers to the internal temporal make-up of eventualities (Comrie, 1976; Smith, 2012). An eventuality can either be regarded as concluded, i.e. perfective or as ongoing, i.e. imperfective. The majority of formal semantic approaches focus on English grammar in which perfective is the unmarked case and imperfective is marked by the progressive *-ing* form (see Beck & von Stechow, 2015 for a discussion). For German, the literature is less clear as there is no morphologically marked aspect distinction in the language. Löbner (2002) observes that “the distinction between imperfective and perfective aspect is not only unmarked in German but also not predictable from the aspectual verb class (e.g. according to Vendler’s classification)” (p. 375). He adds that German utterances do not have a neutral viewpoint aspect: In order to arrive at a sentence meaning, a clear aspectual meaning needs to be assigned. Smith (2012) claims that German has “neutral viewpoint” which “allows bounded and unbounded interpretations” (p. 2589).

Throughout this dissertation, I will assume that German has an Aspect Phrase (AspP) which scopes over the VP (cf. Beck & von Stechow, 2015 for English). As already observed by Klein (1994), viewpoint aspect is a relation between the reference time R and the event time E. It takes a time  $t$  and a property of events  $\langle v, t \rangle$  as input. It then existentially binds the eventuality argument and relates the reference time to the event time of the embedded VP (Klein, 1994; Beck & von Stechow, 2015). In the case of perfective aspect, the event time  $\tau(e)$  is included in the reference time, see (10). Imperfective aspect denotes the inclusion of the reference time into the event time, see (11). The eventuality is viewed as ongoing and the left and right boundary are not included, i.e. an imperfective eventuality is regarded as unbounded.

$$(10) \quad \llbracket \text{PERFECTIVE} \rrbracket = [\lambda P_{\langle v, t \rangle}. [\lambda t_i. \exists e[\tau(e) \subseteq t \ \& \ P(e)]]]$$

$$(11) \quad \llbracket \text{IMPERFECTIVE} \rrbracket = [\lambda P_{\langle v, t \rangle}. [\lambda t_i. \exists e[t \subseteq \tau(e) \ \& \ P(e)]]]$$

In English, perfective aspect on telic eventualities is usually allowed with *in*-adverbials but disallowed with *for*-adverbials, see (12). Imperfective aspect on telics and perfective aspect on activities are a mirror image, see (13) (cf. Iatridou et al., 2001, p. 207; Smith, 2012, p. 2583).

- (12) a. *Katie read the article in an hour.*  
 b. \**Katie read the article for an hour.*

- (13) a. \**Katie was reading the article in an hour.*  
 b. *Katie was reading the article for an hour.*  
 c. \**Katie played football in an hour.*  
 d. *Katie played football for an hour.*

It seems to me that in German, this restriction is not as strong. According to my intuition, the Perfekt (and the Präteritum but I do not use it in spoken speech) receives a perfective interpretation with *innerhalb*-adverbials and an imperfective interpretation with *lang*-adverbials.<sup>5</sup> This illustrates that the German Perfekt is compatible with a perfective, see (14-a) and an imperfective aspect interpretation, see (14-b).

- (14) a. *Katie hat den Artikel innerhalb von einer Stunde gelesen.*  
 Katie has the article in of one hour read.PST.PTCP.  
 ‘Katie read the article in one hour.’  
 b. *Katie hat den Artikel eine Stunde lang gelesen.*  
 Katie has the article one hour long read.PST.PTCP.  
 ‘Katie was reading the article for one hour.’

In order to avoid underspecification, German has a variety of lexical and periphrastic ways to express imperfective aspect (cf. Rogatcheva, 2014). For example, the imperfective Perfekt can be modified by *gerade*, *im Moment* ‘at the moment’ as well as by a nominalised construction to underline that the eventuality is ongoing. The sentences in (15-a)–(15-c), which are based on my own intuitions, reflect this observation.<sup>6</sup> Based on these data, I believe it is justified to assume that German can express both imperfective and perfective meanings. These meanings are anchored in two separate possible heads of the AspP with the lexical entries provided above.

- (15) a. *Ich bin gerade am Artikel Lesen gewesen.*  
 I am just.now at article read.NOMINALISED be.PST.PTCP.  
 ‘I was reading the article at that moment.’  
 b. *Mariam hat gerade den Apfel gegessen, als es an der Tür geklingelt hat.*  
 Mariam has just.now the apple eat.PST.PTCP. when it at the door  
 ring.PST.PTCP.  
 ‘Mariam was eating an apple when the doorbell rang.’  
 c. *Dr Bernd isch grad am Schaffa gwäa, mo d*  
 The Bernd is just.now at work.NOMINALISED be.PST.PTCP. when the  
*Beate num komme isch.*  
 Beate to.his.place come.PST.PTCP. is  
 ‘Bernd was working when Beate came to his place.’

Some authors assume perfect to be an additional aspect in English but also in German (Klein, 1994; Löbner, 2002). This anteriority approach to perfect aspect will be addressed in Chapter 5. The lexical entry for perfect aspect is given in (16).

- (16)  $[[\text{PERFECT}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e[\tau(e) < t \ \& \ P(e)]]]$

<sup>5</sup>For an empirical study on the processing of aspect in English and German, I refer the reader to Bott & Hamm (2014).

<sup>6</sup>My intuitions are influenced by Swabian, an Upper German dialect, as well as by the *Regiolekt* ‘regional language’ spoken in Baden-Württemberg.

### 1.2.5 Tense

Tense locates eventualities in time. In particular, tense refers to the grammaticalised relation between reference time and speech time (Comrie, 1985; Klein, 1994; Smith, 2012).

While Reichenbach (1947) regarded the meaning of the English tenses as a relation between reference time (R), event time (E) and speech time (S)<sup>7</sup>, Neo-Reichenbachian approaches like Klein (1994) refined Reichenbach's original idea. As described above, Klein (1994) regards aspect as the relation between R and E, whereas tenses denote the relation between S and R.

In the framework adopted here, semantic tenses sit in the T-position. The TP-layer is on top of AspP. With regards to the semantics of past tenses, there are two main analyses: One is to regard past tense as a variable over time in a similar way to pronouns (Partee, 1973), the other is to assume an existential quantifier analysis (Ogihara, 1996; Kusumoto, 2005; von Stechow, 2009). An illustration is provided below.<sup>8</sup> The pronominal approach is provided in (17-a) and the existential approach is given in (17-b).

(17) *Amis laughed.*

- a.  $\llbracket \text{Amis PAST}(t_i) \text{ laugh} \rrbracket^{g,C} = \text{Amis laughed at } g(t_i)$ ,  
where  $g(t_i)$  is a time that is salient in context  $C$  and  $g(t_i) < t_C$ .
- b.  $\llbracket \text{Amis PAST laugh} \rrbracket^{g,C} = \exists t[t < t_C \ \& \ \text{Amis laughed at } t]$

In this dissertation, I will pursue an existential account to past tenses. As discussed in von Stechow (2009) and von Fintel & Heim (2011), the pronominal account to past tense can be reconciled with an existential account by assuming that the past tense operator comes with an additional context restriction  $C$ , as indicated in (18). I will ignore this detail in the remainder of this dissertation.

(18)  $\llbracket \text{PAST} \rrbracket^g = [\lambda C_{\langle i,t \rangle}. [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t'[t' < t \ \& \ C(t') \ \& \ P(t')]]]]]$

When a past tense sentence like (3) repeated here as (19-a) is uttered at the speech time, the eventuality expressed is true if it occurred before the speech time. This is achieved by inserting  $t^*$  for  $t$  in (19-b) which results in the truth conditions in (19-c). The respective LF is provided in (20).<sup>9</sup>

- (19) a. *Amis stole the jewels.*
- b.  $\lambda t. \exists t'[t' < t \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{steal}(e)(\text{the unique } z \text{ s.t. } z \text{ are jewels})(\text{Amis})]]]$
- c.  $\exists t'[t' < t^* \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{steal}(e)(\text{the unique } z \text{ s.t. } z \text{ are jewels})(\text{Amis})]]]$

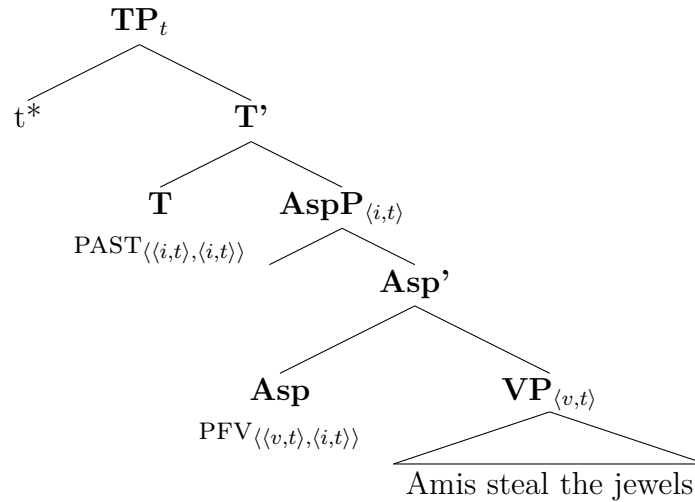
<sup>7</sup>See Rothstein (2008) for a good summary.

<sup>8</sup>This is adapted from Chen et al. (2021, p. 713).

<sup>9</sup>An alternative option would be to already insert  $t^*$  in the lexical entry for PAST:

$\llbracket \text{PAST} \rrbracket = [\lambda P_{\langle i,t \rangle}. \exists t'[t' < t^* \ \& \ P(t')]]]$

(20)



## 1.3 Contrasting perfect and past semantics

### 1.3.1 Diagnostics for an extended-now analysis

As stated by Chen et al. (2021), the extended-now (XN) “theory was specifically designed to account for the properties of the perfect in English (and related languages)” (p. 743). In this section, I will discuss those well-known properties of the English present perfect (McCoard, 1978; Iatridou et al., 2001; Portner, 2003; Matthewson et al., 2015; Grønn & von Stechow, 2020, among others). Throughout this dissertation, these properties will be used as a set of diagnostics to distinguish a true ‘perfect’ with an extended-now interpretation from a semantic past tense interpretation. In Section 1.4, I expand this set of diagnostics and illustrate that experiential and resultative are the core uses of extended-now accounts while the other uses can be subject to systematic cross-linguistic variation.

**The experiential use** of the perfect asserts that an event happened in the past and is relevant for the speaker’s experience at the speech time (Grønn & von Stechow, 2020, p. 3). Experiential perfects occur with telic and atelic verbs<sup>10</sup> and are quantificational in that the relevant past event is required to have appeared at least once (Mittwoch, 2008; Chen et al., 2021). Repeatability of the underlying event can be overtly marked by adverbials, as illustrated in (21)–(22). A pitch accent on *have* is similar to overt adverbs of quantification like *once* or *occasionally* (Mittwoch, 2008), see (23).

- (21) *I have occasionally driven without my license.*  
(Mittwoch, 2008, p. 324)

<sup>10</sup>As observed by Mittwoch (2008, 327f.), the perfect combined with telic verb phrases can lead to experiential uses in the right context, i.e. the sentence *I have lost my passport*, if embedded in a discourse about how easily the speakers loses their personal belongings, can be understood as an event that happened in the past. The same sentence can also receive a resultative reading.

## 1 Introduction

- (22) *Since 1976 I have been hospitalized six times.*  
(Grønn & von Stechow, 2020, p. 2268)
- (23) *I HAVE eaten frogs' legs but I can't say I liked them.*  
(Mittwoch, 2008, p. 326)
- (24) *I have seen worse things in my life.*  
(Dahl & Velupillai, 2013)
- (25) *Have you ever been to America?*  
(König & Gast, 2018, p. 91)

**The resultative use** of the perfect arises only with telic verbs, i.e. with achievements and accomplishments which both involve a change of state. There is an implication that the result state of the embedded eventuality still holds at the utterance time (Iatridou et al., 2001; Portner, 2003; Mittwoch, 2008; Grønn & von Stechow, 2020), as indicated below:

- (26) *Where have you buried the poor body?*  
(Grønn & von Stechow, 2020)
- (27) *Mary has read Middlemarch.*  
(Portner, 2003, p. 459)
- (28) Policeman (on road): *Can I see your license please.*  
Driver: *I've left it at home.*  
(Mittwoch, 2008, p. 324)

When a resultative perfect is conjoined with a clause negating that the result state holds at the speech time, the utterance is judged ungrammatical by native speakers:

- (29) (Matthewson et al., 2015, p. 6)
- a. *John bought a new car, but he sold it.*
- b. \**John has bought a new car, but he sold it.*

**The universal use** only occurs with habituales, statives or progressive verbs, i.e. with homogeneous eventualities (Grønn & von Stechow, 2020). As shown in (30)–(33), the eventuality expressed by the participle starts in the past, includes the speech time and holds throughout the interval that ranges from the speech time to some point in the past. Iatridou et al. (2001, 196ff.) observe that the universal reading only arises if the perfect is modified by an appropriate adverbial like *since 2000* or *for nine years*.<sup>11</sup> The absence of these plain *since*-adverbials in (30)–(31) would lead to an experiential reading. Individual-level statives require modification by durative adverbials, otherwise the sentence gets ungrammatical, as shown by Iatridou et al. (2001) and their example in (33).

- (30) *Since 2000, Alexandra has lived in LA.*  
(Bhatt & Pancheva, 2005, p. 1)

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<sup>11</sup>See Portner (2003) for a discussion and some counter-arguments against Iatridou et al.'s idea that universal perfects arise with homogeneous eventualities.

- (31) a. *Tom has been sick since December.*<sup>12</sup>  
 b. *Mary has been singing this song since this morning.*  
 (Matthewson et al., 2015, p. 6)
- (32) *I have known Jimmie now for nine years.*  
 (Grønn & von Stechow, 2020, p. 2270)
- (33) *He has had brown eyes \*(since he was born).*  
 (Iatridou et al., 2001, p. 197)

According to Iatridou et al. (2001, p. 195), the eventuality expressed by the participle includes the speech time by assertion: whenever universal perfects are conjoined with clauses that negate the eventuality to hold at the speech time, the sentence becomes contradictory:

- (34) (Iatridou et al., 2001, p. 195)  
 a. *\*She has been sick at least/ever since 1990 but she is fine now.*  
 b. *\*She has always lived here but she doesn't anymore.*

**The present perfect puzzle** Even though, as already established, perfects can make reference to events that occurred in the past, modifying the English present perfect with definite past time adverbials results in ungrammaticality (McCoard, 1978; Bhatt & Pancheva, 2005; Klein, 1992). This phenomenon was called *present perfect puzzle* by Klein (1992).

- (35) *\*Tom has gone to Hawaii yesterday/two weeks ago/last year.*  
 (Matthewson et al., 2015, p. 6)
- (36) *I have not had breakfast today/this morning/\*at eight (said before noon).*  
 (König & Gast, 2018, p. 89)
- (37) *\*Chris has left York yesterday.*  
 (Klein, 1992, p. 525)

**Pragmatic effects** The English present perfect gives rise to specific pragmatic effects that have been called ‘current relevance’, ‘lifetime effect’ and ‘repeatability’ (Portner, 2003; Matthewson et al., 2015). It is ungrammatical to use the present perfect when the subject is no longer alive, cf. McCoard (1978).

- (38) *\*Michael Jackson has visited New York.*  
 (39) *\*Isaac Newton has discovered the generalised binomial theorem.*

<sup>12</sup>According to Iatridou et al. (2001), this sentence is expected to be ambiguous between a universal and an experiential reading. Either, Tom has been sick at least once in the interval that stretches from now to December or Tom has been sick throughout this interval. To force the universal reading, one would have to replace *since December* with *at least since December* or *ever since December*. According to Iatridou et al. (2001, p. 199), adverbials that make a universal reading possible are plain *since* and *for*-adverbials. Adverbials which force a universal reading are: *at least since*, *ever since*, *always* or *for five days now*. For more information on why the distinction between universal and experiential reading is grammatical, see Iatridou et al. (2001, 193f.).

The same notion is illustrated in (40):

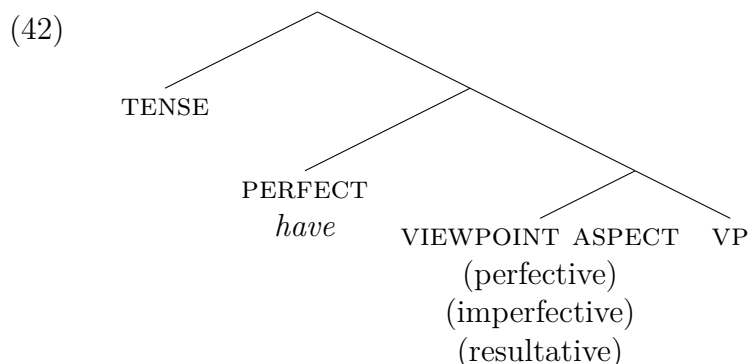
- (40) (Matthewson et al., 2015, p. 6)  
 Context: You are teaching a history lesson. You tell the kids:  
 a. *Columbus discovered America/Hitler killed himself.*  
 b. \**Columbus has discovered America/Hitler has killed himself.*

In English, the present perfect can only be used if the embedded eventuality has an immediate relevance to the present situation.

### 1.3.2 Extended-now analysis

The best-known and most adequate formal semantic approach to the English present perfect is the extended-now (XN) analysis (McCoard, 1978; Iatridou et al., 2001; Portner, 2003; Bhatt & Pancheva, 2005; Beck & Gergel, 2014; Grønn & von Stechow, 2020). The basic idea, which goes back to McCoard (1978), is that the perfect makes available a time interval which extends from the speech time into the past. As explained by Portner (2003), “[t]he intuitive idea of the Extended Now is that we typically count a longer stretch of time than the momentary “now” as the present for conversational purposes” (p. 474). Formally, this notion is implemented by assuming a perfect operator that scopes over viewpoint aspect and sits below the tense projection (Iatridou et al., 2001), see the LF in (42). This syntactic structure is justified by the order of the auxiliaries: The fact that the perfect scopes above the AspP is reflected in the relative order of auxiliaries in (41-a). The perfect scoping below the AspP would lead to the structure in (41-b). In English, the perfect operator is realised by the auxiliary *have* (cf. von Stechow, 2002).<sup>13</sup> The different uses of the perfect arise systematically due to specific combinations of semantic building blocks. These will be discussed in turn.

- (41) (Iatridou et al., 2001, p. 217)  
 a. *He has been singing.*  
 b. \**He is having sung.*



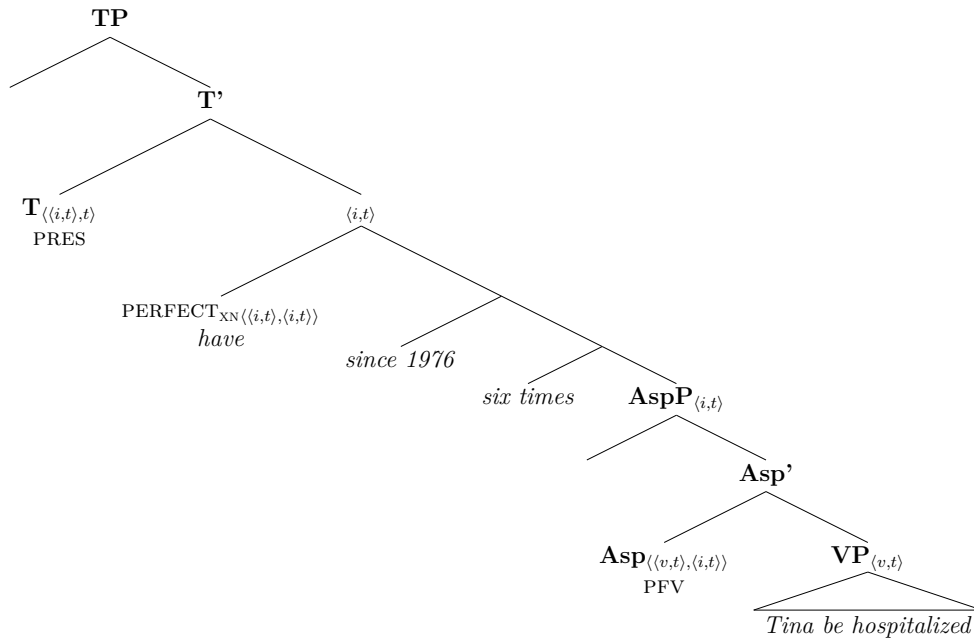
<sup>13</sup>Additional evidence for this assumption is discussed by Iatridou et al. (2001): In English, “reduced relatives containing a perfect are not allowed” (p. 219). Their example is *I saw the boy \*(who has) eaten the fish*. This is in contrast to languages that employ a *be*-perfect like Bulgarian where such reduced relative clauses are possible. They conclude that in English, the semantics of the perfect is denoted by the auxiliary *have*.

$$(43) \quad \llbracket have_{XN} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \& P(t')]]],$$

where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$

**The experiential use** In the experiential use of the English present perfect, the embedded eventuality lies within the extended now (XN), also called the perfect time span (PTS), and occurs at least once within the XN. In the sentence in (44), the right boundary of the XN is the speech time, the left boundary is provided by the adverbial *since 1976* in (44). However, context can also provide the left boundary of the XN. The experiential use typically arises with perfective aspect,<sup>14</sup> as illustrated in (44). Below, I use the lexical entry for *since* as discussed in Grønn & von Stechow (2020) and references therein. The truth conditions of (44) are provided in (46).

$$(44) \quad \textit{Since 1976, Tina has been hospitalized six times.}$$



- $$(45) \quad \begin{aligned} \text{a.} \quad & \llbracket \text{PRES} \rrbracket = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \& P(t)], \text{ where } t_c \text{ is the speech time} \\ \text{b.} \quad & \llbracket have_{XN} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \& P(t')]]], \\ & \text{where } XN(t',t) \text{ iff } t \text{ is a final subinterval of } t' \\ \text{c.} \quad & \llbracket since(t) \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t'_i. P(t') \& LB(t, t')], \\ & \text{where } LB(t, t') = 1 \text{ iff } t \text{ is an initial subinterval of } t' \\ \text{d.} \quad & \llbracket \text{PFV} \rrbracket = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) \subseteq t \& P(e)]]] \\ & \text{if } P \text{ denotes a set of events} \end{aligned}$$

$$(46) \quad \llbracket (44) \rrbracket = \exists t [t = t_c \& \exists t' [XN(t',t) \& \exists_6 e [\tau(e) \subseteq t' \& e \text{ is an event where Tina is hospitalized} \& LB(1976, t')]]]$$

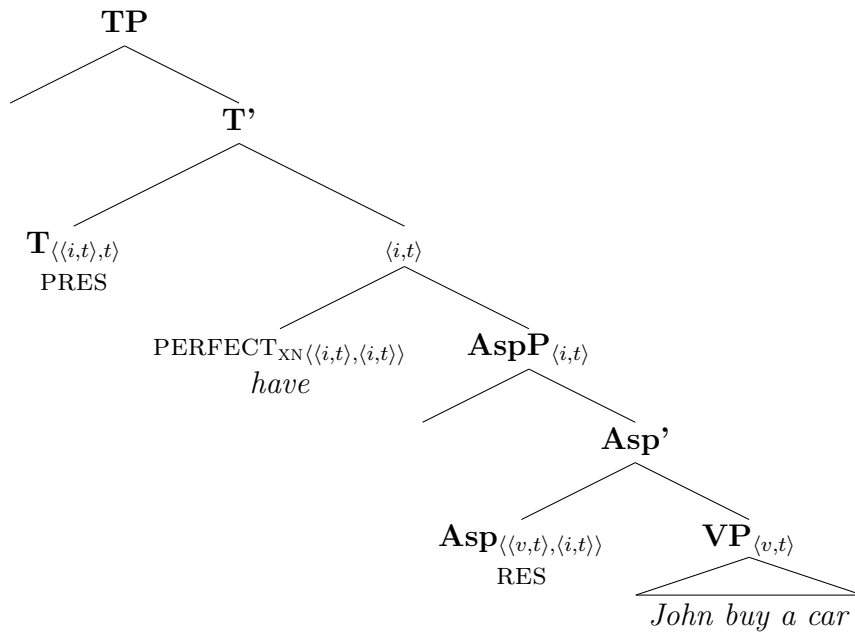
'There is a time interval  $t$  which is the speech time and there is a perfect time

<sup>14</sup>However, the experiential use can also arise with imperfective aspect. As observed by Iatridou et al. (2001), the sentence *Since 1990, I have been sick* is ambiguous between a universal and an experiential reading. Given that states like *be sick* are unbounded, a perfective aspect would not achieve the correct truth conditions - neither for the universal nor for the experiential use.

span which extends backwards from the speech time and has the speech time as its final subinterval and there are six events whose run time are included in the perfect time span and  $e$  are events where Tina is hospitalized and the left boundary of the perfect time span is 1976.’

**The resultative use** only arises with telic verbs (Matthewson et al., 2015; Grønn & von Stechow, 2020) like in (47-a), repeated from (29-b) above. The fact that the result state of the eventuality still holds at the speech time is modelled by the lexical entry for resultative aspect by Bhatt & Pancheva (2005), as illustrated in (48-c). The truth conditions are given in (49).<sup>15</sup>

- (47) a. *John has bought a new car.*  
 b. \**John has bought a new car, but he sold it.*



- (48) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
 b.  $[[\text{have}_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[\text{RES}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e_{1v} \exists e_{2v} [\text{Result}(e_2, e_1) \ \& \ t \subseteq \tau(e_2) \ \& \ P(e_1)]]]$ ,  
 where  $\text{Result}(e_2, e_1)$  iff  $e_1$  is a telic event and  $e_2$  is the result state of  $e_1$   
 (with “result state” to be understood as Kratzer’s 1994 “target state”)
- (49)  $[[\text{John has bought a new car}]] = 1$  iff  $\exists t [t = t_c \ \& \ \exists t' [XN(t',t) \ \& \ \exists e_1 \exists e_2 [\text{Result}(e_2, e_1) \ \& \ t' \subseteq \tau(e_2) \ \& \ e_1$  is a buying event where John buys a new car]]]  
 ‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which has  $t$  as its final subinterval and there is an event  $e_1$  which is a buying event where John buys a car and there is an event  $e_2$  which is the result state of  $e_1$  and the time interval  $t'$  is included or equal to the run time of  $e_2$ .’

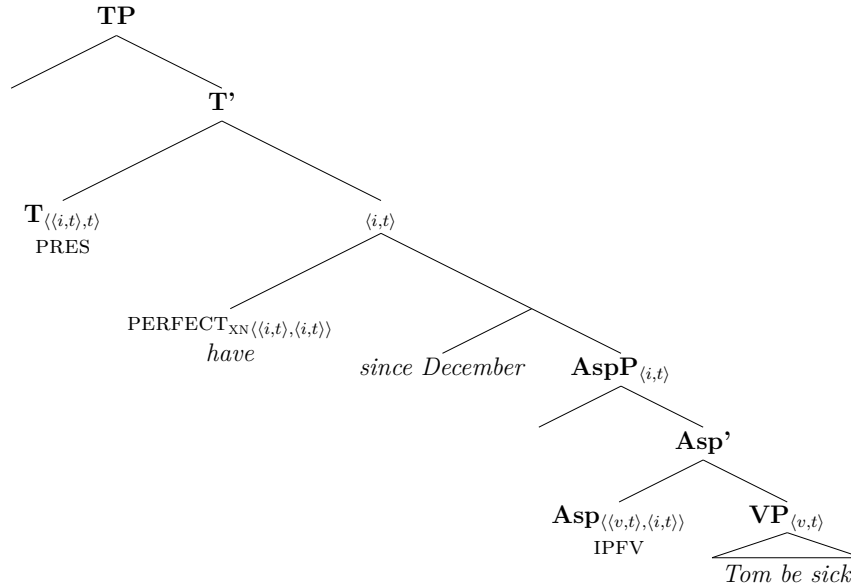
<sup>15</sup>Bhatt & Pancheva (2005) claim that a sentence like the one in (47-a) can also receive an experiential reading. What would change in the composition is to assume a perfective aspect instead of the resultative aspect.

The run time of the result state  $e_2$  includes the extended-now interval  $t'$ . Since the xN-interval includes the speech time, it follows that the result state (i.e. the state of John owning a car) also includes the speech time. Thus, this analysis predicts the oddness of (29-b), repeated here as (47-b). It is contradictory for the car to be in the state of being bought while being in the state of being sold at the same time by the same agent.

**The universal use** According to Iatridou et al. (2001), it is a defining characteristic of universal uses of the perfect that the embedded eventuality holds throughout the perfect time span. Applied to the sentence in (51), repeated from (31-a) above, the stative eventuality of being sick is required to hold throughout the perfect time span. In more formal terms, the universal use of the English present perfect is predicted to arise whenever the PERFECT-operator (overtly expressed by the auxiliary *have*) is combined with homogeneous eventualities. In English, homogeneity is expressed through statives and progressives which are eventualities for which the subinterval property holds, see (50). As observed by Iatridou et al. (2001), adverbials are an additional necessary ingredient for universal perfects to arise.<sup>16</sup> While the adverbials *since* and *for five days* make a universal reading possible, the adverbials *at least since*, *ever since*, *always* and *for five days now* require a universal reading (Iatridou et al., 2001, p. 199).<sup>17</sup>

(50) Subinterval property: The subinterval property holds of an interval iff the eventuality that holds at that interval holds of every subinterval of that interval (Iatridou et al., 2001, p. 226 and reference therein)

(51) *Tom has been sick since December.*



<sup>16</sup>According to Iatridou et al. (2001), the sentence *I have been cooking*, which lacks a durative adverbial, is not a universal perfect “as nothing is asserted about the utterance time (the sentence can be continued by *but I’m done now*).” (p. 199)

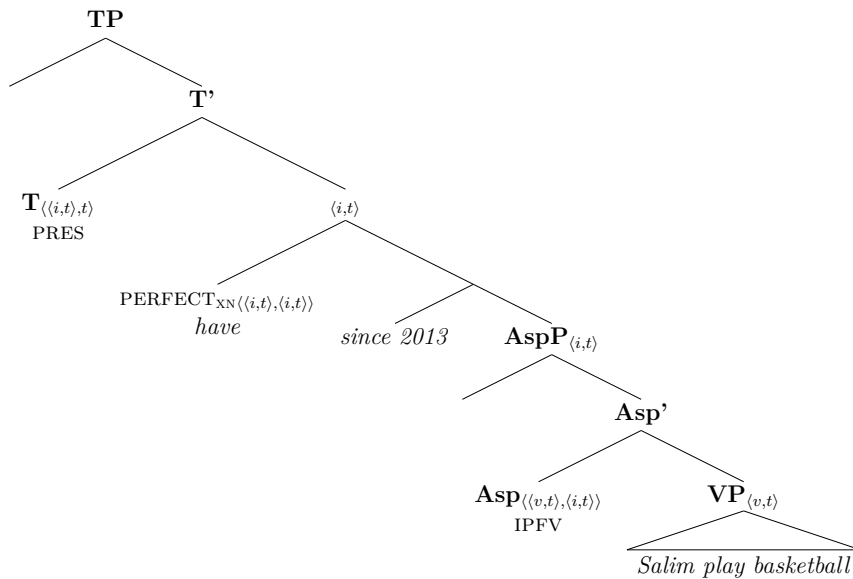
<sup>17</sup>See Portner (2003) for a discussion and some counter-arguments against Iatridou et al.’s idea that universal perfects arise with homogeneous eventualities.

## 1 Introduction

- (52) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
 b.  $[[\text{have}_{\text{XN}}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[\text{since}(t)]] = [\lambda P_{\langle i,t \rangle}. [\lambda t'_i. P(t') \ \& \ \text{LB}(t, t')]]$ ,  
 where  $\text{LB}(t,t') = 1$  iff  $t$  is an initial subinterval of  $t'$   
 d.  $[[\text{IPFV}_{\text{states}}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists s [t \subseteq \tau(s) \ \& \ P(s)]]]$   
 if  $P$  denotes a set of states
- (53)  $[[\text{(51)}]] = \exists t [t = t_c \ \& \ \exists t' [XN(t',t) \ \& \ \exists s [t' \subseteq \tau(s) \ \& \ \text{Tom be sick}(s) \ \& \ \text{LB}(\text{December}, t')]]]$   
 ‘There is a time  $t$  which is the speech time and there is a time  $t'$  which extends backwards from the speech time and includes the speech time as a final subinterval and there is a state  $s$  whose run time time includes or is equal to the extended-now time span  $t'$  and  $s$  is a state of Tom being sick and the left boundary of the time span  $t'$  is December.’

In (54)<sup>18</sup>, the universal use arises through the combination of the PERFECT-operator *have*, imperfective aspect and an activity predicate. Imperfective aspect, overtly realised by the progressive, contributes the unboundedness or homogeneity here.

- (54) *Salim has been playing basketball since 2013.*



<sup>18</sup>According to Iatridou et al. (2001) and Bhatt & Pancheva (2005), such a sentence is ambiguous between an experiential and a universal reading. The experiential reading can be modelled by assuming an additional covert ONCE-operator below, taken from Bhatt & Pancheva (2005, p. 4). ONCE sits below the PERFECT-operator. Note also that the left and right boundary are exclusive in the experiential reading and inclusive in the universal one (Kiparsky, 2002, p. 118).

- (i)  $[[\text{ONCE}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' \subseteq t \ \& \ P(t')]]]$

The resulting truth conditions would be:

$$\exists t' [XN(t',t) \ \& \ \exists t'' [t'' \subseteq t' \ \& \ \exists e [t'' \subset \tau(e) \ \& \ e \text{ is an event of Salim playing basketball}]]]$$

- (55) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)]$ , where  $t_c$  is the speech time  
 b.  $[[\text{have}_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
     where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[\text{since}(t)]] = [\lambda P_{\langle i,t \rangle}. [\lambda t'_i. P(t') \ \& \ \text{LB}(t, t')]$ ,  
     where  $\text{LB}(t,t') = 1$  iff  $t$  is an initial subinterval of  $t'$   
 d.  $[[\text{IPFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [t \subseteq \tau(e) \ \& \ P(e)]]]$   
     if  $P$  denotes a set of events
- (56)  $[[\text{(54)}]] = 1$  iff  $\exists t [t = t_c \ \& \ \exists t' [XN(t',t) \ \& \ \text{LB}(2013,t') \ \& \ \exists e [t' \subseteq \tau(e) \ \& \ \text{Salim plays basketball}(e)]]]$   
 ‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which has  $t$  as its final subinterval and its left boundary is 2013 and there is an event whose run time includes or is equal to  $t'$  and it is an event of Salim playing basketball.’

Given the truth conditions in (56), the XN-approach correctly predicts that the sentence *Salim has been playing basketball since 2013* is true iff Salim is still playing basketball. Applied to the sentence in (51) with the stative verb phrase *be sick*, the analysis correctly predicts that the sentence is true iff Tom has been sick in the past and is still sick at the speech time.

**The present perfect puzzle** As already established in Section 1.3.1, the English present perfect cannot co-occur with definite past time adverbials; native speakers judge this combination as ungrammatical (cf. McCoard, 1978; Bhatt & Pancheva, 2005; Klein, 1992). This phenomenon was called *present perfect puzzle* by Klein (1992).

The ungrammaticality of the combination of the present perfect with adverbials like *yesterday* follows from the analysis established so far; the combination of the respective ingredients results in a logical contradiction (cf. Bhatt & Pancheva, 2005; Grønn & von Stechow, 2020). This is illustrated in (57) and (58).

- (57) The perfect operator  $\text{have}_{XN}$  has scope over *yesterday*
- a. \**Tristan has won the fight yesterday.*  
 b.  $[_{TP} \text{PRES} [\text{have}_{XN} [\text{yesterday} [_{AspP} \text{PFV} [_{VP} \text{Tristan win the fight} ]]]]]]$   
 c.  $[[\text{have}_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
     where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 d.  $[[\text{yesterday}]_c] = [\lambda P_{\langle i,t \rangle}. [\lambda t. t \subseteq \text{yesterday}_c \ \& \ P(t)]]]$   
 e.  $\exists t [t = t_c \ \& \ \exists t' [XN(t',t) \ \& \ t' \subseteq \text{yesterday} \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{the battle})(\text{Tristan})]]]$   
 ‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which extends backwards from the speech time and has the speech time as a final subinterval and the time interval  $t'$  is included in *yesterday* and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is a winning event of the fight by Tristan’  
**contradiction:** the XN interval which also includes the speech time is a subset of *yesterday*, i.e. the speech time is a subset of *yesterday*

- (58) *yesterday* has scope over the perfect operator  $have_{XN}$
- a. \**Tristan has won the battle yesterday.*
  - b.  $[_{TP} PRES [yesterday [have_{XN} [_{AspP} PFV [_{VP} Tristan win the fight ]]]]]$
  - c.  $[[have_{XN}] = [\lambda P_{(i,t)}. [\lambda t_i. \exists t' [XN(t',t) \& P(t')]]],$   
           where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$
  - d.  $\exists t[t=t_c \& t \subseteq \text{yesterday} \& \exists t'[XN(t',t) \& \exists e[\tau(e) \subseteq t' \& WIN(e)(\text{the battle})(Tristan)]]]$   
       ‘There is a time interval  $t$  which is the speech time and the speech time is included in *yesterday* and there is a time interval  $t'$  which extends backwards from the speech time and has the speech time as a final subinterval and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is a winning event of the fight by Tristan’  
       **contradiction:** the speech time is a subset of *yesterday*

**Interim Summary** Summing up, I have shown that the English present perfect and its stereotypical uses can be modelled with an extended-now analysis (cf. McCoard, 1978; Iatridou et al., 2001; Portner, 2003; Bhatt & Pancheva, 2005; Beck & Gergel, 2014; Grønn & von Stechow, 2020). The different types of uses arise due to specific combinations of the semantic ingredients at hand: the interplay of the perfect operator overtly realised as the auxiliary *have*, tense, viewpoint aspect and the type of Aktionsart embedded in the predicate. It is important to note here that viewpoint aspect (perfective and imperfective) and Aktionsart are interrelated. As observed by Iatridou et al. (2001), only non-stative, unbounded eventualities can be morphologically marked with the progressive - which in the semantics is reflected through imperfective aspect.

The availability of the universal use is predicted whenever the PERFECT-operator which introduces an XN-interval is combined with a homogeneous eventuality which is marked with imperfective aspect and which is modified by an adverbial like *since* or *for*. “Perfective aspect [...] blocks the subinterval property” and thus universal uses cannot arise with perfective aspect (cf. Iatridou et al., 2001, p. 207). This is because perfective marking means that the embedded eventuality is completed, “which for telics means achievement of the goal, and for atelics termination” (Iatridou et al., 2001, p. 207).

Finally, it is crucial to see that the PERFECT-operator used here does not convey anteriority. It only contributes the extended-now interval and says that the embedded eventuality is part of this interval. (cf. Iatridou et al., 2001, p. 213). The completion of the eventuality as in *I have bought a car* is inherited from further down the tree, i.e. from the interplay of Aktionsart und viewpoint aspect.

### 1.3.3 Diagnostics for a past analysis

In this section, I discuss a set of diagnostics for a past analysis of “perfects”<sup>19</sup>. According to Bybee & Dahl (1989), there is a universal grammaticalization path of perfects, as indicated in (59).

- (59) resultatives > perfect > perfective/past

<sup>19</sup>I use the quotation marks here to indicate that these constructions are not true perfects anymore.

While I analyse true perfects with an extended-now analysis (see Section 1.3.2), there are also “perfects” that have developed into past tenses. According to Bybee & Dahl, these are the ones that have progressed further on the development path. I discuss the diagnostics for a past semantics of those “perfects” below:

**The felicity of the perfect in definite past contexts** A “perfect” is no longer a true perfect if it can be combined with definite past time adverbials, i.e. there is no present perfect puzzle as in English, see examples (57) and (58) above.

**No true resultative uses** While true perfects have a close connection to the speech time due to their extended-now semantics and give thus rise to resultative uses, “perfects” with past semantics do not. When telic eventualities are combined with the “perfect”, there is no contradiction when the result state is negated (cf. example (47)).

**No universal uses** In their diachronic development, true perfects may lose their close connection to the speech time (cf. Bybee & Dahl, 1989) and the focus shifts from the current relevance of an eventuality to the eventuality itself. Once this step has taken place, universal uses, which include the speech time by assertion, should no longer be possible. In other words, if a perfect no longer denotes an extended-now interval but instead an anteriority relation, universal uses are not predicted to arise.<sup>20</sup>

**Future uses** The availability of future uses is not per se excluded once a perfect has developed into a past tense. Another important ingredient of future uses of the “perfect” is the denotation of the present tense. In Section 1.3.4, I illustrate how a past semantics can be reconciled with future uses of the “perfect”.

### 1.3.4 Past analysis

Grønn & von Stechow (2020) suggest a lexical entry for “perfects” that can be modified by definite past time adverbials, like the German or Italian perfect. Their relative past semantics of the perfect operator is provided in (60). In other words, this is an anteriority or past analysis of the “perfect” and I discuss below how the different uses are predicted to (not) arise with this anteriority approach of the “perfect”. I will use English dummy sentences in order to illustrate the semantics even though English does of course not have a “perfect” with a past semantics.

$$(60) \quad \llbracket \text{PERFECT}_{\text{relative past}} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$$

#### The felicity of the perfect in definite past contexts

- (61) a. English dummy sentence: *Tristan has won the fight yesterday.*  
 b.  $[_{TP} \text{PRES} [have_{XN} [yesterday [_{AspP} \text{PFV} [_{VP} \text{Tristan win the fight } ]]]]]$   
 c.  $\llbracket \text{PRES} \rrbracket = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)], \text{ where } t_c \text{ is the speech time}$

<sup>20</sup>This is, however, not a necessary condition. In Section 1.4, I show that languages may lack universal uses even if they have an extended-now semantics.

- d.  $[[have_{past}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$   
e.  $[[yesterday]_c] = [\lambda P_{\langle i,t \rangle}. [\lambda t. t \subseteq yesterday_c \ \& \ P(t)]]$   
f.  $\exists t[t=t_c \ \& \ \exists t'[t' < t \ \& \ t' \subseteq yesterday \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ WIN(e)(the \ battle)(Tristan)]]]$   
‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which precedes the speech time and the time interval  $t'$  is included in *yesterday* and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is a winning event of the fight by Tristan.’

**No resultative uses** As illustrated in (62-e), resultative uses do not arise with a relative past analysis of the perfect operator. The sentence is predicted to be true when the result state does not include but rather precede the speech time. Nothing is asserted about the right boundary of the result state. To continue the sentence with *but he sold it* would thus not lead to a contradiction.<sup>21</sup>

- (62) a. English dummy sentence: *John has bought a new car (but he sold it)*.  
b.  $[[PRES]] = [\lambda P_{\langle i,t \rangle}. \exists t_i[t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
c.  $[[have_{past}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$   
d.  $[[RES]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e_{1v} \exists e_{2v} [Result(e_2, e_1) \ \& \ t \subseteq \tau(e_2) \ \& \ P(e_1)]]]$ ,  
where  $Result(e_2, e_1)$  iff  $e_1$  is a telic event and  $e_2$  is the result state of  $e_1$   
(with “result state” to be understood as Kratzer’s 1994 “target state”)  
e.  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ \exists e_1 \exists e_2 [Result(e_2, e_1) \ \& \ t' \subseteq \tau(e_2) \ \& \ e_1 \text{ is a buying event where John buys a new car}]]]$   
‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which precedes the speech time and there is an event  $e_1$  which is a buying event where John buys a car and there is an event  $e_2$  which is the result state of  $e_1$  and the time interval  $t'$  is included or equal to the run time of  $e_2$ .’

**No universal uses** The necessary semantic ingredients for universal uses are: the extended-now semantics of the perfect operator, a homogeneous eventuality and a durative adverbial. If instead, a relative past operator is used as the perfect operator, nothing is asserted about the right boundary of the embedded eventuality and so the eventuality is not asserted to hold at the speech time.

- (63) a. English dummy sentence: *Tom has been sick since December*.  
b.  $[[PRES]] = [\lambda P_{\langle i,t \rangle}. \exists t_i[t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
c.  $[[have_{past}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$   
d.  $[[since(t)]] = [\lambda P_{\langle i,t \rangle}. [\lambda t'_i. P(t') \ \& \ LB(t, t')]$ ,  
where  $LB(t, t') = 1$  iff  $t$  is an initial subinterval of  $t'$   
e.  $[[IPFV_{states}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists s[t \subseteq \tau(s) \ \& \ P(s)]]]$   
if  $P$  denotes a set of states  
f.  $\exists t[t = t_c \ \& \ \exists t'[t' < t \ \& \ \exists s[t' \subseteq \tau(s) \ \& \ Tom \text{ be sick } (s) \ \& \ LB(December, t')]]]$   
‘There is a time  $t$  which is the speech time and there is a time  $t'$  which

<sup>21</sup>The same is true if the resultative aspect was to be replaced with a plain perfective aspect.



### 1.4.1 The Swedish perfect

As discussed in Rothstein (2008) and Larsson (2009), the Swedish present perfect behaves similar to the English present perfect.<sup>24</sup> The experiential use is shown in (65). The embedded eventuality that is placed within the extended-now interval must have occurred at least once.<sup>25</sup>

- (65) experiential use
- a. *Frida har besökt Göteborg många gånger.*  
 Frida has visit.PTCP Gothenburg many times  
 ‘Frida has visited Gothenburg many times.’  
 (Larsson, 2009, p. 71)
- b. *Jag har tappat glasögonen två gånger redan.*  
 I have lose.PTCP the.glasses two times already  
 ‘I have lost my glasses twice already.’  
 (Larsson, 2009, p. 221)

Resultative uses are also attested, as shown in (66). These arise, as expected, when the perfect is combined with telic eventualities.

- (66) resultative use
- a. *Hon har just kommit hem.*  
 she has just come.PTCP home  
 ‘She has just come home.’  
 (Larsson, 2009, p. 71)
- b. *Jag har just tappat glasögonen.*  
 I have just lose.PTCP the.glasses  
 ‘I have just lost my glasses.’  
 (Larsson, 2009, p. 221)

The universal use of the perfect is illustrated in (67-a)–(67-c). The necessary ingredients are the same as in English: an extended-now semantics, a durative adverbial and a homogeneous eventuality like *live* or *be a teacher*.<sup>26</sup> (67-b) illustrates that the eventuality still holds at the speech time. A continuation that negates this leads to a contradiction. The example in (67-d) is interesting: it shows that the universal meaning, i.e. an eventuality starting in the past, holding throughout the extended-now interval and including the speech time, can also be expressed with the present tense in Swedish.

- (67) universal use
- a. *Sedan 2004 har hon bott i Göteborg.*  
 since 2004 has she live.PTCP in Gothenburg

<sup>24</sup>The participle, which I glossed as PTCP, is called “supine” in Swedish grammars and is morphologically distinct from other participles in the language.

<sup>25</sup>See Rothstein (2008) for an extended-now account of the Swedish perfect.

<sup>26</sup>For Swedish, Larsson (2009) derives the extended-now interval with a biclausal structure with two TPs. In her system, the extended-now interval comes about through the interplay of the two TPs and a temporal preposition of the auxiliary.

- ‘Since 2004, she has lived in Gothenburg.’  
 (Larsson, 2009, p. 71)
- b. *Jag har bott här ända sedan jag var barn (#men jag flyttade 1999).*  
 I have live.PTCP here ever since I was child but I moved 1999.  
 ‘I have lived here ever since I was a child (#but I moved in 1999).’  
 (Larsson, 2009, p. 86)
- c. *Jag har varit lärare sedan 1990.*  
 I have be.PTCP teacher since 1990  
 ‘I have been a teacher since 1990.’  
 (Rothstein, 2011, p. 135)
- d. *Jag är lärare sedan 1990.*  
 I am teacher since 1990.  
 ‘I have been a teacher since 1990.’  
 (Rothstein, 2011, p. 135)

Just as in English, the Swedish perfect also displays the present perfect puzzle. As soon as definite past time adverbials like *igår* are combined with the perfect, the utterance is judged ungrammatical.

- (68) present perfect puzzle
- a. \**Frida har ätit ett äpple igår/ förra veckan.*  
 Frida has eat.PTCP an apple yesterday/ last week  
 ‘\*Frida has eaten an apple yesterday/last week.’  
 (Larsson, 2009, p. 53)
- b. \**Sigurd har kommit igår.*  
 Sigurd has come.PTCP yesterday  
 ‘\*Sigurd has come yesterday.’  
 (Rothstein, 2008, p. 28)

In addition to the well-known uses discussed in Section 1.3.1, the Swedish perfect also displays an inferential use as well as a future perfect use (Rothstein, 2008; Larsson, 2009). The inferential use is often signalled by an epistemic adverb. As indicated by Larsson’s translation in (69), the present perfect then has a plain past meaning.

- (69) *Han har (tydligt) varit sjuk igår.*  
 he has apparently be.PTCP sick yesterday  
 ‘Apparently, he was sick yesterday.’  
 (Larsson, 2009, p. 102)

Finally, the Swedish perfect can also be used in future contexts, as shown in (70). Rothstein (2011) observes that there is a correlation between the availability of this future use and the general possibility of the present tense in that language to refer to the future, as illustrated in (71). The future use of the perfect is not available in English as the English present tense is not used for future time reference in the same way.

(70) *Imorgon har konferensen redan slutat.*  
tomorrow has conference-the already end.PTCP  
‘The conference will have ended by tomorrow.’  
(Rothstein, 2008, p. 28)

(71) *Imorgon åker jag.*  
tomorrow leave.PRS I  
‘Tomorrow, I will leave.’  
(Rothstein, 2011, p. 124)

To derive this future use of the Swedish perfect, I assume the lexical entry for the Swedish present tense<sup>27</sup> in (72-c).

- (72) a. *Imorgon har konferensen slutat.*  
b.  $[_{TP} \text{ PRES } [\text{tomorrow } [_{har}_{XN} [_{AspP} \text{ PFV } [_{VP} \text{ konferensen slutat } ]]]]]$   
c.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$   
d.  $[[\text{tomorrow}]_c] = [\lambda P_{\langle i,t \rangle}. [\lambda t. t \subseteq \text{tomorrow}_c \ \& \ P(t)]]$   
e.  $[[ha_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$   
where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
f.  $[[\text{PFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e[\tau(e) \subseteq t \ \& \ P(e)]]]$   
if  $P$  denotes a set of events  
g.  $\exists t[t \geq t_c \ \& \ t \subseteq \text{tomorrow}_c \ \& \ \exists t'[XN(t',t) \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{end}(e)(\text{the conference})]]]$   
‘There is a time after or equal to the speech time which is a subset of tomorrow<sub>c</sub> and there is a time  $t'$  that expands backwards from  $t$  and the run time of the event of the conference ending is included in  $t'$ .’

### 1.4.2 The Bulgarian perfect

The Bulgarian perfect is a *be*-perfect, i.e. it consists of a copula combined with a participle (Bybee & Dahl, 1989; Grønn & von Stechow, 2020). As observed by Iatridou et al. (2001), the Bulgarian perfect participle can have an imperfective and a perfective stem; the different uses of the perfect arise systematically based on the type of participle that is used, the *Aktionsart* and the interplay with (durative) adverbials. Given that Bulgarian is listed in Dahl & Velupillai’s (2013) typological study on perfects presented in the World Atlas of Language Structures Online, the Bulgarian perfect has both resultative and experiential uses.<sup>28</sup> I illustrate these below.

In (73), I provide a resultative use of the Bulgarian perfect. The perfective stem of the participle combined with a telic *Aktionsart* leads to resultative meaning.

(73) *Nameril sǎm go!*  
find.PFV.PTCP am.1SG.PRES it.3SG.ACC

<sup>27</sup>This is the lexical entry developed by Bhatt & Pancheva (2005) for the German present tense.

<sup>28</sup>As mentioned above, the WALS Online only lists perfect constructions which have both resultative and experiential uses. Unfortunately, I was not able to find any other experiential uses of the Bulgarian perfect besides the one in (74). To conduct original fieldwork would have been beyond the scope of this dissertation.

‘I’ve found it.’  
(Grønn & von Stechow, 2020, p. 2265)

A perfective stem of the participle blocks universal readings, as shown in (74): only an experiential reading is possible here.

- (74) *Marija (\*vinagi) e obiknala Ivan (\*ot 1980 nasam).*  
 Maria (\*always) is love.PFV.PTCP Ivan (\*from 1980 till-now)  
 ‘Maria has fallen in love with Ivan.’  
 (Iatridou et al., 2001, p. 208)

The example in (75) is a minimal pair to the example in (74). The embedded participle has an imperfective stem and the sentence has a universal meaning. The semantic ingredients that are employed here are: durative adverbial, stative *Aktionsart*, unboundedness expressed as the imperfective stem of the participle.

- (75) *Marija vinagi e običala Ivan.*  
 Maria always is love.IPFV.PTCP Ivan  
 ‘Maria has always loved Ivan.’  
 (Iatridou et al., 2001, p. 208)

Iatridou et al. (2001) analyse these data as follows: the Bulgarian perfect has an extended-now semantics. Whenever the perfect is combined with a durative adverbial and an unbounded eventuality, universal uses are predicted to arise. As discussed in Section 1.3.2, unbounded and thus homogeneous eventualities are a necessary ingredient to universal uses. In English, statives and progressives are viewed as homogeneous. In Bulgarian, on the other hand, (non-)homogeneity is anchored in the perfect participle itself<sup>29</sup>. A perfective stem is non-homogeneous and thus, universal uses are blocked with these participles (see the example in (74)). An imperfective stem is homogeneous (or unbounded) and universal uses are predicted to arise, as shown in (75). Iatridou et al. (2001) summarise this in the following way: “Since the imperfective participle of any *Aktionsart* presents that eventuality as homogeneous (i.e., without a distinguished final subinterval of termination or completion), the imperfective will permit a U-perfect [= universal perfect] reading” (p. 208f.).

Based on the observations by Iatridou et al. (2001) on the Bulgarian perfect, I derive the meaning of the sentence in (75) in a parallel way to the English universal use, see (76). My underlying assumption - going back to Iatridou et al. (2001) - is that the perfect operator in Bulgarian is covert but that it has the same lexical entry as the English and Swedish one. The fact that imperfectivity is marked on the participle itself is not reflected in the LF. I assume the same LF as for English and Swedish. This implies that while there is cross-linguistic variation when it comes to the morpho-syntactic realisation of the perfect, the general LF and semantic building blocks stay the same across languages.

<sup>29</sup>Iatridou et al. (2001) provide further support for this claim by analysing reduced relative clauses in Bulgarian, where the copula can be omitted without losing any perfect meaning. They conclude that in Bulgarian, perfect meaning is not anchored in the auxiliary [as in English] but rather in the participle itself. In a second step, they apply this idea also to other languages that have *be*-perfects.

- (76) a. *Marija vinagi e običala Ivan.*  
 b.  $[_{TP} \text{ PRES } [_{\text{PERFECT}_{XN}} [\text{vinagi } [_{\text{AspP}} \text{ IPFV } [_{VP} \text{ Marija običala Ivan } ]]]]]]$   
 c.  $[[\text{PRES}] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
 d.  $[[\text{PERFECT}_{XN}] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [\text{XN}(t',t) \ \& \ P(t')]]]$ ,  
     where  $\text{XN}(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 e.  $[[\text{vinagi}]_c = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \forall t'' [t'' \subseteq t \rightarrow P(t'')]]]$   
 f.  $[[\text{IPFV}] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [t \subseteq \tau(e) \ \& \ P(e)]]]$   
     if  $P$  denotes a set of events  
 g.  $\exists t [t = t_c \ \& \ \exists t' [\text{XN}(t',t) \ \& \ \forall t'' [t'' \subseteq t' \rightarrow \exists e [t'' \subseteq \tau(e) \ \& \ \text{Marija loves Ivan} (e)]]]$   
     ‘There is a time  $t'$  which expands backwards from the speech time and for all  $t''$  that are included in  $t'$ , there is an event whose run time includes  $t''$  and  $e$  is an event of Marija loving Ivan.’

Dahl (1985) observes that there is no present perfect puzzle with Bulgarian perfect sentences.<sup>30</sup> As discussed in (57) and (58), the English present perfect cannot be modified by a definite past time adverbial. In the Bulgarian sentence in (77), on the other hand, there is no present perfect puzzle. Unfortunately, I have not been able to account for this. As soon as I assume an extended-now perfect operator, modification with definite past time adverbials like *three days ago* should lead to ungrammaticality. The example in (78) also illustrates the lack of the present perfect puzzle in Bulgarian: an English simple past that is modified by a definite past time adverbial can be translated either with the Bulgarian past tense or with the perfect.<sup>31</sup> In the latter case, the participle is based on the perfective stem, as shown in (78-b).

- (77) *Pratkata e pristignala predi tri dena.*  
 package.DEF is arrive.PFV.PTCP. before three days  
 ‘The delivery arrived three days ago.’  
 (Dahl, 1985, p. 137)
- (78) a. *Khari Potăr oščte minalata godina polučil Nimbus dve khiljadi.*  
 Harry Potter already last.DEF year got.PST.PFV. Nimbus two thousand  
 ‘Harry Potter got a Nimbus Two Thousand last year.’  
 (Grønn & von Stechow, 2020)
- b. *Khari Potăr oščte minalata godina e polučil Nimbus dve khiljadi.*  
 Harry Potter already last.DEF year is got.PFV.PTCP. Nimbus two thousand  
 thousand  
 ‘Harry Potter got a Nimbus Two Thousand last year.’  
 (Grønn & von Stechow, 2020)

Future uses of the Bulgarian perfect are not available. Instead, the future (or modal) marker *shite* is added to the perfect in order to express future meaning. This is illustrated in (79).

<sup>30</sup>The gloss is added by me.

<sup>31</sup>Grønn & von Stechow (2020) use data from “three parallel corpora, Parasol, the Oslo Multilingual Corpus and the RuN-Euro corpus, that contain translations of various works of literature” (p. 2268).

- (79) *Ivanka shte e rabotila.*  
 Ivanka SHTE is work.PFV.PTCP.  
 ‘Ivanka will have worked.’  
 (Pitsch, 2010)

Lastly, in Bulgarian, there are different ways of marking evidential evidence. The perfect can be used in an inferential context where the speaker has only indirect evidence about the proposition, as illustrated in (80).

- (80) *Ivan e celunal Maria.*  
 Ivan is kiss.PFV.PTCP. Maria  
 ‘(I infer that) Ivan kissed Maria.’  
 (Koev, 2011, p. 116)

### 1.4.3 The Niuean perfect

Niuean is an endangered Polynesian language. Tense, aspect and modality constructions appear clause-initially in this VSO language (Matthewson et al., 2015, p. 2).

Matthewson et al. (2015) analyse the TAM marker *kua* as the PERFECT-operator in Niuean. It behaves very similar to the English present perfect but also differs in important ways. As shown in (81), *kua* gives rise to experiential readings.

- (81) Matthewson et al. (2015, p. 8), experiential use
- a. ***Kua** toli mouga nakai a koe?*  
 PRF climb mountain YNQ ABS 2SG  
 ‘Have you ever climbed a mountain?’
  - b. *E, **kua** toli mouga (tei) au.*  
 yes PRF climb mountain (recent) 1SG  
 ‘Yes, I’ve climbed a mountain.’

The Niuean perfect also gives rise to resultative uses. As shown in (82), the result state of telic verb phrases like *to buy a car* still holds at the speech time when embedded under *kua*. To negate this result state leads to a contradiction, which is why (82-b) is judged ungrammatical.

- (82) Matthewson et al. (2015, p. 10), resultative use
- a. Context: Your cousin comes back to town after a trip away and you are catching her up on what has happened in the family while she was gone. One thing that happened was that your other cousin Sione bought a car but then sold it almost immediately. You say:
  - b. \****Kua** fakatau (tei) e Sione e motokā foou ti sela e ia.*  
 PRF buy (recent) ERG Sione ABS car new then sell ERG 3SG  
 ‘Sione has bought a new car and sold it.’

The example in (83) shows that universal uses of the perfect do not arise. Instead, a present tense construction with *ko e* is offered in this context.

## 1 Introduction

- (83) Matthewson et al. (2015, p. 8), no universal use
- a. Context: You're getting a bit annoyed about how long Mary has been singing this one song. You say 'Mary has been singing that song since this morning.'
  - b. ??**Kua** *lologo (tei) a Malia e lologo na tali mai he mogo*  
 PRF sing (recent) ABS Mary ABS song DEM since DIR1 LOC time  
*pogipogi.*  
 morning  
 'Mary has been singing that song since this morning.'
  - c. (**Ko e**) *lologo a Malia e lologo na tali mai he mogo pogipogi.*  
 (KO ABS) sing ABS Mary ABS song DEM since DIR1 LOC time morning  
 'Mary is singing that song since this morning.'

Modification of *kua* by past time adverbials is degraded even though it is not marked as ungrammatical in the same way as in English (cf. the present perfect puzzle by Klein (1992)). This is illustrated in (84), taken from Matthewson et al. (2015, p. 9).

- (84) ??**Kua** *fano a Tom ki Hawaii he tau kua mole.*  
 PRF go ABS Tom to Hawaii LOC year PRF pass  
 'Tom has gone to Hawaii last year.'

Just as in English, there are also lifetime effects. *Kua* is unacceptable in (85) because Columbus is already dead. This pragmatic phenomenon has also been called 'current relevance'.

- (85) Matthewson et al. (2015, p. 12), lifetime effect
- a. Context: You are teaching a history lesson. You tell the kids:
  - b. # **Kua** *kitia mua e Columbus a Amelika.*  
 PRF first sight ERG Columbus ABS America  
 'Columbus has discovered America.'

The status of future uses of *kua* is unclear. Future marking is not required in Niuean (Matthewson et al., 2015, p. 3). This leads Matthewson et al. to the assumption that *kua* should be able to receive a future interpretation. However, this is not borne out by their fieldwork data. These stand in contrast to grammar descriptions of the Niuean language.

Lastly, a key data point is presented in (86) and (87). As observed by Matthewson et al. (2015, p. 15), "perfect marking coerces an individual-level predicate into having an inchoative, change-of-state interpretation" (p. 15). *Kua* is thus treated as an inchoativizer which explains why it is unacceptable in the non-inchoative context in (86) but acceptable in the inchoative context in (87) where a change-of-state actually took place.

- (86) Matthewson et al. (2015, p. 15), *kua* in non-inchoative context
- a. Context: A woman has just given birth to twins. The doctor says:
  - b. (#**Kua**) *lalahi (tei) e tau tama haau.*  
 (#PRF) big (recent) ABS PL child 2SG.POSS  
 'Your children are big.'  
 Comment: 'Kua and *tei* might only be possible if the babies were somehow measured in the womb before they were born, and they've come out bigger.'

- (87) Matthewson et al. (2015, p. 15), *kua* in inchoative context
- a. Context: You haven't seen a friend's twins for a while, and when you see them again, you notice that they have got big.
  - b. ***Kua lalahi (tei) e tau tama haau.***  
 PR big.PL (recent) ABS PL child 2SG.POSS  
 'Your kids have grown/they're bigger.'  
 Comment: 'Without *kua* or *tei* this would be 'Your children are big''

Based on these data, Matthewson et al. (2015) “view the Niuean perfect as placing an initial change-of-state at some point within the Perfect Time Span. The eventuality may or may not have also finished before the utterance time” (p. 22) The change-of-state component is modelled with Dowty's BECOME-operator, as illustrated in (88). The lexical entry of the PERFECT-operator *kua* is provided in (89). It introduces both the change-of-state component as well as the perfect time span and places the change-of-state of the embedded eventuality within the perfect time span.

- (88) Matthewson et al. (2015, p. 22)  
 $[(\text{BECOME}(P))(e)]$  is true at  $I$  iff there is an initial boundary interval  $J$  for  $I$  such that  $\neg(P(e))$  is true at  $J$  and there is a final boundary interval  $K$  for  $I$  such that  $P(e)$  is true at  $K$  (adapted from Dowty, 1977:52).
- (89) Matthewson et al. (2015, p. 23)  
 $[[kua^c]] = [\lambda P. [\lambda t. \exists e[(\text{BECOME}(P))(e) \ \& \ \tau(e) \subseteq \text{PTS}_c(t)]]]$

I refer the reader to the remainder of Matthewson et al.'s paper for the details on how this lexical entry predicts the available uses of the Niuean perfect *kua*. There is, however, one important take-away: Matthewson et al. (2015) predict the non-availability of universal uses in Niuean based on the compositional building blocks at hand. Specifically, the PERFECT-operator itself blocks the subinterval property, thereby precluding homogeneity. This follows from the fact that the BECOME-operator, which inherently denotes a change of state, is non-homogeneous. Consequently, Niuean perfect constructions with *kua* do not permit universal interpretations. Below, I illustrate how Matthewson et al. (2015) derive the truth conditions for the sentence in (83), i.e. the simplified version *Malila has been singing*.

- (90)  $\exists e [\text{BECOME}(\text{sing})(e) \ \& \ \text{AGENT}(e)=\text{Malila} \ \& \ \tau(e) \subseteq \text{PTS}_c(t_c)]$

Matthewson et al. (2015) employ a Neo-Davidsonian framework where thematic roles are added to the event. In order to apply the perfect operator in (89) to the tense and aspect system developed in this dissertation, I need to leave out the AspP, otherwise the structure produces a type mismatch. The PerfP then attaches directly to the VP. This gives us the truth conditions in (91). I assume here that *kua* takes a property of type  $\langle v, t \rangle$  as its first argument. This is different to the perfect operator discussed above whose first argument is of type  $\langle i, t \rangle$ . Secondly, omitting the AspP leads to the problem that I cannot modify the property by *since*-adverbials which require a property of times as their first argument. And of course, I cannot represent perfective or imperfective aspect when omitting the AspP.

(91)  $\exists e [\text{BECOME}(\text{Malia sing that song})(e) \ \& \ \tau(e) \subseteq \text{XN}(t_c)]$

### 1.4.4 The German Perfekt

In typological research, the German Perfekt is often treated as a special case within the broader class of *have*-perfects.<sup>32</sup> Like its English and Swedish counterparts, it is historically derived from a possessive construction. However, typological accounts commonly highlight considerable areal variation within German. In particular, the Southern German Perfekt is described as functioning as a general past tense (Bybee & Dahl, 1989, p. 74; Lindstedt, 2000, p. 371). Lindstedt (2000) states that “[w]hen a perfect can be used as a narrative tense [...] it has ceased to be a perfect. This is what has happened in the majority of Slavic languages, as well as in South German and North Italian dialects, in Sardinian (Georg Bossong, p.c.) and spoken French” (p. 371). In contrast, Northern German dialects are said to preserve a stable perfect (Lindstedt, 2000).

This distinction reflects a broader tendency observed in grammaticalisation paths across languages: *have*-perfects, stemming from resultative or possessive constructions, tend to evolve into past tenses. In some varieties, such as Southern German, the Perfekt is said to shift towards a general past tense; in others, such as spoken French, the development progresses toward a perfective past (Bybee & Dahl, 1989; Lindstedt, 2000).

It is striking that neither the well-documented areal variation of the German Perfekt, nor the broader grammaticalisation path of perfect constructions, is adequately reflected in current semantic accounts. The number of existing analyses of the German Perfekt is frustratingly long and confusing (Reichenbach, 1947/1966; Wunderlich, 1970; Latzel, 1977; Bäuerle, 1979; Fabricius-Hansen, 1986; Ballweg, 1988; Herweg, 1990; Ehrich, 1992a; Thieroff, 1992; Klein, 1999; von Stechow, 1999; Klein, 2000; Musan, 2001; Musan, 2002; von Stechow, 2002; Löbner, 2002; Rathert, 2004; Pancheva & von Stechow, 2004; Rothstein, 2008; Bäuerle, 2015). It is clear that no consensus as to the correct analysis has been reached and I consider this topic to still be an open question. There is a general tendency in semantic accounts of the Perfekt to rely on introspective data. As none of these (introspective) works reviewed explicitly restricts its scope to a particular variety or dialect of German, it must be assumed that the proposed analyses are intended to apply to Standard German broadly - thereby disregarding potentially significant dialectal differences. In the following sections, I provide a general overview of a selected number of semantic accounts of the German Perfekt.

### XN-approaches

One of the earliest extended-now analyses of the German Perfekt is by **von Stechow (1999)**.<sup>33</sup> He proposes that the auxiliaries *haben/sein* ‘have/be’ denote a classical extended-now interval in the sense of McCoard (1978). The right border of this interval is the reference time and the left border is either given by context or an adverbial (p. 88).<sup>34</sup>

<sup>32</sup>In addition to *have*-perfects, German also has *be*-perfects.

<sup>33</sup>As noted by von Stechow, Fabricius-Hansen (1986) also pursues an extended-now account.

<sup>34</sup>In a parallel way, he assumes that the Futur I is a mirror image of the Perfekt: The future auxiliary *werden* denotes an XN-interval, the left boundary is given by the reference time and its right boundary stretches into the future and is either provided by the context or an adverbial (p. 90).

The reference time is included in the XN-interval. This is then combined with a deictic approach to tense as in Partee (1973). Whether or not the Perfekt denotes a universal use is dependent on the realisation of a quantificational adverb. The extended-now interval denoted by the auxiliaries functions as the restriction to a quantificational adverb whose nucleus is the participial phrase (p. 88). Von Stechow assumes that the sentence in (92) has a universal or “ExtendedNow-Lesart” with the LF in (93). In fact, he assumes that the adverb *immer* forces a universal use.

- (92) *Du hast immer gute Leute gehabt.*  
 You have always good people have.PST.PTCP.
- (93) immer[XNP(präs)][du gute Leute hab-]

Von Stechow (1999, p. 92) additionally lists the following sentences as instances of the universal Perfekt:

- (94) a. *Ich habe dich immer geliebt.*  
 I have you always love.PST.PTCP.
- b. *Ich habe hier immer gewohnt.*  
 I have here always live.PST.PTCP.
- c. *Graham ist immer ein Amerikaner gewesen.*  
 Graham is always a American be.PST.PTCP.

Von Stechow agrees with Agnostopoulou et al. (1997) who assume that a perfect without an open adverb like *immer* can never be a universal perfect (p. 91). The minimal pair without *immer* in (95) is an existential perfect according to von Stechow.<sup>35</sup> He suggests the LF in (96) where instead of assuming a covert *immer*, von Stechow suggests to existentially close the event argument and to assert that the VP-event is properly included in the extended-now interval.

- (95) *Du hast gute Leute gehabt.*  
 You have good people have.PST.PTCP.
- (96)  $\exists e[\text{IN}(\text{XP}(\text{präs})(e) \ \& \ *[\text{du gute Leute haben}](e))]$

Additionally, von Stechow (1999) states that only stative eventualities can form a universal Perfekt and he provides the examples below. The difference lies in the telicity of the eventuality:

- (97) a. *#Ich habe immer diesen Aufsatz geschrieben.*  
 I have always this essay write.PST.PTCP.  
 ‘I have always written this essay.’
- b. *Ich habe immer an diesem Aufsatz geschrieben.*  
 I have always at this essay write.PST.PTCP.  
 ‘I have always been writing this essay.’

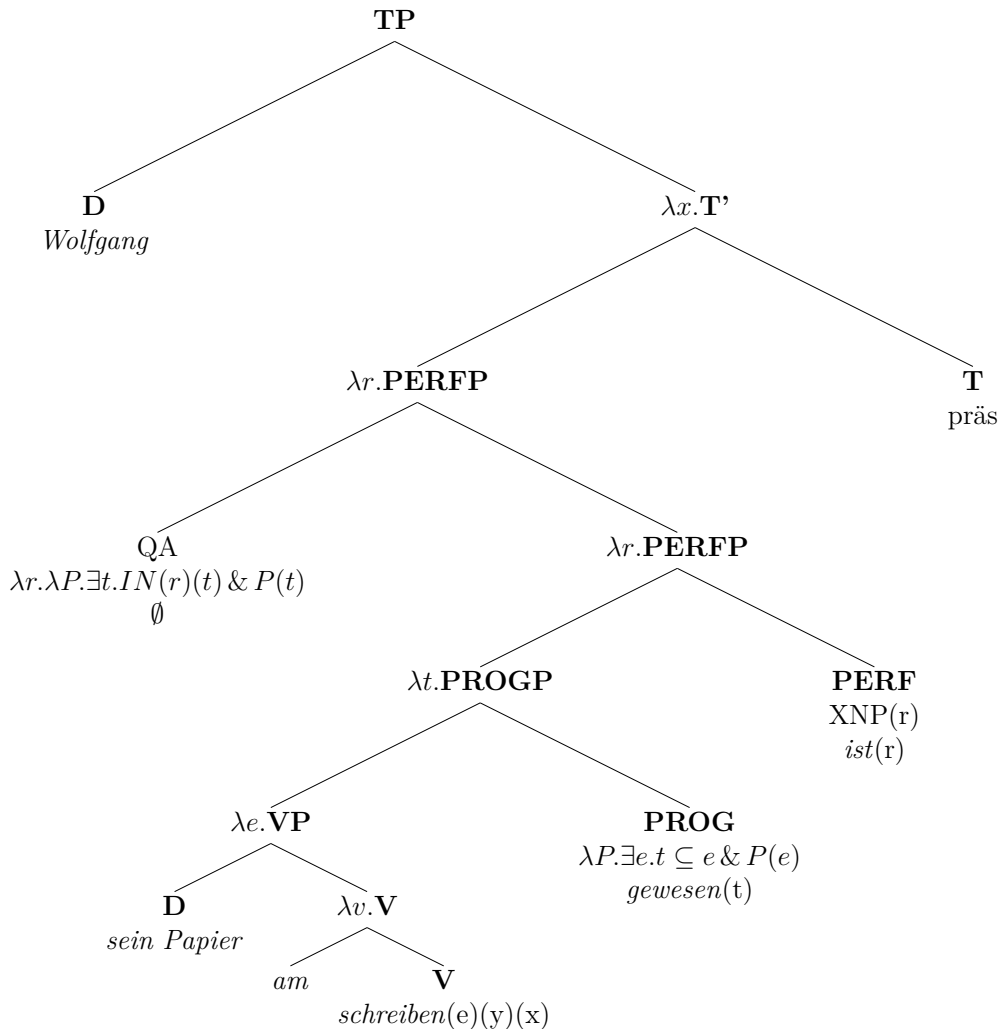
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<sup>35</sup>He calls all perfect uses other than the universal one *existenzielles Perfekt* or *E-Perfekt*.

The LF that von Stechow (1999, p. 105) provides for the sentence *Wolfgang ist sein Papier am schreiben gewesen* is given in (99). The truth conditions are provided in (98).

$$(98) \quad \exists t[\text{IN}(\text{XP}(\text{präs}))(t) \ \& \ \exists e[t \subseteq e \ \& \ \text{schreiben}(e)(\text{sein Papier})(\text{Wolfgang})(t)]]^{36}$$

(99)



QA is the covert quantificational adverb that relates the XN-interval with the progressive aspect phrase. The lexical entry that is used in this tree models only existential uses of the Perfekt. For universal uses, the QA-operator needs to denote something like *immer*. The exact semantics are not spelled out in his article. The Perfekt is merely an argument in this approach (von Stechow, 1999, p. 106).<sup>37</sup>

On top of that, von Stechow argues that Perfekt and Präteritum do not have the same meaning.<sup>38</sup> In particular, he believes that Perfekt and Präteritum behave differently in

<sup>36</sup>It is unclear to me how von Stechow's calculation proceeds. In particular, I am confused by how the extended-now interval, here XP, is combined with the präs. Given von Stechow's syntax, this should happen after the PERFP is applied to the function QA. This is not what happens in his calculation.

<sup>37</sup>For mistakes in this tree and the calculation, I refer the reader to Rathert (2004, p. 36f.).

<sup>38</sup>“Die zweite These richtet sich gegen die oft vertretene Behauptung, daß im Deutschen das Perfekt

complement sentences: While the Präteritum supposedly leads to a simultaneous reading, see (100-a), the Perfekt leads to a backshifted reading, as in (100-b).

- (100) a. *Fritz dachte, daß es 8 Uhr war.* (GZ)  
 Fritz thought that it 8 o'clock was  
 b. *Fritz dachte, daß es 8 Uhr gewesen ist.* (VZ)  
 Fritz thought that it 8 o'clock be.PST.PTCP. is

All in all, von Stechow (1999) argues for an extended-now approach of the German Perfekt. Universal uses arise only when the PERFP serves as an argument to *immer*, i.e. *immer* forces a universal use. The Perfekt is not ambiguous here. The difference between existential and universal uses comes about through the kind of QA-operator that is used.

**Rathert (2004)** also suggests an extended-now account of the German Perfekt. Adverbials like *schon oft* ‘often ever since’, *schon immer* ‘ever since’ and (*schon*) *seit* ‘already since’ are the main reason for her to develop an extended-now analysis. She criticises that anteriority or past approaches of the Perfekt, as discussed in Section 1.3.4, cannot predict the fact that universal uses of the Perfekt arise with extended-now adverbials. In contrast to von Stechow (1999), Rathert does not include the speech time into the XN-interval by assertion (p.103). However, she suggests that “we have a strong conversational implicature which creates the impression of speech-time-inclusion – but this is only an implicature and should be treated as such” (p.103). The lexical entry that she assumes for the Perfekt is provided in (101). Her lexical entry of *schon immer* is given in (102).

- (101) the Perfekt has an XN-semantics but with an abutting relation  
 $F(\text{Perf})(P)(t) = 1$  iff  $\exists t' [t' \supset \subset t \ \& \ \text{left-infinite}(t) \ \& \ P(t')]$   
 (102)  $F(\text{schon immer})(P)(t) = 1$  iff  $\text{left-infinite}(t) \ \& \ \forall t' \in D_i [t' \subseteq t \ \& \ C(t') \rightarrow P(t')]$

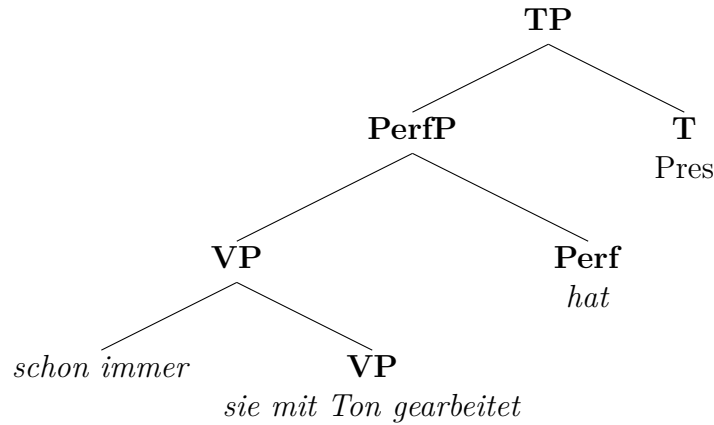
The sentence in (103-a) receives the truth conditions in (103-b) based on her LF in (103-c).

- (103) a. *Sie hat schon immer mit Ton gearbeitet.*  
 She has already always with clay work.PST.PTCP.  
 b.  $\exists t [t = s^* \ \& \ \exists t' [t' \supset \subset t \ \& \ \text{left-infinite}(t') \ \& \ \forall t'' [t'' \subseteq t' \ \& \ C(t'') \rightarrow \text{she works with clay at } t'']]]$

---

eine Variante des Präteritums ist. Selbst wenn das Perfekt das Präteritum weitgehend verdrängt, so bedeutet es doch etwas anderes, und zwar in allen mir bekannten Varianten (soweit ich sie über schaue)” (p.97).

c.

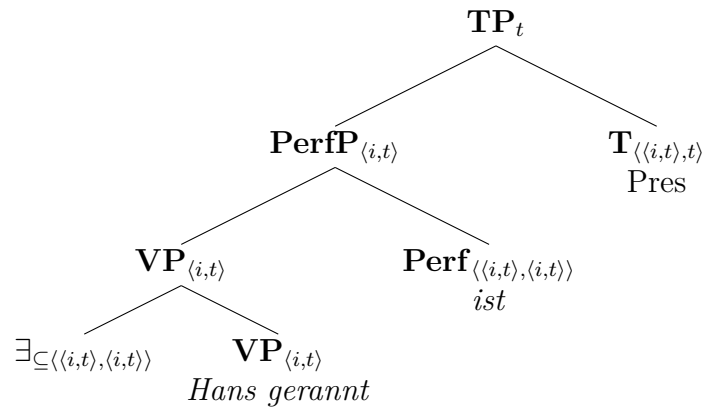


For unmodified Perfekt sentences as in (104), Rathert (2004) assumes the covert frequency adverb  $\exists_{\underline{c}}$ . Rathert's (2004, p.117) LF and the respective lexical entries for (104) are provided in (105). The truth conditions are given in (106).

(104) *Hans ist gerannt.*

Hans is run.PST.PTCP.  
'Hans ran.'

- (105) a.  $F(\text{Pres})(P)=1$  iff  $\exists t \in D_i [t=s^* \ \& \ P(t)]$ . Type:  $\langle\langle i,t \rangle, t \rangle$   
 b.  $F(\text{Perf})(P)(t)=1$  iff  $\exists t' \in D_i [t' \supset c t \ \& \ P(t')]$ . Type:  $\langle\langle i,t \rangle, \langle i,t \rangle \rangle$   
 c.  $F(\exists_{\underline{c}})(P)(t)=1$  iff  $\exists t' \in D_i [t' \subseteq t \ \& \ P(t')]$ . Type:  $\langle\langle i,t \rangle, \langle i,t \rangle \rangle$   
 d.



(106)  $\exists t \in D_i [t=s^* \ \& \ \exists t' \in D_i [t' \supset c t \ \& \ \exists t'' \in D_i [t'' \subseteq t' \ \& \ \text{VP is true at } t'']]]$

The way that the frequency adverb  $\exists_{\underline{c}}$  is defined, it “cuts out” an interval of the bigger extended-now interval which results in the “anteriority-reading” of the Perfekt (Rathert, 2004, p. 118).

In order to account for Perfekt sentences modified by the definite past time adverb *gestern* as in (107), Rathert (2004) makes the following assumptions: *Gestern hat es geregnet* is ambiguous between two readings. In the first reading, the frequency adverb  $\exists_{\underline{c}}$  scopes over *gestern* which results in a universal reading, i.e. the raining occurred

throughout the whole day. In the second reading, *gestern* scopes over the frequency adverb  $\exists_{\subseteq}$ , resulting in an existential reading, i.e. “[t]he coughing could be a singular event in yesterday, as the raining could just last for some hours of yesterday” (Rathert, 2004, p. 118). In order to avoid a type mismatch, Rathert (2004) assumes that *gestern* is a “combination of a covert preposition and the time “yesterday” proper” (p. 119ff.).

- (107) *Gestern hat es geregnet.*  
 Yesterday has it rain.PST.PTCP.  
 ‘Yesterday, it rained.’

In sum, Rathert’s analysis is conceptually very similar to the one by von Stechow (1999). In both analyses, the Perfekt has one fixed meaning. The difference between existential/anteriority uses of the Perfekt and universal uses comes about through an additional operator (QA in von Stechow’s case,  $\exists_{\subseteq}$  in Rathert’s case). While the extended-now interval does not include the speech time but rather abuts it in Rathert’s analysis, the reference time (and thus the speech time) are included in von Stechow’s extended-now interval for universal uses but not for existential ones (pp. 88, 91).

Another extended-now approach is by **Rothstein (2008)**. He investigates the Swedish, English and German perfect and suggest an XN-account for all three languages. The main cross-linguistic difference lies in the position of the right border of the extended-now interval: While the end of the extended-now interval is fixed in English and Swedish, it is regarded as vague in German (Rothstein, 2008, p. 2). Based on the data in (108)–(109), Rothstein argues that the Perfekt does not denote a past tense meaning. Among other things, the data concern SOT contexts, as already discussed in von Stechow (1999, p. 98) and Latzel (1977, p. 191), see (108). The example in (109), which goes back to Wunderlich (1970, p. 139), is also supposed to show that Perfekt and Präteritum do not have the same meaning. While the sentence with the preterite form *lag* is judged to be grammatical, the minimal pair with *hat gelegen* is not. For more data, I refer the reader to Rothstein (2008, p. 26f.).

- (108) a. *Fritz dachte, daß es 8 Uhr war.*  
 Fritz thought that it 8 o’clock was  
 ‘Fritz thought that it was eight o’clock.’  
 b. *Fritz dachte, daß es 8 Uhr gewesen ist.*  
 Fritz thought that it 8 o’clock be.PST.PTCP. is  
 ‘Fritz thought that it had (already) been eight o’clock.’
- (109) a. *Wir kamen über die Autostrada nach Florenz, das in einem breiten Tal lag.*  
 we reached via the Autostrada to Florence which in a wide valley lay  
 ‘We reached Florence, which was situated in a wide valley, via the Autostrada.’  
 b. \**Wir kamen über die Autostrada nach Florenz, das in einem breiten Tal gelegen hat.*  
 we reached via the Autostrada to Florence which in a wide valley lay.PST.PTCP. has

A further property of the German Perfekt that Rothstein (2008, p. 25) discusses is the future perfect use, see (110).

- (110) *Morgen hat die Konferenz bereits geendet.*  
 tomorrow has the conference already end.PST.PTCP.  
 ‘The conference will have ended by tomorrow.’

Rothstein (2008, p. 38) uses the example in (111) to falsify Rather’s (2004) analysis. His example shows that the Perfekt, or more precisely, the extended-now interval can be properly before R, and not abutting R as in Rathert’s analysis.

- (111) *Véronique hat immer in Frankreich gewohnt. 1999 ist sie nach*  
 Véronique has always in France live.PST.PTCP. 1999 is she to  
*Deutschland gezogen.*  
 Germany move.PST.PTCP.  
 ‘Véronique always lived in France. In 1999, she moved to Germany.’

The analysis that Rothstein (2008) suggests is provided in Figure 1.2 below. According to Rothstein, the extended-now interval, also called perfect time span (PTS), is dynamic. This means that the right boundary of R can be before or equal to the reference time. On top of that, PTS includes the event time. Rothstein argues that the right boundary of the PTS can be “identical to the final subinterval of (E) or to (R) or can be in between” (p. 39).



Figure 1.2: The German Perfekt according to Rothstein (2008, p. 39)

In order to capture future perfect uses, Rothstein suggests that the perfect time span in German can also extend into the future. His analysis captures this by stating that the reference time must not precede the speech time. This is indicated by the arrow after R in Figure 1.2.

## Ambiguity approaches

Löbner (2002) claims that the German Perfekt is ambiguous between a present perfect and past tense. The analyses against which he argues are Klein (1999) and Musan (2000).<sup>39</sup> Löbner (2002, p. 370) elaborates on this in the following way:

In these approaches the form is interpreted compositionally as the result of combining the past participle of the verb with the stem *sein* or *haben* and adding present

<sup>39</sup>He cites Musan (2000) but I am sure that he is actually referring to Musan (2001).

tense to the auxiliary. The apparent past tense uses of the form are accounted for in various ways. In view of these proposals it is worthwhile to re-raise the simple question: Is the Perfekt ambiguous or not? The discussion here will focus on the tense contributed by the form in its various uses. If the form is not ambiguous, its tense must be present tense in all its uses, and this is what proponents of a uniform analysis propose. If the Perfekt is ambiguous, it must be regarded as contributing present tense in its present perfect function and past tense in the functions it has taken over from the Past.

Löbner starts his argumentation by stressing that positional time adverbials like *gestern* ‘yesterday’, *jetzt* ‘now’ and *morgen* ‘tomorrow’ cannot serve as a means to argue for the ambiguity of the Perfekt. The fact that the Perfekt can be modified by both past and non-past adverbials, see Löbner’s (2002, p. 382f.) examples in (112-a) and (112-b), are taken to mean that it is not the tense that is modified here but rather some projection lower in the tree. Löbner argues that the Perfekt has two readings, namely a past perfective reading in (112-a) and a present perfect reading in (112-c).

- (112) a. *Karla ist gestern hier eingezogen.*  
 K. is yesterday here move.in.PART  
 ‘K. [has] moved in her yesterday.’
- b. *Jetzt/Morgen ist Karla hier eingezogen.*  
 now/tomorrow is K. here move.in.PART  
 ‘Now K. has moved in here’ / ‘Tomorrow K. will have moved in here.’
- c. *Jetzt, wo Karla gestern hier eingezogen ist, brauchen wir einen Schlüssel fürs Klo.*  
 Now where K. yesterday here move.in.PART is need we a  
 key for.the toilet  
 ‘Now that K. has moved in here yesterday, we need a key for the toilet.’

He then goes on to argue that the Perfekt can never be analysed as a present tense in narrative contexts and that a past analysis is the only plausible one in these cases. Another argument he mentions for the ambiguity of the Perfekt is the behaviour in temporal-clause constructions: the Perfekt can appear in clauses introduced by *als* and *nachdem* which only allow for true past readings, as shown in Löbner’s (2002, p. 384ff.) examples in (113-a) and (113-b). On the other hand, the Perfekt can also appear in *wenn*-clauses which is only plausible if the Perfekt has a non-past meaning as well, see Löbner’s example in (113-c).

- (113) a. *Als ich sie gestern getroffen habe, ...*  
 when I her yesterday meet.PART have, ...  
 ‘When I met her yesterday, ...’
- b. *Nachdem Klaus den Kamin angemacht hat, wurde es wieder warm.*  
 after K. the fireplace light.PART has become it again warm  
 ‘After K. lit the fireplace, it became warm again.’

- c. *Wenn ich sie getroffen habe, weiß ich mehr.*  
 when I her meet.PART have, know I more  
 ‘When I [will] have met her, I will know more.’

**von Stechow (2002)** argues for an ambiguity of the German Perfekt between an “Extended Now and a semantic PAST” (p. 394). Additionally, von Stechow assumes that the adverbial *seit* ‘since’ is also ambiguous between the positional reading in (114) and the durative reading in (115).

- (114) Positional *seit*  
 $\llbracket \textit{seit} \rrbracket(t) = [\lambda P. [\lambda t'. \exists t''[\text{XN}(t'',t') \ \& \ \text{LB}(t,t'') \ \& \ P(t'')]]]$ , P is homogeneous
- (115) Durative *seit*  
 $\llbracket \textit{seit} \rrbracket(d) = [\lambda P. [\lambda t. \exists t'[\text{XN}(t',t) \ \& \ |t'| = d \ \& \ P(t')]]]$ , P is homogeneous

Positional *seit*<sup>40</sup> is active in von Stechow’s (2002, p. 398) example in (116-a), and an illustration of von Stechow’s (2002, p. 398) durative *seit* is provided in (116-b).

- (116) a. *Dieter ist seit 1975 in Düsseldorf.*  
 Dieter is since 1975 in Düsseldorf.
- b. *Wir sind heute seit 30 Jahren verheiratet.*  
 we are today since 30 years married  
 ‘Today, we have been married for 30 years.’

Von Stechow (2002) analyses the sentence in (117) as an XN-reading of the Perfekt. The fact that its most natural interpretation is something like ‘Dieter has once lived in Berlin’ is modelled by the covert operator *mal* in (118-b).<sup>41</sup> The extended-now operator, which according to him is realised as an abutting relation in German, is anchored in the auxiliary *have*, see (118-c). The LF he assumes is provided in (118-a) and the truth conditions are in (118-d) (p. 403). Note that he ignores the abutting relation in this last step.<sup>42</sup>

- (117) *Dieter hat in Berlin gewohnt.*  
 Dieter has in Berlin live.PST.PTCP.
- (118) a.  $[_{TP} \text{ NOW Pres } [_{AspP} \text{ HAVE}_{Germ} \text{ mal } [_{PartP} \text{ Dieter in Berlin wohn-} ] \text{ hab-} ]]$   
 b.  $\llbracket \textit{mal} \rrbracket = [\lambda P. [\lambda t. \exists t'[t' \subseteq t \ \& \ P(t')]]]$   
 c.  $\llbracket \text{HAVE}_{Germ} \rrbracket = [\lambda P. [\lambda t. \exists t'[t' \succ\langle t \ \& \ P(t')]]]$ ,  
 where  $\succ\langle$  is the abutting relation  
 d.  $\exists t[\text{XN}(t, \text{NOW}) \ \& \ \exists t' \subseteq t: \text{Dieter lives in Berlin at } t']$

<sup>40</sup>As observed by von Stechow (2002), the sentence in (i) is ungrammatical which is one piece of evidence for a true ambiguity of *seit*.

(i) \**Dieter ist seit 1990 achtmal in Tübingen.*

<sup>41</sup>This is the operator used by Rathert (2004).

<sup>42</sup>Spelling out the contribution of *have*, the truth conditions are:

(i)  $\exists t' [t' \succ\langle t \ \& \ \exists t'' \subseteq t': \text{Dieter lives in Berlin at } t'']$

Having established the semantics of the XN-operator, von Stechow goes on to say that “[m]any if not most occurrences of the German perfect morphology express a plain PAST tense. Some researchers try to reduce the past readings to the PRESENT PERFECT. I agree with Löbner (2002) that this is not possible” (p. 404). Von Stechow (2002, p. 404) illustrates the past meaning of the Perfekt with the sentence in (119).

- (119) *Wir sind gestern seit genau dreißig Jahren verheiratet gewesen.*  
 We AUX yesterday since exactly thirty years married be.PART  
 ‘Yesterday, we had been married for thirty years.’

In (119), *seit* is durative and reaches up to the reference time. As the reference time is *gestern*, the overall Perfekt sentence does not denote an eventuality that abuts the speech time. Rather, it precedes the speech time. Von Stechow suggests that the “finite form of *sein/haben* may license a semantic PAST” (p. 404). He assumes the LF and truth conditions in (120).

- (120) a.  $[_{TP}PAST_i \lambda t[t \subseteq \text{yesterday} [\text{since } 30 \text{ years } [_{VP}\emptyset [_{AP}\text{we married}] \text{been}]]] \text{are}]$   
 b.  $PAST_i \subseteq \text{yesterday} \ \& \ \text{we are married at } PAST_i \ \& \ \exists t \text{ XN}(t, PAST_i) \ \& \ |t| = 30 \text{ years} \ \& \ \text{we are married at } t$

The following examples show that German perfect morphology can also express a third meaning, namely what von Stechow calls “Perfect of Result” (von Stechow, 2002, p. 395) [Zustandspassiv, haben-Passiv].

- (121) a. *Bettina ist seit 10 Minuten eingeschlafen.*  
 Bettina AUX since 10 minutes sleep.in.PART  
 ‘Bettina has been asleep for 10 minutes.’  
 b. *Wolfgang hat Diano seit Freitag verlassen.*  
 Wolfgang AUX Diano since Friday leave.PART  
 ‘Wolfgang has left (= been out of) Diano since Friday’

## Anteriority approaches

Anteriority approaches of the Perfekt go back to Reichenbach (1947/1966) who proposed that the (English) perfect denotes a relation between (E), (R) and (S) where the event time (E) precedes the reference time (R) which is simultaneous to the speech time (S), see (122).

- (122) Reichenbach’s (English) perfect  
 $E < R, S.$

As discussed in von Stechow (1999), this approach is used by many authors including Bäuerle (1979), Ballweg (1988), Herweg (1990) and Klein (1994). However, an anteriority relation between (E) and (R) cannot predict Perfekt sentences that give rise to universal uses (cf. von Stechow, 1999). This problem was already discussed by Reichenbach himself, see Section 1.2.1.

### 1.4.5 Summary

I have examined the perfect in five typologically diverse languages. It has become evident that English, Swedish, Bulgarian and Niuean exhibit a grammaticalised perfect and Iatridou et al. (2001), Rothstein (2008) and Matthewson et al. (2015) suggest that the perfect in these four languages should receive an extended-now analysis. A common demoninator of these perfects is that they all serve experiential and resultative functions, as listed in Table 1.1. Due to language-specific properties, however, there is cross-linguistic variation with respect to the availability of universal, future and inferential uses of the perfect, as well as regarding the presence of the so-called *present perfect puzzle*, i.e. whether the perfect is judged ungrammatical when modified by definite past time adverbials.

	English	Swedish	Bulgarian	Niuean
type of perfect	<i>have</i> -perfect	<i>have</i> -perfect	<i>be</i> -perfect	<i>kua</i> -perfect
experiential	✓	✓	✓	✓
resultative	✓	✓	✓	✓
universal	✓	✓	✓ + ipfv.ptcp.	✗
present perfect puzzle	✓	✓	✗	✗ but degraded
future	✗	✓	✗	?
inferential	✗	✓	✓	no data

Table 1.1: The cross-linguistic distribution of the extended-now perfect

Following Iatridou et al. (2001), the meaning of the perfect operator can be paraphrased as in (123)<sup>43</sup>. Cross-linguistically, the perfect operator can be realised overtly (as *have* in English or *kua* in Niuean) or covertly (as in Bulgarian) and the make-up of the perfect operator can also vary, as shown in (124). While I derive the truth conditions with the identical operator in English, Swedish and Bulgarian (in combination with the respective language-specific properties), the Niuean perfect operator contains a BECOME-operator in order to account for inchoative uses where a change-of-state is embedded in the extended-now interval.

(123) “There is an interval (the perfect time span) in/throughout which there is a bounded/unbounded eventuality.” (Iatridou et al., 2001, p. 212)

- (124) a. English, Swedish  

$$\llbracket \textit{have/ha} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$$
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$
- b. Bulgarian  

$$\llbracket \text{PERF}_{\textit{covert}} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$$
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$
- c. Niuean  

$$\llbracket \textit{kua}^e \rrbracket = [\lambda P. [\lambda t. \exists e[(\text{BECOME}(P))(e) \ \& \ \tau(e) \subseteq XN_c(t)]]]$$

The different uses of the perfect can be predicted by the semantic ingredients that enter

<sup>43</sup>See also the formalisation in Bhatt & Pancheva (2005).

into each composition. The resultative use requires telic eventualities while the experiential use can be derived with any kind of *Aktionsart*. Note that “[t]here is no component of the perfect that directly expresses anteriority” (Iatridou et al., 2001, p. 213). Rather, anteriority in the experiential use is expressed through the interplay of the perfect and perfective aspect. The universal use comes about when a durative adverbial and an unbounded eventuality are combined. Unboundedness can be expressed differently in the languages investigated. In English, semantic unboundedness is anchored in statives and progressives. In Swedish, universal uses arise with statives (there is no progressive marking in Swedish). In Bulgarian, unboundedness is anchored in the participle itself. When the participle has an imperfective, and thus unbounded, stem, a universal meaning can arise.<sup>44</sup> In Niuean, universal uses are not possible because the perfect operator *kua* is inherently bounded as it includes a change-of-state component. Future uses of the perfect, such as those found in Swedish, are predicted under an analysis where a PRES-operator introduces a time that is simultaneous with or follows the speech time.

A unified analysis of these cross-linguistic patterns and uses can be captured by assuming a universal underlying LF structure with the hierarchical projections of TP > PerfP > AspP > VP, as discussed in Section 1.3.2. This implies that while there is cross-linguistic variation when it comes to the morpho-syntactic realisation of the perfect, the general LF and semantic building blocks stay the same across languages.

So far, I have only addressed the English, Swedish, Bulgarian and Niuean perfect. The German Perfekt has been the topic of much debate and there is no consensus in the literature when it comes to the correct analysis. As discussed in Section 1.4.4, there are XN-accounts, ambiguity accounts where the Perfekt is treated as ambiguous between an XN and a past meaning, and pure past analyses. On top of that, it is striking that neither the well-documented areal variation of the German Perfekt as put forth in typological literature, nor the broader grammaticalisation path of the perfect (Bybee & Dahl, 1989) is adequately reflected in current semantic accounts. This research gap motivates the research questions developed in the following section.

## 1.5 Outline of the investigation

This dissertation investigates tense and aspect semantics from a diachronic, synchronic and dialectal perspective in Upper German. Each chapter deals with separate research questions and can be read on its own.

Building on the diagnostics developed in Section 1.3 and placing the German Perfekt in a broader cross-linguistic context, I arrive at the first two research questions:

- Chapter 2:  
What is the semantics of the Middle High German Perfekt?
- Chapter 3:  
What is the semantics of the Swabian and thus the Upper German Perfekt?

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<sup>44</sup>As observed by Iatridou et al. (2001), the perfect in Modern Greek is built with perfective participles. They thus correctly predict that universal uses cannot arise in Greek because the participles are inherently and always bounded.

## 1 Introduction

In a second step, the semantic insights from Chapter 2 and 3 are then applied to educational contexts:

- Chapter 4:  
How can insights into perfect and past semantics inform grammar teaching?
- Chapter 5:  
How can tense semantics in general inform grammar teaching?

Chapter 2 deals with the Middle High German (MHG) Perfekt.<sup>45</sup> The questions I address are: What is the semantics of the MHG Perfekt and how is it different from other perfects for which an extended-now analysis has been suggested? How can the different uses and patterns of the MHG Perfekt be described in a systematic fashion? Building on the diagnostics developed in Section 1.3, I will discuss the different uses of the MHG Perfekt and relate my findings to previous research (Shimazaki, 2002; Paul, 2007; Zeman, 2010) and to the typological perfect development path (Bybee & Dahl, 1989; Bybee et al., 1994; Lindstedt, 2000).

Chapter 3 deals with the question which semantics the Modern Swabian Perfekt has. The Swabian dialect is a descendant of Middle High German and so it serves as a good testing ground for the typological development path of perfects. I will try to find out which uses are available in Swabian through original fieldwork. The findings will be compared to research on the *Präteritumschwund* ‘loss of the preterite’ in Upper German dialects (Lindgren, 1957; Dentler, 1997; Fischer, 2018) and to the typological landscape of perfects.

In Chapter 4, I will focus on current didactic practices in Germany when it comes to teaching the English present perfect. These practices will be compared to the semantic insights developed in Chapter 1 and 3 in order to find out if tense semantics can inform grammar instruction. I will point out the weaknesses of the traditionally used signal-word approach to the English present perfect common in foreign language instruction and then report the results of a pilot intervention study where novel teaching materials were tested.

Chapter 5 investigates how the German tenses are currently presented and taught in German grammar instruction. These observations will be analysed on the basis of Chapter 1–3. In particular, I will report data from a videography of a sixth grade German lesson on the German tenses. The elicited data show that the ways in which the German tenses are taught are inadequate and do not coincide with the students’ own intuitions.

Chapter 6 provides a general discussion and summarises my main findings. This chapter is followed by an appendix that contains the items used in my Swabian fieldwork study and the teaching materials developed for the intervention study discussed in Chapter 4.

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<sup>45</sup>As discussed in Section 2.2, Middle High German consisted of Middle German and Upper German dialects. In my investigation, I only focus on Upper German data.

Part 1:  
Diachronic and synchronic semantics



## 2 The Perfekt in Middle High German and its Extended-Now Semantics

*im hât der siehtuom gewert / wol zwei jâr unde mê*  
- Amis in *Der Pfaffe Amis*, verse 2222ff.

### 2.1 Introduction

This chapter<sup>1</sup> examines the semantic behaviour of the Middle High German (MHG) Perfekt. Starting from an overview of the MHG language as well as previous research on the diachronic development of the Perfekt, I will investigate the Perfekt in the MHG comic romance *Der Pfaffe Amis*. Based on these data and previous observations by Shimazaki (2002), Paul (2007) and Zeman (2010), I will argue for an extended-now analysis of the MHG Perfekt in the sense of Iatridou et al. (2001), see Section 1.3.2. Shimazaki (2002, pp. 63, 69) already suggested that the MHG Perfekt was not grammaticalised as a past tense but as something like the English present perfect. This chapter provides more evidence for this claim and is structured as follows: In Section 2.4, I will systematically describe data on the MHG Perfekt. Major phenomena that will be addressed are experiential, resultative, universal and future uses of the MHG Perfekt, the prototypically close connection to the speech time, the present perfect puzzle and the choice of temporal adverbials modifying the MHG Perfekt. In Section 2.5, I will argue that the extended-now analysis is applicable to the Middle High German Perfekt and I will demonstrate how it accounts for the observed data. In Section 2.6, I will describe the semantic change from an XN-semantics in the Middle High German period to a past semantics in Early New High German.

### 2.2 On Middle High German

Middle High German is the second oldest period of the German language and it encompasses three centuries (1050–1350). It developed from Old High German (OHG) and into Early New High German (ENHG). The transition from Old High German to Middle High German is mainly observable through a phonological change: the weakening of unstressed vowels to schwa /ə/, see Hennings' (2020, p. 156) examples in (1). This change affected the inflectional system of the nominal and verbal domain (Paul, 2007, pp. 19–20).

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<sup>1</sup>Parts of this chapter were presented at the *Formal Diachronic Semantics 7* conference in Budapest in November 2022. I thank the audience for valuable feedback.

## 2 The Perfekt in Middle High German

- (1) a. OHG *zunga* > MHG *zunge*
- b. OHG *geban* > MHG *geben*
- c. OHG *salbōn* > MHG *salben*
- d. *gi-* (prefix) > MHG *ge-* (i.e. OHG *gisehan* > MHG *gesehen*)

MHG cannot be regarded as a coherent language with one standard way of writing. Rather, it consisted of a variety of dialects. These dialects had all taken part in the High German consonant shift, also called Second Sound Shift.<sup>2</sup> This phonological change took place between the sixth and eighth century and set apart Low German and High German dialects. Between 1050 and 1350, Middle High German consisted of Middle German as well as Upper German dialects. The major Upper German dialects were Alemannic, Bavarian, South-Rhine Franconian and East Franconian while the Middle German dialects comprised West and East Middle German dialects (cf. Hennings, 2020, p. 5).

### 2.3 The origins of the German Perfekt

Considerable research has been devoted to the diachronic development of perfects (Bybee & Dahl, 1989; Bybee et al., 1994; Lindstedt, 2000; see also Section 1.4) and to the development of the German Perfekt in particular (Lindgren, 1957; Grønvik, 1986; Dentler, 1997; Öhl, 2009; Gillmann, 2016; Fischer, 2018; Fischer, 2020). While Old Germanic languages were equipped only with two tense forms, namely Präsens and Präteritum (Öhl, 2009), the emergence of the Perfekt (and other periphrastic constructions) in Old High German times lead to a radical change in the German tense system. While the former was a synthetic system, the latter contained both synthetic and periphrastic forms (cf. Wegera et al., 2018). Compared to the perfect in other Germanic languages like Old English and Old Saxon, the OHG Perfekt developed rather late and so its development could be traced *in statu nascendi* (Öhl, 2009, p. 267). The generally held view (cf. Grønvik, 1986; Bybee & Dahl, 1989; Fischer, 2018) is that the German Perfekt developed from a resultative construction where *habēn* ‘have/possess’ and *uuesan* ‘be’ were used as main verbs and the participle was adjectival. In a *habēn*-construction as in (2), the participle modified and agreed with the object and in the *uuesan*-construction it modified the subject, see (3).

- (2) *phigboum*                      *habeta sum*                      *giflanzotan*                      *in sinemo*  
figtree.MASC.SG.ACC. had      someone planted.PTCP.MASC.SG.ACC in his  
*uuingarten*  
vineyard  
‘Jemand besaß einen Feigenbaum, der in seinem Weingarten gepflanzt war’  
‘Someone had a planted figtree in his vineyard’  
(*Tatian* 102,2; cited from Fischer, 2018, p. 251)

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<sup>2</sup>See Klausmann (2014) and Hennings (2020) for more details.

- (3) *Yrhugis thar thoh éines man ther thir si irbólgan, [...] far, bisúani*  
 remember there DOCH a man who you.DAT. be enraged go reconcile  
*thih er*  
 you.REFL. before  
 ‘Wenn dir da noch einer in den Sinn kommt, der dir erzürnt ist, [ ... ] geh, versöhne  
 dich zuerst mit ihm!’  
 ‘If you remember a man who is enraged, [...] go, make peace with him first.’  
 (*Otfrid* II, 18, 21–23; cited from Gillmann, 2016, p. 200)

However, as observed by Gillmann (2016, p. 234f.), true resultative uses of *habēn/uuesan* + V-PP as in (2) and (3) were already highly marginal in OHG. Far more often, the construction was used as a resultative perfect, i.e. as a construction that denotes a past event whose result state persists at the same time as the main narrative (Gillmann, 2016, p. 237, see also resultative uses of perfects discussed in Section 1.3.1). The typological assumption (Bybee & Dahl, 1989; Bybee et al., 1994, pp. 51–105) that perfects develop along the universal grammaticalization path in (4) cannot be confirmed by Gillmann’s OHG data. If the assumption that grammaticizations start with truly compositional constructions is correct, then this development must have taken place before the OHG period.

- (4) resultatives > perfect > perfective/past

While *habēn* and *uuesan* functioned as main verbs in resultative constructions, they became more and more grammaticalised over time. As described by Grønvik (1986) and Gillmann (2016), *habēn/eigan* + V-PP constructions were originally only possible with telic verbs, i.e. verbs with a lexically specified result state. Gradually, the Perfekt expanded and could then also be formed with atelic (and intransitive) verbs which lack a lexically defined result state. The resultative construction thus changed into a perfect construction in Old High German times already. In the perfect construction, there was a focus on the verbally expressed eventuality (see Grønvik, 1986 and Gillmann, 2016 for more details) rather than on the result state that persist at the speech time. Resultative uses are the earliest attested uses of the German Perfekt. As soon as intransitive verbs could be used in this construction, experiential uses became available. Only at a later stage, the construction was used with unbounded eventualities like statives which then made universal uses possible (cf. Fischer, 2018).

In the following section, I will describe the MHG Perfekt, i.e. the natural continuation of the OHG Perfekt. The respective data, like the majority of the OHG data, are concerned with the second stage in Bybee & Dahl’s (1989) perfect development path.

## 2.4 Data

The Middle High German data discussed in this section were collected on the basis of the diagnostics for an extended-now analysis discussed in Section 1.3.1. As described above, there is already a large body of research on the grammaticalisation of the German Perfekt, both from a descriptive as well as from a typological point of view. In this body of research, the MHG Perfekt is described as a true perfect. What is missing,

however, is a formal semantic account of the different uses of the MHG Perfekt and how they are predicted from the semantic building blocks that enter into each composition. Given these circumstances, a full-fledged corpus study on the MHG Perfekt itself is not necessary at this point. Rather, I want to re-evaluate existing observations and apply the diagnostics for an extended-now analysis to the MHG data. In order to decide which kinds of uses are available in MHG, a qualitative investigation that also considers the context of each Perfekt occurrence is required. I conducted a small corpus study on the comic romance *Der Pfaffe Amis* which consists of 2510 verses and 11508 words.<sup>3</sup> There are 85 occurrences of the Perfekt in *Der Pfaffe Amis* which are subdivided into 14 *sîn*-Perfekts and 71 *hân*-Perfekts. These were collected manually and analysed with regard to their semantic behaviour. I also relate my findings to previous observations on the MHG Perfekt which are based on the sources listed in Table 2.1. All of the data stem from the Upper German dialect region.

Text	Author	Origin	Year
<i>Rolandslied</i>	Pfaffe Konrad	Regensburg	around 1170
<i>Nibelungenlied</i>	anonymous	Passau	1190–1210
<i>Herzog Ernst</i>	anonymous	Bayern/Österreich or Ostfranken	around 1200
<i>Parzival</i>	Wolfram von Eschenbach	near Ansbach, Bayern	1200–1210
<i>Tristan</i>	Gottfried von Straßburg	unclear	around 1210
<i>Der Pfaffe Amis</i>	Der Stricker	Österreich	1240

Table 2.1: Middle High German sources

### 2.4.1 The experiential use

As already discussed in Section 1.3.1, the experiential use of the perfect asserts that an event happened in the past and is relevant for the speaker’s experience at the speech time (Grønn & von Stechow, 2020, p. 3). On top of that, the experiential perfect is quantificational in that the relevant past events are repeatable (Grønn & von Stechow, 2020, p. 4), which can be overtly marked by adverbials, as illustrated in (5). The experiential perfect occurs with telic and atelic verbs.

- (5) *Since 1976 I have been hospitalized six times.*  
(Grønn & von Stechow, 2020, p. 2268)

The experiential use of the perfect is also available in Middle High German. In *Der Pfaffe Amis*, the Perfekt co-occurs with quantificational adverbials, like *drî stunt* (‘three times’) and *ê* (‘before’).<sup>4</sup>

<sup>3</sup>See <http://mhdbdb.sbg.ac.at/LastStatistics.de.html>.

<sup>4</sup>For telic verbs, it is difficult to distinguish experiential and resultative uses of the perfect (cf. Mittwoch, 2008.)

- (6) *der engel ist nû drî stunt zuo mir komen*  
 the angel is now three times to me come.PST.PTCP  
 ‘Mir ist mittlerweile dreimal ein Engel erschienen’  
 ‘The angel has now come to me three times.’  
 (*Der Pfaffe Amis* 1412; Henne, 1991, p. 66)
- (7) a. *di andern bringe ich iu dar zuo, swenne er der rede gedaget,*  
 b. *die ich iu ê hân gesaget.*  
 which I you before have say.PST.PTCP  
 ‘[Den Rest zahle ich Euch, wenn er dieses Gerede lāsst,] von dem ich Euch  
 vorhin erzählt habe.’  
 ‘[I will give you the rest when he stops the ramblings] of which I have told  
 you before.’  
 (*Der Pfaffe Amis* 2310; Henne, 1991, p. 100)

The possibility of the MHG Perfekt to occur with quantificational adverbials is also pervasive in other MHG texts. Some examples are listed below.<sup>5</sup>

- (8) *dâ bin ichz diu dir ê kumber hât geclagt, und diu dir sagte*  
 there am I.it who you before sorrow has tell.PST.PTCP. und who you said  
*dînen namn*  
 your name  
 ‘da bin ich die Jungfrau, die dir früher einmal ihr Leid geklagt hat und dir deinen  
 Namen sagte’  
 ‘There it is me who has shared with you her sorrow before and who told you your  
 name.’  
 (*Parzival* 252,11; Shimazaki, 2002, p. 66)
- (9) *ich getuon noch den degenen, als ich hân ê getân*  
 I do still the warriors as I have before do.PST.PTCP.  
 ‘ich tue auch jetzt so den feindlichen Helden, wie ich früher einmal getan habe’  
 ‘I still treat the warriors as I have done before.’  
 (*Nibelungenlied* 885; Shimazaki, 2002, p. 66)
- (10) *im hât der künic Etzel nie sô liebes niht vernomen*  
 in.this has the king Etzel never so pleasant.thing not hear.PST.PTCP.  
 ‘der König Etzel hat niemals eine so angenehme Nachricht vernommen’  
 ‘In this, king Etzel has never heard such pleasant things.’  
 (*Nibelungenlied* 1713; Shimazaki, 2002, p. 65)
- (11) *sie hânt in dicke überladen mit strîte vil sêre*  
 they have him often overload.PST.PTCP with battles very much  
 ‘Sie haben ihn oft mit Kampf sehr heftig überladen.’  
 ‘Often, they have very much overburdened him with battles.’  
 (*Herzog Ernst* 5372-5375; Zeman, 2010, p. 194)

<sup>5</sup>The German translations stem from the cited authors, the English translations and glosses are from me.

### 2.4.2 The resultative use

As a reminder of resultative uses, see the example in (12-b), taken from the discussion in Section 1.3.1. Resultative uses of perfects have a current relevance to the speech time. As such, they are used when the immediate effect of a past event is described at the speech time. When the embedded eventuality is negated, the whole sentence is judged ungrammatical. This contradiction does not appear with the simple past, see (12-a):

- (12) (Matthewson et al., 2015, p. 6)
- a. *John bought a new car, but he sold it.*
  - b. \**John has bought a new car, but he sold it.*

Of course, it is impossible to test whether the MHG equivalent of (12-b) would also be judged ungrammatical by native speakers of MHG. What the data show, however, is in line with the predictions of the extended-now approach discussed in Section 1.3.2: resultative uses arise only with telic eventualities as illustrated in the following examples.

In the episode *Amis und der Bischof* ('Amis and the bishop'), Amis teaches a donkey to "read." He hides oat in a book, the donkey learns to turn the pages while looking for food. When the bishop comes to check on his progress, the donkey brays loudly because it cannot find any food. Amis explains to the bishop that he is teaching the donkey the alphabet and that the donkey has already learnt the letter A. In this context, Amis addresses the bishop and utters (13). Note that *ersehen* is best translated here as 'recognise'<sup>6</sup>.

- (13) *er hât die buochstaben ersehen.*  
 he has the.PL letters see.PST.PTCP  
 'Er hat die Buchstaben gesehen<sup>7</sup>.'  
 'He has caught sight of the letters.'  
 (*Der Pfaffe Amis* 294; Henne, 1991, p. 22)

Another of many examples stems from the episode *Die Kirchweih* ('The parish fair') in which Amis preaches and then tricks women into giving enormous donations. He addresses the women and emphasises how lucky they are for having him preach to them.

- (14) a. *ir mugt wol immer wesen vrô,*  
 b. *daz mich got hât her gesant*  
 that me.ACC God has here send.PST.PTCP  
 '[Ihr könnt euch für immer glücklich schätzen,] daß Gott mich hierher gesandt hat.'  
 '[You can consider yourselves lucky] that God has sent me here.'  
 (*Der Pfaffe Amis* 366f; Henne, 1991, p. 24)

<sup>6</sup>*Mittelhochdeutsche Wörterbuch* "er-sêhen, *stv.*" lists the following translations: *sehend wahrnehmen, betrachten, erblicken, erschauen mit acc.* All but *betrachten* are telic.

<sup>7</sup>The German translations of *Der Pfaffe Amis* are by Henne (1991).

As in the example above, the Perfekt is used to stress the relevance of a past event to the present situation. In (14-b), the event of God sending Amis to this specific congregation is relevant as Amis is at their church at the time when he utters this sentence.

Another example is from the episode *Das unsichtbare Gemälde* ('The invisible painting') in which Amis dresses up as a famous painter and pretends to draw a vast painting in the halls of a French king. He says that only those who were born in wedlock will be able to see the painting. Unsurprisingly, once the King wants to look at the non-existing painting, he cannot see anything and so says to himself<sup>8</sup>:

- (15) *ich hân zwô êre verlorn*  
 I have two honours lose.PST.PTCP.  
 'Ich habe zweimal Ehre verloren [...die Ehre meiner Mutter und meine eigene].'  
 'I have lost two honours [...my mother's and mine].'  
 (*Der Pfaffe Amis* 630ff; Henne, 1991, p. 34)

In (15), a past event is relevant to the situation in which the king finds himself in. It is clear that at the time of utterance, the king's honour is still lost. The king later also describes his predicament: *ich sich nû wol, ich bin sô blint, daz ich niht bin ein êkint* 'I see it clearly, I am so blind because I am not a child born in wedlock.' (*Der Pfaffe Amis* 637f).

### 2.4.3 The universal use

As discussed in Section 1.3.1, the universal use only occurs with stative or progressive verbs in English, i.e. with homogeneous eventualities (cf. Grønn & von Stechow, 2020). In (16), I remind the reader of this use. The eventuality expressed by the participle starts in the past, includes the speech time and holds throughout the interval that ranges from the speech time to some point in the past.<sup>9</sup> Iatridou et al. (2001, 196ff.) observe that the universal reading only arises if the Perfekt is modified by durative adverbials.

- (16) (Matthewson et al., 2015, p. 6)  
 a. *Tom has been sick since December.*  
 b. *Mary has been singing this song since this morning.*

In previous research, there has been no consensus on whether or not universal uses of the Perfekt exist in Middle High German. While Shimazaki (2002, p. 63) states that the MHG Perfekt can express universal<sup>10</sup>, experiential, indefinite and recent past meanings, Zeman (2010) refers to Shimazaki's universal perfect examples as problematic. According to her, the continuation of the eventuality at the speech time is only implied in these examples and can be ascribed to the Aktionsart of the underlying verb. She also criticises

<sup>8</sup>This is the only time that the Perfekt occurs in monologue in *Der Pfaffe Amis*.

<sup>9</sup>Alternative names that are used are 'perfect of persistent situation' (Comrie, 1976) or 'continuative perfect' (Portner, 2003).

<sup>10</sup>See also Gillmann (2016, p. 80).

that Shimazaki's universal Perfekt examples are all based on 'additive' verbs (p. 206).<sup>11</sup> However, this should not be a point of criticism in the first place: universal Perfekt uses are only to be expected with 'additive' or homogeneous eventualities (cf. Iatridou et al., 2001; Grønn & von Stechow, 2020). I list some of Shimazaki's examples in (17) and (18).<sup>12</sup>

- (17) *die ich von herzen minne und lange hân getân, diu ist mir noch*  
the.one I from heart love and long have do.PST.PTCP. she is me still  
*vil vremde*  
very unfamiliar  
'die Frau, die ich von Herzen liebe und seit langem liebe, die ist mir noch völlig fremd'  
'The one who I love with all my heart and have done for a long time is still very unfamiliar to me.'  
(*Nibelungenlied* 136; Shimazaki, 2002, p. 64)
- (18) *si möht iedoeh erlangen daz ich pin ir gevangen alsus lange hie*  
she could however be.bored that I am her capture as long here  
*gewesen*  
be.PST.PTCP.  
'sie könnte aber müde sein, dass ich als ihr Gefangener so lange hier bin'  
'She could be bored that I have been here for so long as her prisoner.'  
(*Parzival* 327, 5; Shimazaki, 2002, p. 64)

Paul et al. (2007) in their Middle High German grammar do not treat universal uses as a systematic meaning component of the Perfekt. There, the phenomenon is called 'durchstehende Zeit' (§S9 Anm. 1, p. 293) and it is supposed to only occur infrequently ('vereinzelt'). The respective example is provided in (19). The example stems from the *Nibelungenlied* which is the first epic poem recorded in Middle High German. In aventure 20, king Etzel wants to find out more about his future wife, the widowed queen Kriemhild. He asks his advisors if they know the land and people surrounding queen Kriemhild. Markgraf Rüdiger answers that he knows Kriemhild's brothers, the kings Gunther, Gernot and Giselher. He says:

- (19) *ich hân erkant von kinde die edelen künege hêr.*  
I have know.PST.PTCP from child the noble kings from  
'Ich kenne die edlen, hohen Könige von Kindheit an.'  
'I've known the noble kings since (my/their) childhood.'  
(*Nibelungenlied* 1147,4; Grosse, 1997, p. 348; Paul, 2007, §S9 Anm. 1)

Here, Grosse (1997) translates the MHG universal perfect with the present tense form *kenne*. The fact that the kings Gunther, Gernot and Giselher are still alive at that point is addressed within the next few verses of the narration and so the knowing-state is still

<sup>11</sup>"Die Beispiele, die diesbezüglich bei SHIMAZAKI (2002: 64) gegeben werden, erweisen sich als problematisch: Das Andauern der Verbalhandlung zur Sprechzeit wird hier lediglich impliziert und ist in der Regel auf die Aspektualität des Verbs zurückzuführen: Die Belege bei SHIMAZAKI 2002 sind vor allem von additiven Verben gebildet, die sich hinsichtlich des Merkmals der Abgeschlossenheit neutral verhalten." (Zeman, 2010, p. 206)

<sup>12</sup>The German translations are by Shimazaki, the gloss and English translation by me.

on-going. This is why I consider (19) to be a true universal use of the Perfekt.

Turning now to *Der Pfaffe Amis*, I want to suggest that the universal use, though they might be rare in MHG, arise systematically in MHG. As discussed above for Modern English, the universal use is predicted whenever the Perfekt is combined with unbounded eventualities like statives and modified by durative adverbials. There are 6 out of the 85 occurrences of the Perfekt (7.06 %) which are statives that appear in combination with typical perfect adverbials like *unz her* ('until now'), *mêr denn anderthalp jâr* ('more than one and a half years') or *zwei jâr* ('(for) two years'). I discuss them in turn below:

The first example stems from the episode *Der Fischfang* ('Fishing'). Pfaffe Amis visits a farmer and asks for fish. The farmer replies that it is a 3-mile long walk to get fish. Amis, knowing that there is a well on the farm, asks:

- (20) *wâ*            *habt ir wazzer denn genomen,*            *daz ir unz her*  
 where.from have you water DENN take.PST.PTCP. that you until now  
*getrunken*            *hât?*  
 drink.PSTP.PTCP. have?  
 'Woher habt Ihr denn das Wasser, das Ihr bis jetzt immer getrunken habt?'  
 'Where from have you taken the water that you have been drinking until now?'  
 (*Der Pfaffe Amis* 1198f; Henne, 1991, p. 59)

The German translation is by Henne (1991) and he uses the Perfekt tense and adds *immer* ('always').<sup>13</sup> I am unsure whether (20) is a clear universal Perfekt example. The event of drinking certainly abuts the speech time but I am unsure whether it is asserted that the drinking event includes the speech time or whether this is just pragmatically inferred because of world knowledge.<sup>14</sup>

The next two examples appear in the episode *Ein Maurer als Bischof* ('A mason as bishop') which is a typical *Bettler als Pfand* ('beggar as deposit') narration (Henne, 1991, p. 134). Pfaffe Amis travels to Greece where he meets a German mason who cannot speak Greek. Amis convinces the mason to pretend to be a bishop and he dresses him up accordingly. Together they trick a merchant into selling them all the silk that he has. Amis then 'takes care' of the silk and disappears while the mason, still disguised as a bishop, is left behind and supposed to pay the merchant. When the merchant does not get his money he beats the supposed bishop up publicly. A citizen then approaches them and tells them that the man is in fact a mason. The citizen says:

- (21) *er ist mîn mûraer gewesen*            / *mêr denn anderthalp jâr.*"  
 he is my mason be.PST.PTCP / more than one.and.a.half years  
 'Er ist mein Maurer seit mehr als eineinhalb Jahren.'  
 'He has been my mason for more than one and a half years.'  
 (*Pfaffe Amis* 1960ff.; Henne, 1991, p. 87)

<sup>13</sup>This is an interesting data point. The modification of the Perfekt by *immer* is further discussed in Chapter 3.

<sup>14</sup>I consider the verb *trinken* to be homogeneous because each subinterval of it is also a drinking event. However, it does have a dynamic component which would make it an activity rather than a stative eventuality and a universal use would not be expected in (20) in the first place. Maybe *trinken* should not be considered a stative after all.

Henne (1991) uses the Präsens (present tense) in his German translation instead of the Perfekt which would have been a more literal translation. This implies that Henne regards the state of being a mason to continue at the speech time and points towards a universal use of the Perfekt. It is difficult to decide whether the context makes a universal use plausible as there is evidence for and against a universal use: On the one hand, a few lines before (21) is uttered, the citizen is introduced and he describes how he knows the mason: *nu kom der burgaer ouch dar, / dem er gemûret hâte* ('now came the citizen also whom he (the mason) had laid bricks'). The event is expressed with the Plusquamperfekt (pluperfect) which indicates that the mason used to work for the citizen but that this is not an on-going event. This would be evidence against a universal use of the Perfekt in (21). On the other hand, later in the text, the citizen addresses the mason with "*meister mîn*", verse 1974. The Middle High German dictionary lists *meister* as 'Künstler, Handwerksmeister' ('artist, master craftsman'), ('meister,' *Mittelhochdeutsches Handwörterbuch* von Lexer). Additionally, Henne (1991) translates it as 'Maurermeister.' The fact that the citizen addresses the mason as *meister mîn* later in the story makes a true universal use of the Perfekt in (21) plausible.

The narrative continues and the citizen asks the mason why he is acting so strangely and pretending to be a bishop. The citizen says:

- (22) *ir sît doch nû wol zwei jâr harte sinnic gewesen.*  
 you be DOCH now surely two years very in.your.right.mind be.PST.PTCP.  
 'Ihr seid doch zwei Jahre lang völlig bei Verstand gewesen.'  
 'You've been in your right mind for two years now.'  
 (*Der Pfaffe Amis* 1982f.; Henne, 1991, p. 89)

Henne (1991) translates the MHG Perfekt with the Perfekt. It is unclear whether the state of being *harte sinnic* includes the speech time or not. It should include the speech time if (22) is a true universal use of the Perfekt. However, given that the mason has been acting so strangely lately, it would be more plausible to assume that the eventuality expressed by *ir sît sinnic gewesen* only abuts the speech time.

Two much clearer universal Perfekts appear in the episode *Der Juwelenhändler* ('The jeweller'). Amis tricks a merchant into selling him his jewels and lures him to his accommodation where he wants to pay him. As soon as the merchant gets there, however, he is tied up by Amis and his servants. Amis then brings this poor merchant to a doctor, telling him that his father, who is in fact the merchant, is very ill and keeps shouting and accusing Amis of stealing from him. Amis explains the situation to the doctor in the following way<sup>15</sup>:

- (23) *der ist nû leider mange vrist vil grôzlîche siech gewesen.*  
 he is now unfortunately long time a.lot very.much ill be.PST.PTCP.  
 'Leider ist er schon lange arg krank.'  
 'Unfortunately, he (my father) has now been sick for a long time.'  
 (*Der Pfaffe Amis* 2216f.; Henne, 1991, p. 97)

<sup>15</sup>I do not know how to gloss *mange*. I could not find it in the MHG dictionary by Lexer. My gloss is based on Henne's German translation.

The context makes very clear that the state of being ill is ongoing at the speech time. The only reason why Amis drags the poor merchant to a doctor is because Amis falsely accuses the merchant of being mentally ill and he wants the doctor to confirm that by paying him a generous amount of money. Thus, (23) is a universal use of the Perfekt.

The narrative continues and Amis explains the merchant's illness in more detail. Pretending that the merchant is his father, Amis says to the doctor:

- (24) *im hât der siehtuom gewert / wol zwei jâr unde mê* / “*nû him has the sickness lasted.PST.PTCP certainly two years and more now sagt mir, wi ist im wê? / sprach der wîse arzât*”  
 tell me how is him sore said the wise doctor  
 ‘Seine Krankheit dauert nun schon mindestens zwei Jahre.’ “Was fehlt ihm denn?” fragte der erfahrene Arzt,  
 ‘His sickness has lasted for at least two years now.’ “Now tell me what is wrong with him?” said the wise doctor’  
 (*Der Pfaffe Amis* 2222ff.; Henne, 1991, p. 97)

Again, Henne uses the Präsens for his translation which indicates that the sickness is ongoing at the speech time. This interpretation is also confirmed by the context: As in the example in (23), it is very clear that Amis drags the poor merchant to a doctor because of his alleged poor mental health. Having described the merchant's suffering as lasting *wol zwei jâr unde mê*, the doctor replies with *wi ist im wê?* referring to the current and ongoing sickness of his patient. (24) thus contains a clear universal use of the Perfekt.

The story goes on and Amis talks to the doctor about the mental health of his ‘father’. He mentions how he keeps shouting at people and how Amis felt the need to keep him silent by shoving a cloth in his mouth. The doctor is then introduced to Amis' father, the merchant. As soon as the cloth is removed from the merchant's mouth he starts shouting and begging the doctor to help him. Amis comments this ‘mad’ behaviour and says:

- (25) *alsô hât er unz her gelebet.*  
 so has he until now/‘hierher’ live.PST.PTCP.  
 ‘so benimmt er sich die ganze Zeit.’  
 ‘This is how he has been acting until now.’  
 (*Der Pfaffe Amis* 2301; Henne, 1991, p. 101)

The run-time of the eventuality expressed by *gelebet* clearly includes the speech time as the merchant keeps shouting. This is also reflected in Henne's translation. It would be too weak to assume that the event time only abuts the speech time. I thus consider (25) to be a sentence containing a universal Perfekt.

Zeman (2010, pp. 201, 206) also discusses the examples in (24) and (25) in two footnotes and she comes to the conclusion that the Perfekt in these examples is neutral with respect to whether the event is regarded as concluded<sup>16</sup> and that these examples would not illustrate a universal use of the Perfekt.<sup>17</sup> In contrast to the translation by Henne

<sup>16</sup>“Deutlich wird die Neutralität bezüglich des Merkmals der Abgeschlossenheit aber auch anhand zweier Belege im *Pfaffen Amis* des Strickers” (Zeman, 2010, p. 201).

<sup>17</sup>“Vgl. ebenso die zitierten Beispiele aus dem *Pfaffen Amis* des Strickers in Fn. 79, die m.E. ebenfalls nicht als ‘Perfekt der Persistenz’ [=universales Perfekt] bezeichnet werden können” (Zeman, 2010,

(1991), Zeman translates these two instances of the Perfekt with the Perfekt into New High German.

Contrary to Zeman (2010) and based on an analysis of the context in which these sentences were uttered, I suggest that universal uses of the Perfekt are indeed available in Middle High German. I have shown that at least three of the six candidates in *Der Pfaffe Amis* are clear universal perfects. I have also suggested to regard instances of ‘durchstechende Zeit’ mentioned in the MHG grammar by Paul (2007) as universal uses of the Perfekt.

#### 2.4.4 Close connection to the speech time

What all the uses discussed above have in common is their close connection to the speech time. Another way to describe this is to say that the MHG Perfekt expresses the current relevance of a past event to the utterance time of the speaker<sup>18</sup>. This semantic behaviour of the Perfekt is also reflected in the type of discourse mode that the Perfekt occurs in. In *Der Pfaffe Amis*, 82 of the 85 Perfekts occur in dialogue, 2 occur in the frame narrative and 1 occurs in monologue as summarised in Table 2.2.

<b>total n</b>	<b>in dialogue n</b>	<b>%</b>	<b>in monologue n</b>	<b>%</b>	<b>in frame narrative n</b>	<b>%</b>
85	82	96.47	1	1.18	2	2.35

Table 2.2: The Perfekt in dialogue, monologue and frame narrative in *Der Pfaffe Amis*

Lindstedt (2000, p. 371) suggests diagnostics to differentiate a true perfect from a past tense: as soon as a (former) perfect can be used as a narrative tense, it is no longer compatible with the current relevance meaning and thus no longer a perfect. This is one piece of evidence that the MHG Perfekt is still a true perfect, as illustrated in the universal development path by Bybee et al. (1994).<sup>19</sup>

The fact that the MHG Perfekt mainly appears in dialogue<sup>20</sup> has also been noted by Zeman (2010), as illustrated in Table 2.3. She uses the umbrella term *dialogisch*

p. 206).

<sup>18</sup>See also Zeman (2010, pp. 253–255) and ‘Gegenwartsbezug’; Fischer (2020, p. 103) where the MHG Perfekt is described as “prototypically tied to the speech time”.

<sup>19</sup>An anonymous reviewer to *Formal Diachronic Semantics* 7 commented on my abstract saying “To show that the MHG is not ‘yet’ a narrative tense, it seems odd to use a ‘comic romance written in verse.’ This seems to be weak evidence that the form CANNOT be used in narrative as an ordinary past tense.” I do think that a comic romance is a valuable source for linguistic reasoning (cf. Bade & Beck, 2017). *Der Pfaffe Amis* does contain narrative elements as well as dialogues and it is a systematic behaviour of the Perfekt not to appear in the main narrative but only in dialogic passages. Additionally, Zeman (2010) observes that the distribution of MHG tenses is independent of text type (prose vs. verse): “Auch sind hinsichtlich des Verhältnisses der Tempusverteilung [im Mittelhochdeutschen] zu den Kontextfaktoren der Textsorten bzw. der Textfassung (Prosa vs. Vers) keine direkten Abhängigkeitsbeziehungen nachzuweisen. Es konnte gezeigt werden, dass die Unterschiede der Tempusdistribution nicht auf die unterschiedliche Charakteristik einer bestimmten Textsorte zurückzuführen sind, sondern dass die Verteilung in Relation zur Dominanz des jeweils zugrundeliegenden deiktischen bzw. anaphorischen Textmodus erklärt werden kann.” (p. 313)

<sup>20</sup>Zeman (2010) shows that non-prototypically, the Präteritum can also appear in dialogic passages. This

(‘dialogic’) to include both dialogues as well as certain kinds of frame narratives. The common denominator is speaker-oriented speech<sup>21</sup>. This behaviour of the MHG Perfekt is systematic and can also be found in comparable literature, as shown in Table 2.4.

Zeman (2010, p. 309) observes that the Präsens and Perfekt in the MHG *Herzog Ernst* are almost exclusively used in speaker-oriented speech such as dialogues, while the Präteritum and Plusquamperfekt are used in passages that are not as closely connected to the speaker and which put more focus on the general narrative. She further states that the opposition between the MHG Präteritum and Perfekt is not a temporal one but rather that there is a difference in the type of perspective that is taken on the expressed event (p. 313)<sup>22</sup>.

	<b>Präteritum n</b>	<b>%</b>	<b>Perfekt n</b>	<b>%</b>
<b>dialogic</b> (i.e. direct speech and frame narrative)	142	4.8	136	96.45
<b>non-dialogic</b>	2813	95.16	2	1.42
<b>generally valid</b>	1	0.03	3	2.13
<b>total</b>	2956		141	

Table 2.3: The distribution of Präteritum and Perfekt in *Herzog Ernst*, as reported in Zeman (2010, p. 7)

<b>Perfekt (hân)</b>	<b>total n</b>	<b>non-dialogic n</b>	<b>%</b>
<i>Herzog Ernst</i> (around 1200)	121	2	1.65
<i>Rolandslied</i> (around 1170)	138	6	4.35
<i>Parzival</i> (around 1205)	144	4	2.78
<i>Tristan</i> (around 1210)	104	3	3.88

Table 2.4: Percentages of the *hân*-Perfekt in non-dialogue passages, reported by Zeman (2010, p. 8)

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is the case when the speaker refers to an event that is in the past and not strongly connected to the speech time.

<sup>21</sup>Applying this reasoning to the results in Table 2.2, 100% of the occurrences of the Perfekt were in speaker-oriented and thus dialogic passages.

<sup>22</sup>“Perfekt und Präteritum sind damit im Mhd. nicht vorrangig durch ihren temporalen Wert, sondern vor allem durch ihre unterschiedliche Perspektivensetzung voneinander unterschieden.” (Zeman, 2010, p. 313)

### 2.4.5 The present perfect puzzle

As already established in Section 1.3.1, the English present perfect cannot co-occur with definite past time adverbials; native speakers judge this combination as ungrammatical (cf. McCoard, 1978; Bhatt & Pancheva, 2005; Klein, 1992). This phenomenon was called *present perfect puzzle* by Klein (1992). In this section, I show that the MHG Perfekt is subject to the same restrictions as the English present perfect.

Zeman (2010, pp. 188, 195, 254, 291) observes that while the MHG Plusquamperfekt can appear with adverbials referring to a definite past time, this is impossible for the Perfekt.<sup>23</sup> In her corpus, she finds that the Plusquamperfekt is once modified by definite past time adverbials (2.27% of 44 occurrences of the Plusquamperfekt) and six times by the adverb *dô* (13.64%) (p. 236). The Perfekt never occurs with these adverbials in her corpus. Zeman (2010, p. 254) illustrates this with the example in (26).

- (26) *dô het got aber ein wunder begân als er vil dicke*  
 then have.PRÄT God but a miracle perform.PST.PTCP like he very often  
*hât.*  
 have.PRÄS  
 ‘Da hatte Gott aber ein Wunder vollbracht, wie er es sehr oft (vollbracht) hat.’  
 ‘Then God had performed a miracle like he has often done.’  
 (*Herzog Ernst* 4330f., Zeman, 2010, p. 254)

In *Der Pfaffe Amis*, the distribution of Perfekt, Plusquamperfekt and definite past time adverbials is almost identical to Zeman’s findings. The word *gëster* (‘yesterday’) is not used at all. The following lexical items, however, appear once each and always in combination with Präteritum: *des andern tages* (‘on another day,’ v. 745); *an einem vrîtage* (‘on a Friday,’ v. 1168); *an dem maentage* (‘on (the) Monday,’ v. 1648) and *an dem andern tage* (‘on the other day,’ v. 1869). An example is provided in (27).

- (27) *mir starp an dem maentage vruo / ein bischolf, der herre mân.*  
 me died on the Monday early a bishop the lord my  
 ‘Am Montag früh ist mir mein Herr, der Bischof, gestorben.’  
 ‘On Monday early in the day, my lord, the bishop, died.’  
 (*Der Pfaffe Amis* 1648; Henne, 1991, p. 75)

Additionally, I examined whether and how frequently the adverb *dô* (‘da, dann’/ ‘then’ and ‘als’/ ‘when’) co-occurred with the Präteritum, Plusquamperfekt and Perfekt in *Der Pfaffe Amis*, see Table 2.5. *Dô* can introduce both main and subordinate clauses and is used exclusively in the main line of the narrative to recount the order of events. It is not used once with the Perfekt.

The adverb *dô* occurs in main clauses as illustrated in (28)–(30). In its most typical use, it appears with the Präteritum:

<sup>23</sup>Zeman (2010) notes that “Der deutliche Bezug zur Sprechzeit verhindert die Verlagerung der Referenzzeit in die Vergangenheit, so dass das Perfekt von der Bezeichnung der definiten Vergangenheit ausgeschlossen ist. [...] Das mhd. Perfekt verhält sich in dieser Hinsicht parallel zum englischen Perfekt” (p. 207).

total n	with Präteritum n	%	with Plusquamperfekt n	%	with Perfekt n	%
178	172	96.63	6	3.37	0	0

Table 2.5: The distribution of *dô* across past tenses in *Der Pfaffe Amis*

- (28) *dô sprach der bischolf*: “*deiswâr*”  
 then say.PST the bishop: “this.is.true”  
 ‘Da sprach der ‘Bischof’: “Ja, das ist wahr.” ’  
 ‘Then the bishop said: “This is true.” ’  
 (*Der Pfaffe Amis* 1894; Henne, 1991, p. 84)
- (29) *do erschrac der wirt vil sêre*.  
 then startle.PST the landlord much very  
 ‘Jetzt erschrak der Kaufmann furchtbar.’  
 ‘Then the landlord got startled very much.’  
 (*Der Pfaffe Amis* 1895; Henne, 1991, p. 84)
- (30) “*ez ist wâr, ez ist wâr*”, / *sprach der bischolf aber dô*.  
 it is true it is true said the bishop but then  
 ‘“Es ist wahr, es ist wahr”, wiederholte der ‘Bischof.’  
 ‘It is true, it is true, the bishop then said.’  
 (*Der Pfaffe Amis* 1972; Henne, 1991, p. 87)

This pattern is parallel to Modern English. The present perfect cannot co-occur with *then*, as illustrated in (31):

- (31) a. *Then, Susan came home.*  
 b. ??*Then, Susan has come home.*<sup>24</sup>

On top of that, the adverb *dô* frequently appears in subordinate clauses. Whenever this is the case, the subordinate *dô*-clause cannot appear in the prefield of the main clause. Rather, the *dô*-clause is left-adjoined to the main clause and appears in a correlative structure (cf. Axel-Tober, 2012). Most often, the prefield position of the main clause is occupied by the correlative adverb *dô*, see (32)–(34). Seldomly, the main clause can also precede the *dô*-clause, as illustrated in (35). While the *dô*-clause in (32), (33) and (35) is used to express temporal precedence (see also Henne’s translation with *nachdem*), the correlative structure can also be used to express simultaneity in that the *dô*-clause and the main clause refer to the same time interval, see (34). Temporal precedence can either be expressed by the use of the Plusquamperfekt, as in (32), or by the use of the Präteritum, as in (35) and possibly also (33).

- (32) [<sub>CP<sub>sub</sub></sub> *Dô si alle geophert hâten / und daz vil gerne tâten,*] /  
 DÔ they all sacrifice.PST.PTCP. had and that a.lot gladly did

<sup>24</sup>Native speaker judgement: “This sounds very odd to me. It is not possible to use the present perfect with *then*.”

## 2 The Perfekt in Middle High German

- [*CP<sub>main</sub>* *dô sprach der phaffe Âmîs:*]  
 DÔ said the parson Amis  
 ‘Nachdem alle geopfert hatten, und zwar ganz begierig, sprach der Pfaffe Amis:’  
 ‘When they had all gladly made sacrifices, parson Amis said’  
 (*Der Pfaffe Amis* 437ff; Henne, 1991, p. 28)
- (33) [*CP<sub>sub</sub>* *dô der phaffe von Lutringen quam, / swâ er kirchwîhe vernam,*] /  
 DÔ the vicar from Lothringen came where he parish.fair heard  
 [*CP<sub>main</sub>* *dâ predigt er als ê.*]  
 DÔ preached he as before  
 ‘Als der Pfaffe aus Lothringen kam, predigte er wieder überall, wo Kirchweih war.’  
 ‘Having come from Lothringen, the vicar preached as before wherever he heard  
 that there was a parish fair.’  
 (*Der Pfaffe Amis* 933ff; Henne, 1991, p. 46)
- (34) [*CP<sub>sub</sub>* *dô si in sô blôzen sitzen sach,*] / [*CP<sub>main</sub>* *dô twanc si der*  
 DÔ she ihm so naked sit.INF saw DÔ troubled she the  
*ungemach*]  
 anxiety  
 ‘Als sie ihn dann so nackt dasitzen sah, sorgte sie sich gleichwohl mehr’  
 ‘When she saw him sitting there naked, anxiety befell her’  
 (*Der Pfaffe Amis* 2433f.; Henne, 1991, p. 105)
- (35) [*CP<sub>main</sub>* *do bedâhten ouch die wîsen sich,*] / [*CP<sub>sub</sub>* *do si dâ niht*  
 DÔ recollected also the wise.ones REFL DÔ they there not  
*ensâhen,*]  
 NEG.saw  
 ‘Nun besannen auch die Verständigen unter ihnen sich darauf - nachdem sie dort  
 nichts gesehen hatten -’  
 ‘Having seen nothing there, also the wise ones came to their senses’  
 (*Der Pfaffe Amis* 780f.; Henne, 1991, p. 41)

The prefield of the main clause can rarely also be occupied by other phrases, i.e. by adverbs like *nû* and *sô* in (36) and (37), by NPs like *si* in (38), by *daz* in (39) or even by larger constituents containing direct speech, see (40).

- (36) [*CP<sub>sub</sub>* *dô diu zuovart gelac,*] / [*CP<sub>main</sub>* *nû wâren im tougenlîchen bî / sîner knappen*  
*zwêne oder drî.*]  
 ‘Als der Zustrom dann nachließ, erschienen bei ihm heimlich zwei oder drei seiner  
 Helfer.’  
 ‘When the influx [of offerings] ceased, two or three of his helpers appeared secretly  
 by him.’  
 (*Der Pfaffe Amis* 1516ff.; Henne, 1991, p. 71)
- (37) [*CP<sub>sub</sub>* *Dô er ze herbergen quam / und an der vrouwen vernam, / daz er si dûht*  
*ein heilic man / und daz si bereiten began / ein wirtschafft durch den willen sîn,*]  
 / [*CP<sub>main</sub>* *sô sprach er:*]  
 ‘Als er dann zu dem Quartier kam und merkte, daß [sic] die Bäuerin ihn für einen  
 Heiligen hielt und sich anschickte, ihm ein Essen zu bereiten, da sagte er:’

‘When he came to the accomodation and realised that she believed him to be a saint and that she began to prepare a meal for him, he said:’  
(*Der Pfaffe Amis* 957ff.; Henne, 1991, p. 49)

- (38) [ $CP_{sub}$  *dô si den kunic hôrten jehen, / daz stüende dâ, ditz stuende hie, / als in der meister wizzen lie,*] / [ $CP_{main}$  *si sprâchen alle*]:  
‘Als sie den König nun erklären hörten, dort sei dieses zu sehen und hier jenes, wie es ihm Meister Amis zuvor erläutert hatte, da sagten alle:’  
‘When she heard the king’s explain this would be here, that would be there as master [Amis] had explained, they all said:’  
(*Der Pfaffe Amis* 716ff.; Henne, 1991, p. 39)
- (39) [ $CP_{sub}$  *dô im nieman niht brâhte / noch ze bringen gedâhte,*] / [ $CP_{main}$  *daz wart im harte swaere.*]  
‘Als ihm dann niemand etwas gebracht hatte noch daran dachte, ihm etwas zu bringen, wurde es ihm schwer ums Herz’  
‘When nobody brought him anything and did not think of bringing him something, this made him very sad.’  
(*Der Pfaffe Amis* 1847ff.; Henne, 1991, p. 83)
- (40) [ $CP_{sub}$  *dô si des vrâgen began,*] / [ $CP_{main}$  *“swîc stille”, sprach der man,*]  
‘Als sie anfang, nach dem Geld zu fragen, sprach ihr Mann: “Sei bloß ruhig, ’  
‘When she began to ask questions, the man said “Be silent,” ’  
(*Der Pfaffe Amis* 2439f.; Henne, 1991, p. 105)

The semantics of *dô* is difficult to determine as it appears in a variety of constructions and seems to be unspecified as to its core meaning. This unspecificity of *dô* goes hand in hand with Axel-Tober’s (2012) observation that there were less subordinating conjunctions available in MHG than there are in New High German (p.307). If there are less subordinating conjunctions available in a language, then the existing ones need to be multi-functional. *Dô* can appear in main clauses and refer to an indefinite time in the narrative, see (28)–(30). *Dô* can also appear in correlative structures where it is not properly integrated into the main clause. As a subordinating conjunction, *dô* can express temporal precedence, as in (32) and (35) and temporal simultaneity, as in (34).

According to Bäuerle (2015, p. 53), the German subordinating conjunction *als* only licenses true past tenses in its scope. Given that *als* and *dô* have a similar semantics when used as a subordinating conjunction in simultaneous contexts, *dô* can also only allow true past tenses in its scope. Since the MHG Perfekt does not appear in subordinate clauses introduced by *dô* as shown in Table 2.5, it is reasonable to assume that the MHG Perfekt is not a past tense.

The inability of the MHG Perfekt to occur with *dô* as a subordinating conjunction is parallel to the behaviour of the Modern English present perfect, as simplified in (41):

- (41) a. *When Susan came home, the kitchen was on fire.*  
b. ??*When Susan has come home, the kitchen was on fire.*<sup>25</sup>

<sup>25</sup>Native speaker judgement, p.c.: “This sounds very odd to me.”

### 2.4.6 Temporal adverbials

Of the 85 occurrences of the Perfekt in *Der Pfaffe Amis*, 25 (29.41 %) are modified by temporal adverbials. These are the same ones that can also modify the Modern English present perfect. For English, Werner (2014, p. 16) finds that around 30 % of native present perfect uses co-occur with temporal adverbials. This is a very similar number to the one found here. A list of the respective MHG adverbials is given in Table 2.6. Examples are provided in (42)–(44).

Adverbial	Translation German / English	Number of occurrences with the <i>Perfekt</i>
<i>nû / nuo</i>	‘nun’ / ‘now’	7
<i>unz (wenn/her)</i>	‘bis zu’ / ‘until’	3
<i>hie</i>	‘hier’ / ‘here’	3
<i>ê</i>	‘früher; vorhin’ / ‘before’	2
<i>hiute</i>	‘heute’ / ‘today’	2
<i>heint</i>	‘heute Nacht’ / ‘last night’	1
<i>kurzlich</i>	‘in Kürze’ / ‘in a short while’	1
<i>dri stunt</i>	‘dreimal’ / ‘three times’	1
<i>sô lange</i>	‘so lange’ / ‘(for) so long’	1
<i>mêr denn anderthalp jâr</i>	‘mehr als 1 1/2 Jahre’ / ‘more than one and a half years’	1
<i>mange vrist</i>	long time	1
<i>zwei jâr unde mê</i>	‘zwei Jahre oder mehr’ / ‘two years or more’	1
<i>zwei jâr</i>	‘zwei Jahre’ / ‘two years’	1

Table 2.6: Adverbials co-occurring with the Perfekt in *Der Pfaffe Amis*

- (42) *meister, nuo sagt mîr, von waz materie habt ir hie gemâlt alsô schône.*  
 master now tell me from what matter have you here painted so nicely  
 ‘Meister, erklärt mir nun, was Ihr hier so wunderbar gemalt habt?’  
 ‘Master, now tell me about what you’ve painted here so nicely.’  
 (*Der Pfaffe Amis* 646; Henne, 1991, p. 36)
- (43) *nû hân ich ez allez wol gesehen*  
 now have I it all well see.PST.PTCP  
 ‘Ich habe das jetzt alles klar und deutlich gesehen.’  
 ‘I’ve now seen everything well.’  
 (*Der Pfaffe Amis* 680; Henne, 1991, p. 36)
- (44) a. *nuo habt ir in dâ vor behuot, daz er mir nimmer niht*  
 now have you him there from prevent.PST that he me never not  
*engît,*  
 gives.back

‘aber Ihr habt ihn nun davor bewahrt, daß er mir jemals wieder etwas zurückgibt’

‘but now you have prevented him from giving me back anything’

- b. *und habt mir heint ein zît an mînem lîbe getân, ich muoz*  
and have me this.night a time at my body do.PST.PTCP I must

*es immer schaden hân*

it always damage have

‘und lhr habt mich heute Nacht auch noch gequält, worunter ich mein Lebtag leiden werde’

‘and you have tortured me this night, I will always suffer thereof.’

(*Der Pfaffe Amis* 2376ff; Henne, 1991)

Zeman (2010) and Shimazaki (2002) also list very similar adverbials that can modify the Perfekt in MHG: *unz an disen tac* ‘until today,’ *hiute* ‘heute,’ *noch niht* ‘not yet,’ *an disen stunden* ‘now,’ *nû* ‘now’ and *hie* ‘here,’ which all refer to the utterance time of the speaker. Examples are provided below. As hinted at in Zeman’s German translation in (45), in translating the example, it is deemed appropriate to add *jetzt/nun* ‘now’ but to add *damals* ‘then’ is inappropriate.

- (45) *nu liges-tu hie jâmerlîche mit bluote berunnen daz*  
now lie.PRES-you here woefully with blood overflow.PST.PTCP that  
*hâstu dran gewonnen*  
have.PRES.you therefrom win.PST.PTCP  
‘Nun liegst Du hier jammervoll von Blut überströmt. Das hast du [jetzt/nun] davon (gewonnen). / Das hast du [\*damals] davon (gewonnen).’  
‘Now you are lying here woefully covered in blood that is what you’ve got from it.’  
(*Herzog Ernst*, 1308–1312; Zeman, 2010, p. 207)

- (46) *mîn wât ist bluotes naz. von ander manne wunden ist mir geschehen daz, der ich alsô manegen hiute hân erslagen*  
my armour is blood.GEN. wet from other men wounds is me happen.PST.PTCP. this of.which I so many today have slayPST.PTCP.  
‘meine Rüstung ist nass von Blut. Das ist mir durch die Wunden anderer geschehen, von denen ich viele heute erschlagen habe’  
‘My armour is wet from the blood. This was caused by other mens’ wounds of whom I have slain many today.’  
(*Nibelungenlied* 1956; Shimazaki, 2002, p. 66)

- (47) *wâ sît ir hînt gewesn?*  
where are you tonight be.PST.PTCP.  
‘Wo seid Ihr heute Nacht gewesen?’  
‘Where have you been tonight?’  
(*Parzival* 250,12; Shimazaki, 2002, p. 67)

### 2.4.7 Future uses

According to Paul (2007), the MHG Perfekt could be used to express future meaning ('Futur II') which is attributed to the non-past property of the MHG Präsens of *haben* and *sîn*.<sup>26</sup> This future-denoting property of the Präsens is attested for German ever since the Old High German period (Paul, 2007, p. 288 §S4; Wegera et al., 2018, p. 201). Rothstein (2011, p. 124) identifies a correlation: languages whose present tense can refer to the future also have future perfects. As discussed in Section 1.4.1, this is the case for Swedish.<sup>27</sup> Languages that lack this kind of present tense, like English, do not have a future perfect. The MHG Perfekt thus provides further evidence for Rothstein's correlation.

In *Der Pfaffe Amis*, 8 of 85 perfects are future perfects (9.41 %) which are subdivided into 7 *hân*-Perfekts and 1 *sîn*-Perfekt. 5 of these appear in embedded clauses introduced by *swenne*, *sô*, *als*, *unz wenn* and *ê*. Paul's observation that the future use of the Perfekt expresses a 'Future II' meaning is reflected in (48) and (49). While the former illustrates a future use of the Perfekt that occurs in a subordinate clause, the latter appears in the main clause. A past interpretation is ruled out by the context in both cases.

- (48) [nû nemt war,] / unz wenn ir in gelêrt hât,  
 now think Ø until when you him teach.PST.PTCP. have  
 'Überlegt nun,] bis wann Ihr ihm alles beigebracht haben werdet,'  
 'Think now until when you will have taught him everything'  
 (*Der Pfaffe Amis* 204f.; Henne, 1991, p. 19)

- (49) ich hân iuch kurzlîch entladen / [...] iuwer siecheit,  
 I have you shortly deliver.PST.PTCP. [...] your sickness  
 'Ich werde euch in kurzer Zeit von eurer Krankheit befreit haben'  
 'I will have delivered you shortly from your sickness'  
 (*Der Pfaffe Amis* 842f.; Henne, 1991, p. 45)

The *sîn*-Perfekt in (50-a) is embedded in a correlative structure. Again, a past interpretation is ruled out by the context.

- (50) a. sô daz allez ist geschehen,  
 when this all is happen.PST.PTCP.  
 'Wenn alles fertig ist,'  
 'As soon as everything is done'  
 (*Der Pfaffe Amis* 516; Henne, 1991, p. 31)
- b. sô laz ich dar in gen schouwen / beidiu ritter unde vrouwen

Interestingly, all future uses of the Perfekt are based on telic eventualities or eventualities where a result state is easily available (e.g. *in gemezzen hat*). The respective verb phrases are listed in Table 2.7. The interplay of Aktionsart and future uses of the Perfekt is further discussed in Section 3.4.3.

The boundary between future uses and the passive is not clear cut. In (51-b), *sît erkorn*

<sup>26</sup>“Die Perfektumschreibung kann auch eine Zukunftsaussage im Sinne eines Futur II (Futurum exactum) zum Ausdruck bringen, da das Präs. (hier von *haben* und *sîn*) futurische Bedeutung haben kann” (Paul, 2007, p. 292 §S9).

<sup>27</sup>See also Section 3.4.3.

Example	Aktionsart	Main clause	Subordinate clause
<i>ende hant genomen</i> 'have ended'	achievement		✓
<i>in gemezzen hât</i> 'have measured it'	activity		✓
<i>in gelêrt hât</i> 'have taught him to read and write'	accomplishment		✓
<i>ist geschehen</i> 'has happened'	achievement		✓
<i>hân entladen</i> 'have delivered'	achievement	✓	
<i>habt verlor</i> 'have lost'	achievement	✓	
<i>habt genozzen</i> 'have received the money'	achievement	✓	
<i>enphangen hân</i> 'have received the money'	achievement		✓

Table 2.7: Interplay of Aktionsart and future use in MHG Perfekts

could be classified as a state passive 'Zustandspassiv' (cf. Paul, 2007, p. 301 §S22; Wegera et al., 2018, p. 198f.)<sup>28</sup> and *habt verlor* as a *haben* passive 'haben-Passiv' (cf. Gese, 2013). However, have passives are not mentioned in Paul's MHG grammar nor in Wegera et al. (2018, p. 198f.) which is why I counted *habt verlor* in (51-b) as a Perfekt. *sît erkorn* was treated as a state passive. In total, there were 10 instances of *sîn/hân* + PST.PTCP. in *Der Pfaffe Amis* which I classified as passive constructions. I list some more of these in (52)–(54).

- (51) a. *sprechet ir anders iht umb ein hâr,*  
 b. *sô sît ir ze einem gouche erkorn / und habt daz bistuom*  
 then are you to a fool select.PST.PTCP. and have the diocese  
*verlor.*  
 lose.PST.PTCP.  
 '[Sagt Ihr etwas auch nur geringfügig anderes,] seid Ihr zum Narren bestimmt  
 und habt das Bistum verloren.'  
 '[If you say something slightly different,] you are predestined to be a fool and  
 you will have lost the diocese'  
 (*Der Pfaffe Amis* 1710ff.; Henne, 1991, p. 77f.)

<sup>28</sup>“Das Zustandspassiv, bezeichnet durch *sein* + Part. Prät.: Eine scharfe Grenze zwischen der Verbindung von Kopula mit adjektivischem Part. einerseits und der periphrastischen Verbalform andererseits lässt sich nicht ziehen” (Paul, 2007, p. 301 §S22). Wegera et al. (2018, p. 198f.) make the same observation and do not mention *haben* passives either: “Bei der Entwicklung von *sein* als Hilfsverb bildet sich eine Überschneidung der Funktionsbereiche Perfekt und Passiv (sog. Zustandspassiv, z.B. *Die Wäsche ist gewaschen.*”

- (52) *sô ist diu kirche verlorn,*  
 then is the church lose.PST.PTCP.  
 ‘Dann geht Euch die Kirche [...] verloren’  
 ‘Then [due to your disobedience] this church will be lost’  
 (*Der Pfaffe Amis* 86; Henne, 1991, p. 13)
- (53) *hie ist niht gemâlet an!*  
 here is not paint.PST.PTCP. AN  
 ‘Es ist nichts an die Wände gemalt!’  
 ‘Nothing is painted here on the walls’  
 (*Der Pfaffe Amis* 768; Henne, 1991, p. 41)
- (54) *ich hân hie wol driu tûsent phunt / sîns silbers*  
 I have here certainly three thousand pound of.his silver.GEN  
*geslozen.*  
 enclose.PST.PTCP.  
 ‘Gut dreitausend Pfund reinen Silbers habe ich in der Herberge unter Verschuß.’  
 ‘I have certainly three thousand pounds of his silver in my possession’  
 (*Der Pfaffe Amis* 1794f.; Henne, 1991, p. 81)

## 2.5 Analysis

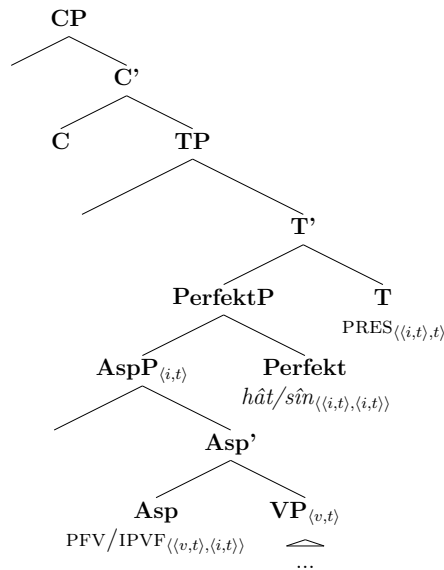
Middle High German is a verb second language (Axel-Tober, 2012, p. 368), i.e. the finite verb appears as the second constituent in declarative sentences. The syntactic analysis of this property is to assume that finite verbs in German are base generated in the right periphery of the sentence and that the complementizer *dass* ‘that’ occupies the C-position. In German, there is complimentary distribution between verb movement and a complementizer in C. If no complementizer is inserted in C, then the finite verb obligatorily moves to C (Axel-Tober, 2012, p. 2). In declarative sentences, the subject<sup>29</sup> additionally moves from Spec-VP to Spec-CP to generate a verb second structure. This is illustrated in (55).

- (55) a. [<sub>CP</sub> *dass* Pfaffe Amis einen Streich spielt]  
 b. [<sub>CP</sub> [Pfaffe Amis]<sub>1</sub> [<sub>C'</sub> [<sub>C</sub> spielt<sub>2</sub>] [ t<sub>1</sub> einen Streich t<sub>2</sub> ]]]

With this syntactic analysis of the German verb second phenomenon in place, I assume the logical form (LF) in (56) for the MHG Perfekt. Building on the data discussed in Section 2.4, I argue that the MHG Perfekt is best accounted for with an extended-now analysis (see Section 1.3.2 and 1.4). The perfect operator is realised by the auxiliary *hân* or *sîn*, scopes over viewpoint aspect and sits below the tense projection. In declarative sentences, the auxiliary moves to C and the subject (or any other constituent) moves to Spec-C in order to generate verb second syntax. For the semantic calculation, the moved constituents can be reconstructed at their base position.

<sup>29</sup>In fact, anything can be in the prefield, for example, the object *einen Streich* can also occupy this position: *Einen Streich spielt Pfaffe Amis*. Here, the object receives more emphasis. The sentence could be the answer to the question *Was spielt Pfaffe Amis?*

(56)

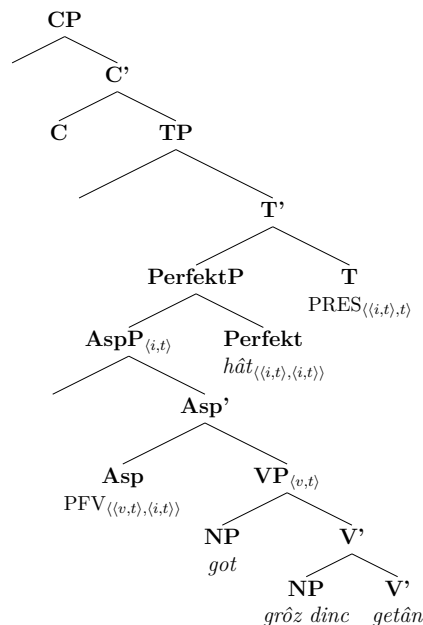


The different uses of the MHG Perfekt and the present perfect puzzle can be predicted by the extended-now semantics of *hân/sîn* and the semantic ingredients that enter into each composition. I discuss each phenomenon in turn below.

**The experiential use** can arise with both telic and atelic verb phrases. In (58)–(60), I provide the LF and semantic calculation for the example in (57). For reasons of simplicity, I ignore the PP *durch iuch* and I treat *grôz dinc* as a definite noun phrase of type *e*.

- (57) *got hât grôz dinc durch iuch getân*  
 God has great thing through you do.PST.PTCP.  
 ‘Gott hat große Dinge durch Euch vollbracht.’  
 ‘God has done great things through you.’  
 (*Der Pfaffe Amis* 1481; Henne, 1991, p. 69)

(58)



I assume that the PERFECT-operator in (59-b) is realised by the auxiliaries *hân* and *sîn*.<sup>30</sup> The contribution of this operator is to provide the extended-now interval, i.e. a time interval which extends backwards from the speech time and has the speech time as its final subinterval, see Section 1.3.2. Note that I am using the same lexical entry by Bhatt & Pancheva (2005) that I employed for the Swedish present tense in (59-a), see also Section 1.4.1. The reason for this is that the MHG present tense can be used for future reference, as discussed in Section 2.4.7.

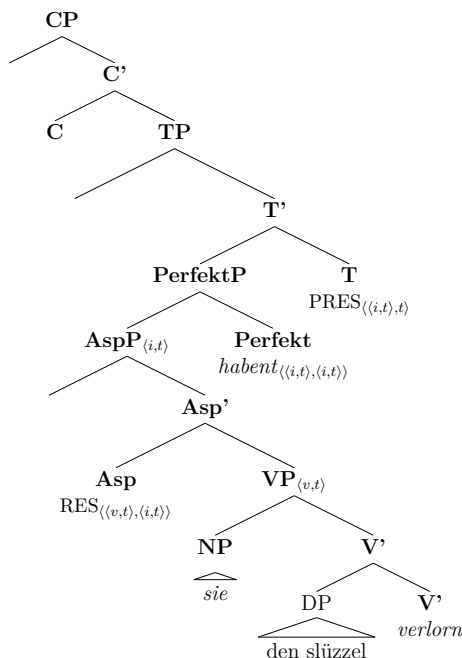
- (59) a.  $[[\text{PRES}]]_{\langle i,t \rangle} = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
           where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$
- b.  $[[\hat{h}at_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]],$   
           where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$
- c.  $[[\text{PFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e[\tau(e) \subseteq t \ \& \ P(e)]]]$   
           if  $P$  denotes a set of events
- (60) a.  $[[\text{VP}]]_{\langle v,t \rangle} =$   
            $[\lambda e_v. \text{TUON}(e)(\text{grôz dinc})(\text{got})]$   
           “ $e$  is an event of God doing great things”
- b.  $[[\text{AspP}]]_{\langle i,t \rangle} =$   
            $[\lambda t_i. \exists e[\tau(e) \subseteq t \ \& \ \text{TUON}(e)(\text{grôz dinc})(\text{got})]]$   
           “there is an event  $e$  whose run time is included in  $t$  and  $e$  is an event of God doing great things”
- c.  $[[\text{PerfektP}]]_{\langle i,t \rangle} =$   
            $[\lambda t_i. \exists t' [XN(t',t) \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{TUON}(e)(\text{grôz dinc})(\text{got})]]]$   
           “there is a time interval  $t'$  which extends backwards from  $t$  and has  $t$  as a final subinterval and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is an event of God doing great things”
- d.  $[[\text{TP}]]_{\langle t \rangle} =$   
            $\exists t [t \geq t_c \ \& \ \exists t' [XN(t',t) \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{TUON}(e)(\text{grôz dinc})(\text{got})]]]$   
           “there is a time interval  $t$  which is equal to or after the speech time and there is a time interval  $t'$  which extends backwards from the speech time and has the speech time as a final subinterval and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is an event of God doing great things”

**The resultative use** As already established in Sections 1.3.2 and 1.4, resultative uses are an integral part of true perfects. They arise with telic eventualities and assert that the result of the embedded event still holds at the speech time. Compared to the LF in (58), I use resultative aspect instead of perfective aspect, see also Section 1.3.2. The other semantic ingredients are the same, see (63). The truth conditions are provided in (64).

<sup>30</sup>I am aware that the syntax I am adopting here is non-standard. Usually, the auxiliaries *haben* and *sein* are assumed to occupy a V-position lower in the tree. However, I need my operator to scope above the aspect phrase. I thus opted for a semantic solution to the problem and chose a syntactic structure that is more established for English data, i.e. a language without V2-syntax. An alternative would be to assume that *hân/sîn* are semantically empty but that they license a PERFECT-operator that sits in the head of PerfP.

- (61) *si habent den schlüssel verlor.*  
 they have the key lose.PST.PTCP.  
 ‘[...] sie haben den Schlüssel verloren.’  
 ‘They have lost the key.’  
 (*Der Pfaffe Amis* 1877; Henne, 1991, p. 85)

(62)



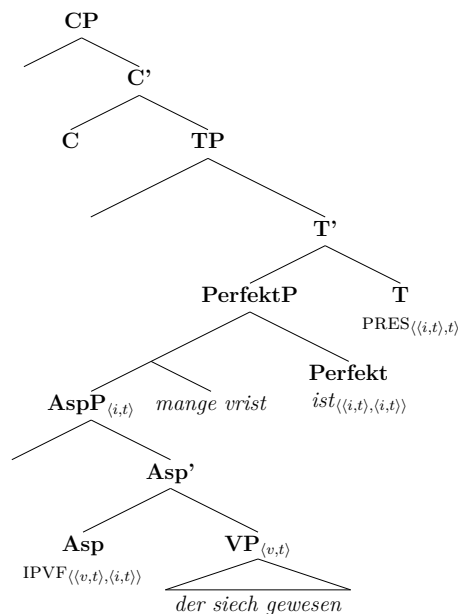
- (63) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
           where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$   
 b.  $[[\text{habent}_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$   
           where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[\text{RES}]] = \lambda P_{\langle v,t \rangle}. \lambda t_{\langle i \rangle}. \exists e_1 \exists e_2 [\text{Result}(e_2, e_1) \ \& \ t \subseteq \tau(e_2) \ \& \ P(e_1)]$   
            $\text{Result}(e_2, e_1)$  iff  $e_1$  is a telic event and  $e_2$  is the result state of  $e_1$   
           (with “result state” to be understood as Kratzer’s 1994 “target state”)

- (64)  $[[\text{si habent den schlüssel verlor}]] = 1$  iff  
 $\exists t [t \geq t_c \ \& \ \exists t' [XN(t',t) \ \& \ \exists e_1 \exists e_2 [\text{Result}(e_2, e_1) \ \& \ t' \subseteq \tau(e_2) \ \& \ e_1 \text{ is a losing event where they lose the unique } z \text{ s.t. } z \text{ is a key}]]]$   
 ‘There is a time  $t$  which is after or equal to the speech time and there is a time  $t'$  which extends backwards from  $t$  and  $e_2$  is the result state of  $e_1$  and  $t'$  is a subset of the run time of the result state  $e_2$  and  $e_1$  is the event where they lose the key.’

**The universal use** arises when an extended-now semantics is combined with homogeneous eventualities and durative adverbials (Iatridou et al., 2001), see Section 1.3.2 for details. The sentence in (65), repeated from Section 2.4.3 above, contains all of these necessary ingredients, see (67). My analysis predicts that the sentence denotes a universal Perfekt. The homogeneous property of the underlying stative verb phrase *siech sîn* (‘be sick’) is captured by assuming imperfective aspect, as illustrated in (67-d).

- (65) *der ist nû leider mange vrist vil grôzlîche siech gewesen.*  
 he is now unfortunately long time a.lot very.much ill be.PST.PTCP.  
 ‘Leider ist er schon lange arg krank.’  
 ‘Unfortunately, he (my father) has now been sick for a long time.’  
 (*Der Pfaffe Amis* 2216f.; Henne, 1991, p. 97)

(66)



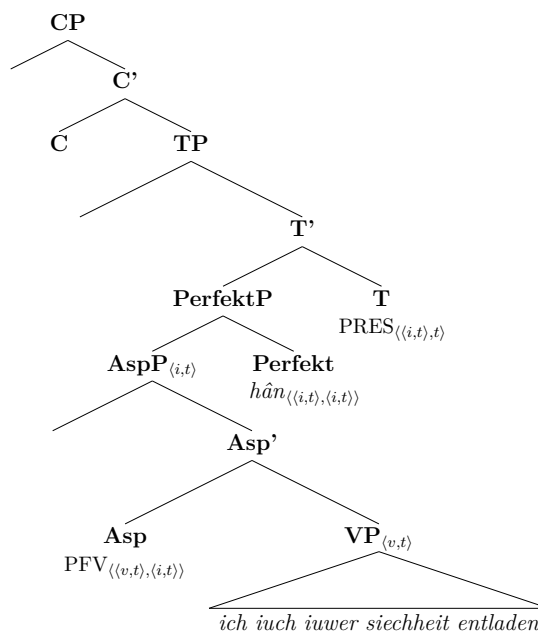
- (67) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
 where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$   
 b.  $[[ist_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$   
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[mange \ vrist]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. |t| = \text{long time} \ \& \ P(t) ]]$   
 d.  $[[IPFV_{states}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists s [t \subseteq \tau(s) \ \& \ P(s)]]]$   
 if  $P$  denotes a set of states

- (68)  $[[ (66) ]] = 1$  iff  
 $\exists t [t \geq t_c \ \& \ \exists t' [XN(t',t) \ \& \ |t'| = \text{long time} \ \& \ \exists s [t' \subseteq \tau(s) \ \& \ s \text{ is the state of him being sick } ]]]$   
 ‘There is a time  $t$  which is equal to or after the speech time and there is a time  $t'$  which extends backwards from  $t$  and it is long and  $t'$  is included in the run time of the state of him being sick.’

**The future use** In Section 2.4.7, future uses of the MHG Perfekt were discussed. In Middle High German, the Präsens was a common way to refer to the future (Paul, 2007, p. 288 §S4). In fact, other (periphrastic) ways to refer to the future were just developing. The fact that future uses arise can be seen as an interplay between the present tense in (71-a) and the meaning of the PERFECT-operator in (71-b). This is parallel to the Swedish future perfect discussed in Section 1.4.1. The truth conditions for the sentence in (69) are provided in (72).

- (69) *ich hân iuch kurzlîch entladen / [...] iuwer siecheit,*  
 I have you shortly deliver.PST.PTCP. [...] your sickness  
 ‘Ich werde euch in kurzer Zeit von eurer Krankheit befreit haben’  
 ‘I will have delivered you shortly from your sickness’  
 (*Der Pfaffe Amis* 842f.; Henne, 1991, p. 45)

(70)



- (71) a.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
 where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$   
 b.  $[[hân_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$   
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 c.  $[[\text{PFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) \subseteq t \ \& \ P(e)]]]$   
 if  $P$  denotes a set of events

- (72)  $[[\text{(69)}]] = 1$  iff  
 $\exists t [t \geq t_c \ \& \ \exists t' [XN(t',t) \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ e \text{ is an event of the speaker delivering the addressees from their sickness}]]]$   
 ‘There is a time  $t$  which is after the speech time and there is a time  $t'$  which extends backwards from  $t$  and there is an event whose run time is included in  $t'$  and  $e$  is an event where the speaker delivers the addressees from their sickness.’

In order to derive future uses, I employ the same semantic ingredients as for perfective experiential uses, see (60). I argue that whether or not a future use arises is dependent on the context and on other temporal signal words that may or may not appear, like *kurzlîch* (‘shortly’). If these circumstances are given, the present tense refers to the future ( $t > t_c$ ) and the future use is available.

**The present perfect puzzle** is attested in languages that possess a true perfect like Swedish and English, see Section 1.4. In the same way, the MHG Perfekt does not co-occur with definite past time adverbials like *gëster* (‘yesterday’). This is predicted by the

current analysis because the combination of the PERFECT-operator and *gestern* results in a logical contradiction.<sup>31</sup> This is illustrated in (73) and (74).

(73) Dummy example 1<sup>32</sup>: PERFECT has scope over *gestern*

- a. \**Tristan hat gestern den Kampf gewonnen.*
- b. [[PERFECT<sub>XN</sub> gestern [pfv [VP]]][PRES]]
- c. [[*gestern*]<sub>c</sub> = [ $\lambda P_{\langle i,t \rangle}$ . [ $\lambda t$ .  $t \subseteq \text{yesterday}_c \ \& \ P(t)$ ]]]
- d.  $\exists t[t \geq t_c \ \& \ \exists t'[\text{XN}(t',t) \ \& \ t' \subseteq \text{yesterday} \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{the battle})(\text{Tristan})]]]]$   
 “there is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which extends backwards from the speech time and has the speech time as a final subinterval and the time interval  $t'$  is included in *gestern* and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is a winning event of the fight by Tristan”  
**contradiction:** the XN interval which also includes the speech time is a subset of *gestern*, i.e. the speech time is a subset of *gestern*

(74) Dummy example 2: *gestern* has scope over PERFECT

- a. \**Tristan hat gestern den Kampf gewonnen.*
- b. [[*gestern* PERFECT<sub>XN</sub> [pfv [VP]]][PRES]]
- c.  $\exists t[t \geq t_c \ \& \ t \subseteq \text{yesterday} \ \& \ \exists t'[\text{XN}(t',t) \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{the battle})(\text{Tristan})]]]]$   
 “there is a time interval  $t$  which is the speech time and the speech time is included in *gestern* and there is a time interval  $t'$  which extends backwards from the speech time and has the speech time as a final subinterval and there is an event  $e$  whose run time is included in  $t'$  and  $e$  is a winning event of the fight by Tristan”  
**contradiction:** the speech time is a subset of *gestern*

## 2.6 Semantic change in Early New High German

As initially observed by Dentler (1997) and then later by Fischer (2018), the Perfekt expanded ever since the MHG period and gradually spread into realms of the Präteritum.<sup>33</sup> According to Dentler (1997) and Fischer (2018), this expansion eventually caused the Präteritumschwund ‘loss of the Präteritum’ attested in Upper German in the Early New High German period (see also Lindgren, 1957). The overall process is illustrated in Figure 2.1.

<sup>31</sup>This same argument has been used to explain the extended-now semantics of the English present perfect (cf. Bhatt & Pancheva, 2005; Grønn & von Stechow, 2020), see Section 1.3.2.

<sup>32</sup>This is a dummy example because there are no MHG sentences like this. So I used Modern German with a MHG semantics.

<sup>33</sup>Middle Low German dialects are not affected by this shift to the same degree. The distribution of the Perfekt and Präteritum in MLG (15th-16th century) resembles that of the MHG Perfekt and Präteritum around 1200 (Fischer, 2020, p. 108).

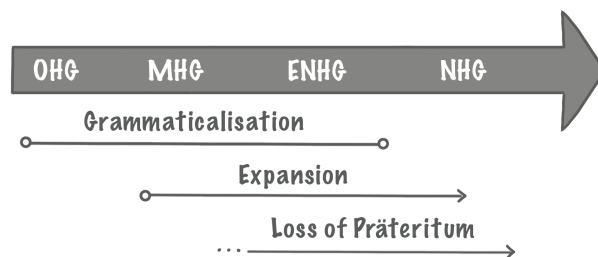


Figure 2.1: The development of the Perfekt, adapted from Fischer, 2018, p. 282, “Abb. 35: Übersicht Perfektgrammatikalisierung, Perfektexpansion und Präteritumschwund.”

Dentler (1997) investigates the frequency of the Upper German Perfekt in six different corpora from the 11th–16th century where she finds a significant increase in Perfekts with a past tense meaning (p. 138). She suggests that the “innersprachliche Motor” ‘engine’ for this change is the semantic closeness between the Perfekt and the Präteritum. Examples for this new past-denoting Perfekt are provided below. Note that in contrast to the MHG data discussed above, the Perfekt can be modified by *gestern* in the Early New High German *Fortunatus*.

- (75) *Er sprach: ja es ist ain fremder kauffmann gestern herkommen wol mit fünffzehen hübschen pferden und will auff die hochzeit*  
(*Fortunatus* 37, 24; Dentler, 1997, p. 81)

Sapp (2009) investigates the Perfekt in the *Bonner Frühneuhochdeutsch-Korpus* and he finds that the Perfekt increasingly appears with past time adverbials, i.e. adverbials which in MHG were only possible with the Präteritum. In the 14th century, 2.5 % of Perfekts were modified with *dann/da/do*, in the 15th century 5.4 % and finally in the 16th century 15.3 % of all Perfekt forms were modified by these adverbials (Sapp, 2009, 438, table 11). Sapp thus confirms Dentler’s (1997) observation that the Perfekt “gradually takes over the semantic domain of the preterite” (p. 438).

Amft (2018) evaluates pamphlets from the 16th century and assumes the ENHG Perfekt to be ambiguous between *perfektisches Perfekt* and *präteritales Perfekt* (true perfect and ‘preterite perfect’ readings). She finds that 69 % of past meanings are expressed by the Präteritum while 31 % are expressed by the präteritale Perfekt (p. 293). Additionally, she finds that the Perfekt is modified much more frequently by definite past time adverbials (60 %) than the Präteritum (40 %)(p. 254).

I regard this gradual change observed by Lindgren (1957), Dentler (1997), Sapp (2009), Amft (2018) and Fischer (2018) as an epiphenomenon of semantic reanalysis (Eckardt, 2006, p. 239). Semantic reanalysis itself happens as a discrete change which can be subdivided into three steps (Eckardt, 2006, p. 239):

- (76) a. PRE-stage  
b. turning point  
c. POST-stage

## 2 The Perfekt in Middle High German

The “turning point” is where semantic reanalysis takes place. Crucially, as described six years later by Eckardt (2012), “the meaning of an utterance before and after semantic reanalysis is practically identical even though the meanings of its parts have changed drastically” (p. 2681).

The discrete change that I am suggesting concerns the lexical entry of the auxiliaries. In the sentence in (77), the experiential use of the Perfekt can either be modelled with the old lexical entry of the auxiliaries in (78) or, after semantic reanalysis took place, with the new lexical entry in (79). The idea that experiential uses of the Perfekt serve as bridging contexts to a past interpretation has already been mentioned by Lindstedt (2000). They are “a way of referring to a past situation without referring to a particular occasion” (Lindstedt, 2000, p. 369, cf. Fischer, 2018, 276f.).

- (77) a. *dī andern bringe ich iu dar zuo, swenne er der rede gedaget,*  
 b. *die ich iu ê hân gesaget.*  
 which I you before have say.PST.PTCP  
 ‘[Den Rest zahle ich Euch, wenn er dieses Gerede lāsst,] von dem ich Euch vorhin erzählt habe.’  
 ‘[I will give you the rest when he stops the ramblings] of which I have told you before.’  
 (*Der Pfaffe Amis* 2310; Henne, 1991, p. 100)

$$(78) \quad \llbracket h\hat{a}n/s\hat{i}n_{XN} \rrbracket_{old} = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$$

where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$

$$(79) \quad \llbracket h\hat{a}n/s\hat{i}n_{PAST} \rrbracket_{new} = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$$

The run time of the event of ‘saying’ is either regarded as part of the XN-interval, see (78), or it is regarded as an interval before the utterance time, as in (79). Both of these analyses can be judged true in the context in (77). In other words, the meaning of the experiential Perfekt before and after the change is practically identical even though the meaning of the auxiliary has changed drastically (cf. Eckardt, 2006).

In line with the results by Dentler (1997), Sapp (2009) and Amft (2018) discussed above, I do not mean to say that this semantic reanalysis took place at one particular point in time. Rather, this kind of reanalysis must have taken place for different speakers at different times, which explains the seemingly gradual shift in meaning of the Perfekt. This means that there must have been a time where both the new and the old analysis of the auxiliaries, see (78) and (79), co-existed.

The new analysis of the Perfekt with a past meaning, see (79), predicts that universal uses of the Perfekt are not easily available anymore. Whenever stative eventualities are combined with the operator in (79), the run time of the state only overlaps with  $t'$  which is located before the speech time, i.e. nothing is asserted about the eventuality holding at the speech time. Additionally, the present perfect puzzle (as attested in MHG) is predicted to no longer hold with the operator in (79), see Section 1.3.4 for a details on a past analysis of perfects.

## 2.7 Chapter summary

Starting from a short overview of the origin of the German Perfekt, this chapter has dealt with data on the MHG Perfekt. Based on the semantic properties of the MHG Perfekt discussed in Section 2.4 and the diagnostics in Section 1.3, I suggested an extended-now analysis along the lines of Iatridou et al. (2001). This analysis makes correct predictions for the observed data, i.e. the different uses of the perfect can be predicted by the semantic ingredients that enter into each composition, see Section 2.5. In particular, I could show that the MHG Perfekt behaves much more similar to the English and Swedish perfect than to the perfect in other languages for which an XN-analysis has been suggested, see Table 2.8, repeated from Chapter 1.

	English	Swedish	Bulgarian	Niuean
type of perfect	<i>have</i> -perfect	<i>have</i> -perfect	<i>be</i> -perfect	<i>kua</i> -perfect
experiential	✓	✓	✓	✓
resultative	✓	✓	✓	✓
universal	✓	✓	✓ + ipfv.ptcp.	✗
present perfect puzzle	✓	✓	✗	✗ but degraded
future	✗	✓	✗	?
inferential	✗	✓	✓	no data

Table 2.8: The cross-linguistic distribution of the extended-now perfect

	Middle High German
type of perfect	<i>have</i> + <i>be</i> -perfect
experiential	✓
resultative	✓
universal	✓
present perfect puzzle	✓
future	✓
inferential	no data

Table 2.9: The extended-now Perfekt in Middle High German

Overall, it is reasonable to assume that the MHG Perfekt was a true perfect construction as described in the universal development path by Bybee & Dahl (1989) and Bybee et al. (1994). As it turns out, the analysis of the semantic change in ENHG developed in this chapter ties in nicely not only with typological literature but also with research on the expansion of the Perfekt which caused the *Präteritumschwund* in Upper German dialects (Dentler, 1997; Fischer, 2018), see Section 2.6.



# 3 The Perfekt in Modern Swabian and its past semantics

*Des secht mr, wenn der Peder gschorbe isch.*

– Informant 3 when presented with the Perfekt in a universal context

## 3.1 Introduction

This chapter<sup>1</sup> examines the Perfekt in Modern Swabian. I will start with an overview of the Swabian language. In a second step, I will then examine previous dialectal accounts of the distribution of Perfekt and Präteritum in Upper German. In Section 3.4, I will report novel data from a fieldwork study on the Swabian Perfekt. The reason why I am investigating a dialect and not the Standard language is two-fold: Firstly, Swabian is the natural continuation of the Middle High German language and the universal perfect development path is regularly applied to only Southern German dialects (cf. Bybee et al., 1994, p. 74; Lindstedt, 2000, p. 371)<sup>2</sup>. Given that Swabian, as the descendant of Middle and Early New High German, inherited the Perfekt with a past meaning with the operator in (1), as suggested in Section 2.6, we would expect to find only true past tense uses of the Swabian Perfekt.

$$(1) \quad \llbracket \textit{haben/sein}_{PAST} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$$

Secondly, semantic accounts on the Standard German Perfekt are very varied and there is no consensus as to the correct analysis. I suggest that approaching the problem from a diachronic and dialectal perspective might help solve the problem. The overall aim of this chapter is thus (i) to arrive at a semantic analysis that can predict the data on the Swabian Perfekt, and (ii) to conjecture what the semantics of the Perfekt is in Standard German.

## 3.2 On Swabian

Schwäbisch ‘Swabian’, like other Upper German dialects, is the natural continuation of the Middle High German language. Swabian is an Alemannic dialect spoken in southern

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<sup>1</sup>Parts of this chapter were presented at the *Formal Diachronic Semantics 7* conference in Budapest in November 2022. I thank the audience for valuable feedback.

<sup>2</sup>For instance, Lindstedt (2000) writes that “[w]hen a perfect can be used as a narrative tense [...], it has ceased to be a perfect. This is what has happened in the majority of Slavic languages, as well as in South German and North Italian dialects, in Sardinian (Georg Bossong, p.c.) and spoken French” (p. 371).

### 3 The Perfekt in Modern Swabian

Baden-Württemberg and western parts of Bayern ‘Bavaria’. It is bordered to the east by Bairisch ‘Bavarian’ and to the north by Franconian dialects with transition areas in between, as illustrated in Figure 3.1.



Figure 3.1: The Alemannic dialects in Germany, adapted from Streck, 2019, p. 213 and references therein

While *Sueben* and *Alamannen* were already mentioned in Roman sources, there are no native written records of the Swabian or Alemannic language before the onset of the OHG period. Within the OHG period, there is no evidence that the language of the Sueben/Alamannen could be subdivided into different dialectal groups (cf. Ernst, 2021).<sup>3</sup> Differences between Alemannic and Swabian arose much later and were reconstructed with the help of the *Historische Südwestdeutsche Sprachatlas* (HSS). In this atlas, around 350 regional urbariums, i.e. regional legal documents, were investigated. Based on these data, a division into Alemannic, Franconian and Swabian between the 14th and 15th century became apparent (for more details see Klausmann, 2014, p. 24f. and Streck, 2019, p. 208f.). The distinction between these dialect groups is mainly based on phonological criteria, which are still observable today. One main criterion for the distinction between western Alemannic (Low and High Alemannic) and Swabian dialects is the realisation of MHG long vowels *i*, *û* and *iu*, see Streck’s (2019, p. 223) examples in (2). While Alemannic dialects kept these long vowels, Swabian diphthongised them but to a lesser extent than the Standard language.<sup>4</sup> For more details on Alemannic morphology and syntax, I refer the reader to the very insightful overview in Streck (2019).

<sup>3</sup>After the *Donausueben* had suffered a defeat against the Ostrogoths in the 5th century, they united with their allied neighbours, the *Alamannen*. This is seen as the second ethnogenesis of the Alamannen and it is the origin of the double name *Alamannen/Sueben* (Willburger & Kokkotidis, 2016).

<sup>4</sup>In High Alemannic, the quality of the MHG long vowel has changed. Depending on the region, the MHG *û* and *iu* may both be realised as the monophthong [y:], as illustrated in the *Sprechende Sprachatlas Baden-Württemberg*, available at [www.sprachalltag.de](http://www.sprachalltag.de).

- (2)
- a. MHG  $\hat{i}$  > Swabian [vɛ̃ɪ̯b], Low Alemannic [vi:̯b], Standard *Weib*
  - b. MHG *iu* > Swabian *Heisr* [ɛ̃ɪ̯], Low Alemannic *Hiis(ə)r* [i:̯], Standard *Häuser*
  - c. MHG  $\hat{u}$  > Swabian [hou̯s], Low Alemannic [hu:̯s], Standard *Haus*

### 3.3 Previous research on the Modern Upper German Perfekt and Präteritum

As already mentioned in Section 2.6, Upper German dialects have been affected by the Präteritumschwund ‘preterite loss’ ever since around 1530 (Lindgren, 1957, p. 97). Typological as well as descriptive accounts agree that the Upper German Perfekt has expanded into domains of the Präteritum and has been functioning like a normal narrative tense ever since (cf. Dentler, 1997; Lindstedt, 2000; Fischer, 2018, p. 36f.). In particular, it has been argued that the expansion of the Perfekt was the main cause for the loss of the Präteritum in Upper German (Dentler, 1997; Fischer, 2018). As dialects are mostly spoken varieties which are not subject to standardisation, these processes of language change can happen more easily in dialects than in the Standard language (Fischer, 2018, p. 14).

According to Fischer (2018, 2020, 2021), who investigated both Georg Wenker’s *Sprachatlas des Deutschen Reichs* (1888–1923)<sup>5</sup> as well as dialect grammars from the 19th and 20th century, German dialects display the Präteritumschwund ‘preterite loss’ to varying degrees. Northern dialects are characterised by a complete preterite paradigm, further to the South, there is a transition area and Upper German dialects form the core area of the preterite loss. This is illustrated in Fischer’s (2021) map in Figure 3.2 where she also evaluated German dialects in Switzerland, Austria and Luxembourg.



Figure 3.2: The preterite loss in German dialects, adapted from Fischer, 2021, p. 349, “Abb. 3: Der Präteritumschwund in den Dialekten des Deutschen”

<sup>5</sup>In order to elicit regional language data, Georg Wenker sent out his famous 40 Wenker sentences to teachers all over Germany. The teachers had to translate these 40 sentences from the Standard language into their Ortsdialekt ‘regional dialect.’ For more details, I refer the reader to maps and explanations at *REDE SprachGIS*, [www.regionalsprache.de](http://www.regionalsprache.de).

Most dialect grammars available for Alemannic and Bavarian dialects documented a complete preterite loss as well as occasional preterite forms of *sein* ‘to be’ (Fischer, 2018, p. 37, Karte 12 and p. 41, Karte 13). With regard to Middle and Low German dialects, Fischer (2020) summarises her findings as follows:

“To the north, there is an area where the dialects preserve more and more preterite forms. This transition zone starts in Rhine Franconian, Hessian and East Franconian dialects where some verbs (mainly ‘to be’, ‘to have’, and modals) can form preterite forms, and is then continued in Moselle Franconian, Luxembourgish and Ripuarian dialects, where successively more verbs have preterite forms until there are complete preterite paradigms in Low German dialects and most parts of East Central German.” (p. 112)

Fischer (2018) further observes that verbs that retained their preterite forms the longest were: *sein* ‘to be’, *haben* ‘to have’, *wollen* ‘to want’, *sollen* ‘shall’/‘to be supposed to’, *können* ‘can’, *müssen* ‘must’, *dürfen* ‘may’/‘to be allowed to’, *sagen* ‘to say’, *wissen* ‘to know’, *kommen* ‘to come’, *denken* ‘to think’, *geben* ‘to give’, *gehen* ‘to go’, *stehen* ‘to stand’, *werden* ‘will’, *nehmen* ‘to take’, *sitzen* ‘to sit’, *tun* ‘to do’ (p. 390). These can be classified as irregular and strong verbs, many of which are modal verbs or have stative lexical aspect. Interestingly, telic verbs are not listed by Fischer, which makes sense given their close connection to the origins of Perfekt forms, see Section 2.3.

While Fischer’s observations are based on written sources from the 19th and 20th century, Leonhard (2022) focusses on more recent and spontaneously produced Alemannic language data from 1974 until 2013. These data stem from the following corpora: *Südwestdeutscher Sprachatlas* (SSA), *Untersuchungen zur Struktur und Funktion regionalspezifischer Intonationsverläufe im Deutschen*, *Regionaldialekte im alemannischen Dreiländereck* (REDI) und *Frontière linguistique au Rhin Supérieur* (FLARS). He finds that the Präteritum has re-emerged into the Alemannic language and that the frequency of Präteritum forms has increased ever since the 1970s (p. 159). Interestingly, these forms are used by Alemannic speakers not only when they use *standardnahe Äußerungen* ‘utterances that are close to the Standard language’. The great majority of utterances he investigates stem from *dialektalen Sprechweisen* ‘speech that is close to the dialect’ (p. 160). Leonhard (2022) attributes the re-emergence of the Präteritum to the fact that these forms, even though they show regional features like palatalisation, deletion of certain sounds and sonorisation, are borrowings from the Standard language (p. 160). Leonhard (2022, p. 133) also investigates the types of verbs that occur in preterite forms in Alemannic. He finds that it is irregular and strong verbs, as well as verbs that have stative lexical aspect, i.e. exactly those verbs that Fischer (2018) found to retain their preterite forms the longest, that re-emerge into the Alemannic preterite paradigm.<sup>6</sup>

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<sup>6</sup>In Chapter 4 and 5, I will discuss a major possible reason for the re-emergence of the Präteritum into Upper German dialects: grammar lessons in school. As these only serve to teach the Standard language, dialectal variation is neglected and sometimes even forbidden in school. This implies that education affects language use (Hudson, 2020, p. 9).

## 3.4 Data

In this section, I present novel data that from my fieldwork on the Swabian Perfekt. As Swabian is the natural continuation of the Middle High German language (see Section 3.2), it constitutes an ideal testing ground for assessing whether the perfect development path proposed by Bybee et al. (1994) applies. According to this development path, which is assumed to have reached its final stage only in Southern German dialects (cf. Bybee et al., 1994, p. 74; Lindstedt, 2000, p. 371), the Perfekt in Swabian is expected to exhibit past tense-like behaviour.

In order to elicit the data, I had 1-on-1 meetings with 9 Swabian speakers: 5 female informants and 4 male informants, as listed in Table 3.1.

no	origin	sex
1	Hechingen	m
2	Buchau am Federsee, now in Esslingen	f
3	Tübingen	m
4	Tübingen	f
5	Baisingen	m
6	Baisingen	m
7	Baisingen	f
8	Hagelloch	f
9	Balingen	f

Table 3.1: Participants of fieldwork study

The data were elicited according to the methodology discussed in Matthewson (2004), i.e. informants had to judge the acceptability of target sentences in specific contexts. I presented the contexts and target sentences to the informants in Standard German and encouraged them to talk in Swabian to me. I also told them that I was not interested in Standard German but that I was only interested in their Swabian native speaker abilities.<sup>7</sup> For reasons of readability, I present all contexts in English. The original German contexts and target sentences are provided in Appendix A.

### 3.4.1 Testing for an XN semantics

The diagnostics I used to test for an extended-now semantics were (i) resultative uses, (ii) the felicity of the Perfekt in universal context, (iii) the ungrammaticality of a Perfekt sentence modified by past time adverbials, see Section 1.3.1.<sup>8</sup>

<sup>7</sup>Remus Gergel (p.c.) said that I should have used a different methodology, namely the Human Diachronic Simulation Paradigm. However, as my data elicitation was already done, I could not implement this anymore but I agree that this would have been a good idea.

<sup>8</sup>The availability of the Swabian (or German) Perfekt in experiential contexts is undisputed and an elicitation would not help to differentiate between an extended-now or past analysis. This is why experiential uses are omitted here.

**Resultative use** In languages that possess true perfects, the sentences corresponding to (3-a) and (4-a) would be judged ungrammatical in the given contexts, see Section 1.3. This is because there is an implication that the result state of the embedded telic eventuality still holds at the utterance time, which then leads to a contraction when the sentence is conjoined with a clause negating that the result state still holds. In Swabian, however, the target sentences are judged grammatical in the respective contexts.

- (3) Your mate Tom is not good with money. Yesterday, he bought himself a new car, but then immediately panicked because he didn't have any savings left. So, he put the car up for sale right away - and managed to sell it successfully. You sum up the situation by saying:

- a. *Tom hat ein neues Auto gekauft, aber er hat es verkauft.*  
Tom has a new car buy.PST.PTCP. but he has it sell.PST.PTCP.
- b. Beurteilung Proband 5: „Dr‘Tom hat a neies Audo kauft aber des hat er glei wieder verkauft. Des ‘glei wieder’ kommt öfter vor im Schwäbischen.“  
judgement participant 5: he immediately translates the sentence into Swabian and uses the Perfekt: “Dr‘Tom hat a neies Audo kauft aber des hat er glei wieder verkauft.”

- (4) Your mother comes back home from a short vacation, and you tell her what happened while she was away. Your cousin Claudi keeps losing things, which always causes a big drama. This time it was like this: Claudi went for a walk, and afterwards her apartment key was missing. Claudi retraced her steps, and -voilà - the key was lying on the gravel path. You tell your mother:

- a. *Claudi hat ihren Schlüssel verloren, aber sie hat ihn wieder gefunden.*  
Claudi has her key lose.PST.PTCP. but she has him again find.PST.PTCP.
- b. Beurteilung Proband 5: „D‘Claudi hot ihrn Schlissl verlora, aber sie hat en glei wieder gfunda.“  
judgement participant 5: he immediately translates the sentence into Swabian and uses the Perfekt: “D‘Claudi hot ihrn Schlissl verlora, aber sie hat en glei wieder gfunda.”

**(In)felicity in universal contexts** As discussed in Section 1.3 and Section 2.5, universal uses of the English and Middle High German perfect arise when an extended-now semantics is combined with homogeneous eventualities and durative adverbials (Iatridou et al., 2001). These universal uses are not available in Swabian<sup>9</sup>, as illustrated in (5)–(8).

- (5) [Context makes universal true] Marc is currently in the hospital, and he has been there for quite some time. Can this state be described as follows?

- a. #*Marc ist 3 Wochen lang im Krankenhaus gewesen.*  
Marc is 3 weeks long in-the hospital be.PST.PTCP.

<sup>9</sup>Note that this is a symptom of the diachronic development of the Upper German Perfekt. The universal use of the Perfekt was available in MHG, as discussed in Chapter 2.

- b. Beurteilung Probandin 9: „Des stimmt au id. Weil er jo ellaweil no em Kroogehaus ischd. Besser: ‘Marc ischd seit drei Wocha em Kroogehaus und muaß ellaweil no deed (=dort) bleiba.’“  
judgement participant 9: “That’s not correct either, because he is still in the hospital. Better: ‘Marc ischd seit drei Wocha em Kroogehaus und muaß ellaweil no deed (=dort) bleiba.’ (Translation with present tense instead of perfect.)”
- (6) [Context makes universal true] Klaus and Peter are best friends, and they have known each other since primary school. Klaus says about his friend Peter, who is standing next to him:
- a. #*Ich habe den Peter jetzt 40 Jahre lang gekannt.*  
I have the Peter now 40 years long know.PST.PTCP.
- b. Beurteilung Proband 5: „Des mit den Jahren passt. Die könnten da jetzt 46 sein. Aber was mich stört, ist das „habe“. Das klingt, als ob der Peder gschdorbe isch. Ich würde sagen: ‘I kenn dr Pedr jetzt schau viazg Joar lang.’“  
judgement participant 5: The part about the years works, they could be 46 now. But what bothers me is the word ‘have.’ That sounds as if Peter had died. I would say: ‘I kenn dr Pedr jetzt schau viazg Joar lang.’ (Translation with present tense instead of perfect.)
- c. Beurteilung Proband 3: „Des secht man wenn der Peder gschdorbe isch. Richtig: ‘I kenn dr Peder seit viazg Joar.’ Des [den Zielsatz mit Perfekt] sechsch am Grab. Und jetzt laid er do dinne em Grab. S isch schad ommen.“  
judgement participant 3: “You would say that if Peter died. Correct would be: I kenn dr Peder seit viazg Joar. (Translation with present tense). The target sentence is something you would say at the grave. And now he is lying there inside the grave. It’s such a pity.”
- (7) [Context makes universal true] Simone is on the pill. And since she has been taking the pill, she has had migraines. Her doctor has confirmed that the migraines are caused by her taking the pill. She started taking the pill six months ago.
- a. #*Simone hat jetzt 6 Monate lang Kopfschmerzen gehabt.*  
Simone has now 6 months long headaches have.PST.PTCP.
- b. Beurteilung Probandin 2: „An sich passt das schon. Aber es klingt so, als wäre das ein abgeschlossener Vorgang. Aber sie hat ja immer noch Migräne. Da passt dann das ‘gehabt’ nicht. Besser: ‘Simone hat jetzt 6 Monate lang Kopfschmerzen.’ Oder ‘Simone hat jetzt schon 6 Monate Kopfschmerzen.’ Wenn die Geschichte anders wäre und abgeschlossen, dann würde es passen. Das ist kontextabhängig.“  
judgement participant 2: In itself, that works. But it sounds as if it were a completed event. However, she still has migraines. So the use of ‘gehabt’ does not fit here. Better would be: ‘Simone hat jetzt 6 Monate lang Kopfschmerzen.’ or ‘Simone hat jetzt schon 6 Monate Kopfschmerzen.’ (Both translations with the present tense instead of the perfect.) If the story were different and completed, then it would fit. It depends on the context.

- (8) [Context makes universal true] Jimmy Carter, former President of the United States, has set a record. He is the president who has been married to his wife the longest. Both are currently in good health.<sup>10</sup>
- a. #*Jimmy und seine Frau sind 73 Jahre verheiratet gewesen.*  
Jimmy and his wife are 73 years married be.PST.PTCP.
- b. Beurteilung Proband 5: „Dr’Jimmy und sei Frau sin 73 Joar verheiroded. Mit ‘gewesen’ geht es nicht, weil sie nicht geschieden oder gestorben sind.“  
judgement participant 5: “Dr’Jimmy und sei Frau sin 73 Joar verheiroded.’ (Translation with present tense). It doesn’t work with ‘gewesen’ because they are not divorced or dead.”

Based on the unavailability of universal uses in Swabian, it is reasonable to assume that the Swabian Perfekt has a different semantics than the English one. This can be modelled in different ways. One could assume that the Swabian Perfekt still has an XN-semantics but that the right boundary is flexible (Rothstein, 2008). Additionally, as discussed in Section 1.4.5, extended-now accounts of perfects do not necessarily include universal uses. It could be that homogeneity is blocked because the participle is inherently bounded (see Bulgarian in Section 1.4.2 or that there is a change-of-state component included in the perfect operator itself (see Niuean in Section 1.4.3). Rathert (2004) assumes an abutting relation which could also explain why true universal use where the speech time is included in the extended-now interval are not allowed in Swabian. A pure past semantics could of course also explain the data.

**Modification by past time adverbials** As already observed in Chapter 2 and specifically in the compositional calculation in Section 2.4, an extended-now semantics combined with definite past time adverbials results in ungrammaticality (cf. Bhatt & Pancheva, 2005; Grønn & von Stechow, 2020). If a language has a perfect that is not subject to this constraint, then this is one piece of evidence that this language does not have a perfect with an extended-now semantics.

As is well known, this constraint does neither hold for Standard German nor for Swabian. The Perfekt can freely combine with definite past time adverbials and so the present perfect puzzle (Klein, 1992) does not hold in Standard German or Swabian. A Swabian example is given below.

- (9) *Geschedern hemmer s Fußballspiel gwonne.*  
yesterday have.we the football.match win.PST.PTCP.  
‘Yesterday, we won the football match.’

Applying Rathert’s (2004) analysis with her lexical entry in (10) to my lexical entry of *gestern* (repeated from Chapter 2) and my syntactic structure leads to wrong truth conditions for (9). The truth conditions would be either contradictory if *gestern* scopes above the perfect operator, as shown in (12) or too strong if the perfect operator scopes over *gestern*, as in (13). This reading is too strong because it suggests that *t’* (which is equal to or a subset of *yesterday*) abuts the speech time. I believe that this is why Rathert (2004) has to assume the additional semantic machinery discussed in Section 1.4.4.

<sup>10</sup>When the data were elicited, Jimmy Carter was still alive.

- (10)  $F(\text{Perf})(P)(t) = 1$  iff  $\exists t'[t' \supset \subset t \ \& \ \text{left-infinite}(t) \ \& \ P(t')]$
- (11)  $[[\textit{gestern}]_c] = [\lambda P_{\langle i,t \rangle}. [\lambda t. t \subseteq \textit{yesterday}_c \ \& \ P(t)]]$
- (12)  $\exists t[t=t_c \ \& \ t \subseteq \textit{yesterday} \ \& \ \exists t'[t' \supset \subset t \ \& \ \text{left-infinite}(t) \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{football match})(\text{we})]]]$
- (13)  $\exists t[t=t_c \ \& \ \exists t'[t' \supset \subset t \ \& \ \text{left-infinite}(t) \ \& \ t' \subseteq \textit{yesterday} \ \& \ \exists e[\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{football match})(\text{we})]]]$

Further, I do not understand how Rothstein (2008) would model the fact that the Perfekt can be modified by definite past time adverbials. In his lexical entry for the Perfekt it says that the speech time is before or simultaneous to the reference time,  $S \leq R$  (see figure 1.2). However, in (9), the reference time  $R$  is included in *gestern* and so clearly before the speech time. Obviously, data like (9) do not pose any problems to past accounts of the Perfekt.

### 3.4.2 Testing for a past semantics

The diagnostics I used to test for a past semantics were (i) the felicity of the Perfekt in past contexts, (ii) whether or not the right boundary of the reference time precedes the speech time,  $R < S$ . In particular, I examined whether the Perfekt does have universal uses when it is modified by what Rathert (2004) calls “extended-now adverbs” like *schon immer*.

**Felicity in past contexts** As shown in (5)–(8), the Swabian Perfekt is unacceptable in universal contexts. However, it is perfectly acceptable in past contexts. Note that the items in (14)–(17) are minimal pairs to the items in (5)–(8).

- (14) [Context makes past true] Marc had a serious operation and then had to spend another three weeks in the hospital. Now, however, he’s back home and doing well.
- a. *Marc ist 3 Wochen lang im Krankenhaus gewesen.*  
 Marc is 3 weeks long in-the hospital be.PST.PTCP.
- b. Beurteilung Probandin 2: „Ja, jetzt passt der Satz. Jetzt ist es ja quasi in der Vergangenheit.“  
 judgement participant 2: “Yes, now it fits. It is in the past.”
- (15) [Context makes past true] Klaus and Peter were best friends. They had known each other since elementary school. Unfortunately, Peter passed away a week ago. Klaus says about Peter:
- a. *Ich habe den Peter (jetzt) 40 Jahre lang gekannt.*  
 I have the Peter now 40 years long know.PST.PTCP.
- b. Beurteilung Proband 1: „Ja, das würde passen.“  
 judgement participant 1: “Yes, that would work.”
- c. Beurteilung Probandin 2: „Ja, das passt. Das ist ja fast so wie oben, nur dass jetzt die Geschichte dazu passt. Mir fehlt noch das Wort ‘schon’: ‘Ich hab den Peter jetzt schon 40 Jahre lang gekannt.’“

judgement participant 2: “Yes, that works. It’s almost the same as above, only now the story matches. I’m still missing the word ‘schon’ (already): ‘Ich hab den Peter jetzt schon 40 Jahre lang gekannt.’”

- (16) [Context makes past true] Until recently, Simone had been suffering from severe migraine attacks – for six years. She has now stopped taking the pill, and suddenly she feels better. She no longer has migraines.
- a. *Simone hat (jetzt) 6 Monate lang Kopfschmerzen gehabt.*  
 Simone has now 6 months long headaches have.PST.PTCP.
- b. Beurteilung Probandin 9: „Des ko mr sage. ‘Simone hot jetzt 6 Joar lang Kopfschmerza ghet.’“  
 judgement participant 9: “One can say that, yes. ‘Simone hot jetzt 6 Joar lang Kopfschmerza ghet.’ ” (translation with the Perfekt)
- (17) [Context makes past true] Gertrud and Alfred married very young and had been married for 73 years. However, they have now gotten divorced.
- a. *Alfred und seine Frau sind jetzt 73 Jahre verheiratet gewesen.*  
 Alfred and his wife are now 73 years married be.PST.PTCP.
- b. Beurteilung Proband 3: „Ja, jetzt passt der Satz. Durch des ‘gwese’ isch es abgeschlosse. Jetzt isch es nimmer.“  
 judgement participant 3: “Yes, now the sentence works. The word ‘gwese’ (been) shows that it has ended. It is not on-going.”

Note that it is not at all necessary for the Perfekt to abut the speech time, as in Rathert’s (2004) analysis. The eventuality lies in the past which can be a few hours ago, a week ago, see (15) or years ago.<sup>11</sup>

**The right boundary of the reference time** If the Swabian Perfekt denoted a time interval which preceded the speech time ( $t' < t$ ), then the right boundary of the reference time  $t'$  would have to end before  $t$ . This would mean that if a speaker uttered a sentence with the Perfekt, they would imply that the eventuality expressed no longer holds. This is what I found when presenting the sentence in (18) (which is taken from Rothstein (2008)) to my informants. 5/6 of the participants I asked, rejected the use of the Perfekt:

- (18) Wir kamen über die Autobahn nach Florenz, das...
- a. ... #*in einem breiten Tal gelegen hat.*  
 ... in a broad valley lie.PST.PTCP. has
- b. Beurteilung Proband 3: „gelegene isch. Besser: liegt. Des liegt da ja immer noch. Anders bei: Cäsars Flotte. Da kann man sagen: Die Flotte von Cäsar hat im Hafen gelegen.“  
 judgement participant 3: “[uses the Perfekt but then corrects himself]: lies. It still lies in the city. It’s different with Caesar’s fleet because there you could say: Caesar’s fleet has lain in the port.”
- c. Beurteilung Probandin 2: „Und wo liegt es jetzt? Auf einem Berg? Besser:

<sup>11</sup>The fact that tenses in general are not fixed to one certain point on a timeline but rather grammaticalise the relation between reference time and speech time is also discussed in Chapter 5.

des in einem broide Dal liegt. Oder isch.”

judgement participant 2: “And where does it lie now? On a mountain? [suggests a paraphrase with the present tense.]”

- d. Beurteilung Probandin 9: „Lait Florenz etzad nimme emma broada Dal?! [nachdem wir zusammen in einen Atlas geschaut haben] Jo, aber des leit ellaweil no do! Des ‘hot’ irridiard mi. [Probandin schlägt vor:] ‘...emma broada Dal leit.’“

judgement participant 9: “Is Florence no longer in a broad valley? [having looked at an atlas together, she said:] Yes but it is still in a valley! The ‘has’ confuses me. [She then suggests an alternative target sentence with the present tense.]”

The judgements of my informants are contrary to Rothstein’s claim. They very much do sound like a past interpretation of the Perfekt ( $t' < t$ ).

Another way to test for a past semantics is the modification by *immer*. As discussed in Section 1.4.4, von Stechow (1999) assumed that *immer* obligatorily leads to universal uses of the Perfekt. That this was too strong has already been observed by Schipporeit (1971) and Rathert (2004, p. 35). My data confirm Schipporeit’s and Rathert’s objection. The Swabian Perfekt modified by *immer* does not necessarily lead to a universal interpretation, as illustrated in (19) and (20) but it can, see (22).<sup>12</sup>

- (19) [Context makes past true] Heidrun is an artist, but she can no longer work because she has rheumatism in her hands. Clay was her favourite material and she enjoyed making vases. She hasn’t worked with other materials.
- a. *Heidrun hat immer mit Ton gearbeitet.*  
Heidrun has always with clay work.PST.PTCP.
- b. Beurteilung Proband 3: „Heidrun hot immer mit Ton gschaftt. Mit nix anderem.“  
judgement participant 3: “Heidrun has always worked with clay. With nothing else.”

All four participants that were presented with this item, accepted it. An example is provided in (19-b). This finding is consistent across different items. A further example is provided in (20), which was accepted by the four participants that I asked:

- (20) [Context makes past true] Julian and Diana were a couple. Julian recently broke up with Diana. He accused her of never truly loving him while they were together. Diana no longer has any feelings for Julian, but she says about their time together:

<sup>12</sup>In English, the universal use of the perfect means that the underlying eventuality holds at the utterance time by assertion. As illustrated by Iatridou et al. (2001) in (i), if the claim that the eventuality expressed by the participle is refuted in the same sentence, this leads to a contradiction. Accordingly, the English present perfect modified by *always* should not be acceptable in the past contexts that I constructed.

- (i) a. \**She has been sick at least / ever since 1990 but she is fine now.*  
b. \**She has always lived here but she doesn’t anymore.*

### 3 The Perfekt in Modern Swabian

- a. *Ich habe dich immer geliebt.*  
I have you always love.PST.PTCP.
- b. Beurteilung Proband 1: „Das passt. Mittlerweile hat sich diese Liebe verändert.“  
judgement participant 1: “That works. But now, their love has changed.”

(21) is a minimal pair of (19), the only difference is that the Perfekt is now modified by *schon immer* instead of *immer*. *schon immer* is not acceptable in a past context. This is stable across items.

- (21) [Context makes past true] Heidrun is an artist, but she can no longer work because she has rheumatism in her hands. Clay was her favourite material and she enjoyed making vases. She hasn't worked with other materials.
- a. #*Heidrun hat schon immer mit Ton gearbeitet.*  
Heidrun has already always with clay work.PST.PTCP.
  - b. Beurteilung Probandin 4: „scho' wenn ses immer noch macht.“  
judgement participant 4: “'schon' implies that she still does it.”
  - c. Beurteilung Proband 5: „hört sich so an, als ob sie es noch machen würde.“  
judgement participant 5: “It sounds as if she is still doing it.”

Based on the data presented in this subsection, the right boundary of the reference time of the Swabian Perfekt is before the utterance time. This contradicts Rathert's analysis which makes use of an abutting relation. In fact, the data presented here do not support any extended-now semantics. However, in the next subsection I will show that the Perfekt can express universal uses.

**Universal uses with the Swabian Perfekt** The Swabian Perfekt can express universal uses, namely when it is modified by *schon immer*. Note that for some informants, universal uses arise even when the sentence is only modified by *immer*. My data confirm Rathert's claim that *schon immer* leads to an XN-reading. However, while these kinds of data are the reason why Rathert assumes an extended-now reading of the Perfekt, I will argue that the XN-component comes not from the Perfekt itself but from *schon immer*, see Section 3.5.

- (22) [Context makes universal use true] Heidrun is an artist, and she started making vases and bowls out of clay when she was 12. She doesn't work with wood or concrete – the only material she uses is clay.
- a. ?*Sie hat immer mit Ton gearbeitet.*  
she has always with clay work.PST.PTCP.
  - b. Beurteilung Probandin 9: „Des isch richtig. 'Se hat ellaweil mit Ton gschaftet.'“  
judgement participant 9: “That is correct. 'She has always worked with clay.’”
  - c. Beurteilung Probandin 4: „Ne, se schafft ja noch. Besser: 'Seit se 12 isch, schafft se mit Ton.' Oder 'Se hot mit 12 ogfange und hot scho immer mit Ton gschaftt.'“

judgement participant 4: “No, she is still working. [suggests an alternative with the present tense and another option with ‘schon immer’ and the Perfekt.]

- d. Beurteilung Proband 3: „Falsch. Das isch rum. Das ist ja jetzt rum, weil da ‘gearbeitet’ /‘gschafft’ steht. Dann ist sie jetzt Kindergärtnerin und hat früher immer mit Ton gschafft.“

judgement participant 3: “Wrong. It is over because it says ‘worked’. It means she might now be a kindergarten teacher and before that, she used to work with clay.”

(22) was accepted by three informants, two informants did not accept it in this context. This shows that for some informants, *immer* is enough to get the universal reading, others require *schon + immer*. The item in (23) illustrates another case where *schon immer* is judged grammatical in a universal context.

(23) makes universal use true] Julian and Diana are a couple. Julian wants to express his love and say that he already loved Diana when he had only known her for a month, and that his feelings haven’t changed. He says:

- a. *Ich habe dich schon immer geliebt.*

I have you already always love.PST.PTCP.

- b. Beurteilung Proband 3: „Des ‘scho’ macht den Unterschied. Nicht abgeschlossen. Andernfalls ist es ungrammatikalisch: ‘sie hot scho immer mit Ton gschafft und jetzt fängt se mit Glas an’, das wäre ein Widerspruch“  
judgement participant 3: “The word ‘schon’ makes the difference. It is not concluded. [The target sentence is judged as acceptable in the universal context. The informant then remembers the other item he was presented with and says: “She has already always worked with clay and now she starts with glass” this would be an ungrammatical sentence because there is a contradiction.”

### 3.4.3 Testing for the availability of future uses

My diagnostics for testing the availability of future uses were based on the acceptability of Perfekt sentences in future contexts. In particular, I tested different *Aktionsarten*, both auxiliary types (*haben*, *sein*), as well as different sentence type (main and subordinate clauses). There were 12 future items in total. 9 times, the Perfekt occurred in the main clause and 3 times in the subordinate clause.

As I pointed out in Chapter 2, the future Perfekt is already attested in MHG. There, I attributed the acceptability of future Perfekts as in (24) (repeated from (49) in Chapter 2) to the interplay of the Präsens and the extended-now semantics. In my MHG data, there was a higher frequency of future Perfekts in subordinate than in main clauses. All future Perfekts were based on telic eventualities or eventualities where a result state was easily accessible, see Figure 2.7. I also discussed that the boundary between future uses and the passive is not clear cut.

### 3 The Perfekt in Modern Swabian

- (24) *ich hân iuch kurzlich entladen / [...] iuwer siecheit,*  
 I have you shortly deliver.PST.PTCP. [...] your sickness  
 ‘Ich werde euch in kurzer Zeit von eurer Krankheit befreit haben’  
 ‘I will have delivered you shortly from your sickness’  
 (*Der Pfaffe Amis* 842f.; Henne, 1991, p. 45)

**Subordinate clauses** In MHG, the future Perfekt was introduced (among other conjunctions) by *swenne* ‘when’ and *ê* ‘before’. I tested whether this is also acceptable in Swabian. Subordinate clauses introduced by *wenn* ‘when’ were judged acceptable for the future Perfekt with *sein*, (25), and with *haben*, (26). The item with the subordinating conjunction *bevor* ‘before’ was not as acceptable, see (27). The item was presented to three informants: one of them did not accept it, the other two said it was acceptable. However, none of the informants actually used the Perfekt in their paraphrases. Instead, they employed the Präsens. This suggests that the future Perfekt is not acceptable in subordinate clauses introduced by *bevor*.

- (25) [Context makes future use true, target sentence: sub, *sein*, state] The friends Lea and Babette are talking. Babette’s grandfather has died, and her grandmother wasn’t doing well last week because of it. Lea asks Babette how her grandmother is doing. Babette wants to visit her tomorrow to see how she’s doing. Therefore, she says:
- a. *Wenn ich morgen bei ihr zuhause gewesen bin, weiß ich mehr.*  
 when I tomorrow at her home be.PST.PTCP. am know I more
- b. Beurteilung Proband 6: „Wenn ich morgen bei re gwäse bin, woiß i mehr. Passt.“  
 judgement participant 6: “ ‘When I have been to her place tomorrow, I know more.’ This fits.”
- (26) [Context makes future use true, target sentence: sub, *haben*, state] The friends Lea and Babette are talking. Babette’s grandfather has died, and her grandmother wasn’t doing well last week because of it. Lea asks Babette how her grandmother is doing. Babette wants to visit her tomorrow to see how she’s doing. Therefore, she says:
- a. *Wenn ich sie morgen getroffen habe, weiß ich mehr.*  
 when I her tomorrow meet.PST.PTCP. have know I more
- b. Beurteilung Probandin 9: „Ja, des sini au so. ‘Wenn i sie mann droffa hau, wass i mai.’“  
 judgement participant 9: “Yes, I agree. ‘When I have met her tomorrow, I know more.’ ”
- (27) [Context makes future true, target sentence: sub, *sein*, achievement] It’s now 12 o’clock. At 2 p.m., Helga will come home. Her husband Bernd is already retired, so he often takes care of the housework. The nosy neighbor can see Bernd and Helga’s dirty kitchen through her window, but considering the time Helga is expected to arrive, she says:
- a. #*Bevor Helga um 2 Uhr nach Hause gekommen ist, hat er*  
 before Helga at 2 o’clock to home come.PST.PTCP. is has he

*gespült.*

do.the.washing-up.PST.PTCP.

- b. Beurteilung Proband 5: „Passt. ‘Bevor se em zwoa hoam **kommt** hot er gschpielt.’“  
judgement participant 5: “This works. ‘Before she comes home at 2, he has washed the dishes.’”
- c. Beurteilung Proband 6: „Würde ich so nicht sagen. ‘Bevor dHelga um 2 **heimkont**, hot er no gspült.’“  
judgement participant 6: “I would not say it like that. ‘Before Helga comes home at 2, he has washed the dishes.’”
- d. Beurteilung Probandin 9: „Joa, des ko so sei. Des Wort ‘bevor’ gibt’s auf Schwäbisch idda. Des wird abgekürzt. ‘Voar d’Helga om zwoa hoam **kommt**, hot er gschbald.’“  
judgement participant 9: “Yes, that might be the case. The word ‘before’ does not exist in Swabian. It is abbreviated. ‘Before Helga comes home at 2, he has washed the dishes.’”

**Main clauses** The most important insight when it comes to future Perfekts in the main clause is that they are not easily accessible for native speakers of Swabian. However, there is a tendency for speakers to accept these items when the Perfekt is modified by an exact time point that lies in the future. This is observable across items which vary with respect to *Aktionsart* and auxiliary type. In (28), the sentence was judged unacceptable by three informants. The other informants that did accept it, added a time in their paraphrases. In (29), informants disliked the future Perfekt, too. However, they accepted it when adding a definite time that lies in the future. The target sentence in (30) which already contained a reference to a future time was accepted by the three informants that were presented with this item. In (31), I tested Rothstein’s (2008) target sentence from (110). Again, my informants disliked the target sentence. This time, even the reference to a future time (*um drei*) could not make the sentence acceptable for all informants. Only informant 8 accepted the sentence in the respective context but they used a different (probably passive) construction in their paraphrase, as illustrated in (31-d). In fact, all of the participants offered paraphrases with *be*+participle instead of *have*+participle. Finally, (32) was judged acceptable by my informants.

- (28) [Context makes future use true, target sentence: main, *sein*, accomplishment]  
Things are getting exciting. There’s a lot of excitement in the shared apartment of Mona, Salim, and Tom. Starting tomorrow, they’ll have a new roommate – her name is Clara. Tom says:
- a. ?*Morgen ist Clara hier eingezogen.*  
tomorrow is Clara here move.in.PST.PTCP.
- b. Beurteilung Proband 6: „‘Morga isch dClara dahanna einzoge.’ Nä. Das würde ich nie sagen. ‘Morga zieht dClara dohanna ein.’ Geht auch. ‘Heute isch se einzoge.’ ‘Geschdern isch se einzoge.’ Als Frage vielleicht? ‘Isch dClara morga dahanna eizoge?’ Ne, als Frage geht des au net.’“  
judgement participant 6: [The participant rejects the target sentence with the

Perfekt. He tries out other options where the Perfekt is modified by ‘today’ and ‘yesterday’ which he accepts. He then tries out a question containing the Perfekt modified by ‘tomorrow’ and also rejects it - just like the target sentence.]

- c. Beurteilung Probandin 9: „Wenn er d’Uhrzeit wasst, no ko er des sage. ‘Mann [=morgen] om zwoa isch dia Clara schau do eizoga.’“  
judgement participant 9: “If he knows the exact time, he can say it like that. ‘Tomorrow at 2 p.m., Clara has already moved in.’ ”

(29) [Context makes future use true, target sentences: main, *have*, *be*, accomplishment, achievement] Tom plays football for a club. In one week, the big final will take place in Glems, and if Tom’s team plays well, they can win the tournament. Tom’s coach is confident that his boys will win. He says:

- a. #*In einer Woche seid ihr nach Glems gefahren und habt das*  
in a week are you to Glems drive.PST.PTCP. and have the  
*Finale gewonnen.*  
final win.PST.PTCP.

- b. Beurteilung Proband 3: „Des isch scho wieder so verdreht. Was ist das für ein Satz? Das ist doch auch in Hochdeutsch ein Scheißsatz. Das ist ja immer was in der Zukunft, und das wird mit der Vergangenheit gesagt. Im Schwäbischen gibt es das nicht. Das klingt, wie wenn ein Depp spricht, als ob er klug sprechen will. I würde sagen: ‘in oirer Woch/nächst Woch fahre mir nôch Glems ond gwinned des Finale.’ Aber, das ist nicht das, was da [im Zielsatz] steht. So wie es dasteht: zu nem bestimmten Zeitpunkt hat man dann gewonnen. So wie ich es gesagt habe, ist es anders. Da ist es mehr das, was er vor hat. Um das gleiche auszudrücken: ‘Nächst Woch um dui Zeit (=um dieselbe Zeit wie jetzt/ nächster Montag um vier) hen mir in Glems des Finale gwonne (Finale findet um drei statt).’ “

judgement participant 3: “This is mixed up again. What kind of sentence is that? That is even a shit sentence in Standard German. It’s always something in the future but it is spoken about with the past. This does not exist in Swabian. It sounds as if a moron is speaking who wants to sound smart. I would say ‘in a week/next week, we drive to Glems and win the final.’ But this is different to the [target] sentence where the focus is on a certain time when the final will be won. The way I said it is different, namely only the future plan. If you wanted to express the meaning of the [target] sentence, you would have to say ‘Next week a this time, we have won the final in Glems’ (given that it takes place at 3 p.m.)”

- c. Beurteilung Probandin 7: „Der Satz findet so in der Vergangenheit statt, aber eigentlich soll er in der Zukunft sein. Satz geht so wie er da steht nicht.“

judgement participant 7: “The sentence takes place in the past but it is supposed to take place in the future. It does not work like this.”

(30) [Context makes future use true, target sentence: main, *have*, activity] There’s a big party tonight, and Paula and Hannes are invited. Paula works on a construc-

tion site and comes home quite dirty. Hannes is impatient because they were planning to be at the party in an hour. However, Paula assures him that she'll be quick in the bathroom. It's 6 p.m. now. Looking ahead to the near future, she says:

- a. *Ich habe um 18:30 geduscht.*  
I have at 6.30.pm take.shower.PST.PTCP.
- b. Beurteilung Proband 3: „Wirsch sehe, i han um halb siebene duscht.' = Um halb siebene bin ich dann fertig mit dusche. Da han ich duscht. Bei den anderen waren Zukunft und Vergangenheit so komisch gemischt. Aber hier passt es.,  
judgement participant 3: “[Translation with *have*+participle.] At 6:30, I'll be done with showering. Then, I have showered. With the other [sentences], future and past were mixed-up in a weird way. But here, it fits.”
- c. Beurteilung Probandin 8: „Des isch jetzt wieder so. 'I ben um halb siebene duscht.' Oder 'I han um halb siebene duscht.' Ich weiß / kann mir allerdings vorstellen, das man das nicht so oft sagt. Dieser Satz 'I han um halb siebene duscht' ist viel besser als 'In oirer Woch seid ihr nach Glems gfare. . .’“  
judgement participant 8: “That's again something like 'I am showered at 6:30.' or 'I have showered at 6:30.' But I can imagine that this is not used often. The sentence 'I have showered at 6:30' is much better than 'In a week, you have driven to Glems...’ ”

- (31) [Context makes future use true, target sentence: main, *have*, achievement]  
Mrs. Trautwein is the organizer of a large conference. She has put a lot of time and effort into the preparations. The conference began the day before yesterday and will end tomorrow. Looking ahead to tomorrow's conference, Mrs. Trautwein says with relief...:

- a. #*Morgen um drei hat die Konferenz bereits aufgehört.*  
tomorrow at three has the conference already end.PST.PTCP.
- b. Beurteilung Proband 3: „Warum konstruieren Sie immer solche Sätze? Besser: 'Morga am drei isch dui Konferenz rom.'“  
judgement participant 3: “Why do you always construct such sentences? It is better to say: 'Tomorrow at three, the conference is done/over.' [no Perfekt in the translation, instead a present tense]
- c. Beurteilung Proband 6: „Besser: 'Morga um drei isch die Konferenz rum.' 'Hat bereits aufgehört' – das geht für mich net. Dann hat sie ja schon aufgehört. Ich kann das am Dienstag sagen, wenn die am Montag noch war (ohne morgen).“  
judgement participant 6: “[He offers an alternative with the 'vorbei/rumsein' construction.] 'has already ended' – this does not work for me. Because then, the conference has already ended. I can say that on Tuesday if the conference was on Monday (not tomorrow).”
- d. Beurteilung Probandin 8: „Ja, morgen um drui isch die Konferenz vorbei. Des isch wie ichs oben gesagt hab. Weil die Uhrzeit hier ins Spiel kommt. Mit aufhören, geht das nicht. Regen kann aufhören. Aber ne Konferenz, das ist komisch. 'Morge um drui isch die Konferenz beendet.'“

judgement participant 8: “Yes, tomorrow at three, the conference is over. [...] Because there is a specific time here. With ‘to end’ it does not work. Rain can end. But it is weird with a conference. [She then offers a target sentence with *be* and the perfect participle of ‘end’. ”

- (32) [Context makes future use true, target sentence: main, *have*, accomplishment]  
 Your friend Mia lent you her favorite book. You have to return it to her soon, but you haven’t finished it yet. However, you promise her that you will finish reading it by next week and will then be able to give it back to her. You say:
- a. *Nächste Woche habe ich das Buch fertig gelesen.*  
 next week have I the book ready read.PST.PTCP.
  - b. Beurteilung Proband 5: „Bis nächst Woch han i des Buchh feedig glose.“  
 judgement participant 5: “By next week, I’ll have finished reading the book.”  
 [translation with *have*+participle]

Based on the data on the futurate Perfekt, it seems reasonable to assume that the Swabian Perfekt cannot make reference to a time following the speech time,  $S < R$ . I believe that this is because the future Perfekt was already marginal in main clauses in MHG. There are some relics left in Swabian, like the future reference of the Perfekt in *wenn*-clauses, and under certain circumstances, a future reference of the Perfekt can be forced. But, as my participants’ judgements indicate, these future uses of the Perfekt are not very natural. This is a new finding as previous research took the availability of future uses of the Perfekt for granted (Klein, 2000; Musan, 2002; Rothstein, 2008).

### 3.5 Analysis

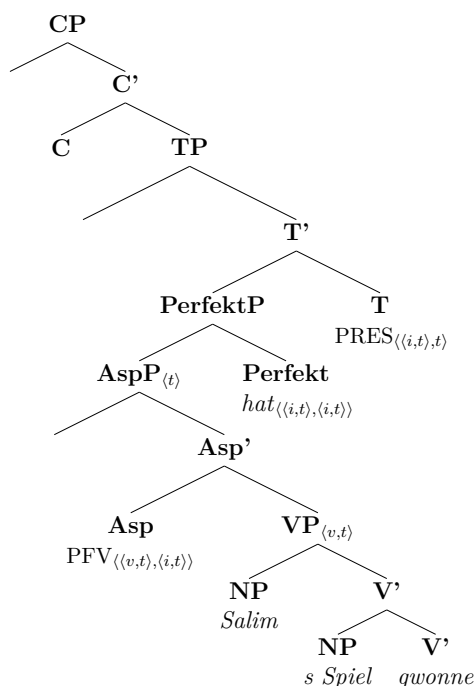
Based on the data discussed in Section 3.4, I suggest that the Swabian (and thus Upper German) Perfekt has a past semantics. The most obvious piece of evidence for this analysis is the fact that the Perfekt does not give rise to true resultative uses (cf. Section 1.4.5). On top of that, universal uses do not arise with the Swabian Perfekt when it is only modified by durational adverbials, see (5)–(8).<sup>13</sup> That the Swabian Perfekt only denotes anteriority has been the source of much criticism (cf. von Stechow, 1999; Rathert, 2004; Rothstein, 2008). However, data from Swabian do support a pure anteriority analysis of the Perfekt. This analysis is in line with the universal perfect development path by Bybee & Dahl (1989) and Bybee et al. (1994). It also fits to Fischer’s (2018) work on the Präteritumschwund: If there are no preterite forms left in Upper German dialects then it seems plausible that the meaning formerly expressed by the Präteritum is now expressed by the Perfekt.

I suggest that the Perfekt sentence in (33) has the truth conditions in (35). The necessary ingredients to the composition are provided in (34).<sup>14</sup>

<sup>13</sup>This illustrates clearly the meaning change from the extended-now semantics in MHG to a past semantics in Swabian.

<sup>14</sup>See also the syntactic and semantic background in Chapter 1 as well as the description of the verb-second syntax in Section 2.5.

- (33) *Salim hat s Spiel gwonne.*  
 Salim has the game win.PST.PTCP.  
 ‘Salim won the game.’



- (34) a.  $\llbracket \text{hat}_{\text{PAST}} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$   
 b.  $\llbracket \text{PFV} \rrbracket = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) \subseteq t \ \& \ P(e)]]]$   
 c.  $\llbracket \text{PRES} \rrbracket = [\lambda P_{\langle i,t \rangle}. \exists t [t = t_c \ \& \ P(t)],$  where  $t_c$  is the speech time
- (35)  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{the game})(\text{Salim})]]]$

Together with von Stechow (2002) and Rathert (2004), I assume that the Perfekt operator is located in the auxiliaries *haben/sein*, see (34-a). I follow von Rathert (2004, p. 110) in decomposing the Perfekt into the present tense (PRES in the tree) and a Perfekt projection. Note that the analysis is almost identical to my analysis of the MHG Perfekt, discussed in Chapter 2. The only difference is that the meaning of the auxiliaries changed from *hân/sîn* that denoted the extended-now operator to *haben/sein* that denote a past operator.

**No resultative uses** As illustrated in (36-e), resultative uses do not arise with a relative past analysis of the perfect operator. The sentence is predicted to be true when the result state does not include but rather precede the speech time. Nothing is asserted about the right boundary of the result state. To continue the sentence with *but he sold it* would thus not lead to a contradiction, which is in contrast to the English present perfect.<sup>15</sup> That resultative uses are unavailable in Swabian was illustrated in (3) and (4).

- (36) a. *Dr Tom hat a neies Audo kauft* (aber des hat er glei  
 The.Tom has a new car buy.PST.PTCP. (but this has he immediately  
*wieder verkauft*).  
 again sell.PST.PTCP.)

<sup>15</sup>The same is true if the resultative aspect was to be replaced with a plain perfective aspect.

- b.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)],$  where  $t_c$  is the speech time
- c.  $[[\text{hat}_{\text{PAST}}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$
- d.  $[[\text{RES}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e_{1v} \exists e_{2v} [\text{Result}(e_2, e_1) \ \& \ t \subseteq \tau(e_2) \ \& \ P(e_1)]]],$   
where  $\text{Result}(e_2, e_1)$  iff  $e_1$  is a telic event and  $e_2$  is the result state of  $e_1$   
(with “result state” to be understood as Kratzer’s 1994 “target state”)
- e.  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ \exists e_1 \exists e_2 [\text{Result}(e_2, e_1) \ \& \ t' \subseteq \tau(e_2) \ \& \ e_1 \text{ is a buying event where Tom buys a new car}]]]$   
‘There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which precedes the speech time and there is an event  $e_1$  which is a buying event where Tom buys a new car and there is an event  $e_2$  which is the result state of  $e_1$  and the time interval  $t'$  is included or equal to the run time of  $e_2$ .’

**No universal uses** The necessary semantic ingredients for universal uses are: the extended-now semantics of the perfect operator, a homogeneous eventuality and a durative adverbial. If instead, a relative past operator is used as the perfect operator, nothing is asserted about the right boundary of the embedded eventuality and so the eventuality is not asserted to hold at the speech time. This is what I found when testing for universal uses in Swabian, see examples (5)–(8).

- (37) a. *Ich han dr Peder jetzt 40 Jahre lang gkennt.*  
I have the Peter now 40 years long know.PST.PTCP.
- b.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t = t_c \ \& \ P(t)],$  where  $t_c$  is the speech time
  - c.  $[[\text{habe}_{\text{PAST}}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$
  - d.  $[[40 \text{ Jahre lang}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. |t| = 40 \text{ years long} \ \& \ P(t) ]]$
  - e.  $[[\text{IPFV}_{\text{states}}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists s [t \subseteq \tau(s) \ \& \ P(s)]]]$   
if  $P$  denotes a set of states
  - f.  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ |t'| = 40 \text{ years long} \ \& \ \exists s [t' \subseteq \tau(s) \ \& \ s \text{ is a state of me knowing Peter} ]]]]$   
‘There is a time  $t$  which is the speech time and there is a time  $t'$  which precedes the speech time and which is forty years long and there is a state  $s$  whose run time time includes or is equal to  $t'$  and  $s$  is a state of me knowing Peter.’

**Modification with *gestern*** The fact that *gestern* can modify the Perfekt in Standard German and Swabian is undisputed. This follows naturally from my analysis, see (39). *geschdern* scopes over the aspect phrase and sits below the perfekt projection. No further assumptions need to be made.

- (38) *Geschedern hat dr Salim s Spiel gwonne.*  
yesterday has the Salim the game win.PST.PTCP.  
‘Yesterday, Salim won the football match.’
- (39) a.  $[[\text{gestern}]_c] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. t \subseteq \text{yesterday}_c \ \& \ P(t)]]]$   
b.  $[[\text{(38)}]_c] = 1$  iff  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ t' \subseteq \text{yesterday}_c \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ \text{WIN}(e)(\text{the game})(\text{Salim})]]]$

With achievements like *win the football match*, the aspect is necessarily perfective. Achievements do not have a durational component. However, accomplishments, which do have a durational component and also activities and states can receive both a perfective and an imperfective aspect interpretation.

As observed by Rathert (2004, p.118ff.), the sentence in (40) can receive either an existential reading or a universal reading (which does not involve an XN here). In the first one, the coughing happens during a singular event that is located in yesterday. In the universal reading, there is constant coughing throughout the whole day. While Rathert has to model this with a covert operator in the tree and decompose *gestern* into a covert preposition and the time *gestern*, the two different interpretations follow naturally without any further assumptions from my analysis. The two interpretations come about through a perfective aspect interpretation for the existential reading, as in (41), and an imperfective aspect for the universal one, see (42).

(40) *Geschiedern hat dr Salim ghuschdet.*

(41) perfective aspect interpretation  $\hat{=}$  Rathert's existential reading

- a.  $[[\text{PFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) \subseteq t \ \& \ P(e)]]]$
- b.  $[[\text{(40)}]_c] = \exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ t' \subseteq \text{yesterday}_c \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ \text{COUGH}(e)(\text{Salim})]]]$

(42) imperfective aspect interpretation  $\hat{=}$  Rathert's universal reading

- a.  $[[\text{IMPFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [t' \subseteq \tau(e) \ \& \ P(e)]]]$
- b.  $[[\text{(40)}]_c] = \exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ t' \subseteq \text{yesterday}_c \ \& \ \exists e [t' \subseteq \tau(e) \ \& \ \text{COUGH}(e)(\text{Salim})]]]$

**Cessation implicature** Based on my informants' judgements on the Autobahn example, repeated here as (43), I am assuming a cessation implicature account for stative Perfekt sentences in the spirit of Altshuler & Schwarzschild (2012).

(43) Wir kamen über die Autobahn nach Florenz, das...

- a. ... #in einem breiten Tal gelegen hat.  
... in a broad valley lie.PST.PTCP. has

Altshuler & Schwarzschild (2012) build their analysis on the hypothesis in (44) (p. 45).

(44) **The temporal profile of statives**

For any tenseless stative clause  $\phi$ , if  $\phi$  is true at moment  $m$ , then there is a moment  $m'$  preceding  $m$  at which  $\phi$  is true and there is a moment  $m''$  following  $m$  at which  $\phi$  is true.

Whenever a past stative sentence is uttered, a cessation implicature arises. Their definition (p. 47) is given in (45).

(45) **Cessation implicature**

When the utterance of a past tensed sentence implicates that no state of the kind described currently holds.

Let me now apply Altshuler & Schwarzschild's reasoning to the example in (43) above. Note that I take my formulations almost literally from Altshuler & Schwarzschild:

The proposition expressed by the present tense counterpart of (43-a), i.e. *Florenz leit emma broada Dal* 'Florence lies in a broad valley', entails the proposition expressed by the past sentence *Florenz hat emma broada Dal glege* 'Florence lay in a broad valley'. This is the case because of the hypothesis in (44). The entailment from PRES  $\phi$  to PAST  $\phi$  is asymmetric; PAST  $\phi$  does not entail PRES  $\phi$ . With this result in hand, we can advance to a calculation supporting a Gricean quantity implicature. When a speaker utters (43-a) she avoids using the stronger alternative *Florenz leit emma broada Dal* because it is false. So the use of (43-a) implicates that Florence is no longer in a broad valley.

This is exactly what my informants commented on. They knew that Florence did not move and still lies in a valley. This is why they reject or cancel the implicature that arises.

**Modification with *immer*** As already observed by Schipporeit (1971) and Rathert (2004), the Perfekt modified by *immer* 'always' does not necessarily lead to a universal use of the Perfekt. It can also modify an eventuality that lies completely in the past. This was the case for (19) which I repeat here as (46-a). Note that the sentence was judged to be acceptable in a context that made a past reading true. With the lexical entry for *immer* in (46-b), the truth conditions in (46-c) derive exactly that, i.e. a past eventuality modified by *immer*. In the LF, *immer* has scope over the aspect phrase and sits below the PERFECT projection.

- (46) a. *Heidrun hot immer mit Ton gschaftt.*  
 Heidrun has always with clay work.PST.PTCP.  
 b.  $\llbracket immer \rrbracket = [\lambda P_{i,t}. [\lambda t_i. \forall t'' [t'' \subseteq t \rightarrow P(t'')]]]$   
 c.  $\exists t [t = t_c \ \& \ \exists t' [t' < t \ \& \ \forall t'' [t'' \subseteq t' \rightarrow \exists e [t'' \subseteq \tau(e) \ \& \ \text{WORK}(e)$   
 (with clay)(Heidrun)]]]]

***Schon immer and seit*** My data on the modification of the Perfekt by *schon immer* are in line with previous findings: For some of my informants, a universal arises with *immer* (cf. von Stechow, 1999), for other informants this effect only arises with *schon immer* (cf. Schipporeit, 1971; Rathert, 2004). What is crucial is that I do not attribute this to the meaning of the Perfekt. Rather, I suggest that the extended-now component lies in the lexical entry of (*schon*) *immer*, see (47) which sits below the PerfektP, scopes over AspP and is of type  $\langle\langle i, t \rangle, \langle i, t \rangle\rangle$ .

- (47)  $\llbracket schon\ immer \rrbracket = [\lambda P_{\langle i, t \rangle}. [\lambda t'_i. [XN(t', t) \ \& \ \text{left-infinite}(t') \ \& \ P(t')]]]$ ,  
 P is homogeneous

The truth conditions are provided in (49), repeated from the sentence in (22) above. The necessary semantic ingredients are provided in (48). The VP has imperfective aspect.

- (48) a.  $\llbracket \text{PRES} \rrbracket = [\lambda P_{\langle i, t \rangle}. \exists t_i [t = t_c \ \& \ P(t)]]$ , where  $t_c$  is the speech time  
 b.  $\llbracket hat_{\text{PAST}} \rrbracket = [\lambda P_{\langle i, t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$   
 c.  $\llbracket \text{IPFV} \rrbracket = [\lambda P_{\langle v, t \rangle}. [\lambda t_i. \exists e [t \subseteq \tau(e) \ \& \ P(e)]]]$   
 if P denotes a set of events

- (49)  $\llbracket \text{Heidrun hat scho immer mit Ton gschafft.} \rrbracket = 1$  iff  
 $\exists t [t = t_c] \ \& \ \exists t'' [t'' < t \ \& \ \text{XN}(t'', t) \ \& \ \text{left-infinite}(t'')] \ \& \ \exists e [t'' \subseteq \tau(e) \ \& \ e \text{ is an event of Heidrun working with clay}]$

As indicated in (47), I believe that the proposition embedded under *schon immer* must be homogeneous. If it is a telic predicate as in (50), the whole sentence receives a habitual flavour.

- (50) ?*Salim hat schon immer das Spiel gewonnen.*  
 Salim has already always the game win.PST.PTCP.  
 ‘It is a habit that Salim wins the football match.’

The fact that the extended-now component in (49) stems from *schon immer* is crucial. As described in Chapter 2, the MHG Perfekt had an extended-now semantics which lead to universal uses, see (23)–(25). Due to the semantic shift of the Perfekt (see Section 2.6) and its past semantics in Swabian, these universal uses do not arise anymore, see (5)–(8). This means that the division of labour changed from a Perfekt that contained the XN-interval to a Perfekt that does not and which needs extra linguistic material to express universal meanings. This is a novel assumption but it has an empirical basis, as shown in Section 3.4. In contrast, Rathert (2004) assumes an XN-semantics of the Perfekt specifically because of adverbials like *schon immer*. I believe that my approach is more adequate as it can deal with both synchronic and diachronic facts about the Perfekt.

That the XN-component in German is anchored in lexical material other than the Perfekt auxiliaries is not an isolated phenomenon. I agree with von Stechow (2002) that German (and Swabian) *seit* ‘since’ also introduces an XN-interval, see (51) (repeated from (6) above).

- (51) *Ich kenn dr Peder seit viazg Joar.*  
 I know the Peter since 40 years  
 ‘I have known Peter for forty years.’

Combined with von Stechow’s (2002, p. 398) lexical entry in (52-a), sentence (51) receives the truth conditions in (52-b).

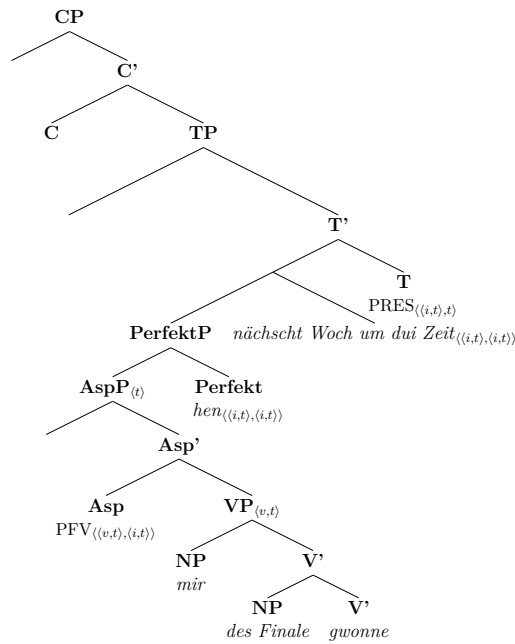
- (52) a.  $\llbracket \text{seit}_{\text{durative}} \rrbracket(d) = \lambda P. \lambda t. \exists t' [ \text{XN}(t', t) \ \& \ |t'| = d \ \& \ P(t') ],$   
           P is homogeneous  
 b.  $\exists t [t = t_c \ \& \ \exists t' [ \text{XN}(t', t) \ \& \ |t'| = \text{forty years} \ \& \ \exists s [ \tau(s) \circ t' \ \& \ \text{KENNEN}(s) (\text{Peter})(I) ] ] ]$ <sup>16</sup>

**No future use of the Perfekt** Given the data in Section 3.4, I suggest that the Swabian Perfekt does not make reference to a time after the speech time. Theoretically, as pointed out in Chapter 1, a relative past analysis of the Perfekt could be reconciled with the

<sup>16</sup>I gave the *kennen*-state an imperfective aspect semantics that is based on an overlap relation. Alternatively, one could assume that states and events have the same imperfective semantics. This would lead to the following truth conditions:  $\exists t [t = t_c \ \& \ \exists t' [ \text{XN}(t', t) \ \& \ |t'| = \text{forty years} \ \& \ \exists e [t' \subseteq \tau(e) \ \& \ \text{KENNEN}(e)(\text{Peter})(I) ] ] ]$ , see also von Stechow (2002, p. 401) who assumes that *e* can denote events and states.

### 3 The Perfekt in Modern Swabian

availability of future uses, as shown below:



- (53) a. *Nächstes Woche um die Zeit haben wir das Finale gewonnen.*  
 Next week at the.same time have we the final win.PST.PTCP.
- b.  $[[\text{PRES}]] = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$   
 where  $t' \geq t_c$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$
- c.  $[[\text{nächstes Woche um die Zeit}]]_c = [\lambda P_{\langle i,t \rangle}. [\lambda t. t \subseteq \text{next week at this time}_c \ \& \ P(t)]]$
- d.  $[[\text{haben}_{\text{PAST}}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$
- e.  $[[\text{PFV}]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) \subseteq t \ \& \ P(e)]]]$
- f.  $\exists t [t \geq t_c \ \& \ t \subseteq \text{next week at this time}_c \ \& \ \exists t' [t' < t \ \& \ \exists e [\tau(e) \subseteq t' \ \& \ e \text{ is an event of us winning the final}]]]$   
 ‘There is a time  $t$  after the speech time and  $t$  is a subset of next week at the same time (as today) and there is a time  $t'$  which precedes  $t$  and there is an event whose run time is included in  $t'$  and  $e$  is an event of a contextually provided “us” winning the final.’

The (simplified) example in (53) was provided by one of my informants. The original target sentence containing the additional VP *In einer Woche sind wir nach Glems gefahren (und haben das Finale gewonnen.)* ‘In one week, we will have driven to Glems and won the final.’ was rejected. One possible explanation for this would be that only telic VPs can receive future-oriented readings in Swabian. However, other items with telic VPs were rejected by my informants (see (28) or (31)).

I interpret the fact that reference to a specific time improves the acceptability of the future Perfekt as a hint towards an analysis that incorporates some kind of *Eigenschaftszuweisung* ‘property assignment’: The sentence in (54) (repeated from (30)) was accepted by my informants. What it expresses is, however, not an eventuality which is anterior to the reference time. Rather, it seems to express the state of the speaker at the reference time (which is 6.30 pm here).

- (54) *Ich habe um 18:30 geduscht.*  
 I have at 6.30.pm take.shower.PST.PTCP.

With regards to the analysis, this would mean that *haben* (or *sein*) are interpreted as main verbs. The LF does not contain an AspP nor a VP and the participle is interpreted adjectivally. This could be achieved through a covert affix as suggested in Maienborn (2009). To work out the exact semantics for these future passives in a Heim & Kratzer (1998) framework remains a challenge for future research.

### 3.6 The Perfekt in Standard German

So far, I have only discussed the Upper German Perfekt with the Swabian Perfekt as a representative. This raises the question of what the semantics of the Standard German Perfekt is.

As already discussed in Section 1.4.4, Löbner (2002) claims that the (Standard) German Perfekt is ambiguous between a present perfect and past tense. In the same vein, von Stechow (2002) also argues for an ambiguity of the Perfekt. He includes the state passive in this discussion but the main readings of the Perfekt are a semantic PAST and an XN-reading. Similarly, Fischer (2018) states that the Standard German Perfekt has two main meanings which she calls *perfektiv* ‘perfective’ and *präterital* ‘preterite denoting’ (p. 133).

This distinction between two different meanings of the Perfekt is also represented in the *Duden-Grammatik* (2022, p. 215ff.). The Perfekt is described as having two possible reference times: In one meaning, the reference time is simultaneous to the speech time,  $R = S$ . This use is said to correspond to the English present perfect and is illustrated with the example in (55) (p. 216):

- (55) *Jetzt hat Peter gegessen. Wir sind jetzt gelandet.*  
 now has Peter eat.PST.PTCP. we are now land.PST.PTCP.  
 ‘Peter has eaten now. We have landed now.’

On the other hand, the reference time can also precede the speech time,  $R < S$ . In these cases, the Perfekt can replace the Präteritum, see (56) (p. 216).

- (56) a. *Anna ist im März 2021 krank gewesen.*  
 Anna is in.the March 2021 ill be.PST.PTCP.  
 ‘Anna was ill in March 2021.’  
 b. *Er ist letzte Woche ins Kino gegangen.*  
 He is last week in.the cinema go.PST.PTCP.  
 ‘He went to the cinema last week.’

Based on these observations, one could attribute the ambiguity of the Standard German Perfekt to the two operators in (57). In particular, this would suggest that the Standard German auxiliaries are ambiguous between an XN-semantics and a PAST-semantics.

- (57) a.  $[[haben/sein]_{XN}] = [\lambda P_{\langle i,t \rangle}. [\lambda t_{\langle i \rangle}. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
 where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$   
 b.  $[[haben/sein]_{PAST}] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$

### 3.7 Chapter summary

In this chapter, I examined the Modern Swabian Perfekt which is the natural descendant of the MHG Perfekt. Based on data that stem from original fieldwork, I argued for a plain past semantics of the Swabian Perfekt. This is in line with the universal perfect development path: Previous research has assumed that Southern German dialects were subject to this last developmental step from perfect to past (Bybee et al., 1994, p. 74; Lindstedt, 2000, p. 371, see Section 2.3) and my data confirm this.

In particular, I showed that universal uses of the Perfekt that were available in MHG are no longer attested in Modern Swabian. The fact that Perfekt-sentences modified by *schon immer* give rise to universal uses has been attributed not the Perfekt itself but to the adverbial. This suggests a reorganization of the division of labour: While the MHG Perfekt independently encoded an extended-now meaning, the Modern Swabian Perfekt requires additional lexical material to express a parallel meaning.

While universal uses are cross-linguistically varied across perfects (see Section 1.4), resultative uses are a common denominator of true perfects. These uses do not arise in Swabian which is additional evidence that the Swabian Perfekt does not encode an extended-now but rather a past semantics.

The status of future uses of the Swabian Perfekt is unclear. I have shown how, theoretically, these uses could be derived with a past semantics. However, my informants only accepted some of the target sentences in future contexts while others were rejected. I reflect this with a question mark in Table 3.2.

A further result of this chapter was that both an extended-now semantics and a past semantics are required in order to account for the historical development of the Upper German Perfekt. While the extended-now analysis is applicable in MHG (and also in OHG), the past analysis is required for Modern Swabian. The attested uses of the Perfekt that are also predicted by these two different approaches are summarised in Table 3.2.

	Middle High German	Swabian
type of perfect	<i>have+be</i> -perfect	<i>have+be</i> -perfect
experiential	✓	✓
resultative	✓	✗
universal	✓	✗
present perfect puzzle	✓	✗
future	✓	?

Table 3.2: The Perfekt in Middle High German and Swabian

Part 2:  
Semantics and school



## 4 How to teach the English present perfect? A semantic approach

*Das schwäbische Perfekt wird verwendet, wenn in der Vergangenheit etwas passiert ist, das auf das Präsens nicht mehr zutrifft. Die Handlung wurde abgeschlossen.*

- 10th grade student during our grammar lesson

### 4.1 Introduction

This chapter<sup>1</sup> elaborates how the semantics of the English present perfect discussed in Chapter 1 and the semantics of the Swabian Perfekt discussed in Chapter 3 can be usefully applied in a contrastive English grammar lesson on the present perfect in (Southern) German schools. These semantic analyses were used to develop novel teaching materials that were tested in a pilot study in Baden-Württemberg.

Recent research has shown that German learners of English underuse the present perfect (Davydova 2011; Fuchs et al. 2016). This is surprising given the fact that the Standard German as well as the Upper German variant of the Perfekt are morphologically similar to the present perfect. However, positive L1 transfer seems to be blocked. Davydova (2011: 279–280) suggests that learners avoid the use of the present perfect due to its complexity and variety of uses and opt for the more transparent preterite. An additional source of confusion might stem from the terminology used in German lessons. The Perfekt is often referred to as ‘Präsensperfekt’ (Granzow-Emden, 2019) which has the advantage of being transparent about the internal morphology of this tense form. However, for German students learning the English present perfect, this name suggests a parallel semantic behaviour. The two tenses look the same, they have a similar name (Präsensperfekt, present perfect) and so transfer mistakes are likely to happen.

Typical transfer mistakes<sup>2</sup> of German students reported in the literature include the incorrect combination of the present perfect with definite past time adverbials as in (1) as well as the use of the present tense in so-called universal contexts requiring the present perfect such as (2). These uses are grammatical in German, as shown in the translations in (3) and (4) where the Perfekt can be modified by *gestern* ‘yesterday’ and where the

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<sup>1</sup>A different version of this chapter has been published as: Braun, J., Gese, H. & Ihle, A. (2025). Visualizing English and Swabian tense semantics in the classroom. In H. Härtl & K. Zaychenko (Eds.), *Grammatical Categories in Linguistics and Education* (pp. 217–250). De Gruyter. Changes compared to the article include an adjusted introduction, a different semantic background and semantic explanations throughout the text as well as a more elaborate discussion of the developed material.

<sup>2</sup>Swan (2001) uses the \* to mark ungrammaticality. For the example by Fuchs et al. (2016), I added the \*.

Präsens ‘present tense’ can be used to denote an event time that started in the past and includes the speech time.

- (1) \**Yesterday I’ve finished all my work for school so far.* (Fuchs et al. 2016: 300)
- (2) \**How long are you in Germany?* (Swan 2001: 42)
- (3) *Gestern habe ich meine ganzen Schulaufgaben erledigt.*  
yesterday have I my whole school.work done
- (4) *Seit wann bist du in Deutschland?*  
since when are you in Germany

In Section 4.2, I will remind the reader of the semantic contrasts between the English present perfect and the Swabian Perfekt. In Section 4.3, current didactic approaches to the present perfect are discussed. I also point out weaknesses of the currently used signal-word approach. In 4.4, results of the joint pilot intervention study with Helga Gese and Anthea Ihle are discussed. The study aimed to remedy the problems connected to the signal-word approach. The material employed in the intervention is based on the semantic insights discussed in this dissertation. In particular, we address the question of how German- and Swabian-speaking learners of English justify their past tense choices and what role semantic visualizations play in these justifications. We also examine to what extent the quality of students’ explanations can be improved by an intervention based on the developed visual-semantic account of present perfect use.

## 4.2 Semantic background

The English present perfect and the Swabian Perfekt both consist of an auxiliary, the tense of the auxiliary and a past participle. Given this parallel morphological make-up, one would expect their semantics to be identical. However, as elaborated on in Chapter 1 and 3, there are systematic differences between the two tenses.

While the English perfect encodes an extended-now semantics, the Swabian Perfekt is most adequately analysed with a past semantics. These analyses correctly predict the available uses, see (5)-(7).

- (5) resultative
  - a. Context: Your mate Tom is not good with money. Yesterday, he bought himself a new car, but then immediately panicked because he didn’t have any savings left. So, he put the car up for sale right away - and managed to sell it successfully. You sum up the situation by saying
  - b. \**John has bought a new car, but he sold it.* (Matthewson et al., 2015, p. 6)
  - c. *Dr‘Tom hat a neies Audo kauft* (aber des hat er glei  
The.Tom has a new car buy.PST.PTCP. (but this has he immediately  
*wieder verkauft*).  
again sell.PST.PTCP.)

- (6) universal
- a. Context: Simone is on the pill. And since she has been taking the pill, she has had migraines. Her doctor has confirmed that the migraines are caused by her taking the pill. She started taking the pill six months ago.
  - b. *Simone has had a heachache for 6 years now.*
  - c. #*D'Simone hôt 6 Joar lang Schädelwae gheed.*  
the.Simone has 6 years long headache have.PST.PTCP.
- (7) present perfect puzzle
- a. \**Salim has won the game yesterday.*
  - b. *Dr Salim hat geschdern s Spiel gwonne.*  
the Salim has yesterday the game win.PST.PTCP.

The contrast between the English and Swabian data and thus the difference between the extended-now analysis and the past analysis has been attributed to the semantics of the auxiliaries in Chapters 1–3:

- (8) a. English  $[[have_{XN}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]]$ ,  
where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$
- b. Swabian  $[[haben/sein_{PAST}]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$

To sum up, while the English present perfect and the Swabian Perfekt have a similar morphological make-up, the respective semantic contributions of the two tenses are different. The English present perfect gives rise to universal and true resultative uses while the Swabian Perfekt does not. In English, the perfect cannot be modified by definite past time adverbials even though it refers to events that occur in the past. The Swabian Perfekt is not affected by this constraint. It can freely occur with definite past time adverbials.

## 4.3 Didactic background

### 4.3.1 The traditional approach

Typically, the present perfect is taught at elementary level (grade 6–8). According to schoolbooks, the present perfect is used either when a finished event has relevance to the present or when a process started in the past and continues into the present. These rules describe the present perfect quite well and are one possibility to break down the extended-now approach described in detail in Chapter 1.

Additionally, certain adverbials like *today*, *since*, *never*, *yet*, *already* or *just* are used in schoolbooks and are supposed to “signal” the necessity to use the present perfect. The use of certain adverbials like *today* can certainly be seen as a symptom of the underlying XN-semantics but this does not hold for all of the adverbials listed above. Recent research has shown that signal words play a prominent role when teaching the present perfect (Davydova, 2011, p. 287; Rogatcheva, 2014, p. 241). As a consequence, the signal-word approach leads German<sup>3</sup> students of English to excessively use the present perfect in

<sup>3</sup>In these types of studies, possible dialectal variation is not addressed. The focus is on variation across

combination with temporal adverbials. Fuchs et al. (2016), who analyse learner corpora, find that German “[l]earners of school age use the PP [present perfect] very often in conjunction with temporal adverbials (46.1 %) in written language, and do so significantly more often than native British school students (15.4 %)” (p. 320). Werner (2014, p. 137) reports results of a corpus study on British English, which consists of both spoken and written data by native speakers, aged 18 or above. These results indicate that 23.2 % of present perfect occurrences in spoken contexts are modified by adverbials, and 19.8 % of the occurrences of the present perfect in written contexts are modified by adverbials. Overall, this is a higher percentage than the one elicited for British school students in Fuchs et al.’s study, but still less than the result for German learners.

On top of that, signal words can appear with other tenses (see Fuchs et al., 2016, p. 317) and are thus not a clear indicator for the present perfect, see (9). In American English, certain signal words even have the tendency to occur with the simple past. As stated in the *Oxford Learner’s dictionary*, “[j]ust is mostly used with the perfect tenses in British English and with the simple past in North American English” (see *Oxford Learner’s Dictionaries*, “just, adv.” 4). Their examples are provided in (10).

- (9) *I never knew you were the someone waiting for me.* Ed Sheeran, *Perfect*
- (10) a. *I’ve **just had** some bad news.* (British English)  
 b. *I **just got** some bad news.* (North American English)

Given these data, it seems surprising why teaching materials nevertheless use the signal-word approach instead of focusing solely on a systematic, compositional-semantic approach using the extended-now account described above. In the following, two possible reasons for scepticism about semantic approaches in grammar teaching are discussed: First, well-known problems of semantic approaches to grammar in language didactics are addressed. Then, the focus will be on the high complexity of formal semantic approaches from a didactic perspective, focusing on the didactic potential of visualizations for the explanation of complex concepts.

### 4.3.2 The problem of simplistic semantic approaches to tenses

In educational contexts, grammar is mostly understood as (morpho)syntax, i.e., the study of structures of words, phrases and sentences, while semantic concepts play a comparatively subordinate role. This preference for structure over meaning is reflected both in surveys (cf. van Rijt & Coppen, 2017; van Rijt, 2020) and didactic publications as well as in curricula. Even teaching materials on semantic phenomena such as ambiguities, misunderstandings and linguistic glitches often focus on form-oriented concepts (such as word type or clause analysis), and not on semantic ones to explain these phenomena (cf. Boettcher & Spinner, 2018). Grammar didactics, whose goal it is to lead students from an unconscious, meaning-guided use of language to the analysis of linguistic structures, thus conceives semantic approaches as a transition state to overcome. Let us take as an example the most prominent and most often discussed semantic approach in language didactics: The introduction of the concept “verb”. In elementary school textbooks in

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different languages.

Germany, verbs are often called “do-words” and defined as “words that describe what someone does”, see the following definition from *Jojo Sprachbuch 2*, 2004, qtd. in Müller & Tophinke (2015, p. 48).

- (11) *Wörter, die sagen, was jemand tut, nennt man Verben: rennen, fressen, fliegen*  
 ‘words that say what someone does are called verbs: to run, to eat, to fly ...’

While, at first glance, it may seem easier for younger children to take such a semantically oriented view of language instead of using the morphological criterion of conjugability, the supposedly child-friendly approach is an obstacle to learning. It prevents children from recognizing non-activity denoting verbs such as *schlafen* ‘sleep’, *haben* ‘have’, *sein* ‘be’ or *müssen* ‘must’ as verbs or leads to logical inconsistencies later on when the definition has to be extended to non-activity verbs (cf. e.g., Mesch & Dammert, 2015; Müller & Tophinke, 2015; Granzow-Emden, 2019). In the area of tenses, too, semantically oriented, simplistic didactic approaches often lead astray (see also Chapter 5): In textbooks, tenses are reduced to their typical meaning and a 1:1 mapping of tense and time reference is suggested, e.g., the present tense is referred to as “now-time”. Such a 1:1 mapping is problematic as it gives rise to contradictions. For example, the present tense might also be used to refer to future events<sup>4</sup>, see (12), and future tense may refer to the present as in (13), see e.g. Rödel & Rothstein (2015, p. 233).

- (12) *Morgen gehen wir ins Kino.*  
 tomorrow go we to the cinema
- (13) *Das werden Sie wohl schon wissen.*  
 this will you probably already know

In simplistic semantic accounts, the temporal reference of tenses is insufficiently captured. The didactic value of these approaches therefore seems to be rather low, especially when it comes to complex issues such as the distinction between present perfect and simple past. On the other hand, formal semantics with its extended-now approach for the present perfect offers a possibility to clearly distinguish present perfect and simple past and to explain the different usage contexts of both tenses. However, the formal semantic analyses presented in Chapter 1–3 of this dissertation are too abstract for school contexts. They have to be didactically reduced. Thus, when it comes to semantically oriented didactic approaches to tenses, two things seem to be relevant: (i) Simplistic semantic approaches (especially with 1:1-mapping of tenses to time points) have to be avoided and (ii) a suitable didactic treatment has to be chosen. The next section focuses on the latter aspect.

<sup>4</sup>This has been reflected in Chapter 2 and 3 by employing Bhatt & Pancheva’s (2005) lexical entry for the German present tense:

$$\llbracket \text{PRES} \rrbracket = [\lambda P_{\langle i,t \rangle}. \exists t_i [t \geq t_c \ \& \ P(t)],$$

where  $t' \geq t$  iff there is no  $t'' \subset t'$ , such that  $t'' < t$

### 4.3.3 Narrowing down complexity using semantic visualizations

Unlike the supposedly child-friendly semantic approaches in elementary school didactics (à la verbs are “do-words”) described above, formal semantics is anything but simplistic. Tense semantics deals with abstract concepts like time intervals, events and states in a formal metalanguage. It resembles mathematics in its use of a formal technical language for “calculating” the meaning of sentences. However, this should not be a reason to exclude semantic issues in language teaching or to reduce them to simplistic rules of thumb. Mathematics, by contrast, is not considered too complex to be taught to students either. The great challenge of educational linguistics is thus to provide a bridge from concreteness to abstraction (see Gretsch & Holzäpfel, 2016, p. 49).

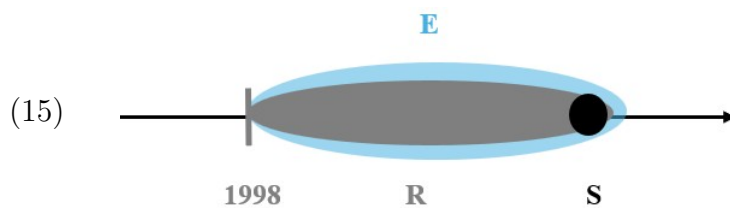
Let us take a brief look at the didactics of mathematics in order to see which methods are used to make abstraction comprehensible for students, see Holzäpfel et al. (2016) for an overview. In mathematics, “[r]epresentation and visualization are at the core of understanding” (Duval, 1999, p. 3), they are used for “depicting and communicating information, thinking about and developing previously unknown ideas and advancing understandings” (Palmer, 1978, p. 262). But not only in mathematics, visualizations are assigned a high educational potential and a heuristic, compressing function: they involve a reduction to the essential of a subject matter (cf. Presmeg, 2006). In linguistics, this compressing/structuring function of visualizations is used in the various sub-disciplines, see Gretsch & Holzäpfel (2016) for an overview. In addition to tables and lists, which can be found in all subdisciplines of linguistics, structural diagrams are widespread in syntax and morphology. In Germany, in the 1970s, structure diagrams were transferred 1:1 from linguistics to teaching for the purpose of a so-called linguistization of grammar teaching. In some cases, this led to students being presented with pages and pages of linguistic phrase structure diagrams (Engel 1978, p. 122). In current grammar didactics however, there is a consensus that a 1:1 transfer of linguistic models in grammar teaching is not adequate, see Rothstein (2010). Visualizations are therefore didactically processed and thereby reduced to suit the addressees (Gretsch & Holzäpfel, 2016, p. 58; Rödel 2018, p. 105–110; for an example of a didactically prepared use of structure diagrams in the field of word formation, see the visual-haptic approach of Gese, 2022).

Regarding semantics, visualizations could help to make the abstract logical notation more tangible for students. In Reichenbach’s (1947/1966) system, the characteristic function of tenses is to situate temporally the event/state denoted by the main verb in relation to further linguistically given ‘times’. He makes a distinction between the event time (E), at which the event/state denoted by the main verb happened/was the case, the speech time (S), at which the sentence is uttered and the reference time (R), which is used to situate the event time, see Rothstein (2008) and Chapter 1 of this dissertation. According to Klein (1994), tenses denote a relation between S and R. He regards viewpoint aspect as the relation between R and E.

Using the Reichenbachian time-visualization system, I represent the extended-now semantics of a present perfect sentence like (14-a) as in (15). The extended-now interval  $t'$  which extends backwards from the speech time can be thought of as Reichenbach’s reference time R with the left boundary 1998. According to Klein (1994), tense is a relation between R and S, and in the way that I analysed the English perfect, it is an inclusion relation. This is in contrast to Reichenbach’s original analysis of the perfect where the

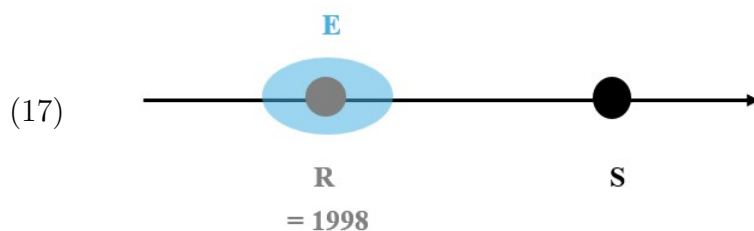
event time precedes the reference time and where the reference time is simultaneous to the speech time, see Chapter 1. In Klein's (1994) system, aspect is the relation between E and R. I represent this in (15) as an inclusion relation where the event time E -  $\tau(e)$  - includes the reference time  $t'$ .

- (14) a. *Since 1998, Salim has been playing football.*  
 b.  $\exists t[t = t_c \ \& \ \exists t'[\text{XN}(t',t) \ \& \ \text{LB}(1998,t')] \ \& \ \exists e[t' \subseteq \tau(e) \ \& \ e \text{ is an event of Salim playing football } ]]$   
 'There is a time interval  $t$  which is the speech time and there is a time interval  $t'$  which has  $t$  as its final subinterval and its left boundary is 1998 and there is an event whose run time includes or is equal to  $t'$  and it is an event of Salim playing football.'



In simple past sentences such as (16), the reference time  $t'$  precedes the speech time. Imperfective aspect denotes an inclusion relation between E and R where the event of Salim playing football is equal to or includes the reference time, see the time arrow in (17).

- (16) a. *In 1998, Salim was playing football.*  
 b.  $\exists t'[t' < t_c \ \& \ t' = 1998 \ \& \ \exists e[t' \subseteq \tau(e) \ \& \ e \text{ is an event of Salim playing football } ]]$



By reducing the formal semantic analysis to much simpler visualizations, we keep the explanatory power of the extended-now account and avoid misleading rules of thumb. At the same time, these visualizations make a suitable approach to the investigated phenomenon possible for 10th grade students.

In the following chapter, I present data from a pilot intervention study in which my colleagues and I tested the impact of our visual-semantic approach on the quality of students' explanations, i.e. on their metalinguistic competence.

## 4.4 Intervention study

In order to evaluate the visual-semantic approach to the present perfect we conducted an explorative intervention study (n=39). More specifically, we wanted to know (i) whether students at the end of lower secondary school use semantic metalanguage when explaining present perfect/simple past uses, (ii) whether and how students use visualizations to support their explanations and (iii) what effects the visual-semantic approach has on the correctness of their answers. Before addressing these questions in three subsections, the design and material of the intervention are described.

### 4.4.1 Design

The study was carried out in the federal state of Baden-Württemberg in the school year 2021/2022. Two 10th grade classes participated in our study which deployed a control group design with pre- and posttest. While the students in the intervention group (N=17) received a treatment using the visual-semantic approach, the students in the control group (N=22) were given a business-as-usual English lesson using regular textbook materials on the present perfect. Both lessons lasted 90 minutes. Students in the intervention group were encouraged to take a scientific approach to language by investigating language data: By comparing English and German/Swabian sentences in different contexts and reflecting on the different usage conditions, they inductively discovered the extended-now semantics of the present perfect. An explanatory video (created by the first author) was used to introduce the visualization of the extended-now approach, which was then consolidated through practice exercises. Students were asked to draw time arrow representations to distinguish between present perfect and simple past sentences, see Figure 4.1, or to transfer a visualization into an English or German/Swabian sentence, see Figure 4.2.

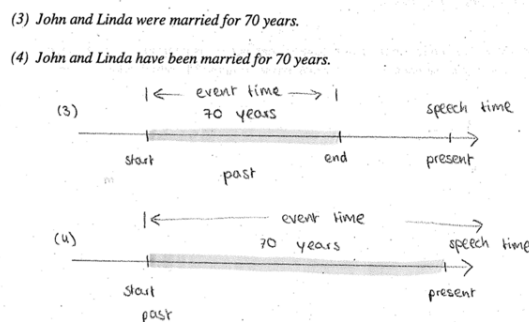


Figure 4.1: A semantic visualization exercise

In order to ensure comprehension, German was used as the language of instruction in certain phases of the intervention, for example, when verbalizing the observations from the comparison German/Swabian vs. English. As described above, the intervention aimed to build up verbal and visual, i.e., non-verbal or only partially verbal explanation routines. By resorting to visualizations, the ability to explain was partially dissociated from practical language skills in the foreign language.

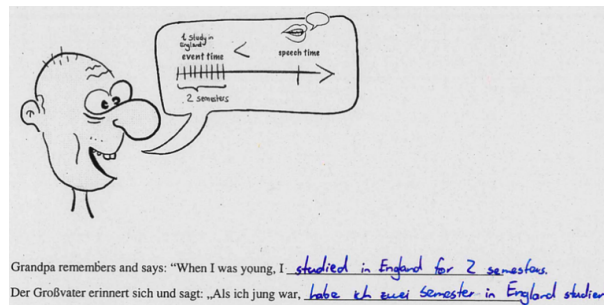


Figure 4.2: “Translating” semantic visualizations into English and German sentences

Before and after the intervention, a survey of the students’ competences was conducted through two open questionnaires. The students’ task was to underline, to correct, and to explain tense errors in three contextually embedded sentences each, see (18)—(20). In a second task the students had to identify a tense mistake in two alternative sentences containing either the present perfect or the simple past, see the example in (21), and to justify their choice. Different items were used in the pretest and the posttest. These were constructed using four types of contexts: A (UNIV)-item contained a present perfect sentence in a context ruling out a universal/continuative reading and thus requiring a simple past, see (21). The (SW)-item combined a so-called present perfect signal word with the simple past instead of the present perfect, see (19). A third item consisted of a random past tense mistake (PTM), see (20), and the choice-task presented a present perfect and a simple past sentence where the present perfect variant is wrong because it leads to a contradiction, see (21).

(18) Universal item (UNIV)

*I remember the time when grandma – God rest her soul – was pregnant with Lizzy. Lizzy was born 1 month too early. She was tiny. **Your grandma has been pregnant for 8 months and then her water broke.***

(19) Signal word item (SW)

*Josh: “Would you fancy going to the cinema?” George: “**I just went to the cinema a couple of days ago.** But we could go to the pub instead?”*

(20) Past tense mistake (PTM)

*Clare: “Hmmm...I’ve been demonstrating against the war. That was really impressive and there were a lot of people.” Grandpa: “Wow! I think it’s great what you young people are doing. **That had made me proud.**”*

(21) Resultative item (RESULT)

*Sam lost her key but she found it again.  
Sam has lost her key but she found it again.*

To find out whether students perceived visualizations as helpful in explaining, we allowed students to choose whether or not to produce visualizations to support their explanations. Since the aim was to collect meta-linguistic utterances on the present perfect usage and not to test foreign language writing skills, students were allowed to answer in English or German.

### 4.4.2 Lesson plan and teaching material

The lesson that we developed is scheduled to last 90 minutes. It consists of different phases that encourage student participation, as depicted in Table 4.1. A more detailed lesson plan is to be found in Appendix B. In the materials that we developed, we employed a visual-semantic approach to the English present perfect and the German/Swabian Perfekt.

Developing phase – Swabian (Erarbeitungsphase)	M1: Perfekt and judgements M2: meaning Perfekt, contrast present perfect
Developing phase – English (Erarbeitungsphase)	M3: Video XN, 2x M3: answering questions on XN
Transfer phase (Transferphase)	M4: present perfect vs simple past M4: extension to French passé composé

Table 4.1: Lesson plan (simplified)

**Developing phase – Swabian** In the first phase, students are presented with Swabian target sentences containing the Perfekt (see worksheet<sup>5</sup> “M1 Das deutsche Perfekt”), as illustrated in (22). The accompanying context makes a universal use of the Perfekt true. The respective data were elicited by the first author, as described in Chapter 3.

- (22) [Context makes universal true] Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:
- a. *Ich habe den Peter jetzt 40 Jahre lang gekannt.*  
I have the Peter now 40 years long know.PST.PTCP.

In a second step, the students are asked to judge whether these target sentences are acceptable. They are encouraged to rely on their own (Swabian) intuitions. The target sentence should be judged unacceptable in the given context by Swabian speakers, see Chapter 3.

In worksheet 2 (“M2 Das Perfekt im Schwäbischen”), students are presented with Swabian judgement data that were elicited in the original fieldwork study discussed in Chapter 3. Based on these data and their own intuitions, students are asked to come up with a meaning rule for the Swabian Perfekt and to use a timeline to illustrate their ideas. Finally, students are asked to translate German/Swabian sentences with the Perfekt and the Präsens into English, as illustrated in Table 4.2 (the detailed exercise can be found in Appendix B).

This translation exercise is meant to elicit whether students make the typical transfer mistakes described in Section 4.1. The correct translation for the German/Swabian Präsens in Table 4.2 is the present perfect. As described in Chapter 1, the present perfect denotes a universal use when combined with stative verbs like *kennen* (‘to know’) and durative adverbials. Thus, in a context that makes clear that the state of knowing is ongoing, the present perfect needs to be used. To translate the Präsens with the present

<sup>5</sup>All worksheets can be found in Appendix B.

Context	German/Swabian	English
Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:	<i>I <b>kenn</b> dr Peder jetzt schau viazg Joar lang.</i>	
Klaus und Peter waren beste Freunde. Sie kannten sich schon seit der Grundschule. Leider ist Peter vor einer Woche gestorben. Klaus sagt über Peter:	<i>Ich <b>habe</b> den Peter jetzt 40 Jahre lang <b>gekannt</b>.</i>	

Table 4.2: Contrasting the German/Swabian Perfekt and Präsens with the English present perfect and simple past

tense in this context is a typical transfer mistake. The German/Swabian Perfekt in *Ich habe den Peter jetzt 40 Jahre lang gekannt*, on the other hand, needs to be translated with the English simple past, as the state of knowing is properly in the past.

**Developing phase – English** In the second phase, students are presented with a video on the semantics of the present perfect. In worksheet 3 (“M3 The semantics of the present perfect”), they are asked to watch the video and then answer questions on the present perfect. These issues involve the extended-now meaning of the present perfect which was explained in a student-friendly manner in the explanatory video. In a second step, the students are asked to illustrate the meaning of the present perfect by using timelines.

**Transfer phase** In the final phase, the exercises are more open and include new phenomena. In worksheet 4 (“M4 Visualizing the meaning of tenses”), students are asked to visualise the difference in meaning between (23) and (24) with the help of timelines.

(23) *John and Linda were married for 70 years.*

(24) *John and Linda have been married for 70 years.*

In the second exercise, students are asked to translate the visualization depicted in Figure 4.3 into English and German/Swabian. To simplify this, the beginnings of the sentences are already provided, as in (25).

- (25) a. *Grandpa remembers and says: “When I was young, I ...”*  
 b. *Der Großvater erinnert sich und sagt: “Als ich jung war, ...”*

In exercise 3, the French passé composé is introduced and students are asked to compare the language data provided in (26) to Swabian. Based on their contrastive analysis, they are asked to come up with a prediction for the semantics of the French passé composé.

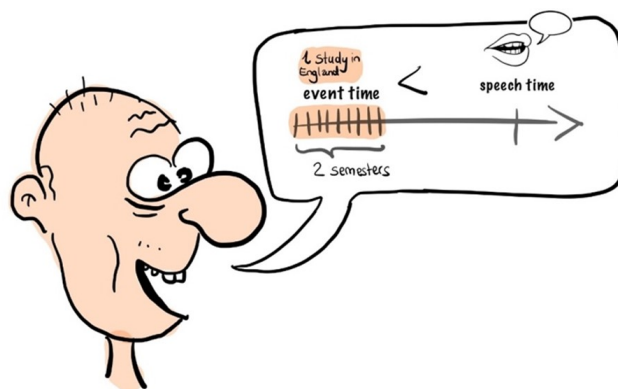


Figure 4.3: Grandpa talks about the past

- (26) [Context makes universal true] Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:
- Depuis 40 ans il est mon ami.*
  - \*Depuis 40 ans il a été mon ami.*

As the French passé composé is not acceptable in the given context but the present tense is, the prediction is that the French passé composé has the same semantics as the Swabian Perfekt.

In a last exercise, students are asked to explain the mistakes made in the sentences shown in (27): (27-a) is ungrammatical because the telic eventuality *lose my watch* combined with the present perfect leads to a resultative interpretation. To continue the sentence with *but I have found it again* leads to a contradiction in English, as discussed in Chapter 1. In (27-b), a universal meaning is expressed with the present tense instead of the present perfect. This is impossible in English.

- (27) a. *\*I have lost my watch but I have found it again.*  
 b. *\*Sally is pregnant for 4 months now.*

### 4.4.3 Answer accuracy

During the intervention, the great majority of students did make tense mistakes. In a translation task, they used the present tense instead of the present perfect in universal contexts or they employed the present perfect in simple past contexts. An example is provided in Figure 4.4, where the darker handwriting was the student's initial solution and the lighter version was the correction after plenum discussion of the examples. This shows that even in 10th grade, students have not sufficiently mastered the English present perfect.

Kontext	Standarddeutsch / Schwäbisch	Englisch
A Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:	<i>I kenn dr Peder jetzt schau viaz Joar lang.</i>	I know Peter since 40 years. I have known Peter for forty years.
B Klaus und Peter waren beste Freunde. Sie kannten sich schon seit der Grundschule. Leider ist Peter vor einer Woche gestorben. Klaus sagt über Peter:	<i>Ich habe den Peter jetzt 40 Jahre lang gekannt.</i>	I've known Peter for 40 years. I knew Peter for 40 years.
C Marc befindet sich gerade im Krankenhaus und er ist schon seit längerer Zeit dort. Seine Mutter sagt:	<i>Dr Marc laid jetzt scho seit 3 Woche im Kranglehaus.</i>	Marc is laying in the hospital since three weeks. Marc has been laying in the hospital since three weeks.
D Marc hatte eine schwere Operation und musste danach noch 3 Wochen im Krankenhaus verbringen. Mittlerweile ist er aber wieder zuhause und wohlauf. Seine Mutter sagt:	<i>Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.</i>	Marc was laying in the hospital for three weeks.

Figure 4.4: Tense errors encountered during the lesson.

## Results

The results showed that both groups benefited from the lesson, see the increase of correct answer from pre- to posttest for the two groups in Figure 4.5. Due to the small sample size, no statistical analysis was performed, but the descriptive data indicate a tendency for a higher competence growth in the intervention group. While the difference value between pre- and posttest was 9.09 in the control group, it was 14.71 in the intervention group.

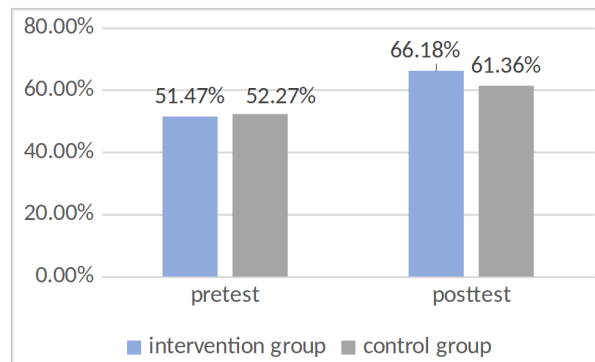


Figure 4.5: Correct answers in the pre- and posttest for the two groups (in %)

However, as shown in Figure 4.6, the distribution of the competence growth on the four item types was very different in the two groups. While the competence growth in the intervention group occurred mainly with the two items in the two typical usage contexts of the present perfect, (UNIV; difference value 23.53) and (RESULT; difference value 47.06), the increase in competence in the control group was almost exclusively due to the signal word item (SW; difference value 27.27). For this item type, in the intervention group, on the contrary, not only was there no gain in competence but there was a high decrease in the error detection rate ('negative' difference value 29.41).

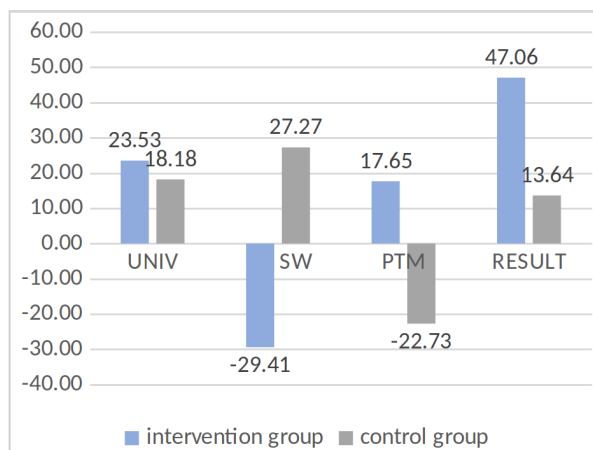


Figure 4.6: Answer correctness from pretest to posttest for the four types of items (difference values)

Since the control group was taught using the traditional approach mainly relying on signal words, this result is not surprising. The strong increase in the error detection rate for the signal word item in the control group shows the effectiveness of the traditional approach for this type of sentences. However, according to the study by Werner (2014: 16) cited above, only around 30% of native present perfect uses contain a temporal adverbial, i.e., a possible signal word. In other words, at least 70% of the occurrences of present perfect sentences cannot be accounted for using the signal word approach. The semantic approach, on the other hand, can explain all occurrence contexts of the present perfect including those with signal words. Nevertheless, the visual-semantic treatment of the intervention group reduced the recognition rate of signal word related mistakes. This raises the question of whether the newly acquired semantic explanatory skills gained by the intervention might block the simpler detection routines using signal words that the students learned in their prior education. The new explicative routines based on the visual-semantic account, in turn, are more cognitively demanding and certainly require more practice. In other words, it is definitely easier to detect a tense error in a sentence with a signal word using the signal word approach than to detect the same error using semantic analysis.

Unlike the signal word approach, however, the semantic approach can explain all present perfect occurrences. This advantage is reflected by the higher increase in competence over all four item types taken together in the intervention group compared to the control group. It would be interesting to see whether the detection rates of tense errors in signal word containing sentences increases after longer exposure to and training with semantic-visual accounts. This, however, would require an implementation of the visual-semantic approach in the curriculum or at least a longer intervention; it is therefore left to further research. The main focus of this study was to see how the visual-semantic approach affects the students' ability to explain the correct use of the tenses, especially the present perfect. Thus, the aim was not only and not primarily to see which approach promotes higher error detection rates / answer correctness, but which approach has a positive impact on students' verbal and visual explanation skills, i.e., on their metalinguistic competence.

The following two chapters are devoted to this question.

#### 4.4.4 The use of linguistic metalanguage

Students' written utterances collected by means of the pre- and posttest questionnaires served as the data set for the first part of the qualitative content analysis. Due to the number of items, the number of subjects, and the time of the survey, a total of 312 verbal explanations would have been possible (39 subjects x 4 items in the pretest + 39 subjects x 4 items in the posttest). However, since no explanations were requested if the error wasn't found, the number was lower. A total of 199 verbal explanations were collected and analysed.

##### **Categorization system and coding rules**

In the course of the qualitative content analysis – a systematic, data-reducing, rule- and theory-guided procedure for the analysis of meaning-containing material (see Mayring, 2014) – a category system was developed. The categories reflect the performance indicators for the theoretical construct of metalinguistic competence (explanatory competence). The development of the categories was deductive-inductive, based on previous studies, theoretical considerations and inductive category-building on the basis of students' written explanations. In existing studies on students' metalinguistic competence (e.g., Funke, 2005; Gese & Großmeyer, 2023; Thißen, Beck & Otten, 2020; Wildemann & Bien-Miller, 2024), metalinguistic competence was operationalised as the use of linguistic terminology. Besides statements using linguistic terminology, these studies identify a second type of explanations: content paraphrases without resort to linguistic terminology. Thißen (2017) labels these paraphrases as “semantic” (as in her account linguistic terminology is mainly restricted to parts of speech and clauses), but they are not semantic in the narrow sense. In this paper, we reserve the terms “semantics” and “semantic” for the linguistic study of meaning, i.e., for formal semantics. With regard to the phenomenon treated in our study, the tenses, the relevant linguistic terms are (formal) semantic ones, see the analysis of the present perfect in Chapter 1–3. The concept of metalinguistic competence, therefore, was operationalised as a linguistic explanation of tenses relying on scientific semantic terminology. To assign the label ‘scientific’ (SCIENT), we used a list of terms, see (28), which was deductively obtained from the description of the present perfect in the linguistic literature and inductively extended after reviewing the data. Following previous studies on metalinguistic competence, the label ‘paraphrase’ (PARAPHR) was chosen if students reformulated the content of the sentence in their own words. The category ‘signal word’ (SW) was defined in accordance with the list of signal words given in schoolbooks.

During the first coding phase, we encountered a number of written utterances that were not paraphrases of meaning but explanations of meaning, but did not make use of linguistic-semantic terminology. Thus, neither the “scientific” nor the “paraphrase” category fit for this type of explanation. Following Becker & Otten (2020) and Wildemann & Bien-Miller (2024), we labeled this category “pre-scientific”. Statements that did not fit to any of these categories were labeled (OTHER). The full list of categories with definitions and anchor samples is given in Figure 4.7.

#### 4 How to teach the English present perfect? A semantic approach

Category	Definition	Anchor Samples (English / German)
Scientific	Students used adequate linguistic semantic terminology, i.e. <u>at least two terms from the semantic terminology list</u> in (36).	[4SWpost]: the <u>event</u> in the past <u>effects</u> his decision today  [34RESULTpost]: <u>Abgeschlossene</u> Handlung, kein <u>Effekt</u> auf die Gegenwart, deswegen simple past (‘Finished action, no effect on the present, therefore simple past’)
Pre-scientific	Students referred to the meaning of the sentence using every day terms but <u>no or less than two appropriate linguistic semantic terms</u> .	[29RESULTpost]: B passt nicht, da der gebrochene Arm eine abgeschlossene Sache ist (‘B doesn’t fit as the broken arm is a finished thing’)  [6UPpost] the action is over
Signal word	Students referred to <u>time adverbials or other signal words</u> used in school books, see figure 1 above.	[10SWpre]: no <u>time</u> given, no simple past  [40SWpre]: <u>Signalwort</u> “ <u>already</u> ” (‘Signal word “already”’)
Paraphrase	Students reformulated the content of the sentence in their own words.	[1PTMpost]: Josh isn’t there at the moment so it has to be simple past  [28PTMpre]: Es macht ihn immer noch stolz und das hat nicht aufgehört (‘It still makes him proud and that has not stopped’)
Other	Students gave explanations not fitting to one of the other categories	[1RESULTpre]: the past perfect is used but you should use the simple past or present perfect  [24PTMpre]: Man kann das s.p. nicht zweimal direkt hintereinander benutzen (‘You cannot use the s.p. twice in direct succession’)

Figure 4.7: Categorization system developed for the qualitative content analysis of verbal explanations

(28) Semantic terminology list:

- Ereignis / event;
- Zustand / state;
- Ereigniszeit / event time;
- Sprechzeit / speech time;
- Referenzzeit / reference time;
- andauern / anhalten / fortbestehen / to hold on / to last / to go on / to continue;
- abgeschlossen / beendet / completed / finished / ended;
- extended now;
- Intervall / interval;
- Dauer / duration;
- Auswirkung / Effekt / Bezug / effect / relevance;
- sich auswirken auf / beeinflussen / betreffen / to affect
- vorzeitig / Vorzeitigkeit / anterior / anteriority
- sich vorher ereignen / to precede

The classification process was twofold. In a first step, the first and the second author independently intuitively assigned one of the following labels without applying the classification criteria of Figure 4.7: semantic, paraphrase, signal word, other. Each classification was discussed directly afterwards, in case of uncertainties or discrepancies an agreement was found. Here, the coders noticed differences in quality between the “semantic” explanations. These were therefore re-classified in a second step. For this purpose, the category system was expanded and the classification criteria were defined as described in Figure 4.7 and (28). In a second coding step, each explanation was classified by the second author according to the categorization system. To enhance the reliability of the codings, the following procedure was chosen in accordance to Mayring (2014): The first author had insight into the whole material, definitions, and codings of the first coder. She worked as a supervisor and checked if she could confirm the codings. In case of disagreement, the coder and the controller discussed the example and arrived at an agreement. Each of the 199 verbal explanations was assigned a classification category. In case an example belonged to more than one category according to the definition given in Figure 4.7 the following coding rules were employed.

- (29) Coding rule 1: if an explanation contained two or more expressions from the semantic terminology list mixed with other non-scientific terms, the label ‘scientific’ was assigned.
- (30) Coding rule 2: if an explanation contained one or more expressions from the semantic terminology list and a reference to a signal word, it was classified “scientific” and “signal word”
- (31) Coding rule 3: if an explanation contained a reference to a signal word and a pre-scientific explanation, the labels “signal word” and “pre-scientific” were given.
- (32) Coding rule 4: if an explanation contained a reference to a signal word and a paraphrase, the label “signal word” was given.

## Results and discussion

As elaborated above, metalinguistic competence was operationalised as the use of linguistic terminology and reflected by the label “scientific” in the categorization set. The aim of the visual-semantic account was to foster this competence. As an intermediate stage on the way to metalinguistic competence, a level with pre-scientific explanations was suggested.

In order to gain an impression of the effectiveness of the two approaches on students’ metalinguistic competence, a comparison of the frequency of occurrence of the different categories in the verbal explanation of the pre- and posttest was conducted. The results are shown in Figure 4.8. The increase of verbal explanation categories SCIENT and PRE-SCIENT from the pre- to the posttest, see also Figure 4.9, showed that both groups profited from the lesson. As expected, the increase in the category SCIENT was higher in the intervention group (difference value 13.37) than in the control group (difference value 8.28). In the intervention group, one in three to four student responses (27.70 %) met the criteria for the target category SCIENT in the posttest. There was also an increase with regard to the category PRE-SCIENT. One in four to five responses (21.28%) in the

intervention group's posttest can be classified as pre-scientific. Interestingly, the proportion of content-paraphrasing responses is still very high after the intervention (44.68 % in the posttest compared to 45.24 % in the pretest). Signal word explanations and other explanations play a very minor role in the intervention group in the pre- as well as in the posttest.

In the control group, only a small proportion of the responses in the posttest can be classified as scientific and the change for this category from pre- to posttest is minor. The most striking finding, for the control group, is the strong increase in pre-scientific responses (difference value 24.30) and the decrease in content-paraphrasing responses ('negative' difference value 43.65). The most frequent explanation category in the control group's posttest is PRE-SCIENT (45.45 %), while in the pretest it was PARAPHRASE (55.77 %). For the (SW) category, there was an increase from pretest to posttest in the control group but the increase was smaller than in the PRE-SCIENT category.

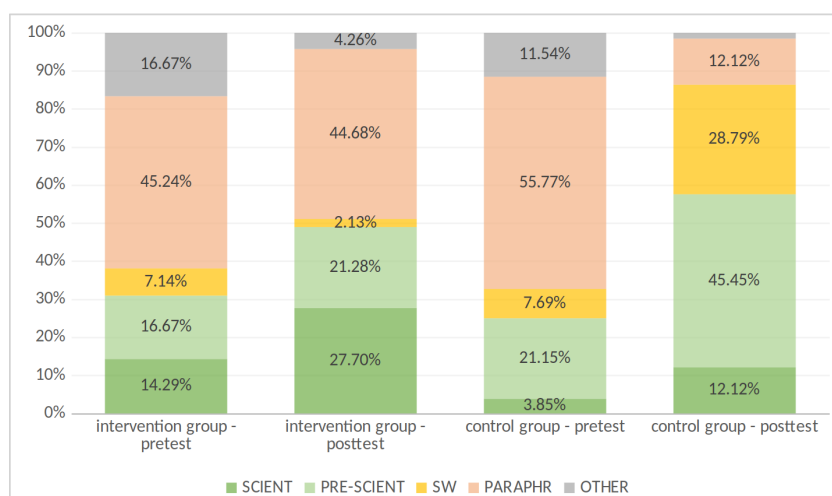


Figure 4.8: Proportion of the classification categories for the two groups in pre- and posttest (in percent)

Turning away from the distribution of categories across groups and looking at students' explanations themselves, the data show that the intervention group outperforms the control group in the RESULT item. The respective quantitative data were shown in Figure 4.6 but the qualitative differences are also reflected in students' explanations. For the RESULT item, students were asked to indicate which of two alternative sentences contained a tense mistake and to explain and illustrate their choice. The material is repeated below:

- (33) pretest:  
 A: *Sam lost her key but she found it again.*  
 B: *Sam has lost her key but she found it again.*

- (34) posttest:  
 A: *Lisa broke her arm but it is healed now.*  
 B: *Lisa has broken her arm but it is healed now.*

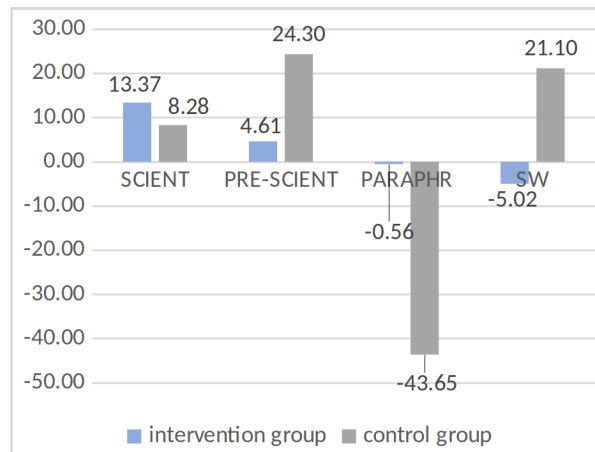


Figure 4.9: Changes in scientific and pre-scientific explanations from pretest to posttest for the two groups (difference values)

There are two qualitative reasons why students in the control group were not as successful as their peers in the intervention group when it comes to solving this exercise: (i) 1:1 mapping and (ii) wrong explanations based on signal words. These are discussed in turn.

As elaborated in Gese & Braun (2023), a 1:1 mapping between tense form and time is the misconception that all tense forms are organised on a timeline with exactly one fixed time slot per tense form (see also Chapter 5). Examples can be found in both the intervention and control group. However, while students in the intervention group only use this kind of explanation in the pretest, students in the control group also keep this line of argumentation in the posttest. In (35), the student explains that it is wrong to use the simple past twice if one event precedes another one. The underlying assumption seems to be that anteriority in the past can only be expressed if two different tenses are used.

- (35) [31RESULTpre]  
*Weil zuerst etwas passiert und dann nochmal etwas → nicht zweimal simple past*  
 “Because first something happens and then something else → not simple past twice”

Another student also seems to argue along the same lines, coming to the wrong conclusion that the “present perfect and then the simple past” can be used to express temporal precedence, see (36).

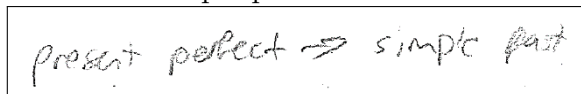
- (36) [12RESULTpre]  
*A is not correct because Sam first lost his key and then he found it again after he has lost the key → you have to use first the present perfect and then the simple past*

In the control group, this line of argumentation is also pursued in the posttest, as shown in (37). The student seems to think that the present perfect must precede the simple past. This is also reflected in their illustration, shown below.

(37) [31RESULTpost]

*Das Tempus bei A ist falsch, da Lisas Arm erst heilen kann nachdem sie ihn gebrochen hat. Deshalb muss zuerst das present perfect verwendet werden und dann bei der darauffolgenden Handlung das simple past*

‘The tense in A is wrong because Lisa’s arm can heal only after she broke it. That’s why the present perfect must be used first and then for the following action the simple past.’



present perfect → simple past

A second reason why students in the control group provide false answers in the RESULT item is their use of signal word explanations. It is correct that only the simple past but not the present perfect can be modified by definite past time adverbials. However, students in the control group seem to believe that when the simple past is not modified by such an adverbial the whole sentence is wrong, as exemplified in (38). Additionally, they believe that as soon as the signal word “now” appears, the present perfect must be used.

(38) [23RESULTpost]

*Satz A stimmt nicht, da wir nicht wissen zu welchem Zeitpunkt sie ihren Arm gebrochen hat. Zudem gibt das “now” einen Bezug auf die Gegenwart, was auf das present perfect (wie in Satz B) hindeutet.*

‘Sentence A is wrong because we don’t know at which time she broke her arm. Additionally, the word “now” has an effect on the present which points towards the present perfect (as in sentence B).’

In (39), the line of argumentation is identical. The student rejects the (correct) sentence A, making use of a signal word explanation. They also stress that B is correct as the present perfect can be used when the event has an effect on the present tense. While this rule of thumb is a good way to break down the extended-now approach, it does not help here. Applied correctly, the student should have said that the event of breaking the arm has an effect on the present, i.e., that the result of the event is still considered as ongoing at the speech time.

(39) [25RESULTpost]

*A passt nicht, da der genaue Zeitpunkt nicht angegeben ist; B: passt, da man mit dem Tempus auch die Zukunft bzw. die Präsens beeinflusst.*

‘A is wrong because the exact point in time is not specified. B is correct because with this tense form one can also influence the future or present.’

Since the signal-word approach was only used in the control group, it is not surprising that the respective students make use of signal word explanations and that there was an increase only in this group, see Figure 4.8. What is surprising, however, is that signal word explanations hardly occur in the pretest. If one takes into account the findings presented in Section 4.3.1 that signal word approaches play a major role in teaching the present perfect, it would be reasonable to expect a high proportion of SW explanations in the pretest. It is an interesting finding that students do not per se draw on signal

words for their metalinguistic explanations. They do so more after having received a traditional signal word lesson and their explanations are then prone to errors that conflict with semantic facts. In the next chapter, we will examine to what extent visualizations may be useful for adequate semantic explanations.

#### 4.4.5 The use of visualizations

Arbeitsauftrag: In einem der beiden Sätze passt das gewählte Tempus nicht. Gib an, in welchem und erkläre, warum. Wenn es hilft, illustriere deine Erklärung an einem Zeitfeil.

A: Lisa broke her arm but it is healed now.  
 B: Lisa has broken her arm but it is healed now.

Erklärung Warum passt das Tempus nicht?	Ggf. Skizze Du kannst deine Erklärung hier durch einen Zeitfeil illustrieren. Vielleicht hilft das.
Because the event is part of the past, you can't use the present perfect. Instead you have to use the simple past.	

Figure 4.10: Differences in quality between verbal explanations and visualizations (RESULT13postI)

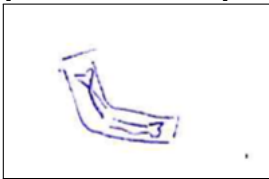
Verbal explanation and visualization do not always match in their quality, see an example from the posttest in Figure 4.10. In his answer, the student correctly identifies sentence B (*Lisa has broken her arm but it is healed now*) as the sentence in which the tense does not fit. However, his verbal explanation is incomplete and does not use all the semantic terminology necessary to explain the ungrammaticality of sentence B: The justification that the “event is part of the past” does not capture the fact that it is an event whose duration does not extend to the speech time, i.e., that the event is completed before the speech time. The verbal justification thus has to be classified as pre-scientific. In contrast, the visualization clearly represents the event as completed before the speech time and uses appropriate semantic terminology (*event time, speech time*) combined with illustrations of the result state of the verbal phrase (*to break her arm*) and the opposite state.

The differences between the visualizations in the two questionnaires are large. There was a variety of visualizations, ranging from non-explanatory, purely illustrative sketches as the drawing of a broken bone in (40) to illustrative sketches with verbal explanation, (41), to very simple time arrow representations, (42), and finally to visualizations such as (43), (44) and Figure 4.10 which were close to the visual-semantic approach presented in Section 4.3.3. In some cases, the relevant terminology was replaced by illustrations, see the illustration of the speech time in (43)<sup>6</sup>. In other cases such as in Figure 4.10 above, the time arrow contains semantic terminology and object language. A third type of time arrows, see (44), only uses semantic terminology without object language.

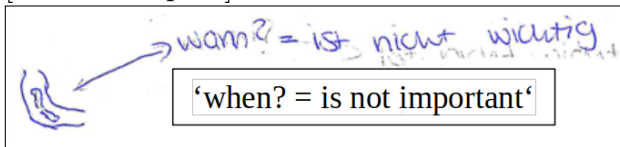
<sup>6</sup>In the intervention, we used an illustration of a mouth as the symbol for the speech time.

#### 4 How to teach the English present perfect? A semantic approach

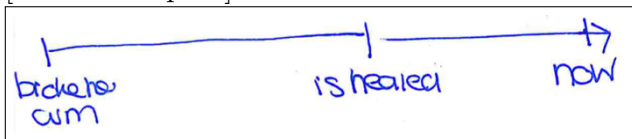
(40) [25RESULTpost]



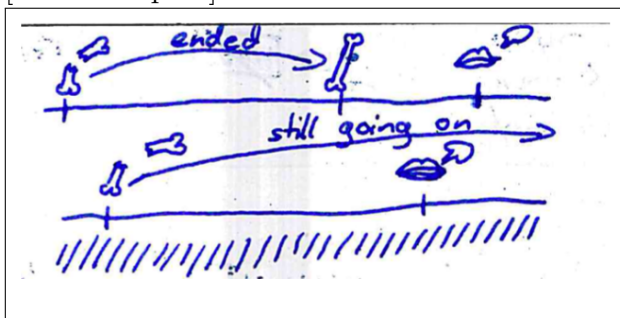
(41) [24RESULTpost]



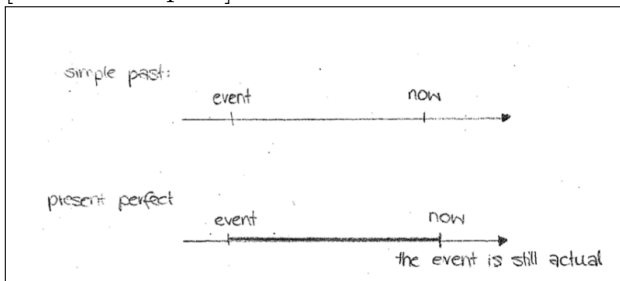
(42) [37RESULTpost]



(43) [8RESULTpost]



(44) [10RESULTpost]



#### Categorization system and coding procedure

Students' visualizations collected by means of the pre- and posttest questionnaires served as the data set for the second part of the qualitative content analysis. As explained above, students were free to choose whether to draw visualizations. Of the 215 visualizations (in case of the UP, PTM and SW items, visualization was only possible if the relevant error in the item was detected) 99 were provided with visualizations, i.e. 46%. Considering that visualizations were optional and represent an additional effort for students, this number is quite high. The proportion of visualizations in relation to visualization opportunities differed between the two groups and the test types (pretest/posttest). For the intervention group, the percentage of visualizations increased after the intervention (difference

value 18.28), while in the control group it decreased from pretest to posttest (‘negative’ difference value 9.28).

Following the procedure for verbal explanations, an operationalization of the concept of meta-linguistic competence was chosen for visual explanations and the 99 visualizations were classified. The development of the categories was deductive-inductive: Based on the verbal category system presented above, and after an initial review of the data, a modified category system specifically tailored to visualizations was developed. Given the visual-semantic analysis of the present perfect and the simple past presented in Section 4.3.3, visualization competence was operationalised as the use of semantically adequate time arrows, i.e., time arrows containing representations of the semantic concepts relevant to the analysis of tense. A list of these concepts is given in (45). Since time arrows by their left-right orientation per se represent a visualization of a temporal sequence of events, the first two concept types in (45) (anteriority/posteriority and events/states) were assumed to be intrinsic to any time arrow. They were thus not counted as criteria for attributing the labels “scientific” or “pre-scientific”. The full list of criteria used for classification can be found in (46).

- (45) **list of semantic concepts used in scientific time arrow visualizations:**  
 anteriority/posteriority; events/states; event time/speech time/reference time;  
 interval (closed/ongoing); effect/result/causation
- (46) **list of semantic concepts used as categorization criteria for the label “scientific” and “pre-scientific”:**  
 event time/speech time/reference time; interval (closed/ongoing); effect/result/  
 causation

Based on the list in (46), a two-step categorization procedure was applied. In a first step, the 99 visualizations were jointly classified by the first two authors into three classes: (i) adequate semantic visualizations that contain two or more concepts from the semantic concept list (46), no matter if these are represented verbally or visually; (ii) semi-adequate visualizations that represent or mention less than two of the mentioned semantic concepts, and (iii) other visualizations. Since this process revealed large quality differences in the class of semi-adequate visualizations, these were divided into two subtypes in a second categorization run by the second author. This second classification procedure employed the four-level classification system in Figure 4.11 containing the labels ‘scientific timeline’, ‘pre-scientific timeline’, ‘simplistic timeline’, ‘other visualizations’. To ensure the traceability of the coding, when assigning the label ‘scientific timeline’ or ‘pre-scientific timeline’, it was noted in each case which concepts from (46) were detected in the visualization.

## Results and discussion

A comparison of the frequency of occurrence of the different visualization categories in the pre- and posttest was conducted. The proportion of the four categories are shown in Figure 4.12 and Figure 4.13 shows the changes from pre- to posttest for the four categories. In both groups, the proportion of simplistic timelines (SIMPL\_TL) as well as other visualization types (mostly non-explanatory, illustrative in nature) decreased and

#### 4 How to teach the English present perfect? A semantic approach

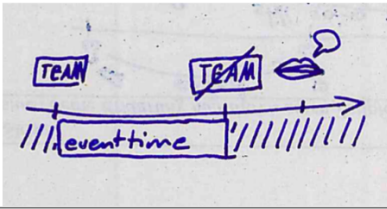
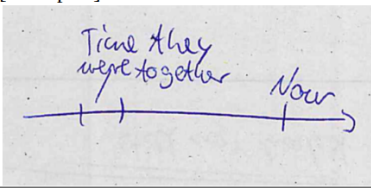
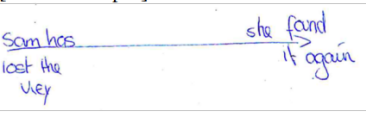
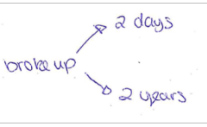
Category	Definition	Anchor Example	Concepts represented or verbalized in the anchor example
Scientific timeline	A time arrow representing or containing at least two of the concepts in (54)	[8PTMpost]: 	event time speech time closed interval
Pre-scientific timeline	A time arrow representing or verbalizing one of the concepts in (54)	[16UPpost]: 	closed interval
Simplistic timeline	A time arrow indicating solely the temporal location of events	[21RESULTpre]: 	(no semantic concepts represented)
Other visualization	visualizations that do not fit in the other categories (e.g. pure illustrations, selection trees)	[24UPpost]: 	

Figure 4.11: Categorization system developed for the qualitative content analysis of visualizations

the proportion of visualization classified as scientific increased. This result again suggests that students at the end of middle school benefit from revisiting topics covered in lower grade grammar classes (here: present perfect vs. simple past). For the pre-scientific timelines, there is a different trend in the two groups: While the occurrence of this category type decreased in the intervention group (in favor of scientific visualizations), it increased in the control group, see the difference values in Figure 4.12.

However, the benefit in terms of visual explanation competence seems to be greater in the intervention group. After the intervention, a large majority (68.57%) of the visualizations in the intervention group meet the criteria for the classification label ‘scientific’ and thus approaches scientific requirements for semantic visualizations. The increase in scientific visualizations is smaller in the control group. Only 18.75% of the visualizations in the posttest achieved the label ‘scientific’. But after all, more than half of the visualizations in the control group represent at least one of the semantic concepts from (46) above (18.75%+37.5%).

Compared to the results from the analysis of verbal explanations, the effects of the intervention on visualizations appear larger. While many students belonging to the in-

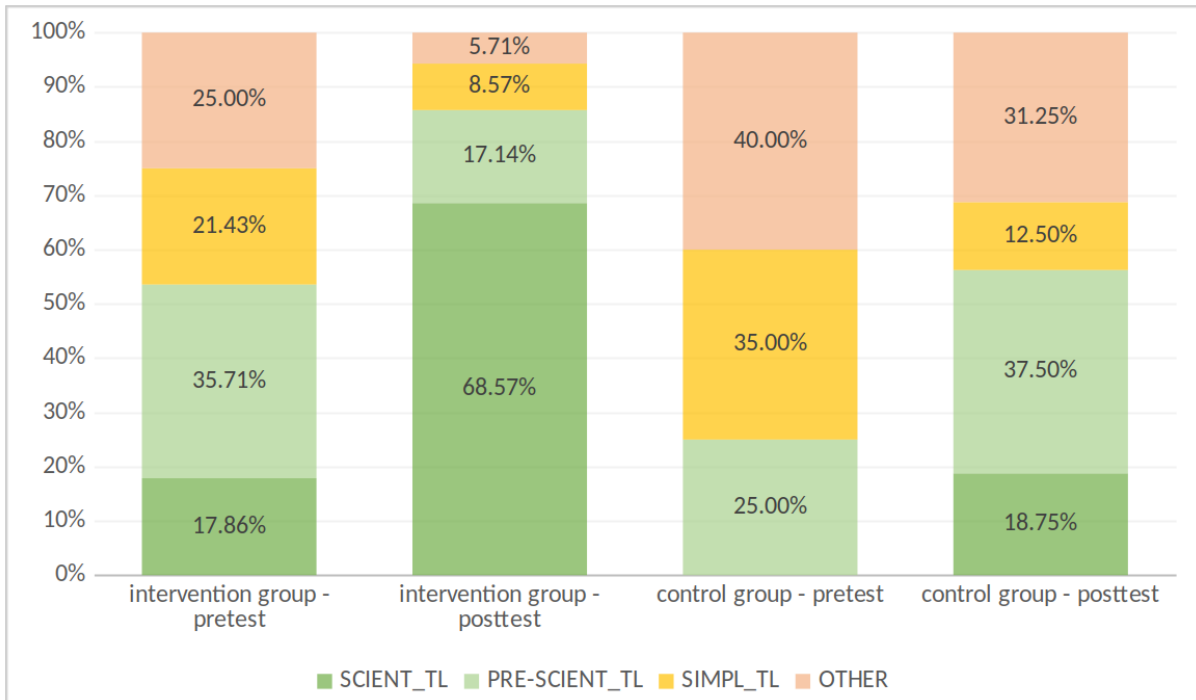


Figure 4.12: Proportion of the visualization categories for the two groups in pre- and posttest (in percent)

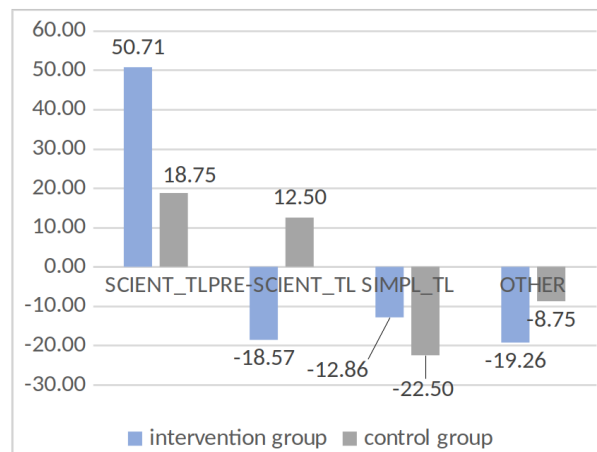


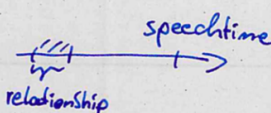
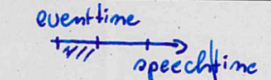
Figure 4.13: Changes in visual labels from pretest to posttest for the two groups (difference values)

intervention group still did not succeed in giving a linguistic-semantic explanation in the posttest (more than two thirds of the verbal utterances did not meet the criteria for the label ‘scientific’), the majority of the visualizations in the posttest of the intervention group are semantically adequate. These results are consistent with the view expressed in 4.3.3 above that visualizations can help make abstract scientific concepts comprehensible and usable for students.

However, there might be another perspective on the observed quality differences be-

tween verbal explanation and visualization. Students had both explanation formats, verbal and visual, at their disposal, with the visualization marked as optional (see the heading of the middle column in (47): “Explanation - Why does the tense not fit?” vs. the heading of the right column: “Sketch if you like - Here, you can illustrate your explanation using a time arrow. Maybe that will help.”). Finally, in order to assess students’ metalinguistic competences, both explanation formats should be combined. A look at some examples may illustrate to what extent verbal explanation and visualization, taken together, provide a more adequate explanation of the semantic phenomenon. In (47), a student uses pre-scientific terms in his verbal explanation but does not mention the content at all (which “action” is “over”?). The associated time arrow then combines linguistic-semantic terms (“event time”, “speech time”) with a visualization of a closed interval anterior to the speech time and a description of the content (“relationship”). Both explanations, verbal and visual, are incomplete. But taking the information from the two representational formats together yields a consistent semantic explanation of the tense error marked in the text. In the next item, the student also uses both explanation formats. He produces a pure content paraphrase (“he is not in the team anymore”) as verbal explanation. The visualization then clarifies the relevant semantic concepts (event time, speech time, closed interval), but does not label them with the corresponding content of the sentence. Again, both explanations, taken alone, are incomplete. Together, they yield an adequate semantic analysis of the sentence, in which object language and metalanguage (terms / visualizations) are interrelated.

(47) Multimodal semantic explanations in the posttest [4UP&PTMpost]

<b>Gesprächsabschnitt</b> <i>Falls du eine unpassende Tempusform findest, unterstreiche diese.</i>	<b>Erklärung</b> <i>Wenn du etwas unterstrichen hast, gib hier eine Erklärung an: Warum passt das Tempus nicht?</i>	<b>Ggf. Skizze</b> <i>Du kannst deine Erklärung hier durch einen Zeitpfeil illustrieren. Vielleicht hilft das.</i>
Josh: “Dude, I’m gutted. Last week, Sally broke up with me. We’ve been together for 2 ½ years!” George: “Oh wow. That sucks. Sorry, mate!” Josh: “Thanks. I guess I’ll be having a lot more free time now. I was wondering whether I should start playing hockey again.”	action is over	
George: “That would be awesome! You’ve been great when you were on the team. We’d love to have you back!” Josh: “Haha. Thanks, I appreciate	he is not in the team anymore	

Some students in our study obviously do not yet succeed in giving adequate linguistic explanations when using only one explanatory format. But: If students are allowed to draw on multimodal explanations when reflecting about language, the quality of metalinguistic utterances increases.

## 4.5 Chapter summary

In this chapter, I showed how the semantic insights developed in Chapter 1–3 can inform grammar teaching in German schools. When teaching semantic concepts like tense in the context of foreign language instruction, particular attention must be paid to cross-linguistic differences between the students' regional varieties and the target language, as shown in Table 4.3.

	English	Swabian
type of perfect	<i>have+be</i> -perfect	<i>have+be</i> -perfect
experiential	✓	✓
resultative	✓	✗
universal	✓	✗
present perfect puzzle	✓	✗
future	✗	?

Table 4.3: Contrasts between the English and Swabian perfect

The contrasts between English perfect semantics and Swabian past semantics were addressed in various teaching materials that were developed as part of this dissertation, see Appendix B. In a second step, these materials were tested in an intervention study in a German school. The results show that to address cross-linguistic differences explicitly and by way of visualizations improves students' metalinguistic competences. Visualizations are a useful way of breaking down semantic facts without resorting to misleading rules of thumb. They prove to be a valuable tool in students' visual explanations and are thus a good way to bridge the gap between theory and practice in educational linguistics. However, as our approach is more complex than the traditional signal-word approach to the present perfect, students need more time and practice. Even though there was an increase in scientific, i.e., linguistic-semantic reasoning about tense forms, most students remained on a level of pre-scientific explanations or paraphrases. Ultimately, this article can be read as an argument for (i) granting semantics a more central role in grammar instruction and (ii) thereby integrating semantic visualizations that are based on linguistic theory.



# 5 Semantics in grammar instruction? Analysis of a practice lesson on German tenses

*Da kommt das Futur II dann nach dem Futur I*  
*There, the Futur II comes after the Futur I*  
– sixth-grader during the videography

## 5.1 Introduction

This chapter<sup>1</sup> discusses the way in which German verb forms are treated in school. Besides mood and active/passive, the verbal tense forms belong to the categories that are classically part of grammar didactics which is an indispensable part of teaching German in school. The specific temporal location of facts by way of tense is a prerequisite for coherent text production and reception. Due to this central role of tense didactics in grammar curricula in secondary education, one would not expect students to struggle with tenses. However, the following data that were elicited during a videography of a sixth-grade grammar lesson illustrate problems and misunderstandings expressed by the students. Their questions highlight problems when it comes to form (e.g. z.B. „Futur II klingt immer komisch“; Deutsch\_Lehrkraftkamera\_Minute 27:41-27:57; “Futur II always sounds weird” German\_teacher’s camera\_minute 27:41-27:57) as well as problems in the domain of semantics, as illustrated below:

Deutsch\_Lehrkraftkamera\_Minute 15:47–15:55

- 1 S Ich kapier das irgendwie nicht
- 2 L Was denn genau?
- 3 S Ja äh mit den (.)
- 4 L Was denn?
- 5 S Vergangenheiten

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<sup>1</sup>This chapter is a slightly enriched and translated version of the following publication: Gese, H. & Braun, J. (2023). Semantik im Grammatikunterricht? Analyse einer Übungsstunde zu den Tempora. In M. Syring, N. Beck, T. Bohl & B. Tesch (Eds.), *Klasse 6b: Eine Unterrichtswoche. Bildungswissenschaftliche und fachdidaktische Analysen* (pp. 479–493). Tübingen University Press. Changes include an adjusted introduction in comparison to the first version of this dissertation, the omission of German quotes in the running text, the inclusion of formal semantic analyses as well as an adjusted conclusion.

Deutsch\_teacher's camera\_minute 15:47–15:55

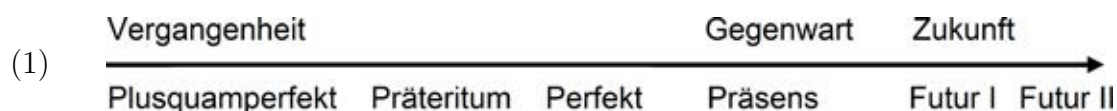
- 1 S I don't get it
- 2 T What exactly?
- 3 S Yes well with the (.)
- 4 T What is it?
- 5 S pasts [past tenses]

This study focusses on those parts of the grammar lesson (2:30–76:05) in which students encounter and discuss problems. Based on selected student utterances, the following questions are addressed: To what extent are students' problems connected to didactic approaches (i) that disregard form, see Section 5.4.1 and (ii) that inadequately describe the meaning of tenses, see Section 5.4.2.

## 5.2 Tenses in linguistics, didactics and schoolbooks

Time coins the way in which we perceive the world (Ehrich, 1992, p. 119). Accordingly, there are various ways of linguistically referring to time. Lexical material across different word classes are one way to refer to time, tenses are another way. In German, these are the so-called simple tenses Präsens (*ich schreibe*) and Präteritum (*ich schrieb*) as well as the complex tense forms Präsensperfekt (*ich habe geschrieben*), Präteritumperfekt (*ich hatte geschrieben*), Futur (*ich werde schreiben*) and Futurperfekt (*ich werde geschrieben haben*). These are the terms that are used in the well-known *Grammatik-Duden* (Fabricius-Hansen, 2016, S. 486ff.). In school contexts, in contrast, the complex tenses are traditionally referred to as Perfekt, Plusquamperfekt, Futur I und Futur II, see Table 5.1. The Standing Conference of the Ministers of Education and Cultural Affairs (KMK) also uses these more traditional terms in their official list of basic grammatical terms (i.e. the *Verzeichnis grundlegender grammatischer Fachausdrücke*). In research in language didactics, however, there is a tendency towards the aforementioned terms (Granzow-Emden, 2019, S. 166) as these make the morphological make-up of the tenses more transparent.<sup>2</sup>

In research in language didactics, the fact that verbs are in some cases referred to as „Zeitwörter“ (“time words”) is viewed critically (Menzel, 1986) as this may lead to confusion with lexical material like adverbs which also make reference to time, like *heute*, *morgen*, *gestern* (today, tomorrow, yesterday). On top of that, when tenses are described, they are often “reduced to their typical meaning” as discussed by (Gehrig, 2014, p. 185) in an analysis of schoolbooks. In particular, there is a 1:1-mapping of tense forms and temporal location. In many schoolbooks, this is illustrated by the use of a timeline where the tenses are connected to specific temporal locations, see the schema in (1).



<sup>2</sup>In the remainder of this chapter, I will use the terminology used in school as I believe it is more accessible for an international reader. In the German version of this article, we use the terms Präsensperfekt, Präteritumperfekt and Futurperfekt.

Traditional terms	New terms	Explanation
Perfekt	Präsensperfekt	finite auxiliary in present tense + typical perfect form
Plusquamperfekt	Präteritumperfekt	finite auxiliary in preterite tense + typical perfect form
Futur II	Futurperfekt	finite future auxiliary <i>werden</i> + typical perfect form + infinitive <i>haben/sein</i>

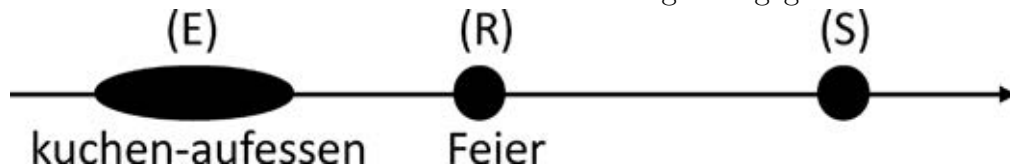
Table 5.1: Comparing terminologies, Granzow-Emden (2019, S. 166)

The exact temporal location of the tenses differs from schoolbook to schoolbook. In some cases, Präteritum and Perfekt are placed at the same location, Präsens is sometimes depicted as having both future and present time reference and the relative order of Futur I and Futur II varies, as in the grammar lesson analysed here. Independent of the exact temporal location, such a 1:1-mapping is always problematic for two reasons. Firstly, this visualization leads to contradictions. Futur I, for instance, can also refer to the present when used in an epistemic context, as in (2) (Fabricius-Hansen, 2016, p. 507).

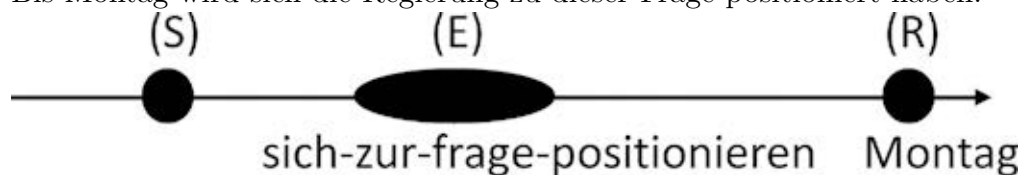
- (2) *Die Begründung wird Ihnen bekannt sein.*  
 The reasoning will you known be  
 ‘You surely know the reasoning.’

Secondly, the meaning of tenses in general is not adequately described when using the above mentioned timelines (Fabricius-Hansen, 2016, S. 507). As already mentioned in Chapter 1 and 4, the characteristic function of tenses is to situate temporally the event/state denoted by the main verb in relation to further linguistically given ‘times’ (Reichenbach, 1947/1966; Klein, 1994). A distinction is made between the event time (E), at which the event/state denoted by the main verb happened/was the case, the speech time (S), at which the sentence is uttered and the reference time (R), which is used to situate the event time. In the case of Plusquamperfekt and Futur II, the event time precedes the reference time, which is further described by lexical material (*Feier, Montag*; feast, Monday) in (3) and (4).

- (3) Bis zur Feier hatten die Kinder den Kuchen längst aufgegessen.



- (4) Bis Montag wird sich die Regierung zu dieser Frage positioniert haben.



Concepts like speech time and reference time are generally not addressed in schoolbooks. Furthermore, tenses and time reference are not only mapped to each other, as shown in (1). They are also regularly equated, as discussed in Topalović (2015, p. 255f.).

### 5.3 Videography of a grammar lesson

The grammar lesson starts with a discussion of where to place the tenses on a timeline as well as an exercise where sentences are to be mapped to the six tenses. Both exercises seem to be difficult for the students. There are many questions regarding the placement of the future tenses and the pluperfect on the given timeline. Also, the classification of the practice sentences poses challenges, i.e. neither the teacher nor the students succeed in correctly classifying the tense in (5) as a passive Futur I. Instead, it is referred to as a Futur II sentence.

- (5) *Er wird als Mädchen angenommen werden.*  
 He will as girl accept.PST.PTCP. become  
 'He will be accepted as a girl.'

This introduction lasts more than twenty minutes. The teacher finishes it with the following words:

Deutsch\_Lehrkraftkamera\_Minute 23:45–23:52

- 1 L Wir üben noch also wir fangen an mit den Übungen würd ich sagen der Einstieg hat sich jetzt ein bisschen länger gezogen als ich dachte macht aber nichts

German\_teacher's camera\_minute 23:45–23:52

- 1 T We will continue to practice. I mean we will start with the exercises now the introduction took a bite more time than I thought but that's not a problem

The following exercises, that address the classification of the tenses within a text, are also accompanied by problems and clarification questions of the students. On the one hand, these focus on the formation of the tenses. On the other hand, they address the semantics of tenses and their location on the timeline. The teacher tries to address the students' difficulties by providing more exercises – this time a cloze test where students are supposed to fill in Präteritum and Perfekt tense forms. This exercise is introduced with the teacher's promise to end the difficult grammar lesson afterward:

Deutsch\_Lehrkraftkamera\_Minute 49:20–49:26

- 1 L Und ich versprech euch dann sind wir auch mit diesen Temporaübungen und Einsetzübungen fertig (.) ja

German\_teacher's camera\_minute 49:20–49:26

- 1 T And I promise you after this we will be done with the tense exercises and the fill-in exercises (.) yes

Without connecting the tense exercises to the next phase concerned with writing essays, the teacher ends the grammar lesson sequence with the following words:

Deutsch\_Lehrkraftkamera\_Minute 1:15:36–1:15:39

- 1 L So (.) gut (.) also ich hab euch gesagt genug der Tempora.

German\_teacher's camera\_minute 1:15:36–1:15:39

- 1 T So (.) good (.) I told you that's enough, no more tenses.

## 5.4 Tenses in German language teaching

There are two main points that are important when it comes to tenses: Firstly, tense is formally defined as an inflectional category on the verb. Secondly, tenses denote the temporal location of eventualities. When teaching, both of these areas are to be addressed, i.e. form and function (see also Hoffmann, 2005, p.28). Purely form-based traditional grammar teaching has been critically discussed in didactic research. Grammar teaching that only focusses on function and disregards form is also problematic (Granzow-Emden, 2019). These so-called “semantic”<sup>3</sup> approaches are prone to oversimplification, reducing verbs to *Tunwörter* “do-words” and *Zeitwörter* “time words”. Moreover, this leads students to disregard morphological and syntactic criteria altogether, as found in the empirical studies by Mesch & Dammert (2015) as well as Müller & Tophinke (2015). These results are consistent with the findings of the present study.

### 5.4.1 Disregarding linguistic form

Tenses are linguistic forms. They denote a relation between times but they are not times. This may seem trivial but to differentiate and disentangle form from function remains a challenge in German grammar instruction, as shown in the following example, where Präsens is referred to as *Gegenwart* - i.e. as the present.

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<sup>3</sup>In contrast to the publication with Helga Gese, I have put the term “semantic” in quotation marks here. “Semantic” in this way does not refer to the formal-semantic approach pursued throughout this dissertation. Rather, “semantic” here refers to a content-based and non-technical meaning of lexical material and it is commonly used like this in current didactic research.

5 Semantics in grammar instruction? Analysis of a practice lesson on German tenses

Deutsch\_Lehrkraftkamera\_Minute 18:00–18:14

- 1 S Also dann bei Präsens äh das war was?
- 2 L sitzt
- 3 S Er sitzt im Auto
- 4 L richtig
- 5 S Das ist ja also Präsens ist ja die jetzt-Form
- 6 L Genau. Richtig. Gegenwart. Richtig.

German\_teacher's camera\_minute 18:00–18:14

- 1 S Alright so then with the present tense em that was what?
- 2 T sits
- 3 S He sits in the car
- 4 T right
- 5 S That's so the present tense is the now-form
- 6 T Exactly. Right. Present. Right.

Interestingly, the teacher also draws on a content-related level of explanation even when answering a form-focused question. In the example below, the student wants to know how to recognise the Futur II (which she first mistakenly refers to as „Perfekt II“):

Deutsch\_Lehrkraftkamera\_Minute 35:46–36:24

- 1 S<sub>1</sub> Ist werdet sehen Perfekt II?
- 2 L Ne Futur. Futur I
- 3 S<sub>1</sub> Also ich weiß nicht wie man das Futur II erkennt
- 4 L Achso. emm ihr werdet gesehen haben.
- 5 S<sub>1</sub> ah
- 6 L Das muss ja abgeschlossen sein in der Zukunft
- 7 S<sub>1</sub> Dann ist werdet
- 8 L sehen Futur I
- 9 S<sub>1</sub> ok
- 10 S<sub>2</sub> [Nebensitzerin von S<sub>1</sub>] Also wenn ich jetzt zum Beispiel sag wir gehen heute tanzen zum Beispiel und ich mach des also ist das dann I oder II?
- 11 L Ne wenn du's im Futur I sagen willst dann ich werde heute tanzen gehen und em ich werde heute tanzen gegangen sein dann wär's abgeschlossen

German\_teacher's camera\_minute 35:46–36:24

- 1 S<sub>1</sub> Is *werdet sehen* [will see] Perfekt II?
- 2 L No Futur. Futur I
- 3 S<sub>1</sub> Alright so I don't know how to recognise the Futur II
- 4 L Ah. Well *ihr werdet gesehen haben* [you will seen have].
- 5 S<sub>1</sub> ah

- 6 L It needs to have ended in the future  
 7 S<sub>1</sub> Accordingly, *werdet* [will]  
 8 L *sehen* [see] is Futur I  
 9 S<sub>1</sub> ok  
 10 S<sub>2</sub> [student sitting next to S<sub>1</sub>] So if I for example say *wir gehen heute tanzen* [we go today dance] is that then I or II?  
 11 L No if you want to say it in Futur I then *ich werde heute tanzen gehen* [I will today dance go] and em *ich werde heute tanzen gegangen sein* [I will today dance gone be] then it would be concluded

In the example above, the teacher uses completion of an event as a criterion for the Futur II, („Das muss ja abgeschlossen sein in der Zukunft“). Instead of explaining the morphological make-up as indicated in Table 5.1, she thus resorts to a content-related or “semantic” explanation. S<sub>2</sub> then tries to make use of this criterion. However, the example sentence she provides (line 10) is in present tense. This shows that content-related explanations are not enough. Attention also needs to be paid to the form.

A similar pattern can be found in the following exchange between the teacher and a student. It seems that the student wants to discuss morphological differences between the Perfekt and the Präteritum. The teacher then answers by drawing on the different contexts of use of the two tenses, thus disregarding their linguistic form. This, however, does not help the student to correctly identify the tense in his question in line 3.

Deutsch\_Lehrkraftkamera\_Minute 34:28–34:51

- 1 S Was ist nochmal der Unterschied zwischen Perfekt und Präteritum?  
 also Perfekt ist ja (.)  
 2 L Mhm. also wir haben ja des so festgehalten des Perfekt verwendet  
 man meistens mündlich und das Präteritum schriftlich des ist für  
 uns erstmal des wichtigste  
 3 S Ich bin zum Bus gegangen ist Präteritum?  
 4 L Ne. ich ging zum Bus ist Präteritum. genau

German\_teacher’s camera\_minute 34:28–34:51

- 1 S What’s the difference between Perfekt and Präteritum again? so  
 Perfekt is (.)  
 2 T Mhm. so we said the Perfekt is used in oral communication and  
 the Präteritum in written communication that’s the most important  
 point for us  
 3 S *Ich bin zum Bus gegangen* [I am to the bus gone] is Präteritum?  
 4 T No. *ich ging zum Bus* [I went to the bus] is Präteritum. exactly

There are many opportunities for form-related reflection during the grammar lesson. For example, one student expresses his uncertainty when identifying verbs. Another student tries to clarify whether *erleichtern*<sup>4</sup> is a verb and independently draws on the morpho-

<sup>4</sup>*Erleichtern* is a verb, *erleichtert* is an adjective derived from a participle.

logical criterion of gradability. In none of these instances, the teacher offers any formal criteria like inflectability or patterns of tense formation:

Deutsch\_Lehrkraftkamera\_Minute 32:24–32:26

- 1 S Ich kann diese Verben finden so schlecht ich kann das nur verwenden  
im Text
- 2 L Des schaffst du

German\_teacher's camera\_minute 32:24–32:26

- 1 S I am really bad at finding these verbs I can only use it in the text
- 2 T You can do it

Deutsch\_Lehrkraftkamera\_Minute 29:59–30:26 [Es geht um den Satz: Gibt es nichts, was uns die Arbeit erleichtert?]

- 1 S Ist erleichtern ein Verb?
- 2 L [zuckt mit den Schultern] besprechen wir gleich
- 3 S Am erleichtertsten. [Pause] erleichtert. erleichterter. am erleichtertsten.

German\_teacher's camera\_minute 29:59–30:26 [The question refers to the practice sentence: *Gibt es nichts, was uns die Arbeit erleichtert?* Is there nothing that facilitates our work? ]

- 1 S Is *erleichtern* [facilitate] a verb?
- 2 L [shrugs] we will talk about this in a minute
- 3 S *Am erleichtertsten.* [Pause] *erleichtert. erleichterter. am erleichtertsten.*  
[student shows that *erleichtert* is gradable.]

Complex tenses seem to pose serious problems to the students, as illustrated by the following student remark:

Deutsch\_Klassenkamera\_Minute 44:57–45:12 [Es geht um den Satz: Oh, an ein Gegenmittel habe ich gar nicht gedacht.]

- 1 S Also habe ist ja quasi Prä Präsens und gedacht ist ja Vergangenheit  
und emm ja die beiden zusammen emm man [??]

German\_students' camera\_minute 44:57–45:12 [About the sentence: *Oh, an ein Gegenmittel habe ich gar nicht gedacht.* Oh, I have not thought of an antidote.]

- 1 S So *habe* [have] is Präsens and *gedacht* [thought] is past and emm  
well both together are emm

The students repeatedly express their uncertainty when it comes to identifying the different German tenses. In particular, they wonder whether each verbal component needs to be classified independently. This problem could have been addressed with the transparent terminology in Table 5.1 and especially with an explanation about how the tenses are formed.

On top of that, the students seem to be unaware of the fact that both *haben* ‘to have’ and *sein* ‘to be’ can serve as auxiliaries in complex tenses in German. According to the teacher, auxiliaries with *sein* are exceptions. In order to identify the pluperfect, the teacher describes participles starting with *ge-*. However, she then says that the students are supposed to deduce from the content that this tense denotes a *Vorvergangenheit* ‘past before the past’:

Deutsch\_Lehrkraftkamera\_Minute 1:10:52–1:12:05

- 1 L Es geht um das gekommen war auch dieses Verb steht im Plusquamperfekt es gibt ein paar Verben wo das Plusquamperfekt nicht mit haben gebildet wird sondern mit einer Form von sein also mit dem war oder waren ja die meisten sind mit haben so wie wir das bis jetzt hatten es gibt ein zwei Ausnahmen da werdet ihr auch gleich bei der Nummer drei nochmal drauf stoßen und trotzdem isse Plusquamperfekt hast du gefunden bei der Aufgabe drei ja dann noch nichts verraten [...]
- 2 S Aber wie sieht man das
- 3 L hm
- 4 S Also woher soll man das wissen [Gemurmel]
- 5 L Na ihr wisst ja dass es zusammengesetzt ist ja Antje hörst du zu ihr wisst ja dass es zusammengesetzt dass es n zusammengesetztes Verb ist und ihr erkennt dass das gekommen dieses Partizip ist weil es ge vorne dran hat ja und dann erkennt ihr ja auch sozusagen dass es eine äh eine Vorvergangenheit ist also da müsst ihr euch sozusagen ausm Inhalt herleiten ja?

German\_teacher’s camera\_minute 1:10:52–1:12:05

- 1 T It’s about the *gekommen war* [come pst.ptcp.; was] this verb is also in the pluperfect and there are a few verbs where the pluperfect is not built with *haben* [have] but a form of *sein* [be] so with *war* or *waren*. Well most are with *haben* just like the examples that we have dealt with so far but there are one two exceptions you will see this with number three but still it is pluperfect. Have you found it looking at number three well then don’t tell us yet [...]
- 2 S But how can you see that
- 3 T hm
- 4 S So how can you tell [murmer]
- 5 T Well you know that it is a complex tense Antje are you listening you know that it is complex that it’s a complex verb and you can see that *gekommen* is the participle because there is the *ge-* at the front and then you can tell that it is a pluperfect so you have to sort of deduce it from the content, ok?

Just once, the teacher seems to become aware of the shortcomings of her approach that disregards linguistic form. When a student tries to identify the tense of a sentence based

on the criterion whether an event is completed or not, the teacher refers to form after all:

Deutsch\_Lehrkraftkamera\_Minute 13:58–14:22

- 1 S Des hier also der Unfall passierte schon und dann ist sie nicht mehr aufgewacht
- 2 L Ne Amelie, du musst gucken, wie das Verb hier steht. Du sollst jetzt nix hier konstruieren, sondern nur das Verb angucken und sagen was das für eine Form ist. Ok?
- 3 S äh
- 4 L Erwachte. ich sah. ich ging. erwachen wäre quasi so (.) seine Mutter erwacht
- 5 S Präteritum
- 6 L Ja genau

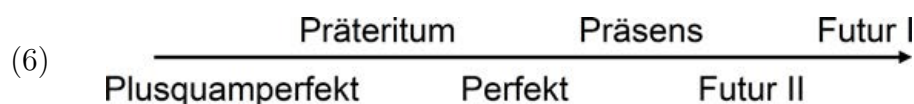
German\_teacher's camera\_minute 13:58–14:22

- 1 S This here so the accident happened already and then she didn't wake up
- 2 T No, Amelie, you need to look at the verb. You are not supposed to construct something here but just look at the verb and say what kind of form it is. Ok?
- 3 S emm...
- 4 T *Erwachte* [woke up]. *ich sah* [I saw]. *ich ging* [I went]. wake up would be (.) *seine Mutter erwacht* [his mother wakes up]
- 5 S Präteritum
- 6 T Yes exactly

Summing up, a content-related approach to tenses is pervasive in the present grammar lesson. This leads to problems when identifying tense forms. The next section deals with students' challenges when it comes to the meaning of the tenses.

### 5.4.2 Simplifying the semantics

As already mentioned, students are supposed to acquire competences on two different levels in grammar lessons: they are supposed to acquire linguistic form and its relation to semantic-pragmatic, sociolinguistic and/or textual function, as suggested by (Rödel & Rothstein, 2015, S. 244). This section focusses on the function of tenses. In the grammar lesson analysed in this chapter, the teacher uses the visualisation in (6). The order of the tenses is fixed to a certain point in time:



There are two main points that are problematic about this visualisation. Firstly, the underlying assumption is that there is a 1:1 mapping between tense and time reference.

This assumption is in contrast to everyday speech and even in the videography itself, there are counterexamples to this assumption. Futur I is used in epistemic contexts that refer to the present, see (2) above. On top of that, the students use Präsens in sentences that refer to the future even though the Präsens is repeatedly referred to as „die Gegenwart“ ‘the present’ in class:

Deutsch\_Klassenkamera\_Minute 11:08–11:12

- 1 S in 100 Jahren gibt es Luftfahrkissen auf der Straße

German\_students' camera\_minute 11:08–11:12

- 1 S in 100 years *gibt es* [gives it / there are] airbairing vehicles on the street

Deutsch\_Lehrkraftkamera\_Minute ca. 36:00–36:24 (repeated from above)

- 10 S<sub>2</sub> [Nebensitzerin von S<sub>1</sub>] Also wenn ich jetzt zum Beispiel sag wir gehen heute tanzen zum Beispiel und ich mach des also ist das dann I oder II?

German\_teacher's camera\_minute ca. 36:00–36:24 (repeated from above)

- 10 S<sub>2</sub> [student sitting next to S<sub>1</sub>] So if I for example say *wir gehen heute tanzen* [we go today dance] is that then [Futur] I or II?

Secondly, the way in which the complex tenses are taught is in contrast to Reichenbach's (1947/1966) “three-place structure” (p.290). This is essential when dealing with the Plusquamperfekt and Futur II as in these cases, the event time precedes the reference time, see Chapter 1. In the present videography, it is a hotly debated problem where to “put” these two tenses on the given timeline. The timeline in (6) places Futur II as anterior to Futur I which is in conflict with the students' native speaker intuitions, as shown in their comments:<sup>5</sup>

Deutsch\_Klassenkamera\_Minute 8:42–8:44

- 1 S<sub>1</sub> Also ich glaube, das Futur II müsste genau anders rum, weil das Futur I ist näher dran und das Futur II ist ganz weit weg
- 2 S<sub>2</sub> ja
- 3 L Ne und zwar, Oli darf noch einmal schätzen und sonst sag ich es
- 4 S<sub>3</sub> Meinen Sie irgendwie „Vor-Zukunft“ oder so?

German\_students' camera\_minute 8:42–8:44

- 1 S<sub>1</sub> So I think the Futur II should be on the other side because Futur I is closer and Futur II is really far away

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<sup>5</sup>I added line 1–3 here which were not included in the joint publication with Helga Gese.

5 Semantics in grammar instruction? Analysis of a practice lesson on German tenses

- 2 S<sub>2</sub> yes
- 3 T No and Oli can try again otherwise I will tell you
- 4 S<sub>3</sub> Do you mean something like *Vor-Zukunft* [pre-future] or something like that?

Using an explanation based on Reichenbach (1947/1966), one could avoid these challenges and still address the question of why Futur II can under certain circumstances be anterior to Futur I. The sentence in (7), for instance, could be explained in the following way: The event E<sub>1</sub> of eating the cake which is expressed in the Futur II has already ended at the reference time 3 pm. The event E<sub>2</sub>, expressed in the Futur I, is still taking place at the reference time.

- (7) Ich bin sicher: Um 15 Uhr werden die Kinder den Kuchen schon aufgegessen haben, aber im Spinat werden sie immer noch herumstochern.<sup>6</sup>



The fact that the linear precedence of the tenses in (6) is a simplification is addressed again and again by the students themselves. One student systematically and well-reasoned explains why the Futur II could also be placed after the Futur I on the timeline:

Deutsch\_Lehrkraftkamera\_Minute 12:58–13:18

- 1 S Aber beim Futur I und Futur II wenn man über dasselbe Ereignis spricht
- 2 L ja
- 3 S zum Beispiel morgen werde ich um 15 Uhr essen das wäre Futur I
- 4 L richtig
- 5 S Das heißt werde um 15 Uhr und beim Futur II ich werde um 15:30 fertig gegessen haben
- 6 L Genau
- 7 S Da kommt das Futur II dann nach dem Futur I. das Futur II müsste ja eigentlich hier hinkommen.

German\_teacher's camera\_minute 12:58–13:18

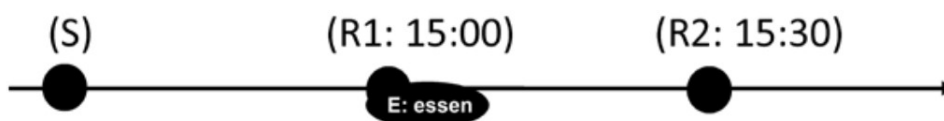
- 1 S But when it comes to Futur I and Futur II if you talk about the same event
- 2 T yes
- 3 S for example *morgen werde ich um 15 Uhr essen* [tomorrow will I at 3 o'clock eat] that would be Futur I

<sup>6</sup>I am sure: At 3 pm, the children will have eaten the cake but they will still be poking around in the spinach.

- 4 T right  
 5 S That means *werde um 15 Uhr* [will at 3 pm] and with the Futur II *ich werde um 15:30 fertig gegessen haben* [I will at 3:30 finished eaten have]  
 6 T Exactly  
 7 S There the Futur II comes after the Futur I. Futur II should in fact be over there.

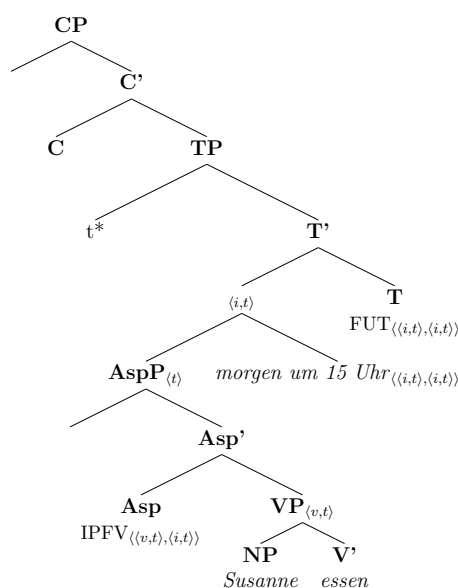
It is interesting that the student draws on two different times (3 pm and 3:30 pm) when discussing the two German future tenses. Intuitively, he thus applies the concept of reference times in a Reichenbachian fashion. His comment could be visualised as in (8).

- (8) Morgen wird Susanne um 15:00 essen und um 15:30 wird sie gegessen haben.<sup>7</sup>



A formal semantic analysis of these sentences is provided below. As discussed in Chapter 1, tense is conceptualised as the relation between the speech time S and the reference time R (Klein, 1994). In the case of Futur I and II, the respective reference times follow the speech time, see (10-b). For the Futur I sentence, I derive the truth conditions in (11) in which the reference time *morgen um 15:00* is included by the event time which is exactly what is depicted in the timeline in (8).

- (9) *Susanne wird morgen um 15 Uhr essen.*  
 Susanne will tomorrow at 3 pm eat  
 ‘Tomorrow at 3 pm, Susanne will be eating.’



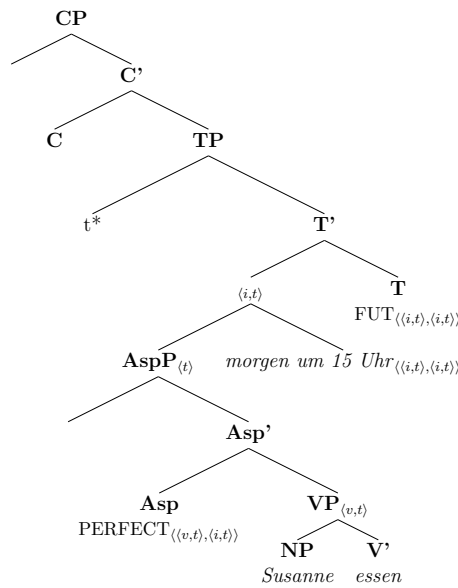
<sup>7</sup>Tomorrow, Susanne will eat at 3 pm and at 3:30 she will have eaten.

- (10) a.  $[[morgen\ um\ 15\ Uhr]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. t \subseteq morgen\ um\ 15\ Uhr \ \& \ P(t)]]$   
 b.  $[[FUT]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' > t \ \& \ P(t')]]]$   
 c.  $[[IPFV]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [t \subseteq \tau(e) \ \& \ P(e)]]]$
- (11)  $\exists t' [t' > t^* \ \& \ t' \subseteq morgen\ um\ 15\ Uhr \ \& \ \exists e [t' \subseteq \tau(e) \ \& \ EAT(e)(Susanne)]]$

In (13), I derive the truth conditions for the Futur II sentence. I use perfect aspect with the lexical entry in (13-c) to derive the correct meaning, i.e. that the event time  $\tau(e)$  precedes the reference time  $t''$  and that both of these times follow the speech time – exactly that is also illustrated in the timeline in (8).

Note that the relative order of eventualities expressed via Futur I and Futur II is not fixed. In Futur I sentences, the event time includes the reference time. In Futur II sentences, the event time precedes the reference time. Depending on which adverbial phrases are used, these reference times can be anywhere on the timeline following the speech time and so the relative order of Futur I and II can vary, see also the example in (7) above.

- (12) *Susanne wird morgen um 15 Uhr gegessen haben.*  
 Susanne will tomorrow at 3 pm eat<sub>PST.PTCP</sub>. have  
 ‘Tomorrow at 3 pm, Susanne will have eaten.’



- (13) a.  $[[morgen\ um\ 15\ Uhr]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. t \subseteq morgen\ um\ 15\ Uhr \ \& \ P(t)]]$   
 b.  $[[FUT]] = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' > t \ \& \ P(t')]]]$   
 c.  $[[PERFECT]] = [\lambda P_{\langle v,t \rangle}. [\lambda t_i. \exists e [\tau(e) < t \ \& \ P(e)]]]$
- (14)  $\exists t'' [t'' > t^* \ \& \ t'' \subseteq morgen\ um\ 15\ Uhr \ \& \ \exists e [\tau(e) < t'' \ \& \ EAT(e)(Susanne)]]$

Without any mention of these semantic concepts, however, an explanation for the relative order of the future tenses is impossible. As illustrated in the teacher’s answer below, she does not take the student’s remark seriously. Rather, she says:

Deutsch\_Lehrkraftkamera\_Minute 13:18–13:40

- 1 L Ne, das Futur I ist quasi noch offen, da ist die Zukunft noch offen da ist die Handlung das was du sagst ist ja eine Prognose das Ereignis hat ja noch nicht tatsächlich stattgefunden ja und deswegen weil's eben noch offen ist weil es stattfinden kann und du eben auch noch nicht weißt wie lange es dauert em ist des quasi am Ende des Zeitstrahls der ist hier [zeigt auf Zeitstrahl] quasi noch offen der könnte hier einfach fortgeführt werden

German\_teacher's camera\_minute 13:18–13:40

- 1 T No Futur I is more or less open the future is still open the action the thing that you say is a prediction the event has not taken place already and because it is still open because it can still take place and because you don't already know how long it will take emm that's why it is at the end of the timeline it is here [points at the timeline] more or less open it could be continued here

As illustrated above, the teacher uses the idea that the Futur I is “open” and Futur II is “concluded” as criteria that decide where to place the two tenses on a timeline. However, these notions only make sense when arguing within a semantic framework and with concepts like speech time, reference time and event time. Otherwise, what is meant with “open” and “concluded” remains unclear. This is reflected in the students' reactions. At the end, they seem to come to the absurd conclusion that Futur II means „dass du's schon weißt“ “that you already know it”:

Deutsch\_Lehrkraftkamera\_Minute 15:01–15:38

- 1 L Also das Futur I ist offen quasi. du kannst zwar eine Aussage über die Zukunft treffen ich werde einen Ausflug machen aber du weißt noch nicht, ob es wirklich stattfinden wird du weißt noch nicht wie lange der dauern wird du wei- du kannst quasi noch nichts über dieses Ding aussagen, über dieses Ereignis
- 2 S Und [Futur] II ist dass du's schon weißt? [...]
- 3 S<sub>2</sub> [S<sub>2</sub> hatte das Gespräch mitangehört und fragt:] Kann man das dann auch verwenden wenn man eine Geschichte in der Vergangenheit sagt schreibt und das dann jemand sagt
- 4 L ja
- 5 S Zum Beispiel weil da weiß man's ja auch.
- 6 L Ja genau

German\_teacher's camera\_minute 15:01–15:38

- 1 T So the Futur I is kind of open. You can say something about the future *ich werde einen Ausflug machen* [I will a trip make] but you don't know yet if it will really take place you don't know yet how

5 *Semantics in grammar instruction? Analysis of a practice lesson on German tenses*

- long it will take you know- you basically cannot say anything at all about this thing about this event
- 2 S And [Futur] II means that you already know it? [...]
- 3 S<sub>2</sub> [S<sub>2</sub> had listened to this conversation and then asked] Can you also use it when one says writes a story in the past and then someone says that
- 4 T yes
- 5 S For example because there you also know it
- 6 T Yes exactly

In a similar way, the students are confused when it comes to the meaning of the Plusquamperfekt. It is introduced by the teacher as a tense expressing the notion of a past before a past. Interestingly, a student comments on this idea but instead of using the Plusquamperfekt, she uses a Präteritum to express a past before past situation. The teacher does not comment on this – and she does not tell the student that the tense she used is a Präteritum rather than a Plusquamperfekt either:

Deutsch\_Lehrkraftkamera\_Minute 24:57–25:05

- 1 S Und zwar, wenn es Plusqua – also wenn ich sage sie hatte davor schon eine Verletzung, oder?
- 2 L Ja genau richtig

German\_teacher's camera\_minute 24:57–25:05

- 1 S And if it is Plusqua- so if I say *sie hatte davor schon eine Verletzung* [she had before that already an injury], right?
- 2 T Yes exactly right

Without further empirical evidence it is impossible to reliably evaluate whether and how the students benefited from the present grammar lesson. Based on the discussions and questions reported above, one might suspect that many things have remained unclear. The following comment of a student illustrates this. It was actually uttered at the beginning of the lesson but it might just as well have been towards the end:

Deutsch\_Klassenkamera\_Minute 6:44-6:56

- 1 S also das Plusquamperfekt, also vor langer langer Zeit, wo noch gar nichts war und Futur, wo es noch unklar ist
- 2 L Ja genau

German\_students' camera\_minute 6:44-6:56

- 1 S so the Plusquamperfekt so a long time ago where nothing existed and Futur when it is still unclear
- 2 T Yes exactly

## 5.5 Chapter summary

This chapter has focused on two main problems when teaching the German tenses. Firstly, a purely content-related approach to tenses prevents students from understanding morphological formation patterns of the different tenses. Secondly, simplifying the semantics of the German tenses contradicts students' native speaker intuitions which in turn leads to confusion. To address these problems, we suggest the following solutions: When students are supposed to identify tense forms, explanations should be based on morphological criteria and content-related explanations should be avoided. When the function of tenses is addressed, truly semantic approaches and their visualizations can help in the explanation process. The elicited comments and questions of the students illustrate that they are more than capable to reflect on semantic issues – even in sixth grade.

While Chapters 1–4 have mainly focused on contrasting perfect and past semantics in various contexts, this chapter has dealt with German tenses in general. Semantic theory can inform grammar teaching in the area of tense and aspect. Certainly, it would be unreasonable to teach formal semantics with the technical details presented above. However, visualizations that are based on linguistic theory, see also Section 4.5, are one possibility to bring linguistics to schools and thus to bridge the gap between theory and practice.



## 6 Conclusion and outlook

**Conclusion** This dissertation investigated various phenomena in the (Upper) German tense and aspect system. The first part of this investigation was concerned with the semantic properties of the Upper German Perfekt and its historical development. I systematically described the available uses of the Middle High German and Swabian Perfekt. These uses were then analysed in a Heim & Kratzer (1998) framework. This allowed me to arrive at precise descriptions of the different development stages of the Perfekt and to compare these stages to other, typologically diverse languages that possess a grammaticalised perfect. In the second part of this dissertation, the respective analyses were shown to be applicable in educational contexts.

In Chapter 1, I introduced the formal semantic framework by Heim & Kratzer (1998). As this dissertation is about tense semantics, I made use of the LF architecture worked out by Beck & von Stechow (2015) which ties together the major phenomena lexical aspect, eventuality, viewpoint aspect and tense.

In Chapter 2, I examined the MHG Perfekt. Based on previous research and an original case study on *Der Pfaffe Amis*, I provided more evidence for the idea that the MHG Perfekt was a true perfect construction as described in the universal development path by Bybee & Dahl (1989) and Bybee et al. (1994). I suggested an extended-now semantics along the lines of Iatridou et al. (2001) to account for the diachronic data on the MHG Perfekt. Cross-linguistically, the perfect operator denoting the extended-now meaning can be realised overtly or covertly. In MHG, the extended-now meaning is anchored in the auxiliaries *hân* and *sîn* as in (1).

$$(1) \quad \llbracket h\hat{a}n/s\hat{i}n_{XN} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [XN(t',t) \ \& \ P(t')]]],$$

where  $XN(t',t)$  iff  $t$  is a final subinterval of  $t'$

The different uses of the MHG Perfekt are predicted by the semantic ingredients that enter into each composition. The resultative use requires telic eventualities while the experiential use can be derived with any kind of *Aktionsart*. The universal use comes about when durative adverbials and an unbounded eventuality are combined. In MHG, semantic unboundedness is anchored in statives which I reflect in my analysis by using imperfective aspect. Additionally, MHG Perfekts are subject to a constraint called *present perfect puzzle* (Klein, 1992), i.e. they cannot be modified by definite past time adverbials. This is reflected by a logical contradiction in the semantic analysis. Overall, my extended-now analysis makes correct predictions for the available data and is a formalisation of the previously suggested similarity to the English present perfect (Shimazaki, 2002). In particular, I could show that the MHG Perfekt behaves much more similar to the English and Swedish perfect than to the perfect in other languages for which an extended-now analysis has been suggested, see Table 2.8 and Table 2.9.

Chapter 3 examined the Modern Swabian Perfekt which is a natural descendant of the MHG Perfekt. The Swabian data were elicited in an original fieldwork study. One main result was that the Swabian Perfekt denotes a past semantics. The semantic change from the extended-now semantics of the MHG Perfekt to the past semantics of the Swabian Perfekt is modelled as a change in the auxiliaries *haben* and *sein*, see (2).

$$(2) \quad \llbracket \textit{haben/sein}_{PAST} \rrbracket = [\lambda P_{\langle i,t \rangle}. [\lambda t_i. \exists t' [t' < t \ \& \ P(t')]]]$$

This analysis was shown to capture the unavailability of universal uses when the Perfekt is combined with durative adverbials. One main characteristic that sets the Swabian Perfekt apart from perfects which possess an extended-now semantics is the unavailability of true resultative uses. Additionally, the extended-now meaning that can be associated with Perfekt sentences is to be attributed to other lexical material like *schon immer* ‘already always’ and *seit* ‘since’. A further result of this chapter was that both an extended-now analysis and a past analysis of the Perfekt are required in order to account for its historical development. While the extended-now analysis is applicable in MHG (and also OHG), the past analysis is required for Modern Swabian. This is in contrast to previous semantic analyses of the German Perfekt (cf. von Stechow, 1999; Rathert, 2004). As it turns out, the analysis developed in this chapter ties in nicely not only with typological literature but also with research on the expansion of the Perfekt which caused the *Präteritumschwund*, i.e. the loss of preterite forms in Upper German dialects (Lindgren, 1957; Dentler, 1997; Fischer, 2018). The overall contribution of this chapter is that dialectal data are just as important as Standard languages when it comes to semantic theory building.

An additional aim of this dissertation was to find out if semantic analyses of tense and aspect prove to be useful in educational contexts and how those analyses could be integrated in Grammar lessons. In Chapters 4 and 5, I address this issue. One main finding from both of these chapters is that visualizations that are based on semantic theories are an adequate way of bridging the gap between formal semantics and grammar instruction in school. Chapter 4 illustrated how the past semantics of the Swabian Perfekt argued for in Chapter 3 can be usefully applied in a contrastive English grammar lesson on the present perfect. In particular, I reported results of a pilot intervention study that was based on original teaching material. The material incorporates both a visualised version of formal tense semantics as well as English-Swabian contrastive data. Results indicated that this new approach promotes the acquisition of multimodal meta-linguistic competences of the students. When it comes to grammar notions surrounding the semantic core phenomenon of tense, visualizations are a useful way of breaking down semantic facts without resorting to misleading rules of thumb like the traditionally used signal-word approach.

Furthermore, the teaching material developed for this intervention study is a useful contribution to the field of educational linguistics in itself. The material is designed to help students acquire the notoriously difficult present perfect. As it is a result of a collaboration between linguists and teachers, it is linguistically adequate and at the same time ready-to-use in the classroom.

In Chapter 5, I reported data from a videography in a sixth grade German class on the German tenses. In grammar lessons, it is common practice to visualise the linear order of the tenses on a timeline. However, the exact ordering differs from schoolbook to schoolbook, i.e. sometimes Futur II precedes Futur I and sometimes it is the other

way round. The same is true for the order of Perfekt and Präteritum. The elicited data showed that these visualisations are inadequate and do not coincide with the students' own intuitions. In particular, the meaning of the tenses could be better analysed within a semantic framework. In fact, this was intuitively used by the students when arguing for the temporal ordering of Futur I and Futur II. Building on semantic analyses of future tenses, I showed how the students' ideas can be formalised and how they can be visualised in a semantically informed way.

**Outlook** This thesis can serve as a foundation for further research in (i) formal semantic analyses of past tenses and (ii) educational linguistics. A natural continuation of this dissertation would be to investigate whether the step from an XN-semantics to a PAST-semantics argued for here can also be found in other languages that have a morphologically similar perfect. In particular, it would be interesting to see whether North Italian and French could be given a parallel analysis with the difference that the respective aspect systems are different to the one investigated here.

On top of that, I believe that the semantic development from XN to PAST is cyclic: There is evidence that the OHG Präteritum developed from an Indo-Germanic perfect construction (cf. Schrodts, 2004, p. 127). In OHG, the Präteritum still had a close connection to the speech time and it could be modified by typical XN-adverbials like *nu* 'now' (cf. Schrodts, 2004, p. 128). To shed more light on this perfect semantic cycle would be an interesting goal for future research.

With regard to (ii), there has been increasing interest in linguistics and its application in educational contexts in recent years (Denham & Lobeck, 2010; Whong et al., 2013; Krifka et al., 2014; Gil & Rastelli, 2018; Betz & Firstein, 2019; van Rijt, 2020; Betz, 2020; Trotzke & Rankin, 2020)<sup>1</sup>. However, while educational linguists generally want to bring linguistic content to the classroom, they tend to neglect how linguistics can be utilised to master well-known acquisition problems and learning difficulties. This dissertation encourages a more applicable approach to acquisition problems. As discussed in Krifka et al. (2014), there are many different languages in German classrooms. As semanticists, we can help students in their acquisition processes by providing explicit contrastive descriptions of differences between languages. This prejudice-free approach has already been successfully applied in other contexts (see chapter 4; Wheeler, 2010). Future research could, for example, address the phenomenon of tense in Turkish and English, or in Arabic and German etc. The teaching material developed in this dissertation (see Appendix B) can serve as a model for more material to come.

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<sup>1</sup>see also *Lehramtsinitiative* by the DGfS; DFG-network *Grammatik für die Schule*; as well as series and journals (e.g. *LinguS* (Linguistik für die Schule, Narr), *LiLa* (Linguistik fürs Lehramt, UTB), *Pedagogical Linguistics*, Benjamins=JOURNAL) and *Educational Linguistics*, Springer=SERIES



# Appendix

## Appendix A: Items Swabian study (chapter 3)

### Context makes universal use of Perfekt true

- (3) [A1] Marc befindet sich gerade im Krankenhaus und er ist schon seit längerer Zeit dort. Kann man diesen Zustand folgendermaßen beschreiben?
- Marc ist 3 Wochen lang im Krankenhaus gewesen.
  - Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.
  - Marc ist seit 3 Wochen im Krankenhaus.
- (4) [A2] Simone nimmt die Pille. Und seit sie die Pille nimmt, hat sie Migräne. Ihr Arzt hat bestätigt, dass die Migräne davon kommt, dass sie die Pille nimmt. Sie hat mit der Pille vor 6 Monaten angefangen
- Simone hat 6 Monate lang Kopfschmerzen gehabt.
  - Simone hat jetzt 6 Monate lang Kopfschmerzen gehabt.
  - Simone hat seit 6 Monaten Kopfschmerzen
- (5) [A3] Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:
- Ich habe den Peter 40 Jahre lang gekannt.
  - Ich habe den Peter jetzt 40 Jahre lang gekannt.
  - Ich kenne den Peter seit 40 Jahren.
- (6) [A4] Jimmy Carter, ehemaliger Präsident der USA, hat einen Rekord geknackt. Er ist der Präsident, der am längsten mit seiner Frau verheiratet ist. Beide sind zur Zeit wohlauf.
- Jimmy und seine Frau sind 73 Jahre verheiratet gewesen
  - Jimmy und seine Frau sind jetzt 73 Jahre verheiratet gewesen.
  - Jimmy und seine Frau sind seit 73 Jahren verheiratet.

### Context makes past use of Perfekt true

- (7) [A5] Marc hatte eine schwere Operation und musste danach noch 3 Wochen im Krankenhaus verbringen. Mittlerweile ist er aber wieder zuhause und wohlauf.
- Marc ist 3 Wochen lang im Krankenhaus gewesen.
  - Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.
  - Marc ist seit 3 Wochen im Krankenhaus.
- (8) [A6] Simone hatte bis vor kurzem starke Migräneanfälle und das 6 Jahre lang. Sie hat jetzt die Pille abgesetzt und plötzlich geht es ihr besser. Sie hat keine Migräne mehr.
- Simone hat 6 Jahre lang Kopfschmerzen gehabt.
  - Simone hat jetzt 6 Jahre lang Kopfschmerzen gehabt.
  - Simone hat seit 6 Jahren Kopfschmerzen.
- (9) [A7] Klaus und Peter waren beste Freunde. Sie kannten sich schon seit der Grundschule. Leider ist Peter vor einer Woche gestorben. Klaus sagt über Peter:
- Ich habe den Peter 40 Jahre lang gekannt.
  - Ich habe den Peter jetzt 40 Jahre lang gekannt.
  - Ich kenne den Peter seit 40 Jahren.

- (10) [A8] Gertrud und Alfred haben sehr jung geheiratet und haben eine 73-jährige Ehe geführt. Nun haben sie sich aber scheiden lassen.
- Alfred und seine Frau sind 73 Jahre verheiratet gewesen.
  - Alfred und seine Frau sind jetzt 73 Jahre verheiratet gewesen.
  - Alfred und seine Frau sind seit 73 Jahren verheiratet.
- (11) [B9b] Bernd ist gerade krank und muss zuhause bleiben. Seine Frau Helga ist für ihn zur Apotheke gefahren. Da es Bernd zwischenzeitlich besser ging, hat er die Küche aufgeräumt, sodass Helga das nicht machen muss. Als sie zurückkommt, ist alles sauber:
- Bevor Helga nach Hause gekommen ist, hat er gespült.

### Context makes future use of Perfekt true

- (12) [B1] Es wird spannend. In der WG von Mona, Salim und Tom herrscht Aufregung. Ab morgen werden sie eine neue Mitbewohnerin haben, sie heißt Clara. Tom sagt:
- Morgen ist Clara hier eingezogen.
- (13) [B2] Frau Trautwein ist die Organisatorin einer großen Konferenz. Sie hat viel Zeit und Mühe in die Vorbereitungen gesteckt. Die Konferenz hat vorgestern begonnen und wird morgen enden. Frau Trautwein sagt erleichtert mit Blick auf die morgige Konferenz:
- Morgen um drei hat die Konferenz bereits aufgehört.
- (14) [B3] Egon ist mit seinem Kollegen Hans auf Geschäftsreise. Er erfährt, dass ein Kunde morgen früh um 10 nochmal mit Hans sprechen möchte. Der Plan ist allerdings, dass Hans morgen früh um 9 abreisen wird. Egon sagt zum Kunden: "Tut mir leid, aber das ist leider nicht möglich. ...."
- Hans ist morgen um zehn weggegangen."<sup>2</sup>
  - Hans ist morgen um 10 abgereist."
- (15) [B4] Tom spielt im Verein Fußball. In 1 Woche ist das große Finale in Glems und wenn Toms Mannschaft gut spielt, können sie die Runde gewinnen. Toms Trainer ist sich sicher, dass seine Jungs gewinnen werden. Er sagt:
- In einer Woche seid ihr nach Glems gefahren und habt das Finale gewonnen.
- (16) [B5] Sabine ist schon lange angestellt beim Zellwanger. Nächsten Monat findet deshalb eine große Feier statt: Sabines 10-jähriges Jubiläum beim Zellwanger.
- Nächsten Monat hat sie dann zehn Jahre im Betrieb geschafft.
- (17) [B6a] Frieder ist Musiker. Mit seinen 78 Jahren ist er das älteste Mitglied im Orchester. Und er ist auch schon extrem lange dabei. Nächstes Jahr gibt es ein Jubiläum zu feiern.
- In einem Jahr hat Frieder 60 Jahre im Orchester gespielt.
- (18) [B6b] Frieder ist Musiker. Mit seinen 78 Jahren ist er das älteste Mitglied im Orchester. Und er ist auch schon extrem lange dabei. Nächstes Jahr gibt es ein

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<sup>2</sup>Musan's paraphrase: Tomorrow at 10, Hans will have left already.

Jubiläum zu feiern.

- a. In einem Jahr ist Frieder (dann) 60 Jahre im Orchester Mitglied gewesen.
- (19) [B7a] Die Freundinnen Lea und Babette unterhalten sich. Babettes Opa ist gestorben und ihrer Oma ging es deshalb letzte Woche sehr schlecht. Lea fragt Babette, wie es ihrer Oma geht. Babette möchte sie morgen besuchen gesehen. Sie sagt deshalb:
- a. Wenn ich morgen bei ihr zuhause gewesen bin, weiß ich mehr.
- (20) [B7b] Die Freundinnen Lea und Babette unterhalten sich. Babettes Opa ist gestorben und ihrer Oma ging es deshalb letzte Woche sehr schlecht. Lea fragt Babette, wie es ihrer Oma geht. Babette möchte sie morgen besuchen gehen. Sie sagt deshalb:
- a. Wenn ich sie morgen getroffen habe, weiß ich mehr.
- (21) [B8] Heute Abend ist eine große Party, zu der Paula und Hannes eingeladen sind. Paula arbeitet auf einer Baustelle und sie kommt ziemlich dreckig nach Hause. Hannes ist ungeduldig, da sie in einer Stunde schon auf der Party sein wollten. Paula versichert ihm jedoch, dass sie sich im Bad sehr beeilen wird. Jetzt ist es 18 Uhr. Sie sagt mit Blick auf die Zukunft:
- a. Ich habe um 18:30 geduscht.
- (22) [B9a] Jetzt ist es 12 Uhr. Um 14 Uhr kommt Helga nach Hause. Ihr Mann Bernd ist schon Rentner und deshalb kümmert er sich oft um die Hausarbeit. Die neugierige Nachbarin kann durch ihr Fenster die dreckige Küche von Bernd und Helga sehen, aber mit Blick auf Helgas Ankunftszeit sagt sie:
- a. Bevor Helga um 2 Uhr nach Hause gekommen ist, hat er gespült.
- (23) [B10] Deine Freundin Mia hat dir ihr Lieblingsbuch ausgeliehen. Du musst es ihr bald zurückgeben, bist aber noch nicht fertig damit. Du versprichst ihr aber, dass du es bis nächste Woche lesen wirst und es ihr dann zurückgeben kannst. Du sagst:
- a. Nächste Woche habe ich das Buch fertig gelesen.

### Testing Rothstein's sentences<sup>3</sup>

- (24) [C1a] Wir kamen über die Autobahn nach Florenz, das...  
a. ... in einem breiten Tal gelegen hat.
- (25) [C1b] Wir kamen über die Autobahn nach Florenz, das...  
a. ... in einem breiten Tal lag.
- (26) [C2a] Marc arbeitet in einem Pharmaunternehmen und ist ziemlich stolz. Er war derjenige, der herausgefunden hat, wie ein Medikament gegen Halsschmerzen besonders effektiv ist. Du willst wissen, wie lange Marc das Rezept dafür schon kennt und fragst:  
a. Wie lange hat Marc das Rezept schon entdeckt?

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<sup>3</sup>See the items in Rothstein, 2008.

- (27) [C2b] Marc arbeitet in einem Pharmaunternehmen und ist ziemlich stolz. Er war derjenige, der herausgefunden hat, wie ein Medikament gegen Halsschmerzen besonders effektiv ist. Du willst wissen, wie lange Marc das Rezept dafür schon kennt und fragst:
- a. Wie lange entdeckte Marc das Rezept schon?
- (28) [C3 - context makes past use true] Karla ist 3 Jahre alt und sie ist mit ihren Eltern in das Haus eingezogen, wo auch ihre Großeltern wohnen. Der große Umzug war gestern. Karla entwischt ihren Eltern grundsätzlich ziemlich oft und öffnet alle Türen. Das könnte den Großeltern peinlich sein. Die Oma sagt deshalb:
- a. Jetzt, wo Karla gestern hier eingezogen ist, brauchen wir einen Schlüssel fürs Klo.
- (29) [C4 - context makes universal use true] Kaan befindet sich gerade im Krankenhaus und er ist schon seit längerer Zeit dort. Da noch keine Besserung in Sicht ist, hat Kaan ziemlich schlechte Laune. Kann man diesen Zustand folgendermaßen beschreiben?
- a. Jetzt, wo Kaan so lange im Krankenhaus gewesen ist, kriegt er schlechte Laune.

### **Context makes resultative use false (and past use true)**

- (30) [D1] Deine Mutter kommt von einem Kurzurlaub zurück nach Hause und du erzählst ihr, was passiert ist, während sie weg war. Deine Cousine Claudi verliert dauernd Dinge und es gibt deshalb immer ein großes Drama. Jetzt war es so: Claudi war spazieren und danach war ihr Wohnungsschlüssel weg. Claudi ist dann den Weg zurückgelaufen und - voilá - da lag der Schlüssel auf dem Kiesweg. Du erzählst deiner Mutter:
- a. Claudi hat ihren Schlüssen verloren, aber sie hat ihn wieder gefunden.
- (31) [D2] Dein Kumpel kann nicht gut mit Geld umgehen. Kürzlich hat er sich ein neues Auto angeschafft und dann direkt Panik bekommen, weil er dann nichts mehr auf der hohen Kante hatte. Er hat das Auto dann direkt wieder zum Kauf angeboten und war damit erfolgreich. Du fasst diese Situation zusammen und sagst:
- a. Tom hat ein neues Auto gekauft, aber er hat es verkauft.<sup>4</sup>
- (32) [D3] Leila ist Turnerin. Beim letzten Wettkampf ist sie am Barren ausgerutscht und hat sich dabei ihren Arm gebrochen. Mittlerweile kann sie aber wieder turnen.
- a. Leila hat sich ihren Arm gebrochen, aber er ist jetzt verheilt.

### **XN-adverbials in contexts that make universal use true**

- (33) [E1a] Heidrun ist Künstlerin und sie hat mit 12 angefangen, Vasen und Schalen zu töpfern. Sie arbeitet nicht mit Holz oder Beton, das einzige Material, das sie

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<sup>4</sup>See the item in Matthewson et al., 2015, p. 6.

verwendet, ist Ton.<sup>5</sup>

- a. Sie hat immer mit Ton gearbeitet.
  - b. Sie arbeitet immer mit Ton.
  - c. Sie arbeitet schon immer mit Ton.
- (34) [E2a] Seit seiner Kindheit glaubt Franz an Gott. Er geht auch gerne in den Gottesdienst.
- a. Franz hat immer an Gott geglaubt.
  - b. Franz glaubt an Gott.
- (35) [E3a] Julian und Diana sind ein Paar. Julian möchte seine Liebe zum Ausdruck bringen und sagen, dass er Diana schon geliebt hat, als er sie erst einen Monat lang kannte und dass sich an seinen Gefühlen nichts geändert hat. Er sagt:
- a. Ich habe dich immer geliebt.
  - b. Ich habe dich schon immer geliebt.
  - c. Ich liebe dich.
  - d. Ich liebte dich immer.

### **XN-adverbials in contexts that make past use true**

- (36) [E1b] Heidrun ist Künstlerin, aber sie kann nicht mehr arbeiten, da sie Rheuma in den Händen hat. Ton war ihr Lieblingsmaterial und sie hat gerne Vasen hergestellt. Mit anderen Materialien hat sie nicht gearbeitet.
- a. Heidrun hat immer mit Ton gearbeitet.
  - b. Heidrun hat schon immer mit Ton gearbeitet.
  - c. Heidrun arbeitet immer mit Ton.
- (37) [E2b] Franz war bis zu seinem 30. Geburtstag ein gläubiger Christ. Allerdings glaubt er mittlerweile nicht mehr, hat auch einige Bücher über Atheismus gelesen und würde sich selbst als Atheisten beschreiben.
- a. Franz hat immer an Gott geglaubt.
  - b. Franz hat schon immer an Gott geglaubt.
  - c. Franz glaubt an Gott.
- (38) [E3b] Julian und Diana waren ein Paar. Julian hat sich vor kurzem von Diana getrennt. Er warf ihr vor, dass sie ihn während sie zusammen waren, nie wirklich geliebt hat. Mittlerweile empfindet Diana nichts mehr für Julian, aber sie sagt über die vergangene Zeit:
- a. Ich habe dich immer geliebt.
  - b. Ich habe dich schon immer geliebt.
  - c. Ich liebe dich.
  - d. Ich liebte dich immer.

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<sup>5</sup>See the item in Rathert (2004).

Appendix B:  
Lesson plan and material (chapter 4)

## Doppelstunde Perfekt/present perfect/simple past

Dauer in Min.	Unterrichtsphase	Angaben zur Verlaufsplannung	Sozialform	Medien/Materialien
5'	Einstieg	Frage an SuS zu M1: Passt der Satz jeweils zur Geschichte? <ul style="list-style-type: none"> <li>➢ Nach Schüler*innenantwort erst b. zeigen</li> <li>➢ (Erklärung für den Unterschied?)</li> </ul>	Klassengespräch	M1 Dokumentenkamera
15'	Erarbeitungsphase 1	Regelformulierung anhand der Beispiele aus M1 (wann kann man das schwäbische Perfekt verwenden und wann nicht?) <ul style="list-style-type: none"> <li>➢ SuS erstellen Zeitfeil zur Regel des Perfekt</li> </ul> <p>SuS erstellen darauffolgend einen Zeitfeil zur Verwendung des Präsens in den Äußerungen des schwäbischen Probanden</p> <p>SuS sollen überlegen, wie man die Sätze aus M1 auf Englisch ausdrücken würde.</p> <ul style="list-style-type: none"> <li>➢ Kann man die gleichen Tempora wie im Schwäbischen verwenden?</li> <li>➢ Hilfestellung durch Kontexte in M2</li> </ul>	PA	M1 und M2 Dokumentenkamera (Heft?)
10'	Auswertungsphase	SuS zeigen und vergleichen ihre Zeitfeile und ihre Regelformulierung  Ende dieser Phase: Präsentation der Musterlösung (SuS übernehmen diese/verbessern ihre eigene Lösung?) <ul style="list-style-type: none"> <li>➢ Ergebnis: das Perfekt und das present perfect sind nicht gleich!</li> </ul>	Plenum	Dokumentenkamera (Heft?)
2'	Überleitung	Unterschiede in der Tempusverwendung genauer herausarbeiten bzw. Schwierigkeit klären	Plenum	-
10'	Erarbeitungsphase 2 (ab hier auf Englisch)	Students watch a video which explains the difference between the simple past and the present perfect <ul style="list-style-type: none"> <li>➢ students are allowed to watch this video 2 times</li> <li>➢ while viewing, they must answer questions on a worksheet M3</li> </ul>	Plenum	Video M3
10'	Auswertung und Ergebnissicherung	Students present their answers, teacher shows the solution of the worksheet afterwards (& interim summary)	Plenum	M3 Dokumentenkamera

15'	Übung/Vertiefung	<ul style="list-style-type: none"> <li>➤ Starting with a question: Keeping the meaning of the English present perfect and simple past in mind, can you visualise the difference between the following two sentences in M4?</li> <li>➤ Look at the following picture. How would this situation be expressed in English and how in Swabian / German?</li> <li>➤ example of the French passé composé, following question: what is your prediction for the semantics of the passé composé? In which contexts can it be used?</li> <li>➤ students analyze and correct 2 sentences – why do these sentences sound wrong to you?</li> </ul>	EA/PA	M4
5'	Auswertung	Auswertung im Plenum		Whiteboard Dokumentenkamera
5'	Abschluss	Verweis/Ausblick auf kommende Stunde Raum für Fragen (Hausaufgaben?)	Plenum	-



### M1 Das deutsche Perfekt

**Aufgabenstellung:** Lest die Sätze in (1) und (2) und entscheidet: Passt der Satz jeweils zum Verwendungskontext? Falls ihr der Meinung seid, dass der Satz nicht passt, gebt einen Grund an.

(1) Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht: *Ich habe den Peter jetzt 40 Jahre lang gekannt.*

Ja, der Satz passt zum Kontext.

Nein, der Satz passt nicht zum Kontext, denn

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(2) Marc befindet sich gerade im Krankenhaus und er ist schon seit längerer Zeit dort. Seine Mutter sagt: *Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.*

Ja, der Satz passt zum Kontext.

Nein, der Satz passt nicht zum Kontext, denn

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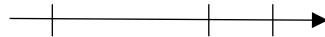
## M2 Das Perfekt im Schwäbischen

Bei einer Befragung wurden die Sätze (1) und (2) aus M1 mit den dazugehörigen Kontexten von schwäbischen Dialektsprecherinnen und -sprechern folgendermaßen beurteilt:

- (1) „Also i würd sage: i kenn dr Peder jetzt schau viazg Joar lang. „Hab gekannt“ klingt so wie wenn der gschdorbe wär.“
- (2) „Nein, das geht nicht. Dann wäre er eigentlich wieder zuhause. Eigentlich müsste es heißen *Dr Marc laid jetzt scho seit 3 Woche im Krangehaus.*“

### Aufgabenstellung

1. Stellt anhand der Kommentare eine Regel auf, wann man das schwäbische Perfekt verwenden kann und wann nicht. Tipp: Fragt euch jeweils: wann hat das Ereignis stattgefunden / wann war die Situation der Fall und wann erfolgt die Äußerung? Veranschaulicht eure Regel an einem Zeitpfeil.



- zur Erinnerung: (1) Ich habe den Peter jetzt 40 Jahre lang gekannt.  
(2) Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.

2. Zeichnet nun einen neuen Zeitpfeil für die Verwendung des Präsens in den Äußerungen des schwäbischen Probanden: *Dr Marc laid jetzt scho seit 3 Woche im Krangehaus* / *I kenn dr Peder jetzt schau viazg Joar lang*. Fragt euch auch hier: wann hat das Ereignis stattgefunden / wann war die Situation der Fall und wann erfolgt die Äußerung?

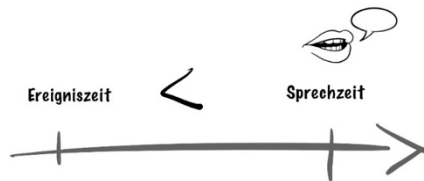
3. Überlegt, wie man die Präsens- und die Perfekt-Sätze unten (im jeweils passenden Kontext) auf Englisch ausdrücken würde. Kann man das gleiche Tempus verwenden?

Kontext	Standarddeutsch / Schwäbisch	Englisch
<b>A</b> Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:	<i>I kenn dr Peder jetzt schau viazg Joar lang.</i>	
<b>B</b> Klaus und Peter waren beste Freunde. Sie kannten sich schon seit der Grundschule. Leider ist Peter vor einer Woche gestorben. Klaus sagt über Peter:	<i>Ich habe den Peter jetzt 40 Jahre lang gekannt.</i>	
<b>C</b> Marc befindet sich gerade im Krankenhaus und er ist schon seit längerer Zeit dort. Seine Mutter sagt:	<i>Dr Marc laid jetzt scho seit 3 Woche im Krangehaus.</i>	
<b>D</b> Marc hatte eine schwere Operation und musste danach noch 3 Wochen im Krankenhaus verbringen. Mittlerweile ist er aber wieder zuhause und wohlauf. Seine Mutter sagt:	<i>Marc ist jetzt 3 Wochen lang im Krankenhaus gewesen.</i>	

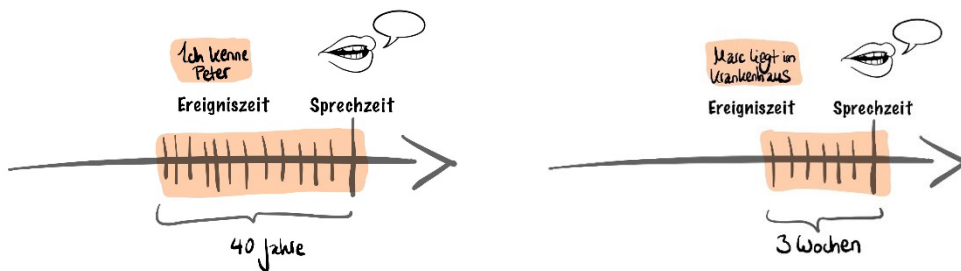
Was stellst du fest, wenn du das deutsche Perfekt mit dem Englischen vergleichst?

### Erläuterung/Erwartungshorizont M2

**Aufgaben 1) und 2):** Die Sätze verwenden jeweils das Perfekt. Für die schwäbischen Proband\*innen ist diese Zeitform jedoch falsch, weil es ein Ereignis beschreibt, das in der Vergangenheit liegt und es naheliegt, dass dieses Ereignis deshalb abgeschlossen ist. (= cessation implicature). **Dies sollte an einem Zeitpfeil unter Zuhilfenahme von Sprech- und Ereigniszeit veranschaulicht werden:**



**Die Proband\*innen** verwenden in ihren Vorschlägen das Präsens, da hier Ereignis- und Sprechzeit im gleichen Zeitintervall (Extended Now) angesiedelt sind.



Aufgabe 3) Die korrekte Übersetzung wäre: A und C im present perfect, B und D simple past;

Wenn oft falsch übersetzt, dann Motivation: Wir schauen uns jetzt an, warum das so schwierig ist

Wenn korrekt übersetzt, dann Motivation: Englisch verwendet hier also andere Tempora. Lasst uns diesen Unterschied der Tempusverwendung in den beiden Sprachen noch genauer herausarbeiten.

### M3 The semantics of the present perfect

useful semantic vocabulary

**speech time:** the time where a speaker utters a sentence

**event time:** the time of the described event

**reference time:** describes in detail when an event occurred.

**to precede:** to happen before

**anteriority relation:** one event occurring before another one in time

**extended:** long or longer than usual or expected      **to occur:** happen, take place

**Task:** Watch the video and answer the following questions:

**First viewing**

- a) Which of the following statements are **true** of the English **present perfect**?
- Its meaning is a simple anteriority relation.
  - It introduces an extended-now interval. This time interval is regarded as part of the present by the speaker.
  - It is important that the extended-now interval has a clear beginning and ending.
  - The event described is seen as part of the past.
  - The event included in the extended-now interval is very relevant to the speech time.
- b) Which tense expresses that an event precedes the speech time?
- c) Give an example for a reference time.

**Second viewing**

- a) What is the meaning of “Tom broke his arm.”?

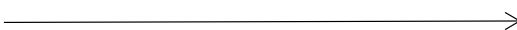
Mark it on the timeline.



Your paraphrase:

- b) What is the meaning of “Tom broke his arm yesterday.”?

Mark it on the timeline.



Your paraphrase:

c) What is the meaning of “Tom has broken his arm.”?

Mark it on the timeline.



Your paraphrase:

d) Explain: Why can we use adverbials like “this morning” with the present perfect but not “yesterday”?

### **Erwartungshorizont M3**

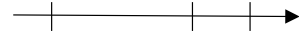
#### **First viewing**

- a) (correct: 2, 5)
- b) (simple past)
- c) (yesterday, this morning)

#### **Second viewing**

- a) (The event of Tom breaking his arm occurred before the speech time.)
- b) (The event of Tom breaking his arm is contained in the time period yesterday.)
- c) (The event of Tom breaking his arm is included in this extended-now interval. In other words, the fact that Tom broke his arm is regarded as part of the present, so he either has a broken arm now or it is very relevant to the speech time that he broke his arm)
- d) (“This morning” somehow refers to a time interval that includes our present situation. What we cannot do is use "yesterday" because this would lead to a logical contradiction. "Yesterday" is clearly before the present and not part of the extended-now.)

**M4 Visualizing the meaning of tenses**

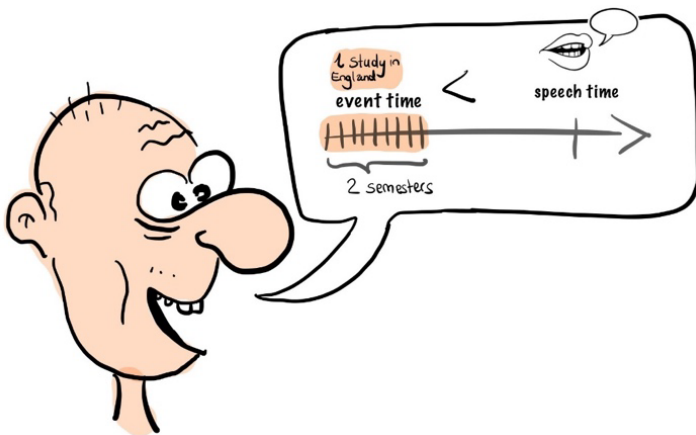


1) Keeping the meaning of the English present perfect and simple past in mind, can you visualise (using arrows) the difference between the following two sentences?

(3) *John and Linda were married for 70 years.*

(4) *John and Linda have been married for 70 years.*

2) Translate the following picture into English and Swabian / German!



Grandpa remembers and says: "When I was young, I \_\_\_\_\_"

Der Großvater erinnert sich und sagt: „Als ich jung war, \_\_\_\_\_“

3) The French perfect, called *passé composé*, looks very similar to the English present perfect and (South-)German Perfekt. Consider the following sentences in the context.

Klaus und Peter sind beste Freunde und sie kennen sich schon seit der Grundschule. Klaus sagt über seinen Freund Peter, der neben ihm steht:

(5) *Depuis 40 ans il est mon ami.*

(6) *\*Depuis 40 ans il a été mon ami.*

Whereas sentence (3) can be uttered in the given context sentence (4) is ungrammatical. Based on this, what is your prediction for the semantics of the French *passé composé*? In which contexts can it be used?

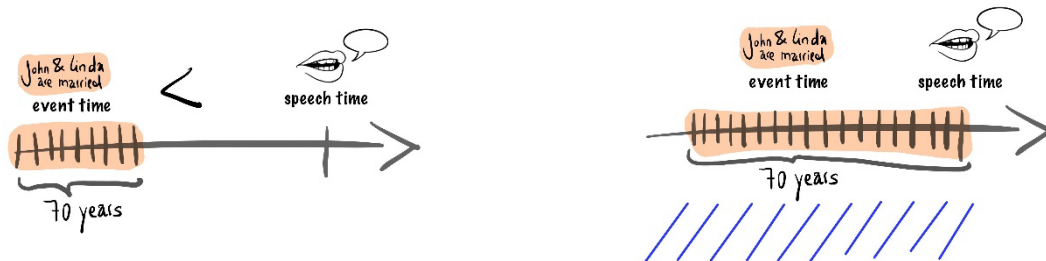
4) Explain: What is wrong with the following sentences?

(7) *\*I have lost my watch but I have found it again.*

(8) *\*Sally is pregnant for 4 months now.*

**M4 Erwartungshorizont “Visualizing the meaning of tenses”**

1)

(1) *John and Linda were married for 70 years.* (2) *John and Linda have been married for 70 years.*

2) Grandpa remembers and says: “When I was young, I studied in England for 2 semesters.”  
 Der Großvater erinnert sich und sagt: “Als ich jung war, habe ich 2 Semester lang in England studiert.“

3) The French *passé composé* has the same semantics as the South-German *Perfekt*. It can be used in past contexts where the eventuality expressed by the verb is regarded as anterior to and completed at the speech time.

4)

(7) is ungrammatical because “I have lost my watch” implies that the watch is still lost. It cannot be followed up by “I have found it again.”

(8) This is judged to be ungrammatical by native speakers, too. They find it very bad because the present tense cannot be used in that way. Instead, they would use the present perfect: *Sally has been pregnant for 4 months now.*

Appendix C:  
Pre- and posttest (chapter 4)

**Übung 1 zur Verwendung der Vergangenheitstempora im Englischen**

- 1) In der Tabelle unten siehst du links ein Gespräch zwischen Clare und ihrem Großvater. Lies es dir durch.  
 2) Das Gespräch enthält ein paar Tempusformen (Verben im present perfect oder im simple past), die im Kontext nicht so recht passen. Unterstreich diese und gib daneben jeweils eine Erklärung, ggf. eine Illustration und eine Verbesserung an.

**Achtung:** Es muss nicht unbedingt in jedem Gesprächsabschnitt ein Fehler stecken. Wenn du kein unpassendes Tempus findest, lass die entsprechende Zeile einfach frei.

<b>Gesprächsabschnitt</b> <i>Falls du eine unpassende Tempusform findest, <u>unterstreich</u> diese.</i>	<b>Erklärung</b> <i>Wenn du etwas unterstrichen hast, gib hier eine Erklärung an: Warum passt das Tempus nicht?</i>	<b>Ggf. Skizze</b> <i>Du kannst deine Erklärung hier durch einen Zeitpfeil illustrieren. Vielleicht hilft das.</i>	<b>Korrektur</b> <i>Falls du eine Tempusform angestrichen hast, verbessere die Form hier.</i>
Grandpa: "So what have you been up to these days?" Clare: "Hmmm...I've been demonstrating against the war. That was really impressive and there were a lot of people." Grandpa: "Wow! I think it's great what you young people are doing. That had made me proud."			
Clare: "Awww. Thanks. Oh and did you hear that aunty Lizzy is pregnant again?" Grandpa: "Yes, that's marvellous news. I remember the time when grandma – God rest her soul – was pregnant with Lizzy. Lizzy was born 1 month too early. She was tiny. Your grandma has been pregnant for 8 months and then her water broke."			
Clare: "Really? I didn't know! Let's hope that Lizzy's baby won't come too early then." Grandpa: "Fingers crossed. Would you like some biscuits?" Clare: "No thanks. I already had dinner."			

## Übung 2 zur Verwendung der Vergangenheitstempora im Englischen

Arbeitsauftrag: In einem der beiden Sätze passt das gewählte Tempus nicht. Gib an, in welchem und erkläre, warum. Wenn es hilft, illustriere deine Erklärung an einem Zeitpfeil.

- A: *Sam lost her key but she found it again.*  
B: *Sam has lost her key but she found it again.*

<b>Erklärung</b> <i>Warum passt das Tempus nicht?</i>	<b>Ggf. Skizze</b> <i>Du kannst deine Erklärung hier durch einen Zeitpfeil illustrieren. Vielleicht hilft das.</i>

**Übung 3 zur Verwendung der Vergangenheits tempora im Englischen**

- 1) In der Tabelle unten siehst du links ein Gespräch zwischen Clare und ihrem Großvater. Lies es dir durch.  
 2) Das Gespräch enthält ein paar Tempusformen (Verben im present perfect oder im simple past), die im Kontext nicht so recht passen. Unterstreiche diese und gib daneben jeweils eine Erklärung, ggf. eine Illustration und eine Verbesserung an.

**Achtung:** Es muss nicht unbedingt in jedem Gesprächsabschnitt ein Fehler stecken. Wenn du kein unpassendes Tempus findest, lass die entsprechende Zeile einfach frei.

<b>Gesprächsabschnitt</b> <i>Falls du eine unpassende Tempusform findest, <u>unterstreiche</u> diese.</i>	<b>Erklärung</b> <i>Wenn du etwas unterstrichen hast, gib hier eine Erklärung an: Warum passt das Tempus nicht?</i>	<b>Ggf. Skizze</b> <i>Du kannst deine Erklärung hier durch einen Zeitpfeil illustrieren. Vielleicht hilft das.</i>	<b>Korrektur</b> <i>Falls du eine Tempusform angestrichen hast, verbessere die Form hier.</i>
Josh: "Dude, I'm gutted. Last week, Sally broke up with me. We've been together for 2 ½ years!" George: "Oh wow. That sucks. Sorry, mate!" Josh: "Thanks. I guess I'll be having a lot more free time now. I was wondering whether I should start playing hockey again."			
George: "That would be awesome! You've been great when you were on the team. We'd love to have you back!" Josh: "Haha. Thanks, I appreciate that. When is the training, usually? I forgot it."			
George: "We meet on Mondays and Thursdays, 6pm." Josh: "Sounds good. I'm looking forward to it. Do you have any plans for tonight? Would you fancy going to the cinema?" George: "I just went to the cinema a couple of days ago. But we could go to the pub instead?" Josh: "Sure, let's go!"			

### Übung 4 zur Verwendung der Vergangenheitstempora im Englischen

Arbeitsauftrag: In einem der beiden Sätze passt das gewählte Tempus nicht. Gib an, in welchem und erkläre, warum. Wenn es hilft, illustriere deine Erklärung an einem Zeitpfeil.

A: *Lisa broke her arm but it is healed now.*

B: *Lisa has broken her arm but it is healed now.*

<b>Erklärung</b> <i>Warum passt das Tempus nicht?</i>	<b>Ggf. Skizze</b> <i>Du kannst deine Erklärung hier durch einen Zeitpfeil illustrieren. Vielleicht hilft das.</i>



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